

Assisted Reproductive Technology Regulations in Indonesia: A Systematic Review from the Perspectives of Health Law and Islamic Fiqh in the Archipelago

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Abstract: Assisted Reproductive Technology (ART) raises complex legal, ethical, and religious implications in Indonesia. This study aims to analyze the synchronization between positive health regulations in Indonesia and the Islamic Fiqh perspective in the archipelago regarding ART practices. This study uses a systematic literature review method of secondary data sources, including scientific literature, the latest legislation (Law No. 17 of 2023; Government Regulation No. 28 of 2024; Minister of Health Regulation No. 2 of 2025), and the Indonesian Ulema Council (MUI) fatwa. The collected data were analyzed using thematic synthesis. The main results show a strong synchronization between positive law and Fiqh. The new regulations explicitly prohibit the practice of gamete donation (sperm/ovum/embryo) and surrogacy, which is fully in line with the MUI Fatwa based on the principle of protecting lineage (hifdz an-nasl). A key finding is the inclusion of an explicit clause in Law 17/2023 and Government Regulation 28/2024 that the implementation of ART "does not conflict with religious norms," which proves the absorption of Fiqh values into state law. In conclusion, TRB regulations in Indonesia are not secular, but actively integrate the values of Tamadun Islam Nusantara to strengthen the social order and protect lineage. This review also identifies 'gray areas' such as sex selection, which require further regulatory review.

Keywords: assisted reproductive technology, health law, Indonesian Islamic jurisprudence, regulation, norm synchronization

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Introduction

Advances in medical science and technology, especially in the last ten years, have brought about various innovations that offer solutions to various health problems at the global level. One of the most significant clinical and social challenges is the problem of infertility, which is no longer seen as fate, but as a medical condition that can be treated. In Indonesia, the significant prevalence of infertility has encouraged the adoption and development of Assisted Reproductive Technology (ART) (Santoso & Wijaya, 2021). Clinical practices such as *In Vitro Fertilization (IVF)* and *Intrauterine Insemination (IUI)* are now routine services in various health centers. This increase in utilization is reflected in data from the Indonesian In Vitro Fertilization Association (PERFITRI, 2023), which shows an upward trend in *IVF* cycles each year, indicating a shift in social acceptance and increased accessibility to services.

However, this technological advancement does not exist in a legal and ethical vacuum. The implementation of TRB has complex implications that go beyond the medical domain, deeply affecting legal, ethical, and religious aspects. From a health law perspective, TRB raises a series of crucial questions regarding the legal status of embryos, the rights and obligations of genetic parents versus social parents, the clarity of lineage (nasab), and the legality of derivative practices such as gamete donation (sperm and ovum) and surrogacy (Handayani, 2020). These issues require a clear, comprehensive, and adaptive regulatory framework to provide legal certainty and protection for all parties involved, including the child born.

At the same time, as the nation with the largest Muslim population in the world, Indonesia's attitude towards advances in medical technology is greatly influenced by the values that have developed within its society. This context places the "Islamic Heritage of the Archipelago" as the foundation of social and ethical values. Unlike a purely secular approach, the Islamic scientific tradition in this region actively engages in dialogue with the progress of the times. This dialogue is articulated through institutions such as the Indonesian Ulema Council (MUI), which formulates Fiqh (Islamic jurisprudence) views to address contemporary bioethical dilemmas. The fatwas issued not only serve as moral guidance for Muslim individuals, but also often function as a source of material values in the process of legislation and the formation of positive law in Indonesia (Pratama, 2022).

The analysis in this study is based on a theoretical framework that intersects positive law and Islamic law, with a focus on *Maqasid Syariah* (the objectives of Sharia). In particular, the principle of protection of offspring (*hifdz an-nasl*) is the main analytical tool for understanding the *ratio legis* (reason) behind the prohibitions in Fiqh, which are then absorbed by state law. The relevance of this study lies in the analysis of the intersection between the two normative systems: positive health law formulated by the state and Fiqh rooted in the scientific tradition of Islam in the archipelago.

