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CAPTURING THE UNSEEN: STILLBIRTH REGISTRATION AS A FOUNDATION FOR MATERNAL AND INFANT HEALTH INDICATORS IN INDONESIA

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Abstract

Stillbirth registration is a vital component of the population administration system because it is related to monitoring maternal and infant health development. Stillbirths data not only provides an overview of maternal and neonatal health conditions, but also reflects the availability of health facilities, the quality of childbirth, and serves as a benchmark for the success of government intervention programs. Despite its importance, the recording of stillbirths in Indonesia still faces various obstacles. This study aims to examine the urgency of recording stillbirths at the Population and Civil Registration Office in providing data on maternal and infant health and to examine the obstacles faced. Literature review method using secondary data is used in this paper. Secondary data sources include national regulations on population administration, official reports from the Population and Civil Registration Office, publications from the Central Statistics Agency (BPS), and previous research on stillbirth registration in Indonesia and other countries. The data analysis technique used is qualitative-descriptive analysis, which examines the suitability of regulations with practices in the field and identifies structural, technical, and socio-cultural obstacles in stillbirth registration. The results show that stillbirth registration has the potential to be a vital source of data for evidence-based health policy. However, the reality on the ground still shows obstacles such as low awareness among families to report, limited capacity of registration officers, weak data integration between the health and population administration sectors, and social stigma surrounding stillbirths. These conditions have resulted in low coverage of stillbirth registration in Indonesia.

Keywords: *infant health, maternal health, population administration, stillbirth registration*

INTRODUCTION

The Sustainable Development Goals were launched by the United Nations in 2015 to replace the Millennium Development Goals (MDGs). Indonesia, as a member of the UN, has been committed to achieving sustainable development goals since 2016. This global development program was subsequently ratified by the Indonesian government through Presidential Regulation No. 59 of 2017 on the Implementation of Sustainable Development Goals. This regulation requires the government to immediately formulate National and Regional Action Plans to achieve the 17 SDG goals by the end of 2030.

One of the goals of the SDGs is to improve the health of the population. Development in the health sector is reflected in Goal 3, Good Health and Well-Being. The first two indicators of this health dimension specifically mention improving the health of mothers and infants/children under five. For example, indicator 3.1 states, “By 2030, reduce the maternal mortality ratio to less than 70 per 100,000 live births.” Meanwhile, indicator 3.2 sets the target of “By 2030, end preventable newborn and under-five mortality, with all countries striving to reduce the neonatal mortality rate to at least 12 per 1,000 live births and the under-five mortality rate to 25 per 1,000.”

Over the past 10 years (2015-2025), Indonesia has succeeded in significantly reducing maternal and infant mortality rates. However, Indonesia's achievements in 2025 place it 77th among 167 countries worldwide with an SDG score of 70.2, (United Nation, 2025)The achievements of indicators 3.1 and 3.2 are still far from the targets set at the end of the SDG period, although according to the UN, Indonesia has experienced a significant improvement in health conditions and still faces considerable challenges in achieving its targets.

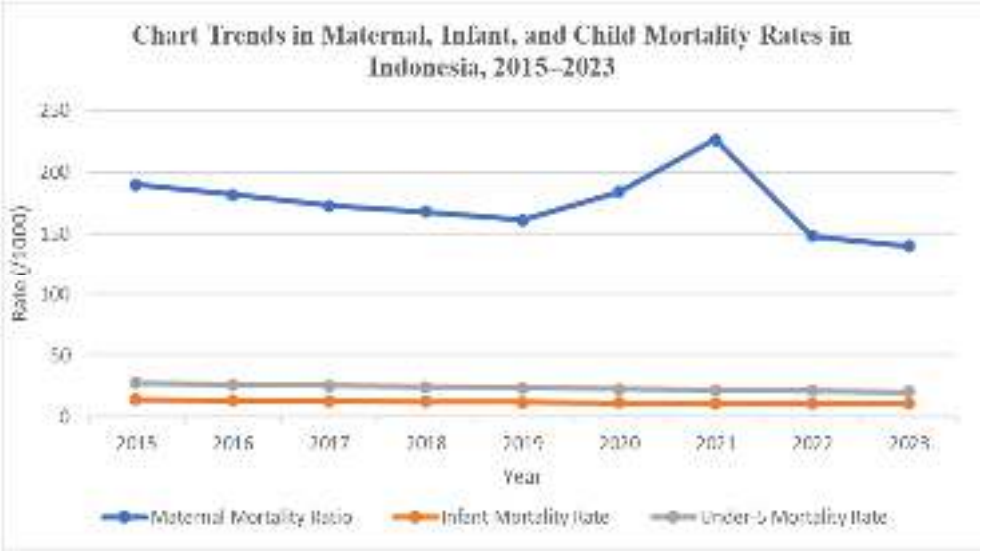

Figure 1. Trends In Maternal, Infant, and Child Mortality Rates in Indonesia, 2015-2023
Source: United Nation, 2025

How can the Indonesian government measure the achievement of these SDG health development goals? One step is through data collection on vital events related to mortality. Population data in Indonesia is collected through a series of activities such as population registration, censuses, and surveys. Population data, especially that related to public health, must be collected regularly to measure the achievement of development in the health sector. This data is important to use as a real measure in data-driven policies. Better population data is needed to monitor maternal and infant health. Inadequate data affects marginalized groups and causes health disparities, (Interrante et al., 2022).

