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Midwives' Legal Authority for Ultrasonography in Obstetric Emergencies at Community Health Centers

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Abstract

Indonesia's maternal mortality ratio remains high, largely due to delayed detection of obstetric complications at primary health centres. Ultrasonography is vital for early diagnosis and referral, yet regulations prohibit midwives the primary maternal care providers from operating ultrasound machines, even in emergencies. This study analyses the legal framework, contrasts it with field practices, and compares it with international standards using normative juridical methods (statutory, comparative, and case approaches). The findings reveal a sharp conflict, regulations explicitly reserve ultrasound operation for physicians and radiologists, while midwives routinely perform basic scans out of necessity in areas without doctors, creating a legal grey area that exposes them to professional sanctions, civil claims, or criminal charges regardless of patient outcome. This uncertainty encourages defensive practice and contributes to delays that cost lives. The study concludes that continued prohibition is unsustainable. Urgent regulatory reform is needed to grant certified midwives limited, clearly defined authority to perform obstetric point-of-care ultrasound through a new specific ministerial regulation that includes national training, restricted scope, and explicit legal protection. Such reform would align law with clinical reality and international best practice, provide legal certainty for midwives, and accelerate the reduction of preventable maternal deaths in Indonesia.

Keywords
Health Regulation, Legal Framework, Maternal Mortality, Midwives, Ultrasonography, POCUS.

1. Introduction

The fulfillment of human rights, including the right to health, is a central mandate of Indonesia, as stated in Article 28H(1) of the 1945 Constitution (Constitution of the Republic of Indonesia in 1945). This obligation is implemented through a complex public health system, where midwives serve as key health workers responsible for safeguarding maternal and child health and addressing persistently high maternal and neonatal mortality rates (Ministry of Health of the Republic of Indonesia, 2021).

Despite decades of interventions, Indonesia's Maternal Mortality Ratio (MMR) remains among the highest in Southeast Asia, with 189 deaths per 100,000 live births recorded in the 2020 Long-Form Population Census (Bappenas, 2022; UNFPA Indonesia, 2025). This means a woman dies approximately every hour from pregnancy- or childbirth-related complications (UNFPA Indonesia, 2025), primarily due to hemorrhage, hypertensive disorders (eclampsia/pre-eclampsia), infection, and obstructed labor (WHO, 2023; Ministry of Health of the Republic of Indonesia, 2024). A major underlying factor, especially in Indonesia's archipelagic setting, is the delay in receiving timely and adequate care.

The "three delays" model (delay in seeking care, delay in reaching a facility, and delay in receiving appropriate care) provides a robust framework for understanding this crisis (Thaddeus & Maine, 1994). The third delay, the delay in receiving appropriate care at the facility, is often precipitated by a critical antecedent: a failure of rapid and accurate diagnosis at the primary care level. Community health centers are the designated first point of contact for the majority of the population. In obstetric emergencies, the ability to swiftly differentiate a high-risk pregnancy from a low-risk one is paramount. This is where the diagnostic capacity of Ultrasonography (USG) becomes indispensable.

USG, particularly Point-of-Care Ultrasound (POCUS), a focused, goal-oriented examination performed by the clinician at the bedside, is a transformative tool in obstetrics (World Federation for Ultrasound in Medicine and Biology (WFUMB, 2022). It enables the immediate detection of critical, life-threatening conditions such as placenta previa, malpresentation, multiple gestations, or Intrauterine Fetal Death (IUFD) (Rani, 2024). In the context of Community health centers, often located in remote areas with significant geographical barriers to referral hospitals, POCUS is not a luxury; it is a fundamental instrument for effective triage. The Indonesian government has recognized this, initiating programs to equip numerous Community health centers with USG devices.

The deployment of USG technology has created a legal and ethical dilemma. While equipment is available, midwives, the primary users, lack legal authority. Numbering over 350,000 and handling most Antenatal Care (ANC) visits and deliveries midwives face a duty conflict: ethical imperatives (beneficence) and the principle *salus populi suprema lex esto* compel them to use USG to save lives, yet regulations reserve this competence for doctors and radiology technicians (Nurdahniar, 2022; UNFPA Indonesia, 2025).

