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Women's Reproductive Health: Reducing Maternal Mortality Rates in The Philippines

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I. Overview

The topic of this extended policy brief is Women's Reproductive Health, with a focus on reducing maternal mortality rates in the Philippines. Maternal mortality refers to the death of a woman from complications of pregnancy or childbirth that occur during the pregnancy or within six weeks after the pregnancy ends (Eunice Kennedy Shriver National Institute of Child Health and Human Development - NICHD, 2020.) According to the same article, complications can arise from direct obstetric causes, such as hemorrhage, infection, hypertensive disorders, pre-eclampsia, and eclampsia, or from indirect causes aggravated by pregnancy, such as pre-existing medical conditions. In the Philippines, several factors contribute to the maternal mortality rate— including limited access to quality prenatal and postnatal care, inadequate health infrastructure intensified in rural areas, and socio-economic barriers such as poverty and lack of education. Additionally, a link is found between home births and elevated risk of mortality rates (Amit et al. 2022); geographical challenges, particularly in remote and rural areas, further exacerbate the difficulties in accessing timely and appropriate maternal healthcare. Despite progress in healthcare services, maternal mortality remains a significant public health issue in the Philippines.

According to the World Bank Group, the maternal mortality ratio (MMR) in the Philippines declined from 129 per 100,000 live births in 2000 to 78 per 100,000 live births in 2020. On the news (4/2/23), the Department of Health (DOH) was quoted as referring to Philippine Statistics Authority (PSA) data that the maternal mortality ratio (MMR) was 84.86 per 100,000 live births in 2021, thus on track to meet the Sustainable Development Goal MMR of 70 per 100,000 live births by 2030 for the country.

However, the reality suggests something else:

On Feb. 22, 2023, PSA actually reported that 2,478 women died of maternal causes in 2021. MMR in 2021 was thus 189.21 per 100,000 live births (2,478/1,309,601 x 100,000) (Philippine Daily Inquirer, 2023). In 2022, the maternal mortality ratio in the Philippines declined to 104 per 100,000 live births, according to Dr. Maria Stephanie Fay Cagayan of the Philippine Obstetrical and Gynecological Society. During a virtual town hall forum organized by the Department of Health, Dr. Cagayan highlighted that the leading cause of maternal mortality was hypertensive disorders, accounting for 31.1 percent of cases. This was followed by abnormalities of forces of labor and puerperium infections, each at 8.7 percent, and postpartum hemorrhage at 8.6 percent. Other contributing factors included maternal diseases, infectious and parasitic diseases, obstetric embolism, and ectopic pregnancy. Dr. Cagayan also noted that the maternal mortality ratio had increased at the onset of the COVID-19 pandemic, rising from 100 per 100,000 live births in 2019 to 123 in 2020 and 212 in 2021, based on data gathered by POGS (ABS-CBN News, 2023).

Despite some progress, the country still faces significant challenges in maternal mortality, highlighting public health issues in the Philippines. Public data on maternal mortality is often disorganized and inaccurate, with discrepancies between sources suggesting potential manipulation of figures. Healthcare resources are unevenly distributed, with urban areas having better facilities and access compared to rural and remote regions, resulting in higher maternal mortality rates in these less accessible areas. Cultural preferences for home births with traditional birth attendants, who often lack proper training, further contribute to preventable maternal deaths. Efforts to integrate traditional practices with modern medical care face resistance.

Natural disasters and environmental factors disrupt healthcare services and infrastructure, increasing maternal mortality rates, as seen during the COVID-19 pandemic. Additionally, the economic burden of healthcare costs remains a significant barrier, with many low-income families unable to afford necessary medical care, leading to increased risks of complications and maternal deaths.

A wider range of family planning methods are available to couples, especially those who desire to have children but are unable to. There are also laws and policies present that aim to aid women and youth in creating more informed choices and having more means to protect their bodies from unwanted circumstances. However, the problem persists: regardless of global declines in maternal mortality rates, the Philippines continues to lag behind the Sustainable Development Goals (SDGs) targets for maternal and child mortality— despite the implementation of various health policies and acts, along with improvements in facility-based deliveries and skilled attendant coverage (Amit et al., 2022), disparities persist in the distribution of health resources and capacity. Rural and remote areas, in particular, face significant disadvantages, as reflected in key maternal and child health indicators that highlight substantial gaps in care and outcomes across different regions. One notable issue is the preference for home births among many Filipino women, influenced by cultural beliefs, limited access to healthcare facilities, and financial constraints (Gabrysch and Campbell, 2009.)

II. Policy Background

According to the most recent World Bank statistics (2024), the Philippines' maternal mortality ratio (MMR) has improved from 129 in 2000 to 78 in 2020 per 100,000 live births. Although the ratio approaches the regional average (East Asia and Pacific), it remains at an excessively high level.

