


Analysis Of The Implementation Of The Child Pneumonia Management Program At Paal V Health Center, Jambi City In 2023

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Article Info	ABSTRACT
<p>Keywords: Management of Child Pneumonia, Implementation, Health Center</p>	<p>Background: Pneumonia is a type of Acute Respiratory Infection (ARI) that has been a cause of death for 740,180 children under 5 years old in 2019, constituting 14% of total deaths in children under five, but reaching 22% of all deaths in children aged 1 to 5 years. The objective of this study is to analyze the implementation of the pneumonia management program at Paal V Health Center in Jambi City. Method: This study uses a qualitative research approach with an analytical design, gathering data through a survey of health workers conducted by the author at Paal V Health Center in Jambi City. Research informantts consist of 8 key informantts, including 1 Program Coordinator for Pneumonia at Paal V Health Center, 1 Head of Paal V Health Center, 2 implementing officers, and 4 mothers of children with pneumonia. Results: The research findings indicate that Paal V Health Center has two health workers, which is inadequate for managing pneumonia cases. Infrastructure is not up to standard, primarily due to the absence of nebulization equipment. Planning and program implementation are generally good with counseling and record-keeping, but there are shortcomings in providing written information to mothers about follow-up appointment schedules. Regular monitoring and evaluation are conducted by health workers and the head of the health center. Conclusion: The management of pneumonia cases at Paal V Health Center is suboptimal due to limited healthcare personnel and equipment. With additional resources and improved communication, pneumonia management can become more effective and efficient.</p>
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INTRODUCTION

Pneumonia is an acute respiratory tract infection caused by bacteria, viruses, or fungi that affects the alveoli or lungs. Common symptoms of pneumonia include difficulty breathing, increased body temperature, chills, headache, and cough with phlegm production (Khodijah et al., 2021). Pneumonia shows its incidence across almost all age groups, although it predominantly targets young children. This information is presented by the World Health Organization (WHO), stating that pneumonia was the cause of death for 740,180 children under 5 years old in 2019, constituting 14% of total deaths among

children under five, but reaching 22% of all deaths in children aged 1 to 5 years. The impact of pneumonia on children under five years old can manifest as rapid and irregular breathing difficulties. In infants, they may experience vomiting, fatigue, decreased enthusiasm, as well as difficulty in consuming food and drinks (WHO, 2019).

Pneumonia spreads through the air when an infected person coughs or sneezes, transmitting viruses via droplets. These pathogens, whether viruses or bacteria, then enter the respiratory tract of nearby individuals. Additionally, pneumonia can also spread through droplets that land on objects in the environment (Tari, 2021). According to the Performance Report of the Directorate of Prevention and Control of Communicable Diseases in 2022, increasing the detection of cases, treatment, and implementing standard management practices are steps that can be taken to reduce morbidity and mortality rates among children due to pneumonia. (—Laporan Kinerja 2022 Direktorat Pencegahan Dan Pengendalian Penyakit Menular Kementerian Kesehatan, 2022).

Managing pneumonia cases is crucial to prevent serious complications such as lung abscess, pleural effusion, or sepsis, which can arise if the disease is not promptly addressed. Through effective management, health centers or healthcare facilities can ensure patients receive optimal care, enhance chances of recovery, and prevent serious consequences associated with this illness (Lisnawati et al., 2020).

The issues in the management of pneumonia management programs at health centers encompass a series of challenges that affect the effectiveness and success of program implementation. One of the main problems is the lack of knowledge and skills among relevant personnel. There may be a gap between the required knowledge needed to accurately diagnose pneumonia in young children and the level of understanding possessed by healthcare workers. As a result, the process of controlling pneumonia programs may not be conducted properly (Guswahyuni et al., 2019).

The insufficient application of knowledge and skills by healthcare personnel is a primary factor affecting both the quantity and quality aspects, leading to low coverage in pneumonia detection without improvement. Consequently, this results in high morbidity and mortality rates among children due to pneumonia, particularly in regions of Indonesia (Kementerian Kesehatan RI, 2021).

