Bioethical Dilemma and Medicolegal Implications in the Management of Pulmonary Tuberculosis: A Professional and Humanistic Review

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ABSTRACT

Background: *Tuberculosis (TB) remains a major global health problem with high incidence and mortality rates, including in Indonesia, which ranks as the second-highest TB burden country worldwide. The prolonged duration of TB treatment is often challenged by patient non-adherence, social stigma, and conflicts between individual rights and public health interests. These conditions give rise to bioethical dilemmas and medicolegal implications in clinical practice.*

Objective: *To analyze bioethical dilemmas and medicolegal implications in the management of pulmonary tuberculosis through a professionalism and humanistic approach based on a clinical case illustration.*

Case Illustration: *A 42-year-old male with smear-positive pulmonary TB demonstrated poor adherence to treatment, refused to wear a mask, and objected to contact tracing due to concerns about social stigma and economic pressure. The patient was lost to follow-up in the second week of therapy due to drug side effects and work demands, thereby increasing the risk of disease transmission and drug resistance.*

Discussion: *This case highlights a conflict between bioethical principles, particularly patient autonomy versus beneficence, non-maleficence, and justice. In the context of infectious diseases, limitations on autonomy may be justified to protect public health. From a medicolegal perspective, healthcare providers have obligations for reporting and contact tracing in accordance with national regulations. A humanistic approach is essential to improve treatment adherence through empathetic communication, family-based education, and social advocacy to address social determinants of health. The integration of professionalism and humanism enhances patient trust and long-term treatment success.*

Conclusion: *The management of pulmonary tuberculosis requires a balance between respecting patient autonomy and protecting public health. Professionalism combined with a humanistic approach is essential to address bioethical dilemmas and minimize medicolegal risks, while improving treatment adherence and therapeutic outcomes.*

Keywords: *Pulmonary tuberculosis, bioethics, medicolegal, professionalism, humanistic approach.*

INTRODUCTION

Tuberculosis (TB) is still a major health problem in Indonesia and continues to present significant challenges in its control efforts. This disease is recorded as one of the highest causes of death due to infectious diseases in the world. TB is a chronic infectious disease caused by Mycobacterium tuberculosis bacteria, with transmission that occurs through droplets produced when the patient coughs, sneezes, or talks (Renalti Pujiani Harefa, 2026.).

Based on the Global Tuberculosis Report 2025 by the World Health Organization, the number of new TB cases globally in 2024 reached 8.2 million, an increase compared to 7.5 million cases in 2022 and 7.1 million cases in 2021. In the United States, data from the Centers for Disease Control and Prevention shows that there are 9,615 new TB cases in 2023, with an incidence of about 2.9 per 100,000 population, up from 8,300 cases in the previous year (Tobin & Tristram, 2024).

In Indonesia, estimates show that there are around 1,090,000 TB cases with a death rate of 125,000 per year, thus placing Indonesia as the country with the second highest TB burden in the world after India. This high incidence and death rate indicates that TB is not only a clinical problem, but also closely related to other determinant factors that have not been optimally handled, such as late diagnosis, low compliance with treatment, and less supportive social and environmental conditions. (Renalti Pujiani Harefa, 2026.).

Treatment of pulmonary tuberculosis requires a relatively long duration and must be carried out regularly, generally for 6 to 8 months. Non-compliance in taking Anti-Tuberculosis Drugs (OAT), either in the form of irregularity or premature discontinuation of therapy, is at risk of causing drug resistance, including double resistance. The success of therapy depends on the patient's compliance in following the treatment regimen consistently. According to the Ministry of Health of the Republic of Indonesia, one of the main factors for the failure of pulmonary tuberculosis treatment is the low level of patient compliance. Irregularity in undergoing therapy can result in treatment having to be repeated from the beginning, thus prolonging the duration of healing, increasing the cost burden, and increasing the risk of drug resistance. In addition to the compliance factor, social stigma towards tuberculosis patients is also a significant obstacle to the success of therapy. Stigma that comes from the community or the family environment can cause feelings of shame, psychological pressure, and the patient's reluctance to continue treatment, because it is considered as a source of disease transmission. Around 45% of patients reported a decrease in treatment motivation due to the stigma. The lack of family understanding about tuberculosis also worsens this condition, because it can increase the patient's social isolation and reduce the emotional support needed during the therapy process. Therefore, comprehensive educational efforts to families and communities are crucial to reduce stigma, strengthen social support, and ultimately increase the success of pulmonary tuberculosis treatment (Siti Nailah Kaltsum, Juli 2025).

The Indonesian Medical Council stipulates that medical practice must be based on four basic principles of bioethics, namely autonomy, beneficence, non-maleficence, and justice. The principle of autonomy refers to respect for the individual's right to express opinions, make decisions independently, and determine their life goals. The principle of beneficence emphasizes the obligation of medical personnel to provide maximum benefits for patients through actions that consider the balance between benefits and risks. The principle of non-maleficence contains the obligation not to cause injury, danger, or loss to the patient. Meanwhile, the principle of justice demands fair and equal treatment for every individual without discrimination (Flora, 2022).

