STRENGTHENING HEALTH CADRE CAPASITY IN TB DETECTION: EVALUATION IN URBAN SOUTH JAKARTA

Rina K Kusumaratna[1*], Suriyani Tan[2], Mutiara Indah Sekar Sari[3], Mutiara Sri Rahayu[4], Ranna Adjani Herteniza[5], Risna Muthmainnah Riskawa[6]

[1-5]Fakultas Kedokteran, Universitas Trisakti
[6]Pasar-Minggu District Health Center

Email Korespondensi: rkusumaratna@trisakti.ac.id

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ABSTRACT

Proper TB management hinges on three key aspects: early diagnosis, early detection of drug resistance, and prompt initiation of treatment plans. Mobilizing the community to actively participate in TB screening activities conducted by health facilities is crucial. Enhancing the knowledge and skills of health cadres is necessary to enable them to independently and support health workers in community TB screening efforts. This activity aims to evaluate, assess and address issues, improve TB case detection and treatment, and empower health cadres to become TB champions, accelerating the elimination of tuberculosis, in Pasar Minggu sub-district, South Jakarta. Results indicate that the education and training activities effectively enhanced cadres' TB screening and contact investigation skills. Post-test assessments showed significant ($p<0.05$) improvement in understanding and abilities, with average scores rising considerably from 78.67 (pre-test) to 98.67 (post-test), confirming successful knowledge and skill acquisition. Health cadres identified five new cases through home visits during active case-finding and contact investigation efforts. Engaging the community is crucial for effective public health interventions, ensuring both relevance and practical implementation.

Keywords: Skill Development, Tuberculosis Management, Community Involvement.

1. INTRODUCTION

The Global TB Report 2022 highlights Southeast Asia as having the highest TB cases in 2021 (45%). Indonesia is second after India, contributing 9.2% of the cases. In many low- and middle-income countries with a high tuberculosis burden, TB investigations usually commence when individuals seek medical help for symptoms indicative of pulmonary tuberculosis, a process known as passive case-finding. The WHO advises systematic screening of contacts of newly diagnosed TB patients due to their significant risk of developing the disease (WHO.,2018). Eight countries, including Indonesia, contribute over two-thirds of global TB cases from 30 countries. In 2023, Indonesia reported 821,200 TB cases, predominantly in West Java, East Java, and Central Java. The productive age group, particularly those

aged 45 to 54 years, is the most affected (Kemenkes RI.,2023a; Bagcchi., 2023).

TB remains a public health issue in Indonesia and globally, as stated in the sustainable health development goals (SDGs) (Fitchett et al., 2015). To meet the 2019 National TB program target, interventions are needed for most districts/cities to achieve 90% case detection and treatment coverage by 2024. The key effort to increase TB cases found and treated is shifting to intensive and extensive active case detection within families and communities, while maintaining high-quality service standards (Kemenkes RI., 2020, Kemenkes RI., 2023). Active case finding (ACF), as defined by WHO, refers to systematic TB screening in at-risk populations outside health facilities (WHO., 2015). Screening these populations facilitates earlier diagnosis and management, reducing morbidity and mortality rates and lowering transmission within the community.

Ultimately, ACF helps reduce TB transmission, accelerating the decrease in new TB cases (Bohlbro et al., 2021; MacPherson et al.,2024). Since the late 20th century, ACF has been a widely implemented community-based TB screening approach. Its goal is to boost TB diagnosis rates, leading to timely and proper treatment. The Minister of Health's Regulation No. 67 of 2016 on Tuberculosis Control, Article 11, explains that TB case finding can be conducted actively or passively. Active case finding includes contact case investigations, mass screenings in vulnerable groups, and special situation screenings. Passive case finding involves examinations at Health Service Facilities. TB cases are diagnosed, classified, and typed after case finding (Kemenkes RI., 2016). Case finding involves identifying TB patients through activities like screening suspected cases, conducting physical and necessary examinations, determining diagnosis, and classifying the disease and patient type. Once diagnosed, patients undergo proper treatment until cured to prevent disease transmission. This process requires patients who understand TB symptoms, access to health facilities, and competent health workers to examine symptoms and complaints. As part of its TB control strategy, the Ministry of Health of the Republic of Indonesia employs ACF to enhance TB case detection and offer Tuberculosis Prevention Therapy (TPT) (Rahayu et al.,2022; Mahler et al.,2024; Rahma et al.,2024).