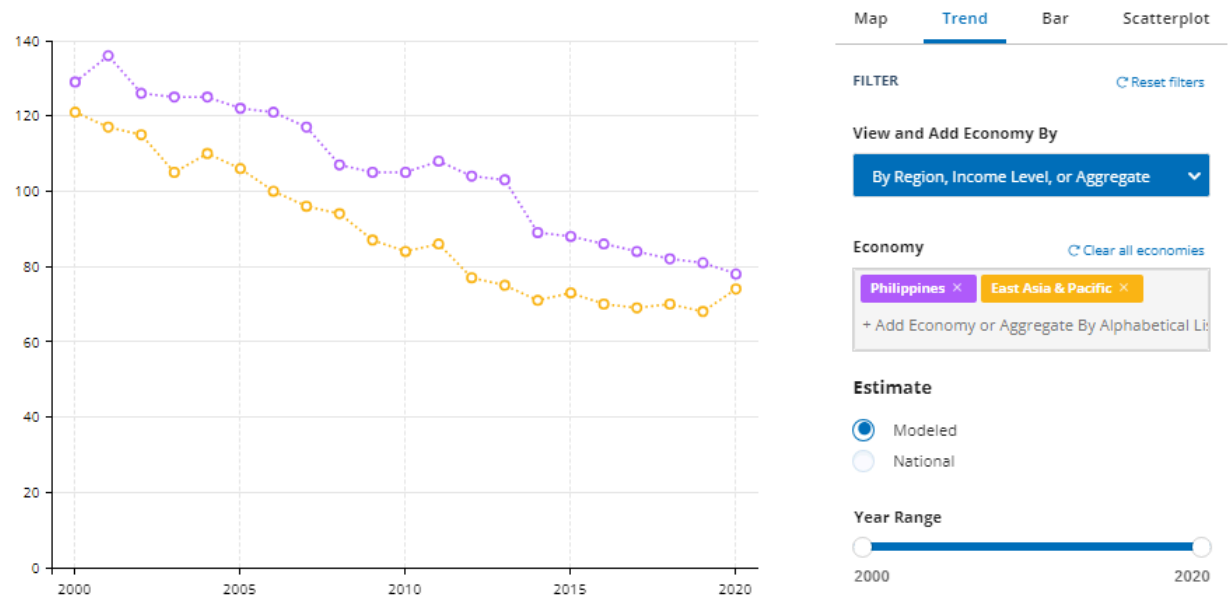

Figure 1. World Bank Gender Portal | Maternal Mortality Ratio

Reducing maternal mortality rates and improving reproductive health in the Philippines have been studied for many years. Policies and programs have been implemented to improve

health outcomes for mothers and children including integrating nutrition programs such as the *"Kalusugan at Nutrisyon ng Mag-Nanay Act"* (R.A. 11148), which covers those who are nutritionally at risk, especially pregnant and lactating women, adolescent girls and teenage mothers, women of reproductive age, and all Filipino children who are newly born up to age twenty-four (24) months (Manila Bulletin, 2018).

Furthermore, the Republic Act No. 10354 (The Responsible Parenthood and Reproductive Health Act of 2012), or what the public refers to as the "RH Law", provides ethical and medically safe, legal, accessible, affordable, non-abortifacient, effective, and quality reproductive health care services, the promotion of people's right to health, especially those of women, the poor, and the marginalized. (The LawPhil Project, 2012). The Department of Health in 2020 also enacted "The National Safe Motherhood Program" to ensure access to mentioned healthcare services, particularly for underserved populations. It includes skilled birth attendance, emergency obstetric care, and postpartum care. These policies were made to recognize such services as a component of basic health care. However, there is too little to no improvement in the healthcare system across different regions and health departments in the Philippines.

In a study conducted by Cagayan, MD, PhD et al. (2022), mothers/patients were interviewed to provide an analysis regarding the capacity of health facilities to provide services in Rural Health Units (RHUs) in Luzon. Despite the aforementioned policies, pregnant mothers still expressed dissatisfaction with these medical institutions.

> *"The lack of funding and resources in some RHUs also force us (patients) to spend out-of-pocket for medications and services, which sometimes discourages us from visiting the RHU." (Region 3 - Central Luzon)*

The group found that gaps bordering maternal mortality in the Philippines are attributed to the inadequacy of essential resources and support for mothers, specifically during the first stages of pregnancy and after infant delivery. There exist a number of maternal benefits both from the government and NGOs, but problems arise in the beneficiaries' limited reach to these services and the shortage of such services in covering prenatal care until childbirth. Maternity leave is provided and paid for 105 days (+ 15 days if solo parent) of pregnancy, including another 2 paid months of leave following the surgery, provided by the Magna Carta for Women (Saligan, 2022). NGOs such as PhilHealth provide a Maternity Care Package (MCP) ranging from PhP6,500 to PhP8,000, which is only accessible to those who availed the corresponding annual premium contribution of PhP2,400 (PhilHealth Insurance Corporation, 2016). Women who intend to give birth in medical institutions are reluctant to avail of these services and prefer homebirths, finding it more convenient and affordable, along with a factor that social norms present confidence in the skills and experience of traditional birth attendants (Cagayan, MD, PhD et al., 2022). Overall, Metrobank asserts that one can expect to spend around PhP1 million for quality services, starting from monthly prenatal check-ups until the baby's first two years of life (Metrobank, 2024). It is evidently favorable for families, specifically those with low income and in rural areas, to prioritize childbirth only, leaving the prenatal and postpartum of mothers unchecked and with insufficient consideration.