A brief literature review shows that previous studies tend to focus on separate aspects. A number of studies focus on the clinical aspects of TRB, such as effectiveness and embryo handling (e.g., Lestarina, 2020). Other studies focus on positive legal aspects, but often still base their findings on old regulations (Law No. 36/2009), such as child protection (e.g., Adi, R., 2019). Meanwhile, Fiqh studies are often normative-doctrinal in nature (e.g., Abdullah, M.F., 2023) and separate from the implementation of positive law. There is still a gap in the literature that systematically analyzes the synchronization between the latest regulations (Law No. 17/2023 and Government Regulation No. 28/2024) and the views of Fiqh Islam Nusantara. Thus, this study aims to bridge this gap through a systematic review of TRB regulations in Indonesia and analyze their implementation from the perspectives of positive health law and Nusantara Islamic Fiqh.

Research Method

This study applies a qualitative approach with a systematic *literature review (SLR)* design. The SLR design was chosen for its superior ability to identify, evaluate, and synthesize data from various types of sources (scientific literature, legal documents, and fatwas) in order to answer specific research questions regarding the synchronization of TRB regulations.

The data sources in this study are secondary data consisting of scientific literature (journal articles, theses, academic books) and normative documents (laws and regulations and fatwas). Data

collection techniques were carried out through systematic literature searches on several databases. For scientific literature, international databases (*Google Scholar*) and national databases (Garuda, SINTA) were used. Normative data searches were conducted on the websites of the National Legal Documentation and Information Network (JDIH), the Ministry of Health's JDIH, and the official website of the Indonesian Ulema Council (MUI).

The search strategy used a combination of *Boolean* keywords tailored to each database. Examples of search terms used include: ("Assisted Reproductive Technology" OR "Test Tube Baby" OR "IVF") AND ("Health Law" OR "Regulation" OR "Legality" OR "Ethics") AND ("Indonesia"). Separate strings are used to search for fatwas, such as: ("MUI Fatwa") AND ("Test-Tube Baby" OR "Artificial Insemination").

The research instrument used was selection criteria. The inclusion criteria are: (1) Articles discuss legal, regulatory, or ethical/Fiqh aspects related to TRB; (2) The research context is Indonesia; (3) The type of publication is a journal article, thesis/dissertation, academic book, legislation, and fatwa; (4) Publications are in Indonesian or English. Exclusion criteria are: (1) Articles that purely discuss clinical/medical aspects of TRB without legal or Fiqh analysis; (2) Non-scientific opinion articles, news, or blogs.

Data analysis techniques were carried out in several stages in accordance with the thematic synthesis methodology. The first stage was familiarization, in which all complete texts were read repeatedly. The second stage is coding, in which relevant data from articles, laws, and fatwas are extracted and coded (e.g., "prohibition of gamete donation," "embryo status," "requirements for a valid marriage"). The third stage involves grouping these codes into descriptive themes (e.g., "Latest Positive Legal Provisions," "MUI Fiqh Provisions"). The final stage is the development of analytical themes, where synthesis is carried out to identify patterns of relationships between themes, such as "Synchronization of Legal and Fiqh Norms" and "Identification of Regulatory Gray Areas." The analysis focuses on comparing and synchronizing the two perspectives to draw conclusions.

Results and Discussion

TRB Regulatory Map in Indonesia: Positive Legal Framework: Affirmation of Norms in the Latest Legislation

This review identifies fundamental legislative updates that replace the previous legal framework (Law No. 36 of 2009). The main legal basis is currently Law No. 17 of 2023 concerning Health (Government of the Republic of Indonesia, 2023). This law is further clarified through its implementing regulations, namely Government Regulation (PP) No. 28 of 2024 (Government of the Republic of Indonesia, 2024) and the latest technical regulation, Minister of Health Regulation No. 2 of 2025 (Ministry of Health of the Republic of Indonesia, 2025).

This new legal framework retains the substance of the prohibition from previous legislation. TRB practices are only permitted on a limited basis for legally married couples, using sperm and egg cells from both partners, and the resulting embryo is implanted into the uterus of the wife who provided the egg (Adi R, 2019).

