

## Conference Paper

# Short Message Service (SMS) Bunda: Innovation Policy to Reduce Maternal Mortality in Brebes

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### Abstract

SMS Bunda is a text-message service for pregnant women and postnatal mothers to reduce maternal and infant mortality. This paper examines the effectiveness of the Short Message Service (SMS) Bunda as used by the Regent of Brebes in Central Java to reduce maternal mortality. Using a combination of qualitative research methods - participant observation, interviews and document reviews, the results indicated that SMS Bunda reflects the formulation of innovation policies that are fundamentally pedagogic in changing the mindsets about women's reproductive rights.

**Keywords:** SMS Bunda, technology based critical education for women

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## 1. Introduction

Maternal mortality in Indonesia has reached an alarming stage, amounting to 228 per 100,000 live births, according to the Indonesia Demographic Health Survey. The highest maternal mortality rate was recorded in Brebes, a district in the province of Central Java. The causes are attributed to late pregnancy over 35 years old, delivery at a young age of under 18 years, birth spacing is too close to the first year. Other factors are mishandling by the doctor / midwife / nurse, lack of public awareness on the health of pregnant women, bleeding, infection, hypertension during delivery and so on [8]. Most of these deaths could have been prevented with appropriate care during pregnancy, childbirth and post-natal care. Available data showed that although the majority of women in Indonesia receive antenatal care, only about 53% were informed about the signs of pregnancy complications during their visits to the doctor. The high maternal mortality rate reflects the lack of knowledge, which is exacerbated by the inaccessibility among women in Indonesia to reproductive health information [1, 2, 6, 10].

Efforts to reduce the high maternal mortality rates, however, needs to go beyond the medical technical approach [2]. Providing adequate health facilities and infrastructure in towns and villages alone is not enough. More than those, reproductive health

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problems are closely related to non-medical aspects of other communities. Many policies have been undertaken by the Indonesian government to address the problem of women's lack of knowledge about reproductive health. However, to reach out to pregnant and postpartum information antenatal care, birth and post-birth requires the implementation of an innovations policy [9].

Innovation policies in the context of reproductive health communication provide a platform for simplifying the regulations, approaches, procedures and methods of delivering important information to women during their pregnancy and after delivering their babies. For that reason, innovation policy should increase the knowledge of pregnant women and postpartum based technology in the form of Short Message Service (SMS) Bunda.

This study was conducted to examine how SMS Bunda had formulated and implemented public policies based on technological innovation and gender perspective to overcome the problem of lack of knowledge of pregnant and postpartum women in the Brebes Regency. This study used a combination of qualitative methods – participant observation over a span of seven months (from when to when?), interviews and document reviews – to collect the data. Informants were 15 people consisting of regents, head of the health department, the head of the family welfare, maternal and community leaders.

## 2. Discussion

### 2.1. SMS Bunda: Policy Innovation

SMS bunda was designed to complement Jhpiego's USAID-funded Expanding Maternal and Neonatal Survival (EMAS) program in Indonesia. SMS Bunda targets the same provinces as EMAS: Banten, East Java, West Java, Central Java, North Sumatra and South Sulawesi, including Brebes. Although SMS Bunda can be used outside of EMAS target areas, working in the same locations allows Jhpiego to capitalize on existing relationships and related activities. It enables Jhpiego to work across the continuum of care from household to hospital and from the ANC period through delivery, the postnatal period and through the first years of life. SMS bunda helps to make sure that women seek care in a timely manner, while EMAS helps to ensure that when women do seek care from a midwife or other health professional, it is of high quality.

Essential care for both mothers and newborns that can be provided at the primary level is a key priority for the Indonesian government. SMS Bunda aligns well with these priorities, ensuring that women and newborns seek care from their local midwife or at their local health center. SMS Bunda is linked to various initiatives of the government of Indonesia, and both the Ministry of Health and District Health Offices are supportive of

SMS Bunda. For example, the content for all SMS Bunda messages are derived from the National Maternal and Child Health Book. This book is used by all DHOs, public hospitals and health centers, and in Mothers' Classes. SMS Bunda provides the MOH with an additional and innovative platform to share information via SMS. In April 2015, the MOH launched the newest version of the book. As part of the launch and a new national health campaign, the MOH introduced SMS Bunda as a way for pregnant women and new mothers to receive information from the National Maternal and Child Health Book in a condensed, helpful SMS format, to cover the pregnancy period through the first 2 years of the baby's life.

