



A BEHAVIORAL APPROACH TO UNCOVER BARRIERS TO MATERNAL CARE IN HAITI



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LAST UPDATE: **8.23.2021**



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ABSTRACT

Haiti has the highest maternal mortality rates (MMR) in the Latin America and Caribbean region, and low rates of institutional care contribute to high MMR.

Although both structural and behavioral barriers prevent pregnant women from accessing institutional care, behavioral barriers have been often overlooked. Efforts in Haiti to increase rates of institutional care operate on the assumptions that pregnant women do not access care because of the cost, distance to facilities and poor-quality infrastructure of the health centers.

While these assumptions are surely at play, they do not cover all the reasons why pregnant women do not seek institutional care in Haiti. A behavioral approach was followed to uncover both structural and behavioral barriers of the

decision-making process of pregnant women when thinking of accessing institutional care.

The behavioral approach sheds light on other factors beyond the standard variables of prices, distance, and infrastructure, which also affect health seeking behavior, including optimism bias, uncertainty aversion, status quo, disrespectful care and discomfort with the model of care. These insights helped design solutions that have the potential to be more impactful. Policymakers must revise their assumptions about the factors that influence decision making of pregnant women and look beyond structural factors to ensure policies and programs incorporate a behavioral science lens.

Future efforts to increase rates of institutional care must incorporate behavioral insights in order to reach more efficient policies.



01. INTRODUCTION

MOST HIGH-RISK PREGNANCIES SHOW EARLY WARNING SIGNS, AND RECEIVING PROFESSIONAL CARE BEFORE, DURING, AND AFTER CHILDBIRTH HAS PROVEN EFFECTIVE IN REDUCING DEATH RATES.

Haiti has the highest maternal mortality rates (MMR) in the Latin America and Caribbean region. Although there has been a decline since 1990, the latest data (2015) shows that MMR remain high, at 529 deaths per 100,000 live births (IHE and ICF 2018). Based on current trends, Haiti will probably not meet the United Nations' Sustainable Development Goals to reduce the MMR to less than 70 maternal deaths per 100,000 live births by 2030 (World Bank 2017).

Although many factors contribute to high MMR, research has shown that low rates of institutional care are a significant factor. Worldwide,

approximately 15 percent of pregnancies develop complications that can lead to death (WHO 1999). However, most high-risk pregnancies show early warning signs, and receiving professional care before, during, and after childbirth has proven effective in reducing death rates (Institute of Medicine (US) 2003).

Structural barriers to access institutional care are common in Haiti. There is insufficient health infrastructure, limited healthcare workforce, and few medical resources. Moreover, health services are expensive considering socioeconomic levels (Gage and Calixte 2006). Distances to health centers are long and costly due to poor road

conditions and limited access to transportation. In addition, hospitals receive little financial support from the Government of Haiti (GoH), with less than five percent of the budget spent on health (World Bank 2017), which results in poor quality of healthcare.

However, there are factors that go beyond the standard concerns of price and distance and that are more related to the psychological constructs of behaviors. In this note, we describe the process of uncovering these other types of barriers to design more effective solutions.



02. CONTEXT

ALMOST HALF OF WOMEN IN HAITI – ESPECIALLY THE POOREST – DELIVER AT HOME WITH THE HELP OF A *MATRON*.

While in Haiti 91 percent of women go at least once to a health institution for prenatal care, only 67 percent make the four visits recommended by the GoH, and only 33 percent go to a postnatal visit within 48 hours of delivery (IHE and ICF 2018). Furthermore, less than 40 percent of births take place in a health facility, compared to 70 percent in other low-income countries (World Bank 2017).

Almost half of the women in Haiti – especially the poorest – deliver at home with the help of a *matron* (traditional birth attendant). *Matrons* have little formal training, are usually illiterate, and often receive knowledge from their elders rather than formal training. The relationship

between *matrons* and pregnant women is based on trust. When in pain or once in labor, pregnant women seek *matrons'* advice first and follow what they recommend. Given the insufficient health infrastructure, *matrons* offer public services as they are rooted in the communities and are the ones in charge of referring women with risky cases to the hospitals.