More importantly, this new regulation explicitly prohibits practices involving third parties. This prohibition includes: a. Gamete and Embryo Donors: The use of sperm, eggs, or embryos from donors (third parties) is explicitly prohibited. b. Surrogacy: The practice of surrogacy, in which a couple's embryo is implanted in another woman's womb, is prohibited by law in Indonesia (Sujadmiko et al., 2023).

The most crucial legislative finding from this review is the affirmation of normative synchronization. Unlike previous laws, Article 57 paragraph (2) of Law No. 17 of 2023 explicitly states that assisted reproduction can only be carried out "based on health considerations and does not conflict with religious norms" (Government of the Republic of Indonesia, 2023). This clause is reinforced in Article 111 paragraph (3) of Government Regulation No. 28 of 2024 (Government of the Republic of Indonesia, 2024). The addition of the phrase "does not conflict with religious norms" is a key finding that forms the basis of the synchronization analysis in this study (Taubah et al., 2024).

The Framework of Nusantara Islamic Fiqh: Consistency of MUI Fatwas

From the perspective of Indonesian Islamic jurisprudence, the main guidance comes from the Indonesian Ulema Council (MUI) fatwas. A review of relevant fatwas (e.g., the 1979 fatwa) shows a very clear and consistent position:

- a. Conditional permissibility (Mubah): The practice of in vitro fertilization (*IVF*) or artificial insemination is permissible (mubah) on the absolute condition that the sperm and egg cells come from a religiously valid husband and wife, and the embryo is implanted back into the womb of the valid wife (East Java Indonesian Ulema Council, 2019).
- b. Absolute Prohibition (Haram): TRB practices are absolutely prohibited if they involve a third party. The fatwa explicitly prohibits the use of sperm or egg donors (considered equivalent to adultery because it involves mixing lineage) and prohibits the practice of *surrogacy* (Junaidi & Syafi'ie, 2019; Sujadmiko et al., 2023).

The philosophical reason (*illat*) behind this prohibition is very fundamental, namely the application of the principle of *Sadd az-Zari'ah* (closing the door to evil). The main objective is to protect one of the five main objectives of sharia (*Maqasid Syariah*), namely the protection of lineage and family honor (*hifdz an-nasl*) (Vitrianingsih, 2025).

Discussion

Synchronization Analysis: The Absorption of Fiqh Values in Positive Law

This discussion shows that TRB regulations in Indonesia are not purely secular legal products. There is a clear synchronization in which the country's positive laws (Health Law and Government Regulation) substantially adopt and legalize the values contained in Islamic Fiqh (MUI Fatwa). This phenomenon can be analyzed as a form of transformation of fatwas into positive law, in which religious values believed by the majority of society serve as a material source in the formation of national legislation (Pratama, 2022).

The finding that Law No. 17 of 2023 and Government Regulation No. 28 of 2024 now explicitly include the requirement of "not contradicting religious norms" (Taubah et al., 2024) is clear evidence of *legal absorption*. This shifts the paradigm from what was previously only an "ethical consideration" to an equivalent "legal obligation." These two normative systems (state law and Fiqh) now formally agree on one crucial point: a total ban on gamete donation and *surrogacy* in order to protect the clarity of lineage (Ramadhani et al., 2020).

Contribution to Strengthening the Values of Islam Nusantara

This legal synchronization directly contributes to strengthening the "Heritage of the Islamic Civilization of the Archipelago," which is the main relevance of this study. TRB regulations in Indonesia serve as a modern legal mechanism to affirm the fundamental values of Islamic civilization, namely the protection of lineage (*hifdz an-nasl*).