In their study, Mahler B et al., (2024) highlight that early diagnosis, early detection of drug resistance, and the initiation of a treatment plan are vital for effective TB management. Routine disease screening is a key element of the first pillar of the End TB Strategy, designed to ensure early detection for all suspected TB patients. TB surveillance for early detection within the community is an essential component of public health monitoring.

Community involvement is a critical component in the success of tuberculosis (TB) control programs, particularly in early detection and treatment monitoring. When communities actively participate—through education, home visits, and engagement in screening activities—public health interventions become more relevant, sustainable, and impactful (Chavez-Rimache et al., 2023). Empowering health cadres as local facilitators strengthens trust in health services, accelerates case identification, and improves treatment adherence. By building cadre capacity and fostering meaningful community participation, TB elimination strategies can be implemented more effectively and in alignment with

primary healthcare transformation efforts that emphasize prevention and equitable access.

2. PROBLEM STATEMENT AND RESEARCH

TB case detection and treatment at the *Pasar Minggu* District Health Center fell significantly below program targets in *Triwulan* I and II of 2024, reaching only 51% of the expected 90%. The Kebagusan sub-district Health Center recorded the lowest performance, achieving just 28% of its 52.5% target between January and July 2024. These gaps highlight critical challenges in community-based TB screening and follow-up. How can targeted training for health cadres improve TB case detection and treatment outcomes in underperforming urban sub-districts?

This study aims to assess barriers to tuberculosis (TB) detection and treatment in one sub-district health centre in South Jakarta and to strengthen the capacity of health cadres through community-based training. By equipping cadres with the knowledge and practical skills needed for active case finding, contact investigation, and community education, the initiative seeks to empower them as TB champions. In doing so, it supports Indonesia's broader health transformation agenda—advancing early detection, improving treatment adherence, and accelerating the elimination of TB through integrated, community-driven primary care.

The activity was carried out within the working area of sub-district of Kebagusan Health Center, Pasar Minggu, specifically in RW 04 and at RPTRA Kecapi Kebagusan. The location map is shown below.

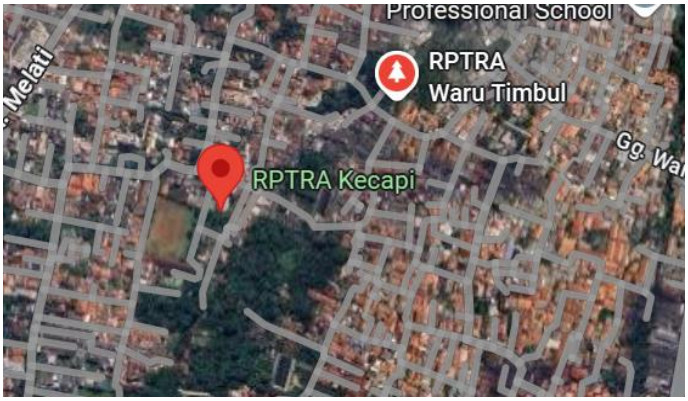

Figure 1. Activity Location Map

3. LITERATURE REVIEW

Community Empowerment in Tuberculosis Control

Community empowerment is a strategic process aimed at enhancing the capacity, awareness, and active participation of individuals in identifying, planning, and implementing initiatives that improve their quality of life independently and sustainably. This approach encourages communities to recognize their potential, make informed decisions, and solve local challenges using available resources (Herman et al., 2023).

In the context of tuberculosis (TB) control, health education serves as a vital empowerment strategy. It equips individuals and groups with the

knowledge, attitudes, and skills necessary to maintain and improve their health autonomously. Through participatory and continuous learning, communities transition from passive recipients to active agents in promotive and preventive health efforts. With a solid understanding of clean and healthy living behaviors, disease prevention, and access to health services, communities are better positioned to make informed decisions for their well-being (Fabanyo & Anggreini, 2022).

As part of this community service initiative, TB education and screening training were delivered using an Active Case Finding (ACF) approach, targeting high-risk groups within the community. This method not only enhances public understanding of TB but also helps dismantle stigma associated with the disease. By empowering health cadres to lead educational activities and conduct door-to-door screenings, the program fosters positive shifts in community knowledge and attitudes toward TB prevention. Early detection and treatment of TB in patients can significantly reduce the number of subsequent infections and prevent secondary cases. To ensure cadres are effective in their roles, especially in conducting contact investigations and active case finding, their ability and knowledge must be regularly enhanced. In accordance with Law No. 6 of 2014 on Villages, Article 94 empowers the government to mobilize community organizations—such as neighborhood associations (*RT/RW*), *PKK*, and youth groups (*Karang Taruna*) to support health initiatives (RI.,2014).