SMS Bunda promotes its services in target areas through mass campaign program. To support this, the midwife is equipped with knowledge about these services and encourage patients to sign up during routine antenatal care visits. SMS Bunda is free, and anyone can get information on maternal and infant health by registering their mobile number and expected date of delivery. Registration can be done anytime during pregnancy. During pregnancy, the mother will receive regular short messages about antenatal care. In the last month of pregnancy, the SMS contains information related to the first days after childbirth for mother and baby. In the first month of birth SMS Bunda will transmit information about the health of mothers and newborns.

Besides communicating information on the physical and mental health of pregnant women, the SMS Bunda also encourages women to access health care facilities. SMS Service Bunda has been rolled out in 222 districts/cities in Indonesia with the number of users mostly coming from Cirebon, West Java, followed by district/city such as Grobogan, Bandung, Deli Serdang, Serang, Tegal. Number of SMS messages sent in February 2016 has reached 116,952. The messages complement the information maternal and child health (MCH) books such as information on the danger signs of pregnancy, the nutritional info on pregnancy, immunization in newborns, breast milk, to family planning.

Given the importance of information provided and the benefits of SMS Bunda services, it is expected that the mother moved to care for their own health and her unborn child to enroll and fellow expectant mothers to join this service. If pregnant women find it difficult to enroll, may be assisted by a midwife to register. In addition, stakeholders also work together to move this program by providing socialization, not only at the level of hospital and health center, but it could go down to people's homes to see the midwife or village head there, which later that information can be disseminated at the time of holding Posyandu, housewives, or other gatherings.

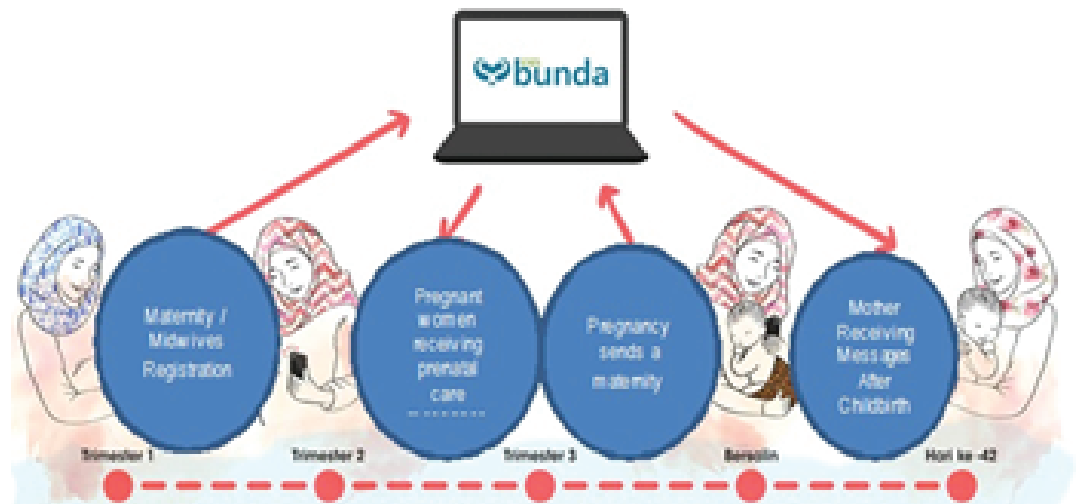


Figure 1: SMS Bunda Plot.

## 2.2. SMS Bunda: Policy Formulation Framework

SMS Bunda is information technology-based innovation policy is developed to overcome the problem of the high rate of maternal mortality for women's lack of knowledge about the process of pregnancy and childbirth. Within the framework of policy formulation, policy innovation is present as a long series of formulation process. This process is done in stages. According to the model proposed in innovation by (Preez and Louw, 2008), this innovation consists of several stages: 1) Phase identification of the idea / ideas; including a. herd, organize, and present information; b filter and collect ideas; c. Framing ideas / frameworks; d. Filtering of ideas; 2) Phase definition of the concept; 3) Phase feasibility and screening concepts; 4) Phase portfolios; 5) Phase Deployment; 6) Phase improvement and formalization; and 7) the exploitation phase.

If the innovation process were adapted within the framework of policy formulation- has equivalence with policy formulation framework proposed by [3, 4]. This means that the presence of the SMS Bunda as a policy innovation is a series of activities that run stage by stage. Its presence is not something instantaneous but deriving from a series of events related to the high maternal mortality rate. What needs to be understood in the stages of innovation within the framework of this policy formulation is the stage of identification of the idea/ideas this SMS Bunda in policy language is referred to as a phase of policy alternatives. This is a creative stage where new ideas or opportunities screened and identified new opportunities. What is interesting is that this new idea comes from outside the government, namely from foreign donors.