One event that is often overlooked when measuring public health is stillbirth data. Stillbirth can be classified as the death of a baby in the womb at more than 28 weeks of gestation, but before birth, (WHO, 2025). Stillbirth is distinct from infant death, though these two events can occur in close succession. An event can only be categorized as a case of infant death if the baby was born alive and showed signs of life. It is crucial to understand that

stillbirths cannot be categorized as either natality or infant mortality. This discrepancy in events that cannot be categorized as birth or death results in an absence of birth and death data, particularly in developing countries. Indeed, the availability of data regarding stillbirth is of paramount importance in the medical and public health domains.

A report from UNICEF (2025) states that the global incidence of stillbirths is approximately 1.9 million in 2023, equivalent to one occurrence every 17 seconds. This figure is believed to be much lower than the actual number of stillbirths, as many are not reported or officially recorded. Stillbirths are particularly prevalent in developing countries such as Indonesia. The downward trend in stillbirths in Indonesia has been evident since 2000-2023, with the median value falling from 15.01 to 8.33, (UN IGME, 2025).

Figure 2. Stillbirth Trends in Indonesia, 2010-2023
Source: UN IGME (2025)

However, the accuracy of this data is questionable due to the sole source of information on stillbirths in Indonesia being the Demographic and Health Survey, which is conducted at five-year intervals and is thus not a continuously updated data set. The United Nations Inter-Agency Group for Maternal, Neonatal and Child Health (UN IGME) is the agency responsible for collecting data on maternal and infant mortality. It then makes estimates based on low, median and high assumptions to fill in the data gaps for certain years in Indonesia. All three UN IGME scenarios show a downward trend in stillbirth rates in Indonesia. However, much more accurate and official data collection is needed, rather than relying solely on limited-scale surveys.

The present study aims to examine the role of birth and death registration at the Population and Civil Registration Office in supporting maternal and infant health measurements. In addition, the study will identify structural, technical, and cultural obstacles that affect stillbirth registration. The results of this study are expected to provide academic and practical input for the enhancement of the population administration and civil registration systems in Indonesia.

LITERATURE REVIEW

Concept of Stillbirth

Stillbirth can be defined as the death of a fetus after 20 weeks of pregnancy, (Changede et al., 2022; Heazell, 2016). Another opinion states that the death can be considered a stillbirth if the fetus has reached the 22nd week, (Eleutério Dell Menezzi et al., 2016). However, an alternative viewpoint form Shrestha et al. (2018) posits that stillbirth is defined as the death of a foetus that is 28 weeks or more gestational age. The difference in gestational age in the terminology of stillbirth is understandable, because the focus is on birth without signs of life.

Perinatal death is categorised into two distinct types: stillbirth and neonatal death. The fundamental distinction between the two categories of perinatal death is the presence or absence of signs of life at the time of birth. Neonatal death is defined as the death of a neonate (i.e. a baby born alive with signs of life) within seven days of birth. These two events have different implications in terms of data collection and may also have different causes.

Stillbirth is influenced by social, economic, and health conditions. Socioeconomic factors, including poverty, low levels of education, and limited access to health services, contribute to high stillbirth rates in developing countries. In addition, cultural factors such as traditional norms, stigma, and harmful practices also contribute significantly to high stillbirth rates. According to Changede et al. (2022), the pattern of stillbirth in India shows a link between the mother's medical condition, with hypertension during pregnancy being the most common contributing factor. Meanwhile, health interventions during pregnancy are related to the couple's socioeconomic status. Economic conditions, especially poverty, contribute to an increased risk of stillbirth in developing countries. Women with low socioeconomic status have a higher risk of stillbirth, perinatal death, and neonatal death compared to women with high economic status, (Patel et al., 2022).

The level of education is one of the social factors that influence the prevalence of stillbirths in a region, especially in rural areas. A higher level of education among mothers has been found to consistently reduce the risk of stillbirths (Swaminathan et al., 2022; Terefe et al., 2025). According to Kasa et al. (2023) increased educational attainment can contribute positively to better maternal health practices and outcomes, thereby reducing the risk of stillbirth. The risk of stillbirth can be reduced in communities where mothers have higher levels of education and where many women choose not to marry.(Adeleye et al., 2025).

However, a fundamental difference occurs in China. Studies in China have revealed that higher levels of maternal education actually increase the risk of stillbirth. This is due to the high labor force participation rate among women with higher education in China, (Li et al., 2022). The pattern in developed countries shows a strong relationship between maternal education and stillbirth, with an odds ratio of 1.37. However, the father's level of education does not show a significant correlation with the risk of stillbirth, (Swaminathan et al., 2022).