This disjuncture between field necessity and legal doctrine creates a "legal grey area" (Rani, 2024). A midwife who uses USG to facilitate an emergency referral may save a life but simultaneously commits an act that could be construed as ultra vires (beyond her legal authority), exposing her to administrative sanctions, civil malpractice claims, and even criminal prosecution for practicing without requisite authority (Nurmila et al., 2025). Conversely, a midwife who adheres strictly to the prohibitive regulation and fails to use an available USG device, resulting in a delayed referral and a poor outcome, could potentially be deemed negligent for failing to utilize available diagnostic tools.

Previous studies have highlighted this regulatory ambiguity. Endjun (2018) emphasized the technical importance of USG for detecting complications. Nurdahniar (2022) specifically analyzed the limitations imposed by the Minister of Health Regulation Number 24 of 2020 on radiology services. Furthermore, reports from Bappenas (2022) and empirical studies such as Tarigan et al. (2019) confirm that midwives are, in fact, using USG in the field, often after receiving informal training, driven by sheer necessity. The Indonesian Midwives Association (*Ikatan Bidan Indonesia*/IBI) has acknowledged this, issuing internal recommendations for limited USG use since 2013 (IBI, 2013). However, a professional association's guideline lacks the legal force to supersede a ministerial regulation, leaving the midwife legally unprotected.

This study distinguishes itself by moving beyond a simple description of the problem. It provides a comprehensive normative juridical analysis of the legal gap itself, triangulating Indonesia's legal doctrine (*das sollen*) against its empirical realities (*das sein*) and rigorous international benchmarks. The novelty of this research lies in its specific focus on the emergency context within community health centers and its use of a comparative legal approach to posit a concrete, viable path for regulatory reform. This article aims to analyze the current legal framework governing the authority of midwives to use USG in obstetric emergencies at community health centers, assess the relevance and applicability of this framework in relation to empirical field practices, identify the legal implications of the existing regulatory gap, particularly concerning legal certainty and professional liability, and propose a policy reformulation based on international best practices. This research is vital for policymakers, healthcare administrators, and legal scholars seeking to align Indonesia's health regulations with its urgent public health objective of reducing maternal mortality.

2. Methods

This study employs a normative juridical research methodology, which focuses on the systematic analysis of legal norms, principles, doctrines, and regulations to identify gaps, contradictions, and potential reforms (Marzuki, 2017). The primary objective is to examine the ideal legal framework (*das sollen*) governing midwives' authority to perform USG in obstetric emergencies at Indonesian primary health centers (community health centers), while contrasting it with empirical realities (*das sein*) and international standards. This doctrinal approach is enriched by multiple analytical lenses to ensure comprehensive evaluation, allowing the research to move beyond mere description toward prescriptive recommendations aligned with public health imperatives.

The research integrates several complementary approaches to achieve analytical depth. First, a statute approach is applied through hierarchical inventory and systematic interpretation of prevailing legal instruments, ranging from the 1945 Constitution and Law Number 17 of 2023 concerning Health to subordinate regulations such as Minister of Health Regulation Number 21 of 2021 on Antenatal Care, Number 24 of 2020 on Clinical Radiology Services, and Number 2 of 2025 on Reproductive Health Efforts. Second, a comparative approach is utilized to benchmark Indonesia's regulatory model against established international frameworks, particularly those of the United Kingdom (National Health Service and Health and Care Professions Council protocols for midwife sonographers) and Australia (NMBA-endorsed midwives authorized to order and interpret diagnostic imaging), as well as global guidelines from the World Health Organization (WHO) and the International Confederation of Midwives (ICM). Third, a case approach contextualizes the normative findings by incorporating documented real-world practices drawn from secondary empirical sources, including government reports and prior field studies such as Sugiharto et al. (2011), Tarigan et al. (2019), and Rani

(2024), thereby illustrating the practical consequences of regulatory ambiguity in remote and emergency settings.