Most of the work to date by the GoH and its partners has focused on addressing structural barriers, such as the financial costs of and physical access to health care. Despite efforts to provide free maternal health services to low-income women, as well as bringing mobile prenatal clinics to the population living in remote areas, these

have proved insufficient, ultimately acting more as pilot projects than large interventions. Efforts to improve the supply side, such as independent non-governmental organizations (NGOs) training nurses to increase Haiti's workforce since 2006, remain insufficient to meet demand, and the quality of care remains low.

In this context, we look beyond structural barriers and bring in behavioral science techniques to examine behavioral barriers – the social and psychological factors that affect what pregnant women think and do – to access institutional care.

03. BEHAVIORAL APPROACH



THIS SYSTEMATIC APPROACH STARTS BY DEFINING A PROBLEM OR STATING A DESIRED BEHAVIOR TO BE ACHIEVED.

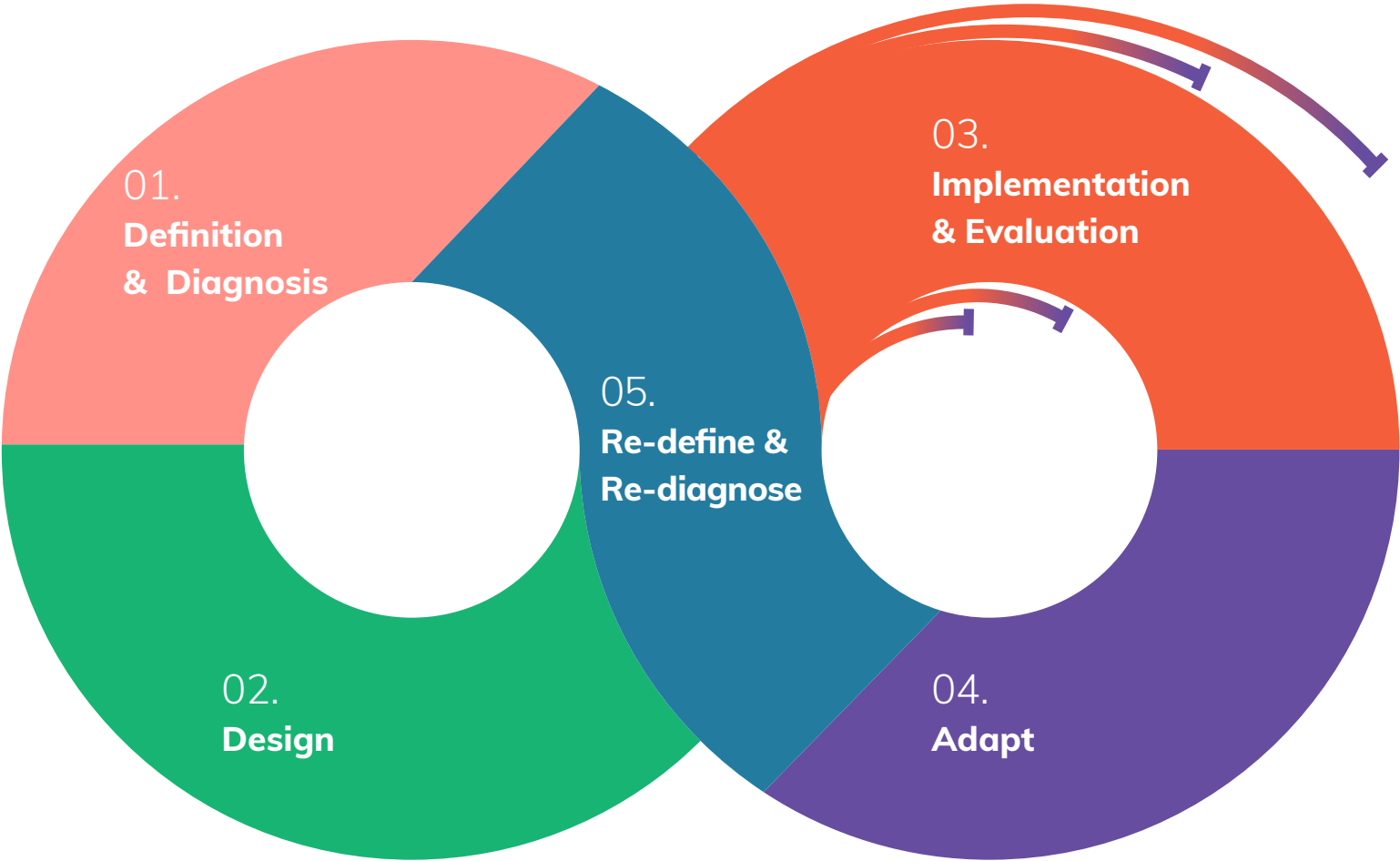
The application of behavioral sciences to design solutions to development challenges follows a standard conceptual structure that, in essence, represents the application of the scientific method to the understanding of human behavior (Data and Mullainathan 2014).