In addition to economic and educational factors, in developing countries, the risk of stillbirth is often associated with cultural factors. Patterns in developing countries tend to show a strong correlation between socioeconomic status, maternal literacy, and access to antenatal care with stillbirth rates. These cultural conditions do not exist in isolation, but shape values in society, where the majority of the population is reluctant to undergo regular pregnancy

checkups, (Nasreen et al., 2023). Certain cultures in developing countries even tend to prioritize home births. Furthermore, gender inequality also contributes to high stillbirth rates. Social norms in a community can also correlate with attitudes toward pregnancy and antenatal care for women. Moreover, there are still strong norms that prioritize traditional birth practices over modern medical facilities, (Arach et al., 2023).

The Importance of Stillbirth Data

In most poor and developing countries, the main source of stillbirth data comes from national surveys. However, these national surveys still have several problems, such as inaccurate data reporting or misreporting, (Saleem & McClure, 2023). For example, in survey activities, sometimes women of childbearing age are unable to distinguish the type of perinatal death they have experienced. As a result, cases of stillbirth are often misunderstood by mothers as cases of neonatal death. The collection of stillbirth data is usually based either on questions about pregnancy outcomes other than live births, or on a complete pregnancy history.

Developed countries have demonstrated their ability to reduce stillbirths by implementing national perinatal mortality audit programmes, reducing social stigma within communities, and improving care for mothers during the postpartum mourning period, (Flenady et al., 2016). A national audit to determine the causes of stillbirths requires basic data. The government cannot take action without accurate data on the number of stillbirths, because all social and health policies must be based on empirical evidence. The collection of stillbirth data is crucial for understanding the prevalence of stillbirths and informing targeted interventions and the allocation of budgetary and human resources to reduce its prevalence, (Dandona et al., 2023).

Indonesian Population Administration System

Based on Law No. 24 of 2013 Concerning Amendments to Law No. 23 of 2006 Concerning Population Administration, Article 1, Number 1 “Population Administration is a series of activities related to the organization and control of the issuance of documents and Population Data through Population Registration, Civil Registration, management of Population Administration information, and the utilization of the results for public services and development in other sectors.” Within the Indonesian Population Administration system, significant population events are required to be documented within the administrative system. These significant events encompass births, deaths, migration and marriages.

In the new Population Administration Law, a clear definition of stillbirth is not included in any article. The explanation of stillbirth as an important event is found in Law Number 23 of 2006 Concerning Population Administration,Article 33 Paragraph (1) “Every stillbirth must be reported by the resident to the implementing agency no later than 30 (thirty) days after the stillbirth.” The explanation of stillbirth in Law Number 23 of 2006 Concerning Population Administration is described in the general provisions, namely “Stillbirth refers to the birth of a baby from a pregnancy of at least 28 weeks at the time of birth without showing any signs of life.”

RESEARCH METHOD

This study employs a qualitative-descriptive approach, informed by a comprehensive review of the extant literature. The data is secondary and sourced from the national regulatory system, government reports, scientific publications and international institutions. Secondary data must be obtained in order to identify regulations pertaining to stillbirth registration, as well as to facilitate comparisons between registration practices and regulations. Furthermore, analysis of structural (regulation-system), technical (staff capacity, procedures) and cultural (stigma, public awareness) constraints is required. The subsequent analysis of the data was conducted through the utilisation of qualitative-descriptive techniques, encompassing data collection, data reduction, data presentation, and conclusion drawing.

RESULT AND DISCUSSION

The Role of Stillbirth Registration

Deaths occurring around the time of birth are often referred to as perinatal deaths. Perinatal deaths can be categorised into two distinct types: fetal deaths and newborn deaths. Perinatal death is defined as the death of a foetus that has reached 22 weeks of gestation up to a baby aged seven days, (Fernández-Férez et al., 2021). The number of infant deaths is recorded when a baby is born alive and then dies from various causes. Infant deaths occur immediately after birth and just before the first birthday. In other words, infant mortality consists of perinatal death after birth and death under the age of 1 year.

The issue pertains to the occurrence of stillbirth, wherein the death of the foetus occurs within the uterus, yet it is documented as infant mortality due to its progression through the delivery process. Indeed, the recording of stillbirth cases must be maintained as a discrete category, distinct from infant mortality records, as they serve as vital indicators of maternal and community health.

The issue of unreported stillbirths remains a major threat to achieving the target of single-digit stillbirth rates by 2030. Therefore, standardized procedures for recording stillbirths are needed to support the monitoring of progress toward reducing stillbirth rates, (Soundararajan, 2025). The urgency of recording stillbirths in Indonesia can be divided into three categories, namely:

1. **Improving the accuracy of data on perinatal and infant mortality.**

Strengthening the recording of stillbirths in a series of population administration systems is a solution to improve the quality and accuracy of perinatal and neonatal mortality data. Stillbirths must be systematically recorded in population administration using a standard definition in accordance with Law No. 23 of 2006 (minimum 28 weeks of pregnancy) and recorded on a Special Stillbirth Form accompanied by clinical metadata on the cause of death, gestational age, and birth weight. This data collection will provide annual data that can be used to calculate perinatal mortality rates at both the national and regional levels.