III. Theoretical Lens

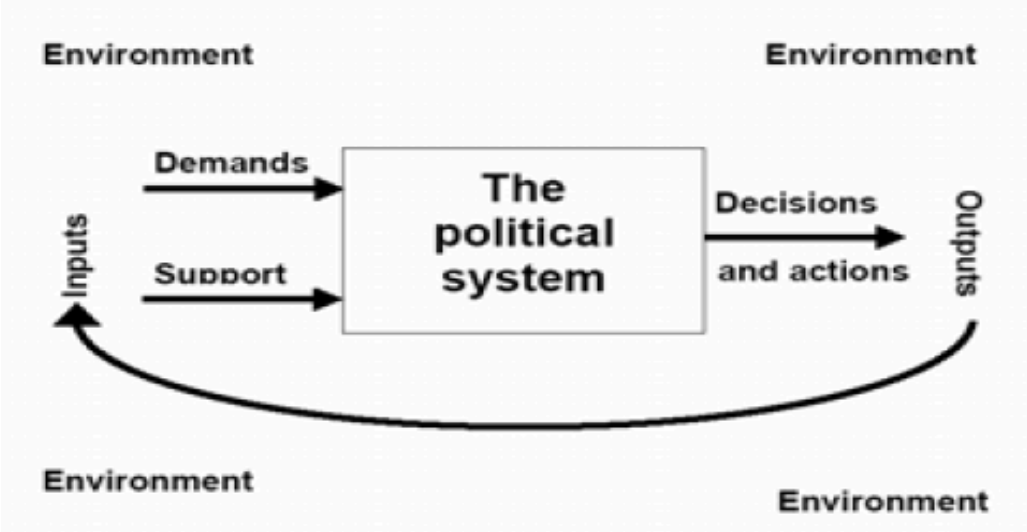

Figure 2. David Easton's Political Systems Theory

For this study, the group will be using David Easton's Political Systems Theory, which states that public policy is the response of the political system to demands from its environment (Anyebe, 2018). Moreover, it establishes the existence of feedback loops within the system, which are changes to the environment that consequently affect what inputs (demands, support, opinions) citizens have for the policymaking system. The political system is only able to produce policies if there is enough demand from the people to address the areas lacking in a program or project under the implemented policies.

In the context of maternal mortality, the approval of the Reproductive Health Law has had a positive impact on the education, services, and funding available. However, as established earlier, a lot of these aspects of the policy haven't reached their intended targets in more rural areas, leading to a negative feedback loop where relevant sectors express their discontent with the law. In consideration of this, the framework of the Political Systems theory presented above will be used as a map in identifying weak points within the feedback loop. From this map, the environment and inputs of the people are two variables that the group will be focusing on to pinpoint what issues continue to persist that the existing policies should be able to address but are unable to do so, as well as human and social factors that could be better supported by future policies. Moreover, the framework will be used to propose policy alternatives specific to these weak points, all in consideration of pushing for a more positive feedback loop. For example, information dissemination is a weak point that affects the relevant sector's decision environment in this issue. Using the framework, the policy alternatives can be put within the context of the feedback loop to help understand which alternatives would positively affect the loop, whether it be policy implementation affecting the decision environment or the people's inputs.