Combining Community Empowerment and Involvement Theories

Community Empowerment and Community Involvement theories collectively emphasize the importance of building local capacity and fostering active participation in public health initiatives. While community involvement focuses on engaging individuals in health programs through education, outreach, and shared responsibility, empowerment theory advances this by enabling communities to identify problems, make decisions, and take collective action (WHO., 2008). In the context of tuberculosis (TB) control, empowering health cadres as TB champions and involving communities in screening and contact investigation efforts ensures that interventions are both contextually relevant and sustainably implemented. This integrated approach strengthens local ownership, enhances trust in health services, and accelerates progress toward TB elimination.

The implementation of cadre empowerment and ACF activities represents a strategic step toward building community resilience and autonomy in creating a TB-free environment. Evidence from recent studies supports the effectiveness of involving community leaders and health cadres in TB control efforts, showing improvements in early detection, treatment adherence, and public engagement (Pratama et al., 2024). For example, Nursyamsi (2022) demonstrated that visual education tools such as posters significantly improved community knowledge about TB, while Arini (2012) found that empowerment efforts in *Tambakrejo* led to increased program achievements, even though implementation was not yet optimal.

However, some studies also highlight challenges and limitations in community empowerment efforts. Amallia et al. (2021) found that despite educational interventions, behavioral change remained limited due to persistent stigma, low motivation, and social barriers. These findings underscore the need for context-sensitive, sustained engagement strategies

that go beyond information delivery to foster genuine community ownership and action.

4. METHODS

The activity was designed as a pre-experimental one-group post-test, community-based study. The location of activities at the Kebagusan sub-district Health Centre in South Jakarta. Attended by 15 health cadre representatives from the Kebagusan sub-district. This comprehensive approach ensures that health cadres are well-equipped to detect and manage TB cases within the community, thereby contributing to overall TB prevention and control efforts.

The activity consists of four stages:

a. Preparation Coordinating and obtaining permits with health centers, sub-district partners, Community Associations, and health cadres. Preparing education materials.
b. The implementation of the TOSS TB initiative was carried out through the following structured components (August 26, 2024):
    1) TOSS TB Education
        a) Delivered targeted tuberculosis education sessions to community members and health cadres.
        b) Focused on raising awareness of TB symptoms, transmission, prevention, and treatment.
    2) Screening and Reporting Training
        a) Conducted training on TB screening procedures, including symptom identification and risk assessment.
        b) Guided participants in completing both the manual and electronic TB.16 RK reporting forms to ensure accurate documentation and data consistency.
    3) TB Contact Investigation and Community Outreach
        a) Implemented door-to-door contact investigation for suspected TB cases.
        b) Provided educational materials using printed media such as pocket books, flipcharts, and posters to support community understanding.
        c) Ensured completion of TB.16 RK forms (manual and e-form) for each contact investigation.
    4) Capacity Building Session
        A dedicated TB contact investigation education and training session was held at the residence of the head of RT10/RW04.

        The session included:
        a) A comprehensive presentation on TB knowledge and management strategies.
        b) Pre-test assessments to evaluate participants' baseline understanding.
        c) Hands-on coaching for conducting TB contact investigations.
        d) Introduction and orientation to the TB contact investigation kit.1. TOSS TB Education
        e) Delivered targeted tuberculosis education sessions to community members and health cadres.

f) Focused on raising awareness of TB symptoms, transmission, prevention, and treatment.

c. Monitoring activities included targeted follow-up from August 27–30, 2024 in RW 04, the sub-district's highest TB burden area. Trained health cadres applied their newly acquired skills through door-to-door contact investigation and active case finding among at-risk individuals. These activities served as both community outreach and practical implementation of the training. Also monitor their accuracy and completeness of TB.16 RK form submissions, ensuring cadres could effectively document screening and investigation outcomes in both manual and electronic formats.

d. Evaluation and Follow-up: Pre- and post-test evaluations measured participants' knowledge and skill acquisition following the training session. Evaluation results were analyzed using a paired t-test to assess the statistical significance of participants' improvement in knowledge and skills, with a threshold of $p < 0.05$. These evaluations were used to assess the overall effectiveness of the intervention.