Indonesia, as a developing and tropical country, has the potential to be an endemic area for communicable diseases that threaten public health. Pneumonia poses a serious threat to public health and is the second leading cause of infant mortality in Indonesia, following diarrheal diseases (Izhar, 2021). Until now, the primary focus of programs aimed at controlling pneumonia in Indonesia has been on managing pneumonia in young children. The detection rate of pneumonia cases among toddlers over the past 11 years has shown quite fluctuating variations (Kemenkes RI., 2021)

The city of Jambi, like many in Indonesia, has not yet achieved the pneumonia detection target of 65%. Jambi also has a low detection coverage compared to the strategic plan target of 65%, with only 10.1% being realized (Kemenkes RI., 2021). The city of Jambi recorded 232 cases of pneumonia in 2020, 332 cases in 2021, and saw a further increase in 2022 with 467 cases (Jambi, 2021). Kasus kejadian pneumonia balita di

Kota Jambi pada tahun 2023 tertinggi terjadi pada Puskesmas Paal V Kota Jambi yakni sebanyak 33 kasus.

Based on the information provided, Puskesmas Paal V is an outpatient health center in Jambi City accredited with a Full Accreditation status. It serves a population of 50,822 residents and offers various healthcare services, including community health efforts and individual health care. One of its initiatives is to contribute to reducing cases of pneumonia through a pneumonia management program. Given these circumstances, the researcher feels an urgent need to conduct an in-depth study on "Analysis of the Implementation of Child Pneumonia Management Program at Puskesmas Paal V, Jambi City in 2023."

METHODE

The type of research used in this study is qualitative research with an analytical design. The study is conducted at Puskesmas Paal V located in Jambi City. The research took place from March to May 2024. There are 8 informantts involved in this study, consisting of the pneumonia program coordinator, the head of the health center, 2 implementing officers, and 4 mothers of children with pneumonia. The instruments used include recording devices, documentation, interview guidelines, observation, and Nvivo software for data collection using in-depth interviews and observation. Data analysis utilizes qualitative analysis with Nvivo software. The research adheres to applicable research ethics, including respecting subjects, fairness, adhering to research principles, obtaining informed consent, and maintaining confidentiality.

RESULT AND DISCUSSION

In this section, the researcher will outline the results of the data collection conducted with 8 informantts at Puskesmas Paal V, Jambi City, referring to the Modified System Theory (Azwar, 2016) and the guidelines for managing child pneumonia from the Ministry of Health (2018) as discussed in Khodijah, Siti, et al. (2022).

Input

In terms of quantity, the availability of healthcare human resources for implementing the child pneumonia management program at Puskesmas Paal V, Jambi City, is inadequate. Currently, there are only 2 personnel available daily: one midwife and one doctor. Additionally, one of them is assigned to the geriatric clinic. Regarding quality, the healthcare personnel have received training and attended meetings provided by the Jambi City Health Office related to child pneumonia management.

"kalau menurut saya sih belum cukup, karna kan program MTBS ni banyak, tetapi yang standby saya sendiri dan dokter kalau perlu tindakan... satunya lagi itu diperbentukkan juga di poli lansia kadang.. jadi kalau ditanya ke saya belum cukup ya"
(Informant 1)

"sebenarnya belum cukup, karna saya lebih ke pneumonia bukan balita, jadi yang standby 1 dan saya kadang jugo diperbantukan di poli lansia. jadi koordinator program sekaligus pelaksana dan dokter cuman"
(Informant 2)

This aligns with Ministry of Health Regulation No. 43 Year 2019, which stipulates the ideal calculation of the required quantity and level of positions for each type of health and non-health personnel through workload analysis, population ratios, and working time distribution (Kementrian Kesehatan Republik Indonesia, 2019). The availability of sufficient human resources plays a crucial role in supporting the implementation of child pneumonia management programs. The constraint of inadequate human resources at Puskesmas Paal V is likely to hinder the implementation of the pneumonia management program. Similar constraints were also noted by Septemdelti et al. (2022) regarding the management of child pneumonia in Riau Province from 2020 to 2022. Handling pneumonia in children in Riau Province continues to face various challenges, especially due to insufficient human resources. The existing human resources are still insufficient to meet the needs of child pneumonia management (Septemdelti et al., 2024).