In addition, the recording of stillbirths in the population administration will enable data integration with health services. This will allow the government to map the causes, timing, and risk factors of stillbirths without relying on national surveys. Evidence shows that in various countries, without strengthening the capacity for stillbirth registration in the population

administration system, most of these events are not reported by other formal registration systems, (Kasasa et al., 2021). This leads to biased estimates and program prioritization.

2. **Forming the basis for the formulation of policies to improve maternal and infant health**

The prevalence of stillbirths in a region is a direct indicator of the quality of health services during pregnancy and childbirth. The lower the stillbirth rate in a region, the better the quality of basic health services for pregnant women and new mothers, particularly in terms of the availability of health facilities and qualified health personnel. Regions with good antenatal care tend to have lower perinatal mortality rates, (Hug et al., 2021). Therefore, concrete steps to integrate stillbirth data into the population administration system can provide policymakers with the basis for setting intervention targets. For example, to set priority targets between regions regarding improvements in antenatal services, delivery care, and emergency referrals. Stillbirth rates can also serve as a statistical indicator for evaluating the quality and effectiveness of maternal and child health programs over time, (AbouZahr et al., 2015).

In addition, recording stillbirths in the population administration system can strengthen the connectivity between civil registration and clinical data. If this data is integrated, it will be easier to analyze the causes and risk factors. The requirement is a recording flow from health care facilities (midwives, community health centers, hospitals) to the population and civil registration office. It is also important to include clinical information on the mother's condition, interventions performed by medical personnel, and the time of stillbirth in population administration documents, (Kerber et al., 2015). These documents can then be collected, tabulated, and analyzed by various government agencies to create health policies that are appropriate for the conditions in each region of Indonesia.

3. **Reducing dependence on slow and costly survey data**

Several surveys have been conducted by the Indonesian government to measure the health conditions of the population. Some surveys have been conducted by the Indonesian Central Statistics Agency (BPS), such as the National Socioeconomic Survey (Susenas), which is conducted annually but divided into four different modules. The four modules are (1) social, cultural, and education module; (2) health and housing module; and (3) social resilience module. These three modules are collected periodically along with module (4) consumption and expenditure, which is conducted annually. In the health and housing module, the government collects data on the health status of the community, clean living behaviors, access to health services, health insurance coverage, and housing conditions, (Central Statistics Agency of Kutai Kartanegara Regency, 2023).

In addition to Susenas, the Indonesian Ministry of Health also conducts its own survey called the Indonesian Basic Health Research (Riskesdas), which was updated to become the Indonesian Health Survey (SKI) in 2023, (Indonesian Ministry of Health, 2023). However, these two surveys do not collect detailed data on perinatal and infant mortality, so stillbirth figures are not recorded in Indonesian Health Survey and Basic Health Research. The public health situation recorded in these two surveys only includes morbidity rates due to infectious and non-infectious diseases, maternal health conditions, and infant and child health conditions.

In addition to surveys, the health status of the Indonesian population is also recorded in the Population Census, which is conducted every 10 years. The most recent Indonesian Population Census was conducted in 2020. In addition to producing a basic profile of Indonesia's population, the Population Census also produces several demographic indicator data through the 2020 Population Census Long Form. The 2020 census results include Book I: Thematic Analysis of Indonesian Population (Adolescent Fertility, Maternal Mortality, Infant Mortality, and Persons with Disabilities), (Indonesian Central Statistic Agency, 2023). Unfortunately, however, the collection of infant mortality data in this activity only produced infant mortality figures and disparities between provinces in Indonesia. The 2020 Long Form did not produce perinatal mortality or stillbirth figures, either at the national or provincial level.

The only national data source that includes stillbirth figures in Indonesia is the Demographic and Health Survey (SDKI). The survey is conducted every five years, in years ending in 2 and 7, (USAID, 2024). For instance, the Indonesian DHS was conducted in 2007, 2012, 2017, and most recently in 2022-2023. The latest Indonesian DHS data is up to 2017, the 2023 edition is still being finalised. The 2017 DHS publication presents stillbirth rate data at the national level, without province-level breakdowns in Indonesia. However, it is highly probable that disparities in stillbirth rates occur between provinces in Indonesia. This is due to the presence of significant socio-economic and cultural differences, as well as geographical barriers between regions in Indonesia.

Consequently, it can be deduced that the primary source of data on stillbirths in Indonesia remains derived from demographic and health surveys (SDKI). These surveys are conducted in all provinces in Indonesia, but the stillbirth data collected is not sufficiently detailed to meet data needs at the regional level (province to district). The interval between surveys is quite protracted, reaching a period of five years, in addition to the time required for the compilation of the final results of the SDKI before they can be disseminated to the public. The recording of stillbirths and their causes in the population registration-based administrative system has become an essential breakthrough. This administration of stillbirths can be a more accurate, complete, and inexpensive source of data than relying solely on national surveys, which consume a significant amount of the state budget.