Data were collected exclusively through library research and rigorous document review. Primary legal materials consist of binding norms from the Indonesian legal hierarchy, while secondary materials encompass academic textbooks on health law, peer-reviewed journal articles, professional association guidelines, notably IBI Congress Decision 2013, and official reports from institutions such as National Development Planning Agency (*Badan Perencanaan Pembangunan Nasional*/Bappenas) and the Ministry of Health. Tertiary materials, including legal dictionaries and encyclopedias, were consulted to ensure terminological precision and conceptual clarity.

The analysis was conducted qualitatively using descriptive-analytical techniques. This involved a detailed description of each norm's content, examination of synchronic and diachronic relationships among regulations, identification of legal conflicts (*antinomy*) and voids (*rechtsvacuüm*), and formulation of evidence-based policy recommendations. By triangulating doctrinal analysis with comparative insights and empirical realities, the study provides a robust foundation for proposing concrete regulatory reform that enhances legal certainty, protects midwives from undue liability, and ultimately contributes to reducing Indonesia's persistently high maternal mortality ratio.

3. Results and Discussion

3.1. Current Legal Framework on Midwives' Use of Obstetric Ultrasonography

The normative analysis clearly shows that Indonesia's legal framework actively excludes midwives from having the authority to perform USG. This is not a vague omission or unclear wording, but a direct and repeated prohibition found in several key regulations. The formal legal position (*das sollen*) is therefore one of strict exclusion. Law Number 17 of 2023 concerning Health, the new omnibus health law, establishes the general principles for all health workers. While the law requires every health worker to act according to professional standards and ethics, it also contains important (and somewhat contradictory) provisions on emergencies. Article 191(1) states that in emergency situations, health personnel are authorized to take any medical action needed to save the patient's life in accordance with their competence. Article 191(3) gives limited protection from criminal or civil prosecution for good-faith actions taken in real emergencies. However, the law never explains what "competence" exactly includes in an emergency, especially when it comes to diagnostic tools such as ultrasound (Tamon et al., 2025). This silence leaves the burden of proof on the individual health worker and pushes the matter to lower regulations.

Those lower regulations are far more restrictive and create a real barrier. Minister of Health Regulation Number 21 of 2021 concerning Antenatal Care sets the national standard for pregnancy check-ups. Article 16(1) explicitly states that antenatal USG examination must be performed "by a medical doctor or an obstetrician-gynecologist". No exception is made for midwives, not even for basic screening purposes. In practice, this regulation makes the physician the only person legally allowed to do an ultrasound during maternal health services.

The exclusion becomes even stronger with Minister of Health Regulation Number 24 of 2020 concerning Clinical Radiology Services. This regulation places USG a safe, non-ionizing tool under the same heavy rules as X-rays and CT scans. Article 20 clearly limits operators of radiodiagnostic equipment (including USG) to only three groups: radiographers with D-III or D-IV education, radiology specialists, or other doctors who have received special training (Minister of Health Regulation Number 24, 2020). Midwives do not fit into any of these three categories,

so a midwife who performs an ultrasound scan is technically practising radiology without a licence.

In this restrictive environment, two counter-arguments are sometimes used to defend midwives, but both are legally weak. The first is the 2013 Congress Decision of IBI that internally allows midwives to perform limited USG for fetal presentation and viability checks. Unfortunately, in the Indonesian legal hierarchy, a decision of a professional organization has much lower force than a Minister of Health Regulation, so it cannot protect a midwife if she is reported (IBI, 2013). The second possible defence comes from the newer Minister of Health Regulation Number 2 of 2025 on Reproductive Health Efforts. It says that in remote Community health centers or during emergencies, health workers may carry out "supporting actions" for early detection. The language sounds helpful, but it is too vague it never mentions ultrasound by name, and it does not cancel the clear prohibitions in the two older regulations.

From legal theory, the principle of legal certainty (*Rechtssicherheit*) demands that laws are clear, consistent, and predictable, and free from serious contradiction (Hadjon, 1987). The current situation shows an antinomy or conflict between norms: general emergency clauses in Law Number 17 of 2023 and Minister of Health Regulation Number 2 of 2025 on one side, and specific technical prohibitions in Minister of Health Regulation Number 21 of 2021 and Minister of Health Regulation Number 24 of 2020 on the other side. In Indonesian legal doctrine, when a specific rule clashes with a general rule, the specific rule wins (*lex specialis derogat legi generali*). Therefore, in court, the prohibitions against midwives would almost certainly take precedence over the general emergency provisions.