5. RESULT AND DISCUSSION

a. Result

Through coordinated and ongoing cross-sectoral socialization activities, involving the sub-district head of Kebagusan, the head of Kebagusan sub-district health center, the TB program coordinator, *RW*/*RT* heads, and health cadres, TB screening education and training activities were conducted in RW-04 Kebagusan sub-district. This collaborative effort provided the following profiles (Table 1) and level of knowledge scores (Table 2).

Table 1. Characteristic of Health Cadres Champions

Variabel		n (%)
Gender	Female	15 (100)
Aged (yr)	18-44	9 (60)
	45-59	6 (40)
(π±SD, yr)		46 ± 4.37 yr
Education	Senior High School	15 (100)
Regular activity	Housewive	15 (100)

Profile of the majority of cadres are women, with an average age of 46 ± 4.37 years. Most have a high school formal education and are housewives, in addition to their roles as health cadres.

Picture 1. illustrates the educational and training activities conducted at the residence of the head of *RW 04*. These sessions were attended by 15 active health cadres, who conducted for in TB programme.

Picture 2. Education process activities

Prior to the training, cadres demonstrated a baseline level of knowledge based on their pre-test scores. However, notable gaps were observed in practical competencies, particularly in sputum collection, specimen storage, and manual completion of the TB.16RK form. Following the training, cadres conducted home visits as part of active case-finding efforts. They demonstrated improved proficiency in sputum collection and storage, accurate completion of both the TB.16RK form and its electronic version, and provided meaningful support in tuberculosis control activities. After training knowledge and practical skills, they conduct home visit to conduct active case finding. They can more effectively collect and store sputum samples, accurately fill out the TB.16 RK form and electronic-form version, and provide valuable support in TB control efforts. (see Picture 2).

Picture 3. Home visit for Contact Investigation and Active Case Finding

In evaluation session from table 2, showed the average pretest score of active TB cadres was 78, which surged to 98 post-training on TB screening and contact investigation, also highlighting significant level of knowledge and understanding were enhancement ($p<0.05$).

Table 2. Pre-Post Test Analysis of Health Cadres on the process of Training

Training result evaluation of activities		
Pre-test	Minimum score	60
	Maximum score	100

	Avergae score	78.67
Post-test	Minimum score	80
	Maximum score	100
	Average score	98.67

- **95% Confidence interval of the differences**

	Lower	Upper	t	df	Significance (2-tailed)*
Pre-test & Post-test	-27,25	-12,74	-5,91	14	< 0,001

note: *Paired T-test

Results indicate that the education and training activities effectively enhanced cadres' on TB screening and contact investigation skills. The p-value of <0.05 demonstrates that the observed score increase is statistically significant.

During the community-based targeted TB screening at *Kecapi RPTRA*, Kebagusan, organized by the Kebagusan sub-district Health Center, three new TB cases were detected. Additionally, during home visits conducted as part of the contact investigation, add two new TB index cases were identified.

Table 3. Sputum Smear Result

	Pot sample	Positive Result (new cases)	%
Active case finding at the *Kecapi RPTRA*	40	3	7.5
Home-visit contact investigation	8	2	2.5
Total new-cases			10

b. Discussion

The average age of active health cadres in this area is 46 years, placing them in the late adulthood category. Individuals in this age group are generally regarded as experienced and mature, earning greater trust from the community. Their credibility enables them to effectively facilitate TB case detection among the productive-age population. Despite most cadres being a house-wive, they remain highly committed as volunteer health workers, actively contributing to community health initiatives and disease prevention efforts. Their education influences an individual's abilities and continuous development. Health cadres, who voluntarily serve their communities, come from diverse educational backgrounds. Since cadre recruitment is voluntary and interest is limited, selecting only highly educated individuals is not feasible. To optimize their performance, non-formal education—such as regular training and workshops—can enhance their skills. Local health cadres play a vital role in bridging the healthcare system with the community, ensuring health

programs are more accessible and effective by using the local language (Purwanta et al.,2023; Doubeni et al.,2022).