Based on the imbalance between the number of healthcare personnel and the patient load, there is often an increase in workload for midwives assigned to the geriatric clinic. This situation can lead to midwives feeling overwhelmed, which may eventually result in negative attitudes towards their work. (Hikmat & Melinda, 2020). In addition, in terms of quantity, the availability of facilities and infrastructure for implementing the child pneumonia management program at Puskesmas Paal V, Jambi City, is incomplete. Based on observational findings, there is still one piece of equipment missing, namely the nebulization device. However, in terms of quality, the available facilities and infrastructure function well and can be utilized effectively overall.

Health training is conducted through technical and functional training programs gradually at all administrative levels, aiming to support professionalism and enhance the quality of healthcare services. Training plays a crucial role in efforts to improve the quality and empower healthcare personnel to address various challenges in healthcare provision (Pamungkas & Kusmiati, 2021).

Facilities and infrastructure in the detection and management of child pneumonia are the resources used to facilitate early detection and treatment until recovery according to the standard guidelines for implementing the detection and management of child pneumonia (Lisnawati et al., 2020). The issue related to insufficient facilities and infrastructure was also identified in a study by Lisnawati et al. (2022) regarding the management of child pneumonia at Puskesmas Bogor Utara. The research findings indicated that although overall facilities and infrastructure were adequate, there were still some deficiencies at Puskesmas Bogor Utara. Specifically, there were insufficient supplies of injectable antibiotics such as ampicillin and gentamicin. Additionally, there was a lack of complete forms for home visits for children with pneumonia as part of the care-seeking program (Lisnawati et al., 2020).

In terms of funding, the implementation of the child pneumonia management program at Puskesmas Paal V, Jambi City, is adequately supported. The funding sources primarily come from the BLUD (Public Service Agency) fund or financial management patterns that provide flexibility, allowing for healthy business practices to enhance community service and promote community welfare.

The budget for Puskesmas comes from various sources, including the State Budget (APBN) and other funds. As a technical implementation unit of the local Health Office, Puskesmas requires funds to carry out various health activities and programs within its jurisdiction (Khodijah et al., 2021).

Process

The planning for implementing the child pneumonia management program at Puskesmas Paal V, Jambi City, involves a step-by-step assessment of children to evaluate the severity of their cough, enabling subsequent intervention during the implementation stages by midwives/nurses and doctors. One notable difference lies in how the number of child pneumonia cases is recorded: doctors document based on clinical symptoms, while implementing midwives/nurses document based on pneumonia classification.

“misalkan dia datang berdasarkan formulir MTBS, setelah diukur semuanya TB, BB, suhu nah kami tetap nanya apakah ada batuk atau sukar bernafas. Nah.. pokoknya setiap pasien datang ditanya kalau dijawab iya ditanya lagi berapa hari dan dihitung nafasnya, baru kita tentukan klasifikasi.... “ (Informant 1)

—kita sesuai SOP yang dibuat ya, tiap pasien datang diukur BB, TB, Suhu dan ditanyakan batuk gak, susah gak bernafas , udah berapa hari dan hitung kecepatan nafasnya sesuai usianya (Informant 2)

“ harus dihitung nafas selama 1 menit, kalau nafasnya cepat itu bisa dikategorikan pneumonia tapi kalau disertai sesak dan batuk itu pneumonia berat (Informant 3)

In the stage of classification and determining further actions, differences were found in the approach between midwives/nurses and the attending doctors in the childhood pneumonia program. The difference lies in how they record the number of cases of childhood pneumonia: doctors document based on the number of clinical symptoms, whereas midwives/nurses record based on the classification of pneumonia.

Challenges related to planning will impact the implementation of the program. This is evidenced by previous research conducted by Amala (2019) regarding the management of pneumonia treatment programs in Sleman District, Yogyakarta. The findings indicate that one of the obstacles in planning for childhood pneumonia specifically concerns socialization, which is still included in integrated health posts (posyandu) and other activities involving toddlers. These challenges influence the existing planning efforts (Sholehatun Khairul Amala, 2019).