IV. Problem Analysis

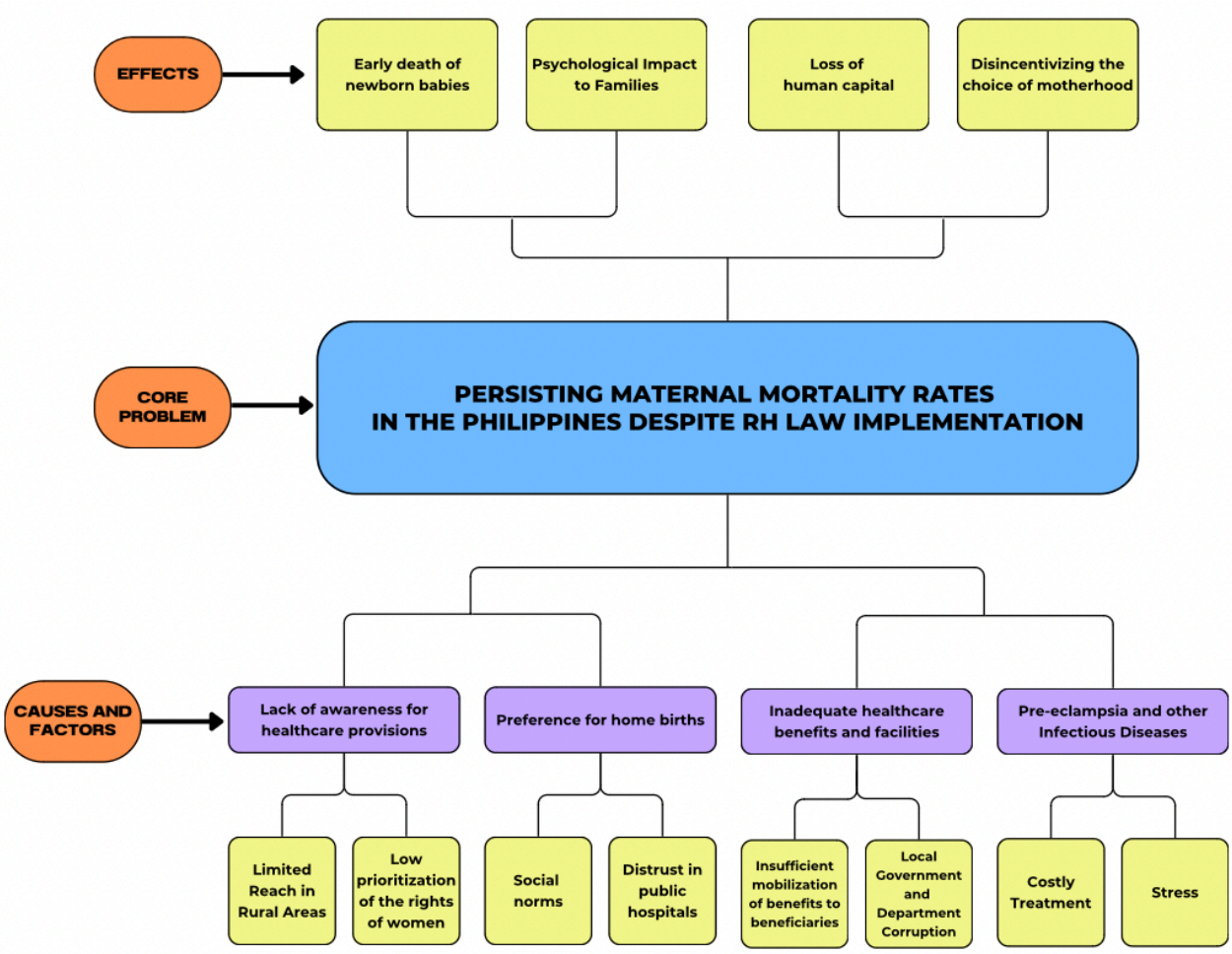

Figure 3. Problem Tree Analysis | https://tinyurl.com/poldesi-figures-3-5

Core Problem

As established when examining the present policy environment, the Reproductive Health Law of 2012 has provisions dedicated to providing more services for maternal care, such as skilled workers and deliveries. However, the maternal mortality ratio has remained high in the last twelve years despite the introduction of this legislation, going only from 104 to 78 with frequent fluctuations (World Bank Gender Data Portal, 2023). This brings into question the effectiveness of government resource mobilization and conscious choice of citizens despite the presence of government programs.

Causes

Maternal deaths in the Philippines are mostly caused by a combination of medical, social, and systemic factors. As shown in Figure 3, there have been inadequate healthcare benefits and facilities provided along with the public's lack of awareness of such healthcare provisions. According to the World Health Organization (2024), factors that prevent women and mothers

from seeking or receiving care during pregnancy and childbirth are health system failures, poor quality care, insufficient numbers of and inadequately trained health workers, shortage of essential medical supplies, specifically those with limited reach in rural areas, and the poor accountability of health systems. All women deserve access to quality healthcare. These systemic factors determine the quality expected by mothers before, during, and after their pregnancy.

In cases of pre-eclampsia and other infectious diseases, medical assistance and services become inadequate to the point that only middle to high-income people can afford. Low-income earners, specifically those without family planning, experience higher levels of stress– women experiencing stress are more prone to maternal morbidity (UNICEF, 2021). Nonetheless, the need for such proper medical assistance is safer for both mothers and infants since medical institutions have the necessary equipment for the operation. However, home births are still prevalent in the country because of social norms and the growing distrust of public hospitals. A record from 2005 in Biliran Island states that the rate of maternal mortality in the province was 289 per 100,000 live births (Manguni & De Herdt, 2017). This news led to the ban on home births in the province the same year and was eventually implemented nationwide in 2008. However, homebirths are still prevalent in the country because of social norms and the growing distrust of public hospitals. With the purpose of having a safe delivery, these factors arise primarily because the public does not see facility-based childbirth as a better choice than home births.

Effects

The persistence of maternal mortality has major implications for economic and social development. For one, it has been found that roughly 81% of infants whose mothers had died within 42 days of childbirth also did not survive and faced 46 times greater risk of dying within one month (Moucheraud et al., 2015). This highlights the importance of addressing factors affecting the mortality rate; otherwise, it would also adversely affect the well-being of their children. Maternal death also has lasting impacts on children and families. Lawrence et al. (2022) have found that families with deceased mothers suffer from depressive symptoms and stress stemming from financial issues and fragmentation of family members. Physical health also suffered due to grief. Bazile et al. (2015) add to this, stating that maternal death worsens children's vulnerabilities to health complications and social impacts. Another effect of persistent maternal deaths is the loss of human capital, as expectant mothers who die are usually at the peak of productivity and career. Kirigia et al. (2008) identified that within regions of high maternal mortality rates, a person's death reduced GDP per capita by about USD 0.36 per year. Lastly, high maternal mortality rates also disincentivize women from taking on motherhood. Jain (2011) found that aside from successful safe motherhood programs, a large number of saved maternal lives can be attributed to women choosing not to have children, which significantly contributes to the decline of maternal deaths. This would imply that countries without effective safe motherhood programs cannot provide a safe environment for all mothers to thrive in, disincentivizing motherhood.