The education and training sessions aimed to address these gaps by providing both theoretical knowledge and hands-on practice. The training included presentations on tuberculosis, pre-test assessments to gauge initial knowledge levels, TB contact investigation coaching, and the introduction of the contact investigation kit. This comprehensive approach ensured that the cadres received both the information and the practical experience needed to improve their skills. Through our support and monitoring, cadres have shown significant improvement, making them more capable of performing TB screening and contact investigation. This aligns with the concept of health transformation in primary care integration, which aims to improve accessibility, quality, and efficiency in healthcare services. A key aspect of this transformation is strengthening community engagement, playing a crucial role in implementing integrated primary healthcare services. By prioritizing promotive and preventive efforts, community empowerment encourages active participation, with local volunteers guiding and educating individuals toward healthier living behaviors (Kemenkes RI., 2023a; Atika., 2023; Kemenkes RI., 2018).

This analysis highlights the importance of continuous education and practical training for health cadres. By regularly updating their knowledge and skills, cadres can remain effective in their roles and adapt to new challenges in TB control. Ongoing support and supervision are also essential to reinforce the training and ensure that cadres can consistently apply what they have learned in the field. By focusing on these areas, health cadres can become more effective in their roles, leading to better TB case detection and management (Henderson et al., 2023).

One of the active case-finding (ACF) activities is screening. Unlike general ACF, we implement community-based targeted screening. Community-based ACF activities have been adopted by several countries, particularly developing ones. According to a study by Burke et al., (2021) and Bohlbro et al., (2021), ACF involves systematic community interventions to screen individuals for tuberculosis. TB screening can take various forms but requires interaction between the screener and the person being screened. It involves direct reporting from the community to health workers, which is crucial for identifying potential TB cases promptly. Active surveillance activities, such as active case finding, play a significant role in this process. ACF involves systematically screening individuals within the community to identify TB cases early, ensuring timely intervention and treatment, and ultimately helping to control the spread of tuberculosis. Mobilizing the community involves encouraging participation in TB screening activities by health facilities within the health cadres' work area. This includes assisting with verifying household and close contact data on TB symptom screening forms and contact history checks. Health cadres and health workers partner to conduct contact investigations in the field. The role of cadres is to support health workers in changing community behavior to promote Clean and Healthy Living Behavior (*PHBS*) for TB control, through education, case finding, contact investigations, and providing assistance (Syaripi A et al.,2018; Burke RM et al.,2021; Kemenkes RI.,2023d).

Examples of ACF interventions at primary health care include mobile screening, diagnostic clinics (such as sputum drop-off stations), training health workers and community volunteers to detect TB symptoms, and door-to-door TB screening with symptom interviews and sputum collection. Following up the empowerment of health cadres at the Kebagusan Health Center, cadres are now able to conduct TB contact investigations and accurately fill out the e-TB.16RK form, can also conduct active case-finding for at-risk individuals. To complement these community-driven initiatives, many health transformation strategies integrate technology and data-driven approaches, further enhancing service delivery, addressing health inequalities, and fostering proactive healthcare models (da Silva et al., 2024).

Tuberculosis remains a significant public health concern, and empowering health cadres is crucial for strengthening community-based prevention and care efforts. By equipping local health workers with the knowledge and skills to identify cases, provide education, and support treatment adherence, communities can enhance their response to TB and improve health outcomes. Notably, well-coordinated field activities have led to a 10.4% increase in case detection, based on findings from 48 sputum pots, demonstrating the tangible impact of strategic outreach in identifying new cases. Health cadres promptly carried out a contact investigation for those new cases. In accordance and stated that the role of cadres in contact investigation includes (Dirjen P2P., 2019):

1. Collecting contact data from the index case.
2. Screening symptoms and assessing TB risk factors for each adult contact.
3. Providing Communication, Information, and Education (IEC) to contacts with negative screening results.
4. Referring household contacts with positive screening results to the health center.
5. Educating contacts about TB disease, the importance of complete treatment, and home infection prevention and control.
6. Ensuring thorough verification of all contact investigations.

Field empowerment outcomes highlight the critical role of community involvement, emphasizing the need for TB program managers to foster cross-sectoral collaboration. This can be achieved through community-based initiatives such as conducting home-visit for active case finding (ACF). Provide TB cadres with TB contact investigation training sessions at least three times a year as a regular based. The program manager must also monitor the accuracy of contact investigation activities, such as ensuring the correct completion of the TB.16RK form, reminding cadres to conduct home visits for new index cases within one month of confirmation, and prompting household contacts of index cases to undergo sputum examination immediately.