The Mind, Behavior, and Development Unit of the World Bank Poverty and Equity Global Practice along with the Health, Nutrition and Population Global Practices set out to apply this conceptual framework in the approach defined in Figure 1. This approach starts by defining a problem or stating a desired behavior to be

achieved, and applying qualitative and quantitative research instruments to diagnose the roots of the problem or barriers to that behavior. After an iterative process of problem redefinition and continuous hypothesis testing of potential barriers, a set of barriers is identified and prioritized, and potential solutions are designed and implemented following insights from behavioral sciences. The effectiveness of the proposed intervention is then assessed following experimental and statistical methods, and finally the results are used to provide evidence and inform policy by adjusting or scaling up the solutions.

Through the case of Haiti, we describe the first three steps of the behavioral approach, describing how to get from a development challenge to a set of potential solutions to test.

FIGURE 1
DIAGRAM OF THE BEHAVIORAL APPROACH



04. DEFINING THE PROBLEM



IN HAITI, HIGH MATERNAL MORTALITY RATES OCCUR EVEN IN PLACES WHERE THERE IS ACCESS TO ROADS AND SUFFICIENT HEALTH INSTITUTIONS.

The behavioral approach begins with a problem. In Haiti, high MMR occur even in places where there is access to roads and sufficient health institutions. Even when the infrastructure is there, pregnant women do not attend prenatal care visits and do not deliver in health institutions.

Our desired outcome is to increase take-up of institutional care (both prenatal and deliver-

ies) among pregnant women. We break down these behaviors into several parts. Do pregnant women intend to attend prenatal care visits? If they don't, the barrier might be the point of decision. If they do, the barrier might be related to an action, either when trying to reach care or when they are receiving it. Figuring out which of these barriers is most relevant requires the use diagnostic tools.



05. DIAGNOSING THE PROBLEM

Once there is a clear understanding of the problem, a set of question generation begins leading to the diagnostic phase. Diagnostics can be qualitative and/or quantitative. In Haiti, we conducted qualitative research to better capture individual experiences, choices, perceptions, and attitudes towards institutional care. The diagnostic started with an extensive desk review of existing literature and reports. The team then interviewed key informants such as health practitioners, national counterparts at the Ministry of Public Health and Population and other ministries, international partners, and NGOs working on health in Haiti. We conducted fieldwork in the Nippes department, which had the highest presence of hospitals with obstetrician care per women (IHE and ICF 2018, DSF 2017). Within Nippes, we selected one communal section with a low percentage, and one with high percentage, of births at an institution. To identify the barriers (Table 1), we conducted observations

in two healthcare centers, focus group discussions, and semi-structured interviews with a purposively selected range of actors: pregnant women, matrons, health practitioners, family members, community health workers (CHW), and community leaders.

A careful analysis of the qualitative data allowed us to develop a shortlist of six key behavioral barriers hindering pregnant women from institutional care, grouped by whether these barriers delay the moment to seek, reach, or receive adequate care (Thadeuss and Maine 1994). Although most barriers have been found in similar contexts in other countries, some are unique to the case of Haiti, such as optimism bias and status quo. Firstly, pregnant women do not consider seeking institutional care because of their belief that their chances to experience a negative pregnancy or birth event are low (optimism bias); because of economic constraints

and uncertainty regarding the inability to plan in advance the final cost of the service (uncertainty aversion) (Kyei-Nimakoh, Carolan-Olah and McCann 2017); and because of their tendency to prefer maintaining what they are familiar with (status quo) (i.e. their mothers delivered at home with help of a matron). Secondly, barriers delaying pregnant women to reach institutional care include distance to healthcare centers and high transportation costs, and safety and security during transport (Gage and Calixte 2006, Kyei-Nimakoh, Carolan-Olah and McCann 2017, Essendu and Samuël Mills 2010). Finally, barriers delaying women's decision to receive institutional care include disrespectful care (Bohren, et al. 2015) and discomfort with the model of care given at healthcare centers (Kyei-Nimakoh, Carolan-Olah and McCann 2017). Table 1 summarizes the identified barriers and the type of care at which they occur.