Innovation policy paves the way for the application of information communication technology to reproductive health education. Where critical education for women was traditionally conducted through face-to-face meeting or spread through the print media, this innovation uses digital communication devices, such as a mobile phone,

that the majority of Indonesians possess. The process makes the SMS as a medium of critical education for pregnant women and childbirth is a process of deliberative policy. That policy is implemented not in top-down from government. But there is involvement of outside parties to the process. SMS Bunda involves a process of mutual interaction between the government and the female population.

### 2.3. SMS Bunda: Technology Based Critical Education for Women

The high rate of maternal mortality is not just a medical problem but also an issue of awareness of reproductive health among women, most of whom are not aware of their reproductive rights. Here is where the critical education for women becomes relevant for the following reasons: Public perception that the women's primary role is in the kitchen and home, which places women as second-class citizens who do not have the authority to make decisions, including the issue of pregnancy and childbirth. Second, although women have been given the same space to develop themselves, they are still subject to the values of a patriarchal culture. A critical educational agenda is needed to raise the public awareness of women's reproductive rights. The problem is many women do not realize that education is a necessity. Hence, women must themselves initiate the change in mindsets. And that change begins with self-awareness, it is in the same breath with views of the philosophy of man as active agents or subjects start will be the first step towards the reconstruction of the paradigms of the pattern "magical consciousness" towards the pattern of "critical consciousness". The critical educational agenda is liberation or awakening for people who have not been realized or oppressed. With this education becomes critically important for women who are where most of them are still deluded with the trend and style or may not realize they have a choice and they can change the situation.

In [5], notes that the main task of critical education is to humanize the unjust structures in the public system. Fakhri alludes to the critical educational paradigm theorized by Paulo Freire calling for the raising of human awareness. In this issue, women are in marginality positions and most of them are still in the realm of magical consciousness, despite some women moving on critical awareness. How the educational process can be a means of change and awareness for women. With the standpoint of humanism, [7] who started a problem from the human angle in which women are also a type of man, education can build a positive understanding of women as God's creatures who naturally have potential. In principle, every human being has the right to choose and develop her potential. And the choice was made based on knowledge, not just a conviction without the knowledge of the process out. For if the selection process with confidence without knowledge, it will only lead women to vote without knowing that

what he did was not a negotiable option. Through the process of education, women can find a lot of knowledge to get to the critical awareness.

Awareness is the key to start the process of education and self-awareness that comes from being able to read the reality of himself and his environment. Anxiety is the beginning of the process of critical thinking person. How women can be encouraged to consider the state of reality that includes self or surroundings. In the process of education of women can be encouraged dialogue to arouse memories critical. Until finally appear progressive role in himself to become a better self and can take a role in solving the problems that occurred to him. Moreover, education is a stimulus for humans to use its potential in accordance with humanity values. Additionally, materially advance the quality of education can be a private person. Realizing this education process is very important for women. Education that can answer the problems of women, gender-aware education with the critical education of women will learn to build their capabilities, heed himself with science and private good, not just beautify appearance. Bring awareness of critical education, which is the beginning of a magical consciousness toward critical consciousness that is both analytical and practical.

Therefore, critical education initiated by Paulo Freire's important for women. Freire used approach to solve pressure in Brazil. In this paper, the authors also noted that to resolve the issue of the lack of knowledge related to women's reproductive health, especially labor dialog methods are needed to sensitize women and dialog method that can be adapted to technological developments and emerging information.

SMS Bunda is a form of critical awareness, which elaborates on interaction between senders and receivers using information technology, such as mobile phones. This innovation in dual-gender perspective, not only reproductive health issues but also issues of making women literate technology. SMS Bunda is a technology-based education that can shift the paradigm to empower women in their reproductive rights.

### 3. Conclusion

SMS Bunda reflects the formulation of innovation policies that are fundamentally pedagogic in changing the mindsets about women's reproductive rights. SMS Bunda represents an innovation policy framework that focuses on using information communication technology to address women's awareness of their reproductive health and reproductive rights. This educational model offers action-reflection process continuously, to assess the value of the benefits, the rate of change, and the failure or success of a process of becoming the "man" that are beneficial to self and social change in the environment surrounding community.

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