Based result from evaluation test and field observation, the assessments showed significant improvement in understanding and abilities, with average scores rising considerably from pre-test to post-test, confirming successful knowledge and skill acquisition. Based on the Primary Service Integration program (*Integrasi Layanan Primer* / ILP) emphasizes improving the abilities of health cadres to provide basic

health services to the community by conducting home-visit (Kemenkes RI., 2023c; Kemenkes RI., 2023d). Cadres are responsible for identifying individuals who do not receive services, are non-compliant, or have health problems but do not follow treatment or early detection protocols. Community strengthening is critical in implementing Primary Health Service Integration, prioritizing promotive and preventive actions through community empowerment. Active participation and involvement of cadres in mobilizing and educating the community to adopt healthy behaviors are key elements for success. This involves ongoing coaching, training, motivation, and consistent monitoring by TB program officers, all aimed at improving their performance as TB cadres. Community involvement is essential for impactful public health interventions, ensuring they are both relevant and practically applicable.

However, the impact of these activities may not yet be fully optimal. One plausible assumption is that behavioral change and community ownership require sustained engagement beyond initial training. Factors such as persistent stigma, limited digital literacy, and uneven motivation among cadres and residents may hinder consistent follow-through. Additionally, the absence of integrated digital reporting systems and real-time feedback loops may reduce the efficiency of surveillance and follow-up.

Despite these challenges, the synthesis affirms that health education, when embedded in community service frameworks and supported by empowered cadres, can catalyze long-term improvements in public health literacy, disease prevention, and system resilience.

6. CONCLUSION

Active community participation and the strategic involvement of health cadres are essential to strengthening tuberculosis (TB) detection and treatment in urban settings. This study demonstrates that targeted, community-based training significantly improves cadres' knowledge and practical skills in TB screening, contact investigation, and case documentation. Post-training, cadres effectively conducted home visits, identified new TB cases, and supported early detection efforts—contributing directly to improved public health outcomes.

By integrating primary care services and empowering cadres as TB champions, this initiative supports Indonesia's health transformation agenda, which emphasizes preventive strategies, digital health integration, and equitable access to care. The findings affirm that investing in cadre capacity not only enhances TB control but also fosters sustainable community engagement and long-term health system resilience.

While the outcomes are promising, the impact may not yet be fully optimal. One plausible assumption is that behavioral change and community ownership require sustained engagement beyond initial training. Factors such as persistent stigma, limited digital literacy, and uneven motivation among cadres and residents may hinder consistent follow-through and reduce the effectiveness of surveillance and reporting.

This study provides a foundation for future research and policy development. Further investigation is recommended to explore the scalability of this approach across diverse urban and rural contexts, assess

long-term behavioral change among community members, and evaluate the integration of digital tools in supporting cadre-led TB surveillance and reporting systems.

7. REFERENCES

Amallia, R., Widyastuti, D., & Sari, R. M. (2021). Perilaku Masyarakat Dalam Pencegahan Tuberkulosis Di Wilayah Kerja Puskesmas Manyaran. *Media Kesehatan Masyarakat Indonesia, 17*(2), 123–130. Https://Ejournal.Undip.Ac.Id/Index.Php/Mkmi/Article/Download/38419/20322

Arini, D. (2012). Upaya Pemberdayaan Masyarakat Dalam Program Penanggulangan Penyakit Tuberkulosis Di Puskesmas Tambakrejo. *Jurnal Administrasi Kesehatan Indonesia, 1*(2), 45–52. Https://Journal.Unair.Ac.Id/Filerpdf/Akk46c9ba60e9full.Pdf

Atika, N. (2023). Several Pillars Of Health Transformation In Indonesia: From Resilience Pharmaceutical Supply, Health Insurance, Primary Health Care, To Digital Health. *Indonesian Journal Of Health Administration, 11*(2), 183–185. Https://Doi.Org/10.20473/Jaki.V11i2.2023.183-185

Bagcchi, S. (2023). Who's Global Tuberculosis Report 2022. *The Lancet Microbe, 4*(1), E20. Https://Www.Thelancet.Com/Journals/Lanmic/Article/Piis2666-5247(22)00359-7/Fulltext

Bohlbro, A. S., Hvingelby, V. S., Rudolf, F., Wejse, C., & Patsche, C. B. (2021). Active Case-Finding Of Tuberculosis In General Populations And At-Risk Groups: A Systematic Review And Meta-Analysis. *European Respiratory Journal, 58*(4). Https://Doi.Org/10.1183/13993003.00090-2021