TABLE 1.
SUMMARY OF BARRIERS, BY TYPE OF CARE

		Type of care	
3-delay model	BARRIER	PRENATAL CARE	DELIVERY
SEEK	OPTIMISM BIAS	Women underestimate the risks associated with not seeking care. They believe that if they do not feel any pain there is no need to seek prenatal care.	Unless the case gets complicated, women generally prefer home birth, as their belief of the probability of experiencing an unexpected complication is low.
	ECONOMIC CONSTRAINTS/ UNCERTAINTY AVERSION	Care is perceived as expensive and final cost fluctuates greatly creating uncertainty and reducing women's ability to plan.	Institutional delivery is more expensive and uncertain than home delivery; women must pay apart for any the medicines and materials used.
	STATUS QUO BIAS		Pregnant women's mothers and relatives delivered at home with the family matron, so they prefer to maintain the norm that they are familiar with.
REACH	TRANSPORTATION CONSTRAINTS; DISTANCE, COST AND SAFETY	Hospitals are far and women cannot afford transportation. There is only a limited number of vehicles in some areas. Bad state of roads and absence of lighting make the transportation unsafe for the women and fetus. At night, it becomes impossible to reach health centers as newborns arrive.	
RECEIVE	DISRESPECTFUL CARE	Women report receiving an apathic welcome from health staff who ask many questions, including some on their sexual habits which may make women feel uncomfortable.	Women either experienced or heard of rumors of physical and verbal mistreatment from health staff, as well as being abandoned during labor.
	DISCOMFORT WITH THE MODEL OF CARE		Women dislike the model of care given at health centers because they do not like giving birth without their family members, they are displeased with the birthing seat, scared by the materials used and medicines given, and annoyed by being asked to walk before giving birth.



When analyzing these barriers, we understood that matrons have a great influence on women's decisions to seek, reach and receive care. However, matrons lack incentives to refer women to hospitals, as matrons are paid when performing birth deliveries. Even though matrons say they provide referrals to save lives, matrons reported that small and non-monetary rewards such as transport fees, delivery kits, and being recognized by the medical staff are what ultimately motivate them.