This creates an unacceptable legal gap and fails the basic test of legal certainty. The regulatory framework also goes against the higher principle that the welfare of the people is the supreme law (*salus populi suprema lex esto*) and against the constitutional obligation to protect the right to health, including maternal health, under Article 28H(1) of the 1945 Constitution.

3.2. Discrepancy with Empirical Practices and International Standards

The empirical reality in Indonesian primary health centres (*das sein*) is completely different from the strict legal rules described earlier. Midwives are already using ultrasound regularly, especially in remote areas where no doctor or radiologist is available. This practice is driven purely by necessity to save mothers and babies, even though it remains illegal under the current regulations.

Field studies from different parts of Indonesia confirm that midwife-performed ultrasound is common and has become part of daily work. In Musi Rawas, South Sumatra, many midwives in private practice and some in community health centers use basic 2D ultrasound after attending short private training courses. They do not perform full diagnostic scans but limit themselves to essential checks such as fetal heartbeat, number of babies, fetal position, and placental location to decide whether urgent referral is needed (Rani, 2024). Similar findings come from Jombang, East Java, where ultrasound machines in Basic Emergency Obstetric Neonatal Services (*Pelayanan Obstetri Neonatal Emergensi Dasar*/PONED) community health centers were often idle because no specialist doctor was present; midwives stepped in to use them and improved early detection of complications (Sugiharto et al., 2011). In Bogor, West Java, the introduction of ultrasound operated by midwives significantly increased the number of antenatal care visits and helped identify high-risk cases such as placenta previa and breech presentation much earlier (Tarigan et al., 2019). These studies show that when midwives use ultrasound, patient outcomes improve, and more women come for check-ups because they value seeing their baby on the screen.

The government itself has equipped thousands of community health centers with ultrasound machines over the past decade, yet the majority of these facilities have no doctor trained in obstetrics or radiology on site. This creates a strange situation: the

state spends money on technology that its main workforce, the more than 350,000 midwives who handle most deliveries is legally not allowed to touch. In reality, midwives have filled this gap out of necessity, often after informal or private training, because waiting for a doctor would mean losing critical time in obstetric emergencies.

This Indonesian practice is fully in line with global health policy and international midwifery standards. The World Health Organization has promoted task-shifting for many years as a proven way to solve workforce shortages in low- and middle-income countries (WHO, 2008). More specifically, WHO now recommends at least one ultrasound scan before 24 weeks for every pregnant woman and supports training non-physicians, including midwives, to perform basic obstetric ultrasound (WHO, 2022). The International Confederation of Midwives includes the ability to use appropriate technology for screening, diagnosis, and care as one of the essential competencies for midwives worldwide (ICM, 2019). Numerous studies from Africa and Asia (Uganda, Malawi, Tanzania) have shown that short, focused training allows midwives to perform point-of-care ultrasound safely and effectively, with clear benefits for maternal and neonatal survival (Mbaruku et al., 2021; Kim et al., 2022).

When we look at other countries, the contrast with Indonesia becomes even clearer. In the United Kingdom, "midwife sonographer" is a recognized professional role with clear protocols from the National Health Service and regulation by the Health and Care Professions Council (Geritz, 2024). In Australia, midwives can obtain formal endorsement from the Nursing and Midwifery Board to order and interpret diagnostic imaging, including ultrasound, after completing accredited postgraduate training (NMBA, 2021; Australian Institute of Ultrasound, 2024). These countries do not leave the practice unregulated or prohibit it; instead, they create safe pathways with national certification, limited scope, and strong legal protection for the midwife.

The gap between Indonesia's written law and daily practice is therefore very wide. Midwives are already doing what international evidence says they should do, and what proven regulatory models in other countries allow them to do legally and safely. The current Indonesian framework is an outlier that blocks best practice instead of supporting it. Keeping the prohibition means continuing to waste expensive equipment, forcing midwives to choose between breaking the law to save lives or following the law and risking lives, and slowing down the reduction of maternal mortality that the government itself wants to achieve.