Differences in determining pneumonia cases based on clinical symptoms versus classification can lead to inconsistencies in case management and reporting. Therefore, enhanced coordination between professions and relevant training are necessary to ensure consistency in patient diagnosis and management, aligned with the principles of Health Services Management that emphasize the importance of inter-professional coordination to improve healthcare service quality.

Furthermore, in implementing the childhood pneumonia management program at the

Paal V Health Center in Jambi City, counseling has been provided to mothers of toddlers with pneumonia. After each examination, details are recorded in a dedicated pneumonia program book. However, mothers of toddlers with pneumonia have reported not receiving a card/form for follow-up appointments; they were informed verbally instead.

In this implementation process, it's crucial to assess and classify toddlers presenting with cough complaints to determine if they have pneumonia, severe pneumonia, or a different condition. Infants and toddlers arriving at the health center with a cough complaint must be classified accordingly— whether they have pneumonia, severe pneumonia, or not pneumonia. Antibiotics like amoxicillin are administered for pneumonia cases, while severe pneumonia cases require referral to a hospital for inpatient care, where they receive injectable antibiotics (Ampicillin and Gentamicin), oxygen therapy based on their hypoxemia severity, and supportive therapy such as fluid and nutrition provision (Kementrian Kesehatan Republik Indonesia, 2023).

Monitoring and Evaluation

The recording is carried out by the pneumonia program coordinator who also serves as the operational officer for managing pneumonia in toddlers, and is reported every quarter. Subsequently, the head of the community health center will also assess the performance of the officers through the e- Performance application, which is a shared electronic-based application that includes stages of managing civil servant performance, consisting of: planning civil servant performance; implementation, monitoring, and coaching of civil servant performance.

“ini kan ada ini (Buku ditunjukkan), saya catat identitas dan kategorinya lengkap semua.. saya pilah masukan ke buku pneumonia jadi ada 2 buku dari semua penyakit dan yang khusus pneumonia, kemudian laporan kan harus direkap saya rekap dulu sesuai format yang dikasih tata usaha per kelurahan misalnya, jumlah totalnya berapa” (Informant 1)

“catat identitas dan emang sudah ada buku khusus yang mencakup Alamat, kategori dan tindak lanjut nanti dilaporkan per triwulan biasanya diminta.” (Informant 2)

“kalau itu petugas yang lain ya, bukan saya yang nyatat dan ga banyak berperan disana. Tapi itu rutin ada tiap minggu.” (Informant 3)

“iya kita melalui E-Kin nanti ada pelaporan itu dan tepat waktu karna dibawah tanggal 25 sudah harus ada” (Informant 4)

Monitoring and evaluation are also conducted on toddlers with pneumonia by healthcare workers through scheduling a follow-up check 2 days after administering antibiotics by the doctor. If a toddler with pneumonia has not visited the Community Health Center (Puskesmas) since 2018, healthcare workers will conduct home visits based on the recorded identity in the toddler pneumonia case book to ensure their condition. Typically, this stage receives transportation funding.

Evaluation through home visits serves as a formative evaluation aimed at providing direct feedback into the pneumonia management process. This approach aligns with participatory evaluation involving all stakeholders, including the patient's family (Alamsyah, 2011). Based on the triangulation of interviews conducted, it is known that monitoring and evaluation are carried out by the operational officers and the head of the community health center, covering the stages from recording and reporting to monitoring and evaluating home visits for toddlers with pneumonia.

CONCLUSION

Based on the research findings, it is concluded that the quantity of available healthcare human resources totals 2 individuals and is insufficient for the management of pneumonia cases. The available healthcare personnel have received training from the Jambi City Health Office. Facilities and infrastructure are incomplete, and it is known that the funding from the BLUD has not been allocated properly. Planning for the implementation of the childhood pneumonia management program includes assessing the difficulty of coughing in children, with differences noted in the documentation of the number of pneumonia cases: doctors document based on clinical symptoms, while nurses record based on pneumonia classifications. Implementation of the childhood pneumonia management program includes counseling mothers of children with pneumonia, and after each examination, records are kept in a special pneumonia program book. Monitoring and evaluation are conducted by implementing officers and health center heads, covering recording, reporting, monitoring, and evaluating visits to the homes of pneumonia-afflicted children.