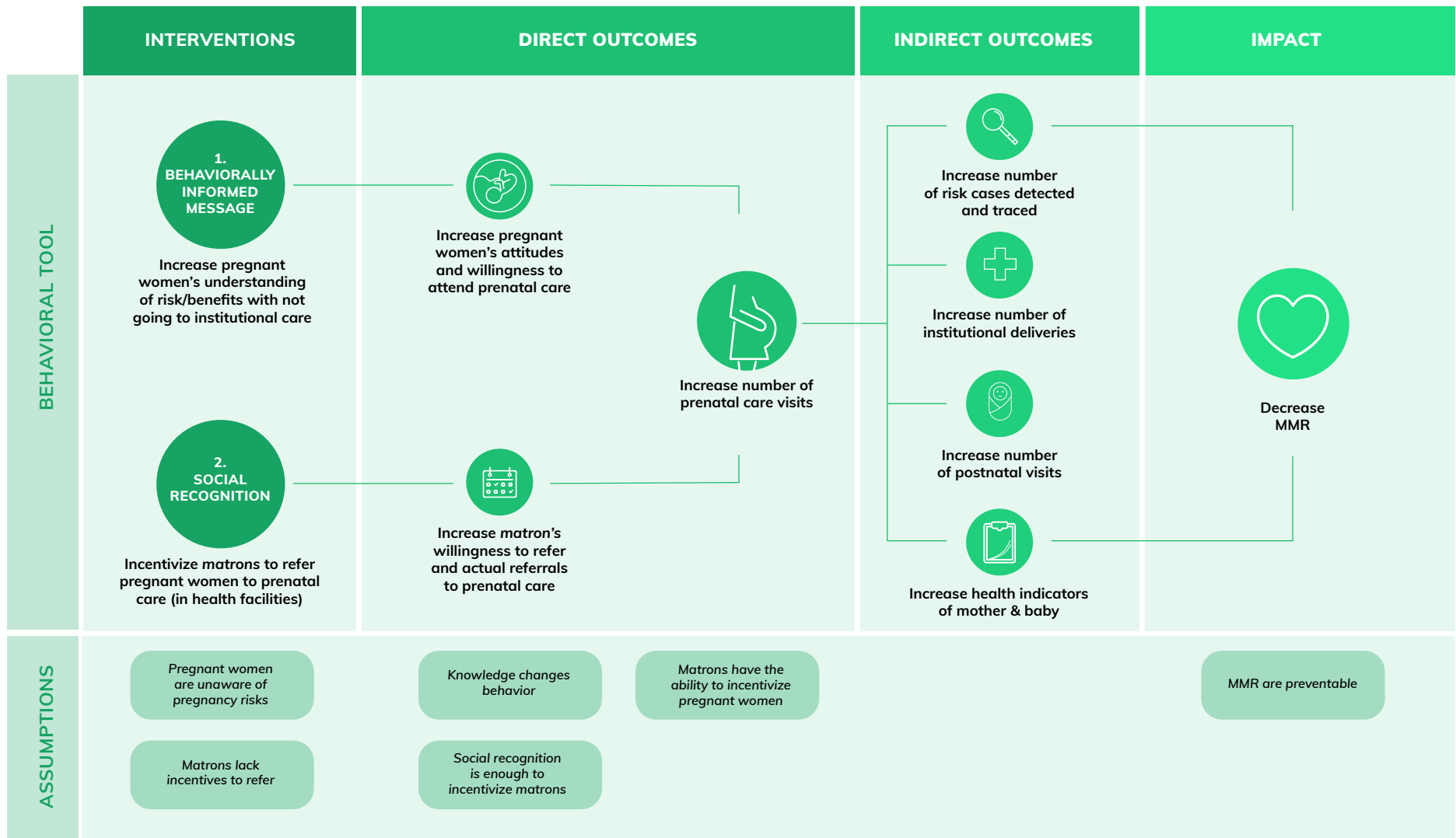


05. DESIGNING SOLUTIONS

Once the barriers were identified, the design phase of suitable interventions began. Through internal brainstorming sessions inspired by a thorough literature review of what worked to overcome similar barriers elsewhere, the team came up with a list of 10 interventions that matched the barriers found (World Bank 2019).

This long list was then shared with the counterpart and experts, and each intervention was assessed and ranked in terms of foreseen feasibility and potential to impact. Two interventions were selected to be tested given their high rank in feasibility and potential impact (Figure 2).

FIGURE 2
THEORY OF CHANGE (TOC)



Intervention 1 intends to overcome optimism bias with a 10-minute video for pregnant women and *matrons* with testimonials from mothers, *matrons*, nurses, and community health workers recognizing the importance of prenatal care and highlighting the potential risks. The video finishes with a descriptive norm gain message: “Pregnant women who attend at least four prenatal care visits increase their chances of having a safe delivery and a healthy baby” (Downs, et al. 2004).

Intervention 2 aims to overcome the lack of incentives of *matrons* to refer pregnant women to health institutions through a social recognition mechanism (Gauri, et al. 2019, Ashraf, Bandeira and Jack 2014). This consists of giving *matrons* a plaque of honor signed by the main doctor in the health facility where *matrons* advise pregnant women to attend prenatal care and by participating in a lottery to win a small token conditional on having advised pregnant women to attend prenatal care.

The ToC (Figure 2) shows how these interventions can increase women’s willingness to attend prenatal care and the number of referrals by *matrons*, as well as the number of prenatal care visits. More women attending the four recommended prenatal care visits means that more risky cases can be detected and treated; that more women would deliver in a health institution and do prenatal care; and that women’s and unborn baby’s health can be monitored. In the long term this would reduce MMR.

OUR AIM NOW IS TO TEST THESE INTERVENTIONS IN A PILOT AND ASSESS WHETHER OUR HYPOTHESIS AND THEORY OF CHANGE ARE CORRECT WITH THE HOPE OF INFORMING BETTER POLICY DECISIONS.



06. CONCLUSIONS



EVEN IF WOMEN HAVE ACCESS TO AND CAN AFFORD INSTITUTIONAL CARE, BEHAVIORAL BARRIERS TO ACCESSING CARE EXIST AND REQUIRE THE USE OF BEHAVIORAL INTERVENTIONS.