From an Islamic bioethical perspective, preserving lineage is central to the prohibition of donation. The mixing of gametes from third parties is considered to undermine legitimate family lineage, which has direct implications for the fundamental rights of children, such as guardianship (*wilayah*) and inheritance rights (Abdullah, M.F, 2023). By prohibiting donors and *surrogacy*, Indonesian positive law (informed by Fiqh) prevents the commodification of the womb (Maulida & Barkatullah, 2025) and legal uncertainty regarding children, particularly in relation to lineage, guardianship, and inheritance (Komala, 2018; Vitrianingsih, 2025). Thus, Indonesian health law actively participates in preserving the core values of Islamic civilization in the face of modern medical technology challenges.

Identification of 'Gray Areas' and Clinical Implications (Regulatory Gaps)

Although synchronization on the issues of donors and *surrogacy* is clear, this review identifies several crucial 'gray areas'. These areas generally involve new clinical technological developments that are not yet specifically regulated by the legal framework (laws/government regulations) or

contemporary Fiqh in Indonesia. Clinical Dilemma of Sex Selection: *First, Pre-implantation Genetic Diagnosis (PGD) and Screening (PGS)* technologies clinically enable the selection of embryos based on sex. However, this practice raises ethical dilemmas, especially if done for non-medical reasons (e.g., *family balancing* or cultural preferences). This review found that Law No. 17/2023 and Government Regulation No. 28/2024 do not specifically regulate *sex selection*. This legal vacuum places OB-GYN clinicians in a difficult position, between patient demands and potential violations of professional ethics. On the one hand, there is no explicit legal prohibition; on the other hand, this practice risks gender bias and discrimination (Taubah et al., 2024). Second, the legal status of *Embryo Cryopreservation*. Third, modern *IVF* clinical practices rely heavily on *embryo cryopreservation* (freezing of surplus embryos) to improve program effectiveness and cost efficiency for patients (Lestarina, 2020). However, this review found that regulations in Indonesia, including the new law, do not yet provide detailed legal guidance on the status of frozen embryos. Fundamental legal questions that remain unanswered include: (1) What is the maximum storage period for embryos? (2) What is the ownership status of embryos in the event of divorce or death of one or both partners? (3) What is the legal status of unused embryos (abandoned embryos)? Can they be donated for research or must they be destroyed? This regulatory vacuum has the potential to cause complex civil disputes in the future (Handayani, 2020). Fourth, the regulatory gap in illegal *surrogacy* practices

Although the Health Law implicitly prohibits *surrogacy*, there is no specific law that comprehensively regulates *surrogacy*, including specific criminal sanctions for the parties involved (other than general prohibitions for health workers) (Sujadmiko et al., 2023). As a result, reports of illegal 'under-the-table' practices continue to emerge (Maulida & Barkatullah, 2025). These illegal practices create even greater legal problems: children born through surrogacy risk not having a clear legal status (because the birth mother is the legal mother under civil law), and surrogate mothers are in a very vulnerable position without legal protection (Komala, 2018).

This 'gray area' requires stricter legal and ethical oversight of healthcare practitioners and professional organizations (Vitrianingsih, 2025). At the same time, it affirms that Indonesia's TRB legal framework, which now explicitly integrates "religious norms," is a successful example of incorporating the values of Nusantara Islamic Fiqh to strengthen the social order (Pratama, 2022).

Conclusion

This systematic review successfully maps and analyzes the TRB regulatory framework in Indonesia after health legislation reform. The main conclusion is that TRB regulations in Indonesia show strong and increasingly explicit synchronization between positive health law and the views of Fiqh Islam Nusantara. This is evidenced textually through legislative updates, particularly Law No. 17 of 2023 concerning Health and Government Regulation No. 28 of 2024, which now explicitly include a clause stating that the implementation of TRB "does not conflict with religious norms."

The affirmation of this clause is formal evidence of legal absorption, whereby the values of Fiqh articulated by the MUI Fatwa—particularly the absolute prohibition on gamete donation and surrogacy—have been substantially adopted into state law. This study confirms that TRB regulations in Indonesia do not operate in a purely secular space. Instead, these regulations actively affirm the fundamental values of the Islamic Heritage of the Indonesian Archipelago, namely the protection of lineage (hifdz an-nasl), as the primary philosophical foundation in facing the challenges of modern medical technology.

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