Challenges in Stillbirth Registration in Indonesia

Structural Obstacles

Stillbirth is one of the important events in demography. This is confirmed in the (Law Number 23 of 2006 Concerning Population Administration, n.d.)and must be recorded by the District Population and Civil Registration Office throughout Indonesia. Regulations on the recording of stillbirths experienced by the community in the Indonesian population administration system have not yet been clearly and comprehensively regulated, especially within the framework of legislation as the highest legal norm. Law No. 23/2006, representing the initial legal foundation for population administration in Indonesia, does encompass a definition and reporting obligations for stillbirths.

However, these provisions remain unremarked in the subsequent Population Administration Law of 2013. Furthermore, Ministry of Home Affairs Regulation No. 108 of 2019 Concerning the Implementation Regulation of Presidential Regulation No. 96 of 2018 on

Requirements and Procedures for Population Registration and Civil Registration and Ministry of Home Affairs Regulation No. 109 of 2019 Concerning Forms and Books Used in Population Administration merely provide a general overview of the mechanisms for population registration and the classification of significant events. These two Permendagri fail to provide adequate detail regarding the procedures for recording stillbirths, which are currently classified as ordinary "death records." This legal fact has created a normative vacuum, due to the absence of explicit operational regulations that govern the requirements, procedures, deadlines, and documents that must be issued in the registration of stillbirths.

The lack of regulation directly affects the technical services provided by the Population and Civil Registration Office. In the absence of binding legal provisions, the Population and Civil Registration Office lacks a robust regulatory foundation to mandate the reporting of stillbirths in a manner consistent with births and deaths. Consequently, the registration of stillbirths is contingent on the initiative of local government agencies, field officers, and public awareness. Consequently, the prevalence of stillbirths is not fully recorded in a systematic civil registration system and cannot be utilised for vital statistics in the fields of health development and regional development planning. The absence of an operational legal basis constitutes a significant impediment to the establishment of a comprehensive and precise civil registration system in Indonesia, one which is capable of producing vital statistics.

Technical Obstacles

Technical obstacles generally occur at the field level, namely at the Population and Civil Registration Office, which is at the forefront of population administration in Indonesia. Population and Civil Registration officers face technical limitations when recording stillbirths because there are no specific and specialized recording instruments available. The absence of a standard form or administrative code for stillbirths means that officers are forced to use the Death Registration Form. In fact, this form should only be used to record the death of a person who has lived, even if only for a moment.

As a result, the recording of stillbirths is often inconsistent between regions in Indonesia. In some regions, stillbirths are included in infant death reports. In other cases, stillbirths are not reported by families because they believe that babies who did not live need not be recorded and have no impact on the population administration system. This situation is exacerbated by regulatory loopholes that prevent Population and Civil Registration Office officials from directing/requiring the public to report stillbirths. As a result, the recording of stillbirths in Indonesia still depends entirely on the initiative of families and the interpretation of officials.

Table 1. Differences in the Use of Stillbirth Registration Forms Among Population and Civil Registration Offices in Indonesia

No.	District/City	Name and Form Code	Brief Description
1	Wajo, South Sulawesi	Stillbirth Report Form (F-2.01)	Stillbirth registration form containing data on the parents, details about the stillbirth (gender, date of birth, cause of stillbirth, place of birth, and certifying officer).
2	Gunungkidul, Special Region of Yogyakarta	Birth/Stillbirth Report Form (F-2.01)	The form is combined with the death record.

No.	District/City	Name and Form Code	Brief Description
3	Tomohon, North Sulawesi	Stillbirth Report Form (F-2.01)	Use a separate "stillbirth" form with the output product being a "Stillbirth Certificate."
4	Metro City, Lampung.	Stillbirth Certificate (F-2.09)	The village/subdistrict level form as proof of stillbirth reporting consists of several copies for the family, subdistrict, and district. The form contains data on the parents, duration of pregnancy, sex of the baby, type of birth, and cause of stillbirth.
5	Rembang, Central Java.	Stillbirth Certificate (F-2.09)	Local version of the "Stillbirth Certificate" specifically for the Rembang Regency area.
6	Blora, Central Java	Stillbirth Certificate for Indonesian Citizens (F-2.09)	Special form for recording stillbirths.
7	Palopo, South Sulawesi.	Stillbirth Report Form (F-2.08)	A special form is available for recording stillbirths.
8	Kotamobagu, North Sulawesi.	Stillbirth Report Form & Stillbirth Certificate (F-2.08 & F-2.09)	There are two forms available for recording stillbirths: F-2-08 for reporting stillbirths, while F-2.09 is an output form in the form of a "Stillbirth Certificate."
9	Garut, West Java.	Stillbirth Report Form (F-2.06)	There is a local regulation requiring stillbirths to be recorded using a special form, namely "Stillbirth Form."
10	Morowali, Central Sulawesi	Stillbirth Certificate (F-2.06)	There is a special Stillbirth Certificate form.
11	Sukabumi, West Java	Civil Registration Report Form (includes Stillbirth options) (F-2.01)	Stillbirths are also reported on the general death report form.

Source: Population and Civil Registration Agency websites in various regions of Indonesia, have been processed.