Based on this behavioral approach, we identify key barriers that are often overlooked when looking only at structural barriers. It becomes clear in our analysis that these barriers are deeply rooted and that clearly identifying these barriers is necessary to improve maternal health in Haiti. At the same time, the analysis also sheds light on the importance of structural barriers (economic constraints, roads and safety, to name a few) that may require non-behavioral interventions to be overcome.

However, the analysis also shows that even if women have access to and can afford institu-

tional care, behavioral barriers to accessing care exist and require the use of behavioral interventions. The video intervention informs women about the process they would go through in a health institution, making the unknown more familiar. It also highlights through real stories the potential risks they could experience if they don't get screened. The rationale behind the social recognition tool is to give a role to *matrons* whose place within the community is under threat when trying to increase institutional care.

Although we fully acknowledge that these interventions do not tackle the supply side

barriers (disrespectful care and discomfort with the model of care), they are meant to be easily applicable and well understood by stakeholders with different appreciation on how behavioral interventions can be integrated to design more efficient solutions.

REFERENCES

A

Ashraf, Nava, Oriana Bandeira, and B. Kelsey Jack. 2014. "No margin, no mission? A field experiment on incentives for public service delivery." *Journal of Public Economics*.

B

Bohren, Meghan A., Joshua P. Vogel, Erin C. Hunter, Olha Lutsiv, Suprita K. Makh, Joao Paulo Souza, Carolina Aguiar, et al. 2015. "The Mis-treatment of Women during Childbirth in Health Facilities Globally: A Mixed- Methods Systematic Review." *PLOS Medicine*.

D

Data, Saugato, and Sendhil Mullainathan. 2014. "Behavioral Design: A New Approach to Development Policy." *Review of Income and Wealth (Review of Income and Wealth)*.

Downs, Julie S., Pamela J. Murray, Wändi Bruine de Bruin, Joyce Penrose, Claire Palmgren, and Baruch Fischhoff. 2004. "Interactive video behavioral intervention to reduce adolescent females' STD risk: a randomized controlled trial." *Social Science & Medicine*.

DSF, MSPP. 2017. *Plan Stratégique National de Santé Sexuelle et Reproductive 2018-2022*. Port au Prince: MSPP.

E

Essendu, Hildah, and and Jean-Christophe Fotso Samuël Mills. 2010. "Barriers to Formal Emergency Obstetric Care Services' Utilization." *Journal of Urban Health*.

G

Gage, Anastasia J., and Marie Guirlène Calixte. 2006. "Effects of the Physical Accessibility of Maternal Health Services on Their Use in Rural-Haiti." *Population Studies*. Taylor & Francis.

Gauri, Varun, Jamison Julian C, Nina Mazar, and Owen Ozier. 2019. "Motivating bureaucrats through social recognition: External validity- A tale of two states." *Organizational Behavior and Human Decision Processes*.

I

IHE and ICF. 2018. *Enquête Mortalité, Morbidité et Utilisation des Services (EMMUS-VI 2016-2017)*. Pétiön-Ville, Haïti, et Rockville, Maryland, USA: Institut Haïtien de l'Enfance (IHE) et ICF.

Institute of Medicine (US) . 2003. *Improving Birth Outcomes: Meeting the Challenge in the Developing World*. Washington (DC).

K

Kyei-Nimakoh, Minerva, Mary Carolan-Olah, and Terence V. McCann. 2017. "Access barriers to obstetric care at health facilities in sub-Saharan Africa- a systematic review." *Systematic Reviews*.

L

Llopis, Jimena, and Emilie Perge. 2019. *Using Behavioral Insights to Increase Safer Birth Deliveries in Haiti*. The World Bank group.

T

Thadeuss, Sereen, and Dedorah Maine. 1994. "Too far to walk: maternal mortality in context." *The National Center for Biotechnology Information* 38(8):1091-110.

W

WHO. 1999. *Reduction of maternal mortality. A joint WHO/UNFPA/UNICEF/ World Bank Statement*. Geneva.

World Bank. 2017. *Better spending, better care: A look at Haiti's health Financing*. Washington D.C.: The World Bank Group.

World Bank. 2019. *Using behavioral insights to increase safer birth deliveries in Haiti*. The World Bank Group.