In the context of pulmonary tuberculosis, patients can show an attitude of refusing treatment, not complying with therapy, or refusing contact tracking. This situation creates an ethical dilemma for medical personnel, because there is an obligation to respect the autonomy of patients, as well as a responsibility to protect public health from the risk of disease transmission. In these conditions, medical professionalism becomes the main foundation in decision making. Professionalism includes adequate clinical competence, ethical responsibility, effective communication skills, and integrity in clinical practice. In addition, a humanistic approach that views patients as individuals with a unique psychosocial context is crucial to improving therapeutic compliance and building a relationship of trust between patients and medical personnel (Puji Krisdiyantoro, April 2024).

The treatment of tuberculosis not only includes clinical aspects, but also involves bioetic and medicolegal considerations. In order to provide legal protection, the state sets various regulations, one of which is in the form of laws. In this context, legal protection for tuberculosis patients has a very important role. Law Number 17 of 2023 concerning Health was drafted to regulate various aspects of public health, including the management of infectious diseases such as tuberculosis.

The integration between professionalism and humanistic approach is a key element in the optimal treatment of tuberculosis. This article presents a case illustration as a means to illustrate the emergence of bioethic dilemmas in clinical practice, as well as examining how medicolegal implications can be anticipated through the application of the principles of professionalism and a proportionally humanistic approach.

CASE ILLUSTRATION

Case Illustration: Compliance Dilemma and Transmission Risk
Patient Identity : Name: Mr. S ; Age: 42 Years Old ; Job: Online motorcycle taxi driver. Social Conditions: Living in a densely populated settlement with his wife and three young children.
Main Complaints and Medical History :

Mr. S came to the health center with complaints of coughing up phlegm for 3 weeks, accompanied by a fever that disappeared and a significant weight loss. After a physical and supporting examination, the results of the Molecular Rapid Test (TCM) showed the results of MTB Detected, Rifampicin Resistance Not Detected (Drug Sensitive Lung TB) with positive BTA (+++).

Chronology of Problems (Bioetic and Medicolegal Dilemma) :
The doctor explained the diagnosis and obligation to undergo intensive treatment for at least 6 months. However, Mr. S indicates resistance to the therapy plan. He refuses to wear a mask consistently at home and objects if health workers do contact tracing (contact tracing) to his family.

Patient's Reason: Mr. S is worried that if his neighbor finds out about his illness, he will be ostracized (social stigma). He also felt unable to stop working to rest because he was the only breadwinner. "If I am honest and keep wearing a mask, people will not want to use my services anymore, my child will not eat," he said. In the second week of treatment, Mr. S stop

taking medicine (Loss to Follow Up/LTFU). He reasoned that the side effects of nausea that were felt interfered with his activities to earn a living. This puts the doctor in a dilemmatic position.

DISCUSSION

1. Analysis of Bioetic Aspects in the Treatment of Pulmonary TB

Autonomy: Respecting the patient's right to refuse medical action.
Beneficence & Non-Maleficence: Doctor's obligation to heal patients and prevent worsening into TB-MDR (Drug Resistant).
Justice: The obligation to protect the community (and the patient's family) from the risk of transmitting life-threatening infectious diseases.

Bioetic Principle Conflict: Autonomy vs Public Health.
Mr.'s Case S reflects the classic dilemma in medical bioethics, which is the tension between the principles of Autonomy and Justice. According to the basic principle of bioethics, Mr. S has the right to determine what is done to his body, including refusing treatment or disclosure of information. However, in the context of infectious diseases such as positive BTA Lung TB, the principles of Non-Maleficence and Justice become more dominant. TB transmission is no longer just a private matter, but a threat to public health. Based on public health ethics, the restriction of individual autonomy can be justified (justifiable) if it aims to prevent significant harm to the wider community (Hadjigeorgiou, 2021). The doctor must be able to explain that the "right to be untreated" ceases when the right violates "the right of others to be healthy."

2. Medical Legal Implications and Professional Obligations

Legally in Indonesia, Health Law No. 17 Year 2023 mandates that everyone who suffers from infectious diseases must make efforts to prevent transmission. For medical personnel, there is a legal obligation to do reporting (mandatory reporting) and contact tracking. Failure to comply with patients such as Mr. S (Loss to Follow Up status) increases the risk of Multidrug-Resistant Tuberculosis (MDR-TB), which medicolegally can be considered as a program failure if not followed up with the correct tracing procedure (Ministry of Health RI, 2020). Doctors need to document every educational effort and patient rejection in medical records as legal protection against negligence (negligence) in transmission prevention.