In addition to limited data collection instruments, the Population and Civil Registration Office also lacks a structured and sustainable cooperation mechanism with other government agencies in the health sector, such as hospitals, community health centers, primary clinics, or village midwives who are authorized to issue Stillbirth Certificates. The lack of data integration and standard reporting procedures means that information on stillbirths is not automatically entered or reported by health agencies into the population administration system in Indonesia. Health workers only record stillbirths in the medical sphere, but have no legal obligation to report them to the Regional Population and Civil Registration Office. As a result, there is an information gap between stillbirth data collection in the health sector and the population administration sector. This results in inaccurate vital statistics on stillbirths. Stillbirth data is only collected at the regional health agency level, but does not appear in national health statistics. Furthermore, development policies are not optimal due to inaccurate data.

Cultural Obstacles

The quality of stillbirth data from national surveys is currently thought to be lower than infant mortality data. This is primarily due to under-reporting of stillbirths, (Saleem &

McClure, 2023). The public tends to be unable to distinguish between different types of deaths surrounding birth. Many people assume that the death of a fetus after 28 weeks of gestation as a neonatal death, even if the baby shows no signs of life at birth. This lack of public awareness has led to an accumulation of infant death reports, but has also resulted in stillbirths going unrecorded within the community.

In developing countries with lower-middle economic conditions, there is often a lack of awareness regarding the reporting of stillbirths among families. This is influenced by the perception that babies born without signs of life are not considered to be 'babies/lives' that require administrative recording. The prevailing assumption that stillborn babies do not undergo the various stages of life that necessitate administrative documentation is a fundamental factor contributing to the significant underregistration of this event. Consequently, stillbirths frequently evade the attention of civil registration systems and household-based surveys. This has the effect of exacerbating data collection problems and making national and regional stillbirth figures difficult to calculate, (Blencowe et al., 2021).

The social stigma associated with stillbirths in various regions, which is often regarded as taboo, has been identified as a contributing factor to the under-reporting of such events. The underlying factors contributing to this phenomenon include feelings of shame, the fear of social exclusion, and cultural beliefs concerning fate. These factors collectively result in a reluctance among families to report incidents to the Population and Civil Registration Office. The psychological effects of grief experienced by couples immediately following a stillbirth include feelings of sadness and guilt, which can result in social isolation, (Burden et al., 2016). Consequently, many families do not report the occurrence of a stillbirth.

CONCLUSION

This study confirms that recording stillbirths in the population registration system plays a crucial role in Indonesia, especially as a basis for providing data on the health conditions of mothers and babies. Administrative recording of stillbirths enables the availability of indicators on the quality of antenatal services, the capacity of health workers, and health facilities. However, the recording of stillbirths in Indonesia still faces structural, technical, and cultural barriers within society. These barriers include a lack of operational regulations, limited technical instruments, and low awareness and negative stigma surrounding stillbirths in society. Therefore, strengthening the recording of stillbirths in the population administration system should be a national priority program in order to create vital statistics that form the basis for evidence-based policy formulation.

This study only uses descriptive qualitative methods that rely on secondary data and literature studies to examine the urgency of stillbirth data collection in the population registration system. Therefore, further research that is able to use quantitative analysis methods between regions, studies of service management in the field, and socio-cultural studies that influence the low rate of stillbirth data collection are important to obtain a more comprehensive understanding.

REFERENCES

AbouZahr, C., de Savigny, D., Mikkelsen, L., Setel, P. W., Lozano, R., Nichols, E., Notzon, F., & Lopez, A. D. (2015). Civil registration and vital statistics: progress in the data revolution for counting and accountability. *The Lancet*, *386*(10001), 1373–1385. https://doi.org/10.1016/S0140-6736(15)60173-8

Adeleye, K., Ogungbe, O., Yeboah-Kordieh, Y., Gresh, A., & Iradukunda, F. (2025). Exploring multilevel determinants of stillbirth: a comprehensive analysis across sub-Saharan African countries. *BMJ Open*, *15*(6), e089371. https://doi.org/10.1136/bmjopen-2024-089371

Arach, A. A. O., Nakasujja, N., Rujumba, J., Mukunya, D., Odongkara, B., Musaba, M. W., Napyo, A., Tumwine, J. K., Nankabirwa, V., Ndeezi, G., & Kiguli, J. (2023). Cultural beliefs and practices on perinatal death: a qualitative study among the Lango community in Northern Uganda. *BMC Pregnancy and Childbirth*, *23*(1), 222. https://doi.org/10.1186/s12884-023-05550-4

Blencowe, H., Bottecchia, M., Kwesiga, D., Akuze, J., Haider, M. M., Galiwango, E., Dzabeng, F., Fisker, A. B., Enuameh, Y. A. K., Geremew, B. M., Nareeba, T., Woodd, S., Beedle, A., Peven, K., Cousens, S., Waiswa, P., & Lawn, J. E. (2021). Stillbirth outcome capture and classification in population-based surveys: EN-INDEPTH study. *Population Health Metrics*, *19*(S1), 13. https://doi.org/10.1186/s12963-020-00239-8