3.3. Legal Uncertainty and Professional Liability Risks for Midwives

The big gap between the strict written rules and the daily necessity-driven practice puts midwives in a very dangerous position. They face legal uncertainty every time they deal with an obstetric emergency where an ultrasound could make the difference between life and death. This situation creates real risks of professional sanctions, civil claims, and even criminal charges.

A midwife who decides to use the available ultrasound machine in an emergency and correctly finds a problem (for example, *placenta previa* or *fetal* distress) may save the mother and baby by arranging a quick referral. However, under the current regulations, she is still breaking the law because she is not an authorized operator according to Minister of Health Regulation Number 24 of 2020. If the family later complains for any reason, even if the outcome is good, the midwife has almost no legal defence. She can be reported for practising radiology without a licence or performing medical action outside her authority. Possible consequences include administrative sanctions from the local health office, revocation of her practice licence by the Indonesian Midwives Association or the Ministry of Health, civil lawsuit for damages, or worse, criminal prosecution under articles about unauthorized medical practice (Kim et al., 2022).

On the other hand, if the midwife follows the regulations strictly and refuses to touch the ultrasound machine, waiting instead for a doctor who may be hours away, and the patient suffers harm or dies, she can also be in trouble. The family can sue her for negligence, arguing that in a reasonably equipped community health centers, the standard of care includes using all available diagnostic tools to avoid delay (Guwandi, 2004). Health professionals have a duty to act according to what is possible and reasonable in the circumstances. In health law, liability can come from culpa (fault or negligence) when a professional fails to use available means that could have prevented harm (Guwandi, 2004). Refusing to use an existing ultrasound when a mother is bleeding heavily could be seen as omission or negligence, especially now that an ultrasound is considered basic equipment in many community health centers.

This "damned if you do, damned if you don't" situation is the direct result of unclear and conflicting regulations. The midwife is trapped in a grey area where no clear standard of care exists for the use of point-of-care ultrasound. The midwife cannot point to any regulation that explicitly allows her to perform limited POCUS in an emergency while also protecting her from liability. This complete lack of legal certainty (*Rechtssicherheit*) goes against basic principles of the rule of law and makes health workers afraid to act decisively (Hadjon, 1987). Many midwives and heads of community health centers, therefore, practise defensive medicine: they avoid using ultrasound even when it is needed, just to stay safe from punishment. This fear directly causes the third delay in receiving proper care at the facility and keeps maternal mortality high. The problem becomes worse because enforcement is inconsistent. In some areas, authorities close their eyes to midwife-performed ultrasound because they know it saves lives and there is no alternative. In other places, a single complaint can trigger investigation and punishment. Recent analyses show that midwives who provide emergency aid can still face legal action if their action is later judged to be outside their formal competence, even with the new protection in Law Number 17 of 2023 (Nurmila et al., 2025). The emergency shield in Article 191(3) is narrow and does not automatically cover diagnostic procedures such as ultrasound.

Soekanto's theory on law enforcement explains why the current regulations are not effective: the legal substance itself is contradictory, the legal structure (supervision and sanctions) is unclear, and the legal culture accepts informal ultrasound use while the written law prohibits it (Soekanto, 2008). All three elements must be in harmony for a law to work properly. Right now, they are pulling in opposite directions. In short, the regulatory gap does not just create theoretical problems. It places Indonesia's 350,000 midwives under constant stress and threat of liability, discourages the proper use of existing technology, and becomes an obstacle to the government's own target of reducing maternal deaths. Keeping this uncertainty is neither fair to midwives nor safe for mothers.

3.4. Recommendations for Regulatory Reform

The only realistic way to solve the problems described above is through targeted regulatory reform. Keeping the current prohibitions would mean criminalising a life-saving practice that is already happening across Indonesia and that aligns with global evidence. Simply ignoring the rules is also not acceptable because it leaves midwives unprotected and patients without guaranteed quality. A middle path exists: create a new, specific regulation that safely expands midwives' authority while keeping strong safeguards for patient safety (Nurmila et al., 2025).