Burke, R. M., Nliwasa, M., Feasey, H. R., Chaisson, L. H., Golub, J. E., Naufal, F., Et Al. (2021). Community-Based Active Case-Finding Interventions For Tuberculosis: A Systematic Review. *The Lancet Public Health, 6*(5), E283–E299. Https://Www.Thelancet.Com/Pdfs/Journals/Lanpub/Piis2468-2667(21)00033-5.Pdf

Chavez-Rimache, L., Ugarte-Gil, C., & Brunette, M. J. (2023). The Community As An Active Part In The Implementation Of Interventions For The Prevention And Care Of Tuberculosis: A Scoping Review. *Plos Global Public Health*. Https://Doi.Org/10.1371/Journal.Pgph.0001482

Chen, J. O., Qiu, Y. B., Rueda, Z. V., Hou, J. L., Lu, K. Y., Chen, L. P., Et Al. (2019). Role Of Community-Based Active Case Finding In Screening Tuberculosis In Yunnan Province Of China. *Infectious Diseases Of Poverty, 8*, 1–12. Https://Link.Springer.Com/Content/Pdf/10.1186/S40249-019-0602-0.Pdf

Da Silva, J. B., Espinal, M., Garcia-Saiso, S., Fitzgerald, J., Marti, M., Bascolo, E., & D'agostino, M. (2024). A Digital Transformation For Primary Health Care. *Bulletin Of The World Health Organization, 102*(1), 2. Https://Doi.Org/10.2471/Blt.23.290726

Dirjen P2p Kemenkes Ri. (2019). *Petunjuk Teknis Investigasi Kontak Pasien Tbc Bagi Petugas Kesehatan Dan Kader*. Https://Repository.Kemkes.Go.Id/Book/48

Doubeni, C. A., Nelson, D., Cohn, E. G., Et Al. (2022). Community Engagement Education In Academic Health Centers, Colleges, And Universities. *Journal Of Clinical And Translational Science, 6*(1), E109. Https://Doi.Org/10.1017/Cts.2022.424

Fabanyo, R., & Anggreini, D. (2022). Empowering Community Leaders To Prevent And Control Lung Tuberculosis. *Jurnal Promkes, 10*(2), 213–222. Https://Doi.Org/10.20473/Jpk.V10.I2.2022.213-222

Fitchett, J. R., Macpherson, P., & Corbett, E. L. (2015). Implementing The End Tb Strategy And The Intersection With The Sustainable Development Goals, 2016–2030. *Transactions Of The Royal Society Of Tropical Medicine And Hygiene*. Https://Doi.Org/10.1093/Trstmh/Trw010

Henderson, D. A. G., Donaghy, E., Dozier, M., Et Al. (2023). Understanding Primary Care Transformation And Implications For Ageing Populations And Health Inequalities: A Systematic Scoping Review Of New Models Of Primary Health Care In Oecd Countries And China. *Bmc Medicine, 21*, 319. Https://Doi.Org/10.1186/S12916-023-03033-Z

Herman, H., Sari, R. M., & Pratiwi, R. (2023). Effort To Control Pulmonary Tuberculosis (Tb) In The Community Through Tuberculosis Alert Health Cadre Training. *Journal Of Community Empowerment For Health, 6*(2), 123–130. Https://Doi.Org/10.22146/Jcoemph.77331

Kementerian Kesehatan Republik Indonesia. (2018). *Modul Pelatihan Bagi Pelatih Kader Kesehatan*. Https://Siakpel.Kemkes.Go.Id/Upload/Akreditasi_Kurikulum/Modul-1-30343738-3236-4936-B531-303232333939.Pdf

Kementerian Kesehatan Republik Indonesia. (2023a). *Profil Kesehatan Indonesia 2023* (Pp. 172–176). Https://Kemkes.Go.Id/Id/Indonesia-Health-Profile-2023

Kementerian Kesehatan Ri. (2016). *Peraturan Menteri Kesehatan Nomor 67 Tahun 2016 Tentang Penanggulangan Tuberkulosis*. Https://Peraturan.Bpk.Go.Id/Details/114486/Permenkes-No-67-Tahun-2016

Kementerian Kesehatan Ri. (2020). *Strategi Nasional Penanggulangan Tuberkulosis Di Indonesia 2020-2024*. Https://Tbindonesia.Or.Id/Wp-Content/Uploads/2021/06/Nsp-Tb-2020-2024-Ind_Final_Bahasa.Pdf