3. Humanistic Approach as a Clinical Solution

Therapy failure on Mr. S is often not caused by medical factors alone, but social determinants of health (social determinants of health). The use of a humanistic approach requires doctors to see Mr. S is not only as a "bacterial carrier", but as the head of the family who is squeezed by the economic burden. The social stigma that Mr. is worried about. S is real. Research shows that stigma is linearly related to the level of drug non-compliance. This is where the professionalism of medicine goes beyond technical competence; doctors must act as advocates for patients. This approach includes:
Empathetic Communication ; Acknowledge the patient's economic difficulties without judging.

Social Justice; Helping access to nutritional assistance or the National Health Insurance (JKN) scheme to reduce the burden of indirect costs.
Family Based Education: Changing the perception of contact tracing from an "investigation" to "protection for loved ones (Prasad, 2018).

Applied Humanistic Strategies:
Digital/Social Empathy: Doctors educate that TB is not a "aib" but a medical disease that can be completely cured (Stigma Eradication).
Shared Decision Making: Involving Mr. S in managing the time of taking medicine to minimize the impact of side effects on his working hours.
Social Advocacy: Doctors work together with health cadres or local community leaders to provide nutritional/economic support (if available), so that patients feel supported systemically, not just medically ordered.

4. Synergy of Professionalism in Practice

The integration between professionalism and humanism creates trust. Without trust, patients tend to hide symptoms or fake compliance. Professionalism ensures that medical standards are met, while humanism ensures that those standards can be carried out by patients in their real-life context. Collaborative efforts between doctors, nurses, and community cadres are very important to ensure the success of long-term treatment (World Health Organization, 2023). In dealing with Mr. S, the professionalism of doctors is tested not only clinically, but also communicatively. Based on the Indonesian Medical Code of Ethics and health regulations of the Health Law No. 17 Year 2023, doctors have the obligation to report certain infectious diseases to the health authorities, but still keep the patient's confidentiality as far as possible (Kode Etik Kedokteran Indonesia, 2012) (UU Kesehatan No. 17 Tahun 2023).

CONCLUSION

Treatment of pulmonary tuberculosis is a medical challenge that inherently involves tension between individual rights and social responsibility. Based on the case analysis of Mr. S, it can be concluded that the success of therapy depends not only on the accuracy of the drug regimen, but also on the doctor's ability to navigate the bioetic dilemma. The principle of patient autonomy must be respected, but in the context of infectious diseases that threaten public health, the principles of justice and non-maleficence provide ethical and legal legitimacy for medical personnel to carry out measurable intervention actions to protect the wider community.

Medicolegally, compliance with national regulations such as the Health Law No. 17 Year 2023 is an absolute professional obligation for doctors to avoid negligence claims. However, rigidly enforcing the rules without considering the human dimension is actually at risk of triggering patient resistance. Therefore, the integration of a humanistic approach that includes empathy, effective communication, and understanding of social determinants becomes a crucial bridge. This approach is proven to be able to increase patient trust (trust), which in the end will increase therapy compliance and reduce the loss to follow-up rate.

The professionalism of doctors in the future must reflect the balance between sharp clinical competence and high ethical sensitivity. By placing patients as partners in treatment through shared decision making, doctors not only play a role as biological healers, but also as agents of social change that contribute to the elimination of tuberculosis globally.

REFERENCES

Flora, S. (2022). *Etika dan Hukum Kesehatan.* JDS Penerbitan dan Percetakan.

Hadjigeorgiou, A. &. (2021). The ethics of tuberculosis management: From autonomy to common good. . *Journal of Bioethical Inquiry, 18(2)*, 245-258.

Kementerian Kesehatan Republik Indonesia. (2020). Strategi Nasional Penanggulangan Tuberkulosis di Indonesia 2020-2024. Direktorat Jenderal Pencegahan dan Pengendalian Penyakit

Kode Etik Kedokteran Indonesia 2012.

Organization, W. H. (2023). *Global Tuberculosis Report 2023.*

Prasad, R. S. (2018). Adverse drug reactions in tuberculosis and their management. *Indian Journal of Tuberculosis, 65(4),* , 337-345.

Puji Krisdiyantoro, S. R. (April 2024). *Aspek Hukum Penanganan Pasien Tuberkulosis Berbasis Perlindungan Hak Asasi Manusia.* Jurnal Syntax Admiration, Vol. 5, No. 4.

Renalti Pujiani Harefa, A. D. (2026.). TBC Pada Masyarakat Puskesmas Kecamatan Gunungsitoli Utara Kota Gunungsitoli Tahun 2025. *Jurnal Pengabdian Masyarakat dan Riset Pendidikan, 4(4),* , 22991-23000.

Siti Nailah Kaltsum, A. T. (Juli 2025). Hubungan Antara Stigma Sosial Dan Kepatuhan Terhadap Terapi Tuberkulosis: Literature Review. *Jurnal Medika Hutama Vol 06 No 04*.

Undang-Undang Republik Indonesia Nomor 17 Tahun 2023 tentang Kesehatan.

Tobin , E. H., & Tristram, D. (2024). *Gambaran Umum Tuberkulosis.* StatPearls Publishing LLC.