V. Policy Alternatives

POLICY ELEMENTS				
Goal	**Criteria**	**Policy I (Reducing Maternal Mortality) Incremental**	**Policy II (Strengthening Healthcare Infrastructure) - Transformational**	**Policy III (Community-Based Health Education Programs) - Incremental**
G1. Reduce Maternal Mortality	Feasibility (Likelihood to be of the policy to be implemented given the resources, needed support and barriers.)	Low- Limited changes, existing challenges persist	Moderate - Requires substantial investment and collaboration	Moderate - Requires collaboration with local communities and NGOs
	Impact (The potential of the policy to decrease the number of maternal deaths.)	Low - Current policies insufficient, high maternal mortality persists	High - Directly addresses inadequate healthcare infrastructure	Moderate - Empowers communities, reduces cultural resistance to facility-based childbirth
	Cost-Effectiveness (The balance of cost incurred against benefit incurred.)	Low - Continued costs without significant improvements	Moderate - Significant initial investment but long-term benefits	High - Lower cost compared to infrastructure investment, potential high impact through behavior change and education
G2. Improve Healthcare Access	Feasibility (Likelihood to be of the policy to be implemented given the resources, needed support and barriers.)	Low-Inconsistent access, especially in rural areas	High - Focuses on improving access in underserved areas	Moderate - Engages local healthcare providers and traditional birth attendants
	Impact (How far the policy could improve accessibility to health care services, particularly among disadvantaged populations.)	Low - Disparities in healthcare access remain	High - Improved access to quality prenatal and postnatal care	Moderate - Increases awareness and utilization of healthcare services
	Cost-Effectiveness (The balance of cost incurred against benefit incurred.)	Low - Current expenditure not leading to significant improvements	Moderate - Requires investment in healthcare facilities and training	High - Cost-effective education programs and community engagement
G3. Enhance Policy Implementation	Feasibility (Likelihood to be of the policy to be implemented given the resources, needed support and barriers.)	Low- Current implementation issues	Moderate - Enhances existing policy frameworks	Moderate - Leverages community support for policy implementation
	Impact (The potential of the policy to improve the execution and effectiveness of both existing and new healthcare policies.)	Low - Existing policies not effectively implemented	High - Improved monitoring and evaluation of policy effectiveness	Moderate - Better policy adoption through community involvement
	Cost-Effectiveness (The balance of cost incurred against benefit incurred.)	Low - Resources spent on ineffective policies	High - Utilizes existing policies with improved monitoring and evaluation systems	High - Enhances policy impact with lower costs through community-based programs

Figure 4. Policy Alternative Matrix | *https://tinyurl.com/poldesi-figures-3-5*

Justification of Ratings in the Problem Analysis Matrix

The Problem Analysis Matrix is based on a well-scrutinized evaluation with respect to every policy alternative, going through the parameters of feasibility, impact, and cost-effectiveness. Most of the criteria are rated "low" for Policy I because it does not identify the basic causes of high maternal mortality rates. Indeed, existing policies are inadequate, as the country has continued to experience high rates of maternal mortality and gaps in healthcare access. Moreover, the money spent on these policies currently in place is not bringing about any considerable improvement, so the status quo has turned out to be an ineffective and very expensive approach without tangible benefits.

Policy II is rated "high" in impact and feasibility because it attacks at the very root of problems arising from a lack of health facilities and poor infrastructure in underserved areas. However, it is to be noted that this policy is only workable if there is significant investment and cooperation; it can result in high improvements in maternal health outcomes. While the upfront

costs will be large, the long-term benefits and savings through reduced maternal and infant mortality rates justify this investment. Policy III: Community-Based Health Education Programs: The feasibility is "moderate," while the impact is "moderate," because this empowers communities, increases awareness, but there could be possible resistance to it, and everything depends on community participation and the consistent allocation of resources. Additionally, similar programs have been present for some time; Yet, the maternal mortality rate continues to be on the rise (Lee-Brago, 2023.) This reflects that even though community-based health education programs are in themselves good in raising awareness, the rating for impact is "moderate" since they do not absolutely get at the infrastructural and systemic barriers to the effective utilization of available healthcare services. Cost-effectiveness: "high," as the costs, relatively speaking, in comparison with infrastructure investment, are low, making this strategy quite feasible as an add-on to infrastructure investment for bringing improvements in health behaviors and service use.

Recommended Policy: Strengthening Healthcare Infrastructure

Of the policies based on the Policy Alternative Matrix, the best to address high maternal mortality rates in the Philippines is the one on Strengthening Healthcare Infrastructure. This policy has a very high feasibility score because it, more than anything else, sets a clear and direct solution to the shortcomings of the current healthcare system by providing better facilities, resources, and personnel, particularly in underserved rural areas. The foretold effect is huge in ensuring that more women get quality prenatal and postnatal care, hence reducing the number of maternal deaths. While this may involve a large initial investment, the long-term benefits will be improved health outcomes and reduced infant mortality, thus overall economic gains from a healthier population.

Cost-Benefit Analysis

	PA I	**PA II**	**PA III**
CBA RATIO	0.6512	***1.0476***	0.9333

Policy Alternative I (Refer to Annex A): Reduce Maternal Mortality, Maintaining the status quo would need a high cost with moderate benefits, The CBA ratio of 0.6512 indicates that the costs outweigh the benefits, suggesting that the existing system is not the most efficient or effective use of resources. Limited improvement in maternal health outcomes and economic savings underscore the need for long-term policy interventions. An estimated 1,000,000,000 benefit arises from limited improvement in maternal health outcomes due to enhanced services and better access to care. With implementing long-term savings from reduced complications and better preventive care amount to 400,000,000 annually. These savings would help decrease emergency interventions and lower treatment costs for complications that are avoided through improved maternal care.