Burden, C., Bradley, S., Storey, C., Ellis, A., Heazell, A. E. P., Downe, S., Cacciatore, J., & Siassakos, D. (2016). From grief, guilt pain and stigma to hope and pride – a systematic review and meta-analysis of mixed-method research of the psychosocial impact of stillbirth. *BMC Pregnancy and Childbirth*, *16*(1), 9. https://doi.org/10.1186/s12884-016-0800-8

Central Statistics Agency of Kutai Kartanegara Regency. (2023, October 9). *GETTING TO KNOW MORE ABOUT THE IMPLEMENTATION OF SUSENAS AND SERUTI IN KUTAI KARTANEGARA IN 2023*. Https://Kukarkab.Bps.Go.Id/En/News/2023/10/09/8/Mengenal-Lebih-Dalam-Pelaksanaan-Susenas-Dan-Seruti-Di-Kutai-Kartanegara-Tahun-2023.Html.

Changede, P., Venkateswaran, S., Nayak, A., Wade, D., Sonawane, P., Patel, R., & Rajput, H. (2022). Causes and Demographic Factors Affecting Stillbirth in a Tertiary Care Centre in India. *The Journal of Obstetrics and Gynecology of India*, *72*(3), 225–235. https://doi.org/10.1007/s13224-021-01571-1

Dandona, R., George, S., Majumder, M., Akbar, M., & Kumar, G. A. (2023). Stillbirth undercount in the sample registration system and national family health survey, India. *Bulletin of the World Health Organization*, *101*(03), 191–201. https://doi.org/10.2471/BLT.22.288906

Eleutério Dell Menezzi, A. M., Drumond Figueiredo, I., Barbosa Lima, E. W., De Almeida, J. C., Santos Marques, F. K. S. M., Ferreira de Oliveira, C., Prates Barreto, N. A., & De Pinho, L. (2016). Vigilância do óbito fetal: estudo das principais causas. *O Mundo Da Saúde*, *40*(2), 208–212. https://doi.org/10.15343/0104-7809.20164002208212

Fernández-Férez, A., Ventura-Miranda, M. I., Camacho-Ávila, M., Fernández-Caballero, A., Granero-Molina, J., Fernández-Medina, I. M., & Requena-Mullor, M. del M. (2021). Nursing Interventions to Facilitate the Grieving Process after Perinatal Death: A Systematic Review. *International Journal of Environmental Research and Public Health*, *18*(11), 5587. https://doi.org/10.3390/ijerph18115587

Flenady, V., Wojcieszek, A. M., Middleton, P., Ellwood, D., Erwich, J. J., Coory, M., Khong, T. Y., Silver, R. M., Smith, G. C. S., Boyle, F. M., Lawn, J. E., Blencowe, H., Leisher, S. H., Gross, M. M., Horey, D., Farrales, L., Bloomfield, F., McCowan, L., Brown, S. J., …

Reddy, U. (2016). Stillbirths: recall to action in high-income countries. *The Lancet*, *387*(10019), 691–702. https://doi.org/10.1016/S0140-6736(15)01020-X

Heazell, A. E. P. (2016). Stillbirth – a challenge for the 21st century. *BMC Pregnancy and Childbirth*, *16*(1), 388. https://doi.org/10.1186/s12884-016-1181-8

Hug, L., You, D., Blencowe, H., Mishra, A., Wang, Z., Fix, M. J., Wakefield, J., Moran, A. C., Gaigbe-Togbe, V., Suzuki, E., Blau, D. M., Cousens, S., Creanga, A., Croft, T., Hill, K., Joseph, K. S., Maswime, S., McClure, E. M., Pattinson, R., … Alkema, L. (2021). Global, regional, and national estimates and trends in stillbirths from 2000 to 2019: a systematic assessment. *The Lancet*, *398*(10302), 772–785. https://doi.org/10.1016/S0140-6736(21)01112-0

Indonesian Central Statistic Agency. (2023). *Book I Thematic Analysis of Indonesian Population (Adolescent Fertility, Maternal Mortality, Infant Mortality, and Persons with Disabilities)*.

Indonesian Ministry of Health. (2023). *Survei Kesehatan Indonesia (SKI) 2023*. Https://Www.Badankebijakan.Kemkes.Go.Id/Hasil-Ski-2023/.

Interrante, J. D., Admon, L. K., Stuebe, A. M., & Kozhimannil, K. B. (2022). After Childbirth: Better Data Can Help Align Postpartum Needs with a New Standard of Care. *Women's Health Issues*, *32*(3), 208–212. https://doi.org/10.1016/j.whi.2021.12.001

Kasa, G. A., Woldemariam, A. Y., Adella, A., & Alemu, B. (2023). The factors associated with stillbirths among sub-saharan African deliveries: a systematic review and meta-analysis. *BMC Pregnancy and Childbirth*, *23*(1), 835. https://doi.org/10.1186/s12884-023-06148-6