Kementerian Kesehatan Ri. (2023b). *Indonesian Health Transformation*. Https://Kemkes.Go.Id/Eng/Layanan/Transformasi-Kesehatan-Indonesia

Kementerian Kesehatan Ri. (2023c). *Peraturan Menteri Kesehatan Nomor Hk.01.07/Menkes/2015/2023 Tentang Petunjuk Teknis Integrasi Layanan Primer*. Https://Link.Kemkes.Go.Id/Multi/Links/Lists/Launchingilp

Kementerian Kesehatan Ri. (2023d). *Petunjuk Teknis Kegiatan Penemuan Kasus Tb Pada Kontak Serumah Dan Erat Pasien Tb Di 25 Kabupaten/Kota Tahap 2*. Https://Www.Tbindonesia.Or.Id/Wp-Content/Uploads/2023/12/2023_Fix_Final_Juknis-Skrining-Tbc-25kk-New-Tahap-2.Pdf

Macpherson, P., Shaunabe, K., Phiri, M. D., Rickman, H. M., Horton, K. C., Feasey, H. R., Et Al. (2024). Community-Based Active-Case Finding For Tuberculosis: Navigating A Complex Minefield. *Bmc Global And Public Health*, *2*(1), 1–14. Https://Link.Springer.Com/Content/Pdf/10.1186/S44263-024-00042-9.Pdf

Mahler, B., Băiceanu, D., Stoichiță, A., Dendrino, D., Mihai, M., Ciolan, G., Et Al. (2024). Active Case-Finding: An Effective Solution For Tuberculosis Detection In Vulnerable Groups—The Romanian Experience. *Risk Management And Healthcare Policy*, 1115–1125. Https://Www.Tandfonline.Com/Doi/Pdf/10.2147/Rmhp.S458722

Nursyamsi, N., & Arda, I. (2022). Pemberdayaan Masyarakat Dalam Upaya Pencegahan Penyakit Tuberculosis Paru. *Jurnal Pengabdian Kepada Masyarakat*, *3*(1), 15–22. Https://Pdfs.Semanticscholar.Org/2c6f/7fc4b3c580d32d287fe9138594e5c64fd7e1.Pdf

Pratama, A., Nugraha, M. H., Naofal, N. A., Anggara, N., Lumbantobing, P., & Sulastri, E. (2024). Community-Based Strategies For Tuberculosis Prevention And Control: Synergistic Approach In Reaching All Levels Of Society. *Journal Of Public Health*, *46*(4), E693–E694. Https://Doi.Org/10.1093/Pubmed/Fdae155

Purwanta, P., Sadewa, D. M. A., Sahrinanda, D., Rizky, I., Muthoharoh, I. M., & Yunistyaningrum, V. (2023). Enabling The Grass Root: Health Cadres Empowerment Program In Efforts To Prevent And Manage Hypertension In The Tanjung Sub-Village Community. *Jurnal Pengabdian Kepada Masyarakat*, *9*(3), 181–187. Http://Doi.Org/10.22146/Jpkm.86250

Syaripi, A., Suryenti, V., & Wantoro, G. (2018). Pengaruh Pendidikan Kesehatan Terhadap Upaya Pencegahan Penularan Tuberkulosis Paru Di Wilayah Kerja Puskesmas Muara Kumpeh. *Jurnal Akademika Baiturrahim Jambi*, *5*(2), 71–80. Https://Ubr.Ac.Id/Medias/Journal/71-80_Manuskrip_Vevi_S.Pdf

World Health Organization. (2008). *Community Involvement In Tuberculosis Care And Prevention: Towards Partnerships For Health* (Who/Htm/Tb/2008.397). Https://Apps.Who.Int/Iris/Bitstream/Handle/10665/43842/9789241596404_Eng.Pdf

World Health Organization. (2015). *Systematic Screening For Active Tuberculosis: An Operational Guide* (Who/Htm/Tb/2015.16). Https://Iris.Who.Int/Bitstream/Handle/10665/181164/9789241549172_Eng.Pdf

World Health Organization. (2018). *Latent Tuberculosis Infection: Updated And Consolidated Guidelines For Programmatic Management* (No. Who/Cds/Tb/2018.4). Https://Iris.Who.Int/Bitstream/Handle/10665/260233/9789241550239-Eng.Pdf