Policy Alternative II (Refer to Annex B): Strengthening Healthcare Infrastructure, Implementing the policy in strengthening healthcare infrastructure involves higher costs but yields high health and social benefits. The CBA ratio of 1.0476 indicates that the benefits

outweigh the costs, making this the most favorable policy option. Investments in infrastructure result in substantial reductions in maternal and infant mortality rates, improves overall health, and enhances community engagement, justifying the higher expenditures. In terms of benefits, the policy is estimated to reduce maternal mortality rates by improving access to care in rural places, contributing 1,200,000,000 in benefits. Increased utilization of rural health facilities is expected to yield 1,200,000,000. Enhanced health for mothers and children through improved infrastructure and education programs will add 500,000,000. Long-term savings from reduced complications and better preventive care are estimated at 400,000,000.

Policy Alternative III (Refer to Annex C): Community-based health Education programs, Community-based health education programs are also a favorable alternative based on the CBA ratio of 0.9333. The alternative emphasizes preventive care and community engagement, leading to health improvements and economic savings at a relatively low cost. Benefits of this policy are expected to improve access to Maternal Care facilities contribution 1,200,000,000 by reducing mortality rates through enhanced facilities. Improved overall health for mothers and children is estimated at 500,000,000. Healthcare saving at 400,000,000.

Based on these calculations, Policy Alternative II: Strengthening Healthcare Infrastructure, offers the highest benefits relative to its costs. The higher the CBA ratio, the more economically beneficial the policy alternative.

VI. Recommendations

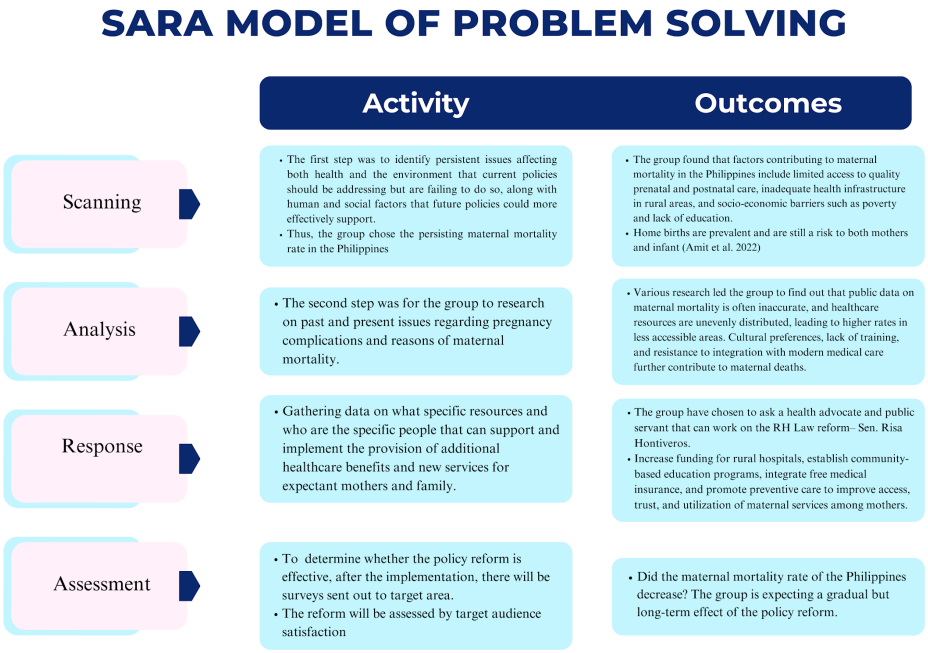

Figure 5. SARA Model of Problem Solving | https://tinyurl.com/poldesi-figures-3-5

Policy Implementations

The paper proposes a policy reform aimed at improving healthcare infrastructures in the Philippines, specifically in rural areas, to establish trust among expectant mothers and their

families. The group has chosen the Congress to work on the reform of the Responsible Parenthood and Reproductive Health Act of 2012 (R.A. 10354), to be led by Senator Risa Hontiveros. Based on what the group has gathered, Senator Hontiveros is well-known for advocating public health and legislative reforms that include both traditional and modern applications. This initiative targets expectant mothers– reaching them through community health programs, educational campaigns, and partnerships with local health centers will be pivotal. The policy paper highlights critical issues such as the high maternal mortality rate, insufficient reproductive health benefits, and inadequate healthcare infrastructure, especially in rural areas.

Our findings reveal that maternal mortality is exacerbated by limited access to quality prenatal and postnatal care, social and economic barriers, and prevalent home births that pose significant risks. As mentioned in the early parts of the paper, public data on maternal mortality is often inaccurate, and healthcare resources are unevenly distributed. To enhance the understanding of the situation, we advise Congress to focus on accurate data collection, equitable resource distribution, and integrating modern medical care with cultural sensitivity.