REFERENCES

- Alamsyah, D. (2011). *Manajemen Pelayanan Kesehatan*. Nuha Medika.
- Guswahyuni, S. M., Ismail, D., & Mujianto, S. (2019). Penemuan kasus pneumonia secara pasif dengan pendekatan MTBS pada balita di Puskesmas. *Berita Kedokteran Masyarakat*, 35(6), 199–209. <https://journal.ugm.ac.id/bkm/article/download/45642/25942>
- Hikmat, R., & Melinda, M. (2020). Hubungan Beban Kerja Dengan Kepuasan Kerja Perawat. *Jurnal Kesehatan*, 10(2). <https://doi.org/10.38165/jk.v10i2.19>
- Izhar, M. D. (2021). Determinants of Pneumonia in Toddlers in Jambi City. *Jurnal Berkala Epidemiologi*, 9(2). <https://doi.org/10.20473/jbe.v9i22021.157-165>
- Jambi, D. K. P. (2021). *Data Pneumonia di Kota Jambi*. Kemenkes RI. (2021). *Profil Kesehatan Indonesia 2021*.
- Kementerian Kesehatan Republik Indonesia. (2019). Peraturan Menteri Kesehatan RI No 43 tahun 2019 tentang Puskesmas. In *Peraturan Menteri Kesehatan RI No 43 tahun 2019 tentang Puskesmas: Vol. Nomor 65*.
- Kementerian Kesehatan Republik Indonesia. (2023). *Rencana Aksi Nasional Penanggulangan Pneumonia dan Diare 2023-2030*. In p2p.kemkes.go.id RA Nasional p2p.kemkes.go.id. Kementerian Kesehatan RI.

- https://p2p.kemkes.go.id/wp-content/uploads/2023/12/NAPPD_2023-2030-compressed.pdf
- Kementerian Kesehatan RI. (2021). Indonesia Health Profile 2020. In B. Hardhana, F. Sibuea, & W. Widiyanti (Eds.), Kementerian Kesehatan Republik Indonesia. Kementerian Kesehatan Republik Indonesia.
- Khodijah, S., Syari, W., & Raharyanti, F. (2021). Analisis Implementasi Penemuan Dan Tatalaksana Pneumonia Pada Program Infeksi Saluran Pernapasan Akut Di Puskesmas Ciampea Tahun 2020. *Promotor*, 5(1). <https://doi.org/10.32832/pro.v5i1.6130>
- Laporan Kinerja 2022 Direktorat Pencegahan dan Pengendalian Penyakit Menular Kementerian Kesehatan. (2022). In Kementerian Kesehatan RI.
- Lisnawati, N., Khodijah Parinduri, S., & Syari, W. (2020). Analisis Strategi Pelaksanaan Penemuan Dan Tatalaksana Pneumonia Pada Balita Di Puskesmas Bogor Utara Tahun 2018. *Promotor*, 3(5), 488–500. <https://doi.org/10.32832/pro.v3i5.4205>
- Pamungkas, G., & Kusmiati, E. (2021). ANALISIS BEBAN KERJA SUMBER DAYA MANUSIA (SDM) KESEHATAN DI PUSKESMAS CIWIDEY KABUPATEN BANDUNG MENGGUNAKAN METODE WORKLOAD INDICATORS OF STAFFING NEED (WISN). *Jurnal Sehat Masada*, 15(1), 93–101. <https://doi.org/10.38037/jsm.v15i1.167>
- Septemdelti, M., Jepisah, D., & Anusirwan. (2024). Aspek Manajemen Dalam Tatalaksana Pneumonia Pada Balita Di Provinsi Riau Tahun 2020-2022. *Ensiklopedia of Journal*, 6(2), 76– 82.
- Sholehatun Khairul Amala. (2019). EVALUATION OF TODLER PNEUMONIA PROGRAM IN SLEMAN DISTRICT. *Universitas Ahmad Dahlan*, 1(4), 1–9.
- Tari, P. I. (2021). Faktor-Faktor yang Berhubungan dengan Praktik Penemuan Kasus TB pada Balita di Puskesmas Kota Jambi Tahun 2021. Universitas Jambi.
- WHO. (2019). *World Pneumonia Day*.