Kasasa, S., Natukwatsa, D., Galiwango, E., Nareeba, T., Gyezaho, C., Fisker, A. B., Mengistu, M. Y., Dzabeng, F., Haider, M. M., Yargawa, J., Akuze, J., Baschieri, A., Cappa, C., Jackson, D., Lawn, J. E., Blencowe, H., & Kajungu, D. (2021). Birth, stillbirth and death registration data completeness, quality and utility in population-based surveys: EN-INDEPTH study. *Population Health Metrics*, *19*(S1), 14. https://doi.org/10.1186/s12963-020-00231-2

Kerber, K. J., Mathai, M., Lewis, G., Flenady, V., Erwich, J. J. H., Segun, T., Aliganyira, P., Abdelmegeid, A., Allanson, E., Roos, N., Rhoda, N., Lawn, J. E., & Pattinson, R. (2015). Counting every stillbirth and neonatal death through mortality audit to improve quality of care for every pregnant woman and her baby. *BMC Pregnancy and Childbirth*, *15*(S2), S9. https://doi.org/10.1186/1471-2393-15-S2-S9

Law No. 24 of 2013 Concerning Amendments to Law No. 23 of 2006 Concerning Population Administration.

Law Number 23 of 2006 Concerning Population Administration.

Li, L., Wu, Y., Yang, Y., Wu, Y., Zhuang, Y., & You, D. (2022). Maternal educational inequalities about adverse pregnancy outcomes observed in a rural area of a province of China during a time period (2010–2018). *Journal of Epidemiology and Community Health*, *76*(5), 458–465. https://doi.org/10.1136/jech-2021-217754

Ministry of Home Affairs Regulation No. 108 of 2019 Concerning the Implementation Regulation of Presidential Regulation No. 96 of 2018 on Requirements and Procedures for Population Registration and Civil Registration.

Ministry of Home Affairs Regulation No. 109 of 2019 Concerning Forms and Books Used in Population Administration.

Nasreen, S. Z. A., Mahjabeen, N., & Shahreen, S. (2023). A Neglected Tragedy; Stillbirth. *Bangladesh Journal of Obstetrics & Gynaecology*, *36*(1), 57–64. https://doi.org/10.3329/bjog.v36i1.65977

Patel, A. B., Bann, C. M., Kolhe, C. S., Lokangaka, A., Tshefu, A., Bauserman, M., Figueroa, L., Krebs, N. F., Esamai, F., Bucher, S., Saleem, S., Goldenberg, R. L., Chomba, E.,

Carlo, W. A., Goudar, S., Derman, R. J., Koso-Thomas, M., McClure, E. M., & Hibberd, P. L. (2022). The Global Network Socioeconomic Status Index as a predictor of stillbirths, perinatal mortality, and neonatal mortality in rural communities in low and lower middle income country sites of the Global Network for Women's and Children's Health Research. *PLOS ONE*, *17*(8), e0272712. https://doi.org/10.1371/journal.pone.0272712

Presidential Regulation No. 59 of 2017 on the Implementation of Sustainable Development Goals.

Saleem, S., & McClure, E. M. (2023). The importance of quality data to track global progress in addressing stillbirths and neonatal mortality. *The Lancet Global Health*, *11*(6), e801–e802. https://doi.org/10.1016/S2214-109X(23)00200-0

Shrestha, J., Shrestha, R., & Gurung, S. (2018). Stillbirths - Determining the associated factors and causes according to relevant condition at death: an experience from Pokhara, Nepal. *Journal of Nobel Medical College*, *6*(2), 58–65. https://doi.org/10.3126/jonmc.v6i2.19572

Soundararajan, S. S. (2025). Addressing Stillbirth: Exploring Economic Status, Government Strategies, and Gaps. *Cureus*. https://doi.org/10.7759/cureus.76923

Swaminathan, A., Lahaie Luna, M., Rennicks White, R., Smith, G., Rodger, M., Wen, S. W., Walker, M., & Corsi, D. J. (2022). The influence of maternal and paternal education on birth outcomes: an analysis of the Ottawa and Kingston (OaK) birth cohort. *The Journal of Maternal-Fetal & Neonatal Medicine*, *35*(25), 9631–9638. https://doi.org/10.1080/14767058.2022.2049751

Terefe, B., Jembere, M. M., Abrha, N. N., Asgedom, D. K., Assefa, S. K., & Assimamaw, N. T. (2025). Pooled prevalence and multilevel determinants of stillbirths in sub-Saharan African countries: implications for achieving sustainable development goal. *Global Health Research and Policy*, *10*(1), 11. https://doi.org/10.1186/s41256-024-00395-6

UN IGME. (2025). *UN Inter-agency Group for Child Mortality Estimation - Stillbirth Rate Total*. Https://Childmortality.Org/All-Cause-Mortality/Data?Indicator=SBR&refArea=IDN.

UNICEF. (2025). *Standing Up for Stillbirth: Current estimates and key interventions*.

United Nation. (2025, October 3). *Sustainable Development Report*. Https://Dashboards.Sdgindex.Org/.

USAID. (2024). *Demographic and Health Survey (DHS)*. Https://Dhsprogram.Com/Methodology/Survey-Types/DHS.Cfm.

WHO. (2025, October 3). *Stillbirth*. Https://Www.Who.Int/Health-Topics/Stillbirth.