To effectively implement the policy of strengthening healthcare infrastructures for mothers to reduce maternal mortality rates in the Philippines, a comprehensive policy reform that provides a balance from the necessities of the target audience– expectant mothers– and the provision of resources and services from the government. The process begins with increasing funding for rural hospitals and health centers, ensuring that these facilities are well-equipped and staffed to provide high-quality care. This will help improve access and trust among mothers and families, encouraging them to utilize these services more frequently. On the other hand, community-based education and support programs for members of the family should be established to develop an understanding of the significance of systematic and proper maternal care. These programs can include workshops, home visits by healthcare professionals, and the distribution of educational materials on preventive care and healthy practices. Integrating free medical and life insurance from PhilHealth will further ensure that mothers have financial protection and access to necessary medical services. Moreover, promoting and requiring mandatory preventive care measures, such as regular prenatal check-ups and vaccinations will help with long-term savings by reducing complications and costly emergency treatments. Funding for local activities that could improve community participation regarding these healthcare initiatives will also develop more interest regarding the significance of the issue for both the public and local governments, leading to sustained improvements in maternal and overall reproductive health outcomes.

Policy Evaluation

Upon further consideration of alternatives discussed throughout the paper, a policy mandating programs and plans to strengthen the current healthcare institutions and infrastructure has proved to be the most cost-beneficial alternative, since it not only expands the reach of already existing centers, hospitals, and offices, but offers more tangible benefits that would, in context of the Political Systems Theory, almost immediately show a trend toward achieving a more positive feedback loop. It was established previously that the target audience, expectant mothers, are not only are inhibited by cultural factors and norms like preference for home birth, but also by intimidation of the potential costs associated with using traditional healthcare, like

transportation, medicine, extra fees for additional check-ups required by the doctor, and so on. Since community-based health education programs bring little returns compared to the costs, wherein awareness campaigns are pointless without enough reachable infrastructure, strengthening current infrastructure would augment the decision environment and inputs of the target population, effectively contributing to addressing that weakpoint in the country's healthcare system. More than being the most cost-effective policy alternative relevant to addressing and reducing maternal mortality, it is also consistent with this evaluation criteria:

Equity

Mothers are the backbone of society, yet they remain as one of the most vulnerable and disadvantaged among multiple sectors of society, amplified by weak enforcement or unreachability of women-specific health programs and benefits. Since women face more health threats than men in the context of family planning and building, equity may only be achieved if these mother-specific health benefits reach its target population, especially in rural areas where it is most unattainable. As shown in the Policy Alternatives Matrix, opting to strengthen and develop healthcare infrastructure yields a moderate to high value - although benefits cannot immediately be reaped, it will result being more beneficial in alleviating maternal mortality long-term.

Efficiency

While the second policy alternative proves to be the most overall expensive choice, it adequately addresses more target areas in maternal mortality, as well as yielding more benefits relative to the amount of investment needed for the policy alternative. As shown in the Cost-Benefit Analysis, despite having an estimated cost of around Php 3.15 billion, the larger reach and increased capacity brought about by this long-term development will improve overall maternal health in the aspects of mother and child mortality rate, less overall spending due to the presence of preventive care, etc. With a CBA ratio of 1.0476 compared to the second highest being 0.9333, this policy alternative proves to be the most efficient despite requiring the most capital.

Effectiveness

Given evident the lack of reachability of healthcare infrastructure in rural areas, the effectiveness of this policy alternative will not be immediately felt, as planning and development would take up the first few years. However, aiming for long-term benefits and usefulness would mean that this issue would not need to be recurringly addressed. It is also tied with intangible benefits, such as increased quality of life for mothers and children, and would lead to an increase in trust for public healthcare. Thus, the effectiveness of the policy would be felt in the long term.

Public Interest and Participation

One of the driving cultural and norm-based causes of maternal mortality is that there are no healthcare centers in proximity for most of the areas in the Philippines outside of the urbanized cities. As such, norms that place trust and value on the government's healthcare system cannot be cultivated, and people would still have a preference for their more traditional, home-based methods. Increasing benefits and ways to reach said benefits would open the people up to other methods of healthcare other than their own, and over time referring mothers and children to nearby hospitals will be part of the norm for most families.

Sustainability

As mentioned earlier, this policy alternative aims to address this weak point in maternal care in the long term. Given the current trend of development for legislation on increased prioritization for reproductive health, this development policy would be continuously supported. Moreover, this policy alternative also falls under the category of infrastructure development, and urbanization frequently places high priority on the economic and social development of the country.

Overall, while this policy alternative requires heavy commitment and investment from involved policy decision-makers and the parties that could aid in the implementation of increased healthcare benefits and healthcare infrastructure, its benefits extend beyond providing adequate and safe assistance to expectant mothers. The trajectory of this healthcare policy alternative overlaps with the interests of further urbanizing rural areas for the sake of economic development, which proves it to be a safe option in terms of avoiding wasting time and resources. While community-based health initiatives could prove their effectiveness in the future, establishing more healthcare infrastructure and benefit-based legislation would only amplify its effectiveness.