This study recommends that the Ministry of Health issue a new Minister of Health Regulation (or at a minimum a binding technical guideline) that explicitly addresses point-of-care obstetric ultrasound by midwives. The new rule must be lex specialis a specific regulation that overrides the general prohibitions in Minister of Health Regulation Number 21 of 2021 and Minister of Health Regulation Number

24 of 2020. International experience shows this approach works well and can be copied with only small adjustments to Indonesian conditions (Nurdahniar, 2022).

First, the regulation must grant limited, explicit authority to certified midwives to perform basic obstetric POCUS in primary care settings, especially in community health centers and during emergencies. This authority should be restricted to goal-directed examinations, not full diagnostic sonography, which remains the job of specialists. Second, the scope of practice has to be clearly defined to avoid confusion or overreach. Acceptable basic skills would include confirming fetal viability (presence of heartbeat), determining the number of fetuses, assessing fetal presentation (cephalic or breech), screening for obvious placenta previa, and basic amniotic fluid evaluation. These limited checks are enough for triage and referral decisions in most emergencies and match exactly what midwives already do safely in the field (WFUMB, 2022).

Third, a national, standardised training and certification programme must be created and made mandatory. Private or informal courses (like those currently attended in Musi Rawas and other areas) should no longer be sufficient. The programme can be developed jointly by the Ministry of Health, the Indonesian Midwives Association, and accredited ultrasound training bodies, following examples from Australia (Australasian Society for Ultrasound in Medicine courses) and the United Kingdom (NHS midwife sonographer pathways). Certification would be time-limited and require refresher training, just as in those countries. This guarantees competence and quality without placing an impossible burden on midwives (Australian Institute of Ultrasound, 2024; Geritz, 2024).

Fourth, the new regulation must include explicit legal protection: a midwife who holds a valid POCUS certification and stays within the defined limited scope is considered to be acting legally and is shielded from liability for the act of performing the ultrasound itself. Any error in interpretation or clinical decision would still be judged under normal malpractice rules, but the simple fact of operating the machine would no longer be a violation. This protection is similar to the endorsement system in Australia and the registered midwife sonographer status in the UK (NMBA, 2021; Geritz, 2024).

Such reform would finally bring Indonesia in line with WHO recommendations on task-shifting and early ultrasound access and with the International Confederation of Midwives' essential competencies (WHO, 2008; ICM, 2019; WHO, 2022). It would end the wasteful situation where expensive ultrasound machines sit unused while mothers die from preventable complications. Most importantly, it would give legal certainty to Indonesia's 350,000 midwives, remove their daily fear of punishment, and allow them to focus fully on what they do best, saving mothers and babies. Implementing this change does not require new laws or huge budgets, only political will and technical drafting. The models from Australia and the UK prove that regulation, not prohibition, is the modern and effective answer. By choosing this path, Indonesia can close the dangerous legal gap, protect its frontline health workers, and take a major step toward reaching the Sustainable Development Goal target for maternal mortality.

4. Conclusion

The legal framework governing midwives' use of USG in Indonesian primary health centers is clearly out of step with the country's urgent need to reduce maternal mortality. Current regulations strictly reserve ultrasound operation for physicians and radiology specialists, creating a wide and dangerous gap between written law and the reality on the ground, where midwives routinely perform basic scans to save lives in the absence of doctors. This conflict produces unacceptable legal uncertainty, exposes midwives to constant risk of liability even when they act to protect mothers and babies, and prevents the full use of equipment the government has already

provided. The only sustainable solution is targeted reform that grants certified midwives limited, clearly defined authority to perform obstetric point-of-care ultrasound while maintaining patient safety through national training and legal protection.

The proposed reform would bring Indonesia into line with international best practice, remove fear from frontline health workers, and directly address preventable delays that still cost hundreds of mothers' lives every year. However, this study is limited to normative juridical analysis supported by secondary empirical data; it is limited to normative analysis and does not include primary fieldwork or large-scale surveys of midwives' actual experiences. Future research should therefore explore the on-the-ground impact of pilot POCUS training programs, evaluate cost-effectiveness in remote areas, and investigate midwives' and patients' perceptions once a new regulation is in place. Such studies will provide the practical evidence needed to support rapid and successful implementation of the recommended regulatory changes.

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The data that support the findings of this study are available from the corresponding author upon reasonable request.