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VIII. Annexes

ANNEX A: COST-BENEFIT ANALYSIS TABLE ON POLICY ALTERNATIVE I

POLICY ALTERNATIVE I: Reduce Maternal Mortality		
Cost		
Category	**Details**	**Amount Estimate (Annual)**
Existing Healthcare Services	Maintenance and operational costs of healthcare facilities	1,000,000,000
Administrative Costs (Insurance, wages, benefits, supplies, etc.)	Procurement of medical equipment and supplies	500,000,000
	Training programs for healthcare workers	200,000,000
	Recruitment of additional healthcare personnel	300,000,000
	Development and implementation of health education programs	100,000,000
	Training and support for traditional birth attendants	50,000,000
	TOTAL COST	**2,150,000,000**

Benefits		
Category	**Details**	**Amount Estimate (Annual)**
Existing Maternal health Services	Limited improvement in maternal health outcomes	1,000,000,000
Healthcare Savings	Long-term savings from reduced complications and better preventive care	400,000,000
Family healthcare benefits	Medical/life insurance, preventive care, etc.	-

Community engagement	Strengthened community participation in healthcare initiatives to increase trust in healthcare systems	-
	TOTAL COST	**1,400,000,000**

ANNEX B: COST-BENEFIT ANALYSIS TABLE ON POLICY ALTERNATIVE II

POLICY ALTERNATIVE II: Strengthening Healthcare Infrastructure		
Cost		
Category	**Details**	**Amount Estimate (Annual)**
Healthcare Infrastructure/Operational Costs	Construction and upgrading of healthcare facilities in rural areas	1,000,000,000
	Maintenance and operational costs of healthcare facilities	1,000,000,000
Administrative Costs (Insurance, wages, benefits, supplies, etc.)	Procurement of medical equipment and supplies	500,000,000
	Training programs for healthcare workers	200,000,000
	Recruitment of additional healthcare personnel	300,000,000
	Development and implementation of health education programs	100,000,000
	Training and support for traditional birth attendants	50,000,000
	TOTAL COST	**3,150,000,000**

Benefits		
Category	**Details**	**Amount Estimate (Annual)**

Improved Access to Maternal Care facilities	To reduce maternal mortality rates due to better access to its facilities	1,200,000,000
Increase Utilization of Rural Healthcare	For more mothers and families to use rural hospitals and centers to improve trust and facility quality	1,200,000,000
Improved Overall Health	Better overall health for mothers and childrenEnhanced health for mothers and children through community-based education and support	500,000,000
Healthcare Savings	Long-term savings from reduced complications and better preventive care	400,000,000
Family Healthcare benefits	Medical/life insurance, Preventive care, etc.	-
Community Engagement	Strengthened community participation in healthcare initiatives to increase trust in healthcare systems	-
	TOTAL COST	**3,300,000,000**

ANNEX C: COST-BENEFIT ANALYSIS TABLE ON POLICY ALTERNATIVE III

POLICY ALTERNATIVE III: Community-Based Health Education Programs		
Cost		
Category	**Details**	**Amount Estimate (Annual)**
Programs Development	Creation of health education and outreach programs	1,000,000,000
Training	Training traditional birth attendants and local health workers	400,000,000
Program Implementation	Running and maintaining education programs	350,000,000
Monitoring and evaluation	Ensuring program effectiveness	250,000,000

Administrative Costs	Management and oversight of programs	250,000,000
	TOTAL COST	**2,250,000,000**

Benefits		
Category	**Details**	**Amount Estimate (Annual)**
Improved Access to Maternal Care facilities	To reduce maternal mortality rates due to better access to its facilities	1,200,000,000
Improved Overall Health	Enhanced health for mothers and children through community-based education and support	500,000,000
Healthcare Savings	Long-term savings from reduced complications and better preventive care	400,000,000
Family Healthcare benefits	Medical/life insurance, Preventive care, etc.	-
Education	Community education	-
Community Engagement	Strengthened community participation in healthcare initiatives to increase trust in healthcare systems	-
	TOTAL COST	**2,100,000,000**

ANNEX D: COST-BENEFIT ANALYSIS AND POLICY ALTERNATIVES MATRIX TABLE

Cost	Details	PA 1	PA 2	PA 3
Capital Expenditures	Construction and upgrading of healthcare facilities in rural areas	-	1,000,000,000	-
	Maintenance and operational costs of healthcare facilities	1,000,000,000	1,000,000,000	-
Infrastructure	Procurement of medical	500,000,000	500,000,000	-

	equipment and supplies			
	Training programs for healthcare workers	200,000,000	200,000,000	-
	Recruitment of additional healthcare personnel	300,000,000	300,000,000	-
	Development and implementation of health education programs	100,000,000	100,000,000	-
	Training and support for traditional birth attendants	50,000,000	50,000,000	-
Human Resources	Creation of health education and outreach programs	-	-	1,000,000,000
	Training traditional birth attendants and local health workers	-	-	400,000,000
Operational Costs	Running and maintaining education programs	-	-	350,000,000
	Ensuring program effectiveness	-	-	250,000,000
Administrative Costs	Management and oversight of programs	-	-	250,000,000
	TOTAL COST	**2,150,000,000**	**3,150,000,000**	**2,250,000,000**

Benefit	**Details**	**PA 1**	**PA 2**	**PA 3**
Tangible	Limited improvement in maternal health outcomes	1,000,000,000	-	-
	Reduction in Maternal mortality rates	-	1,200,000,000	1,200,000,000
	Lower infant mortality rates due to better maternal health	-	1,200,000,000	-
	better overall health for mothers and children	-	500,000,000	500,000,000

	Long-term savings from reduced complications and better preventive care	400,000,000	400,000,000	400,000,000
Intangible	To maintain quality of life for mothers and families	-	-	-
	Strengthened community participation in healthcare initiatives to increase trust in healthcare systems	-	-	-
	Community education	-	-	-
	TOTAL COST	**1,400,000,000**	**3,300,000,000**	**2,100,000,000**