2015 Partners In Health Canada Interactive Case Study:

Maternal, Newborn and Child Health

All letters found within the case are *fictional* and have been imagined for this case only. The case topic, however, is a true representation of circumstances in Haiti. The case scenario is complex and does not necessarily have a correct or perfect solution, and thus encourages a judicious balance of creative yet perceptive approaches.

The author has provided informative facts and figures within the case package to help teams. The data provided are derived from independent sources and are clearly cited such that teams can verify or contest the findings within their recommendations, if it is pertinent to do so. Teams are responsible for justifying the accuracy and validity of all data used in their proposal.

Partners In Health
CANADA

Welcome Letter

August 23rd, 2015

Fellow Friends,

As we edge closer to the end of the chapter that is the Millennium Development Goals, we are reflecting on the progress Haiti has made towards a series of objectives required to achieve our long-term, transformational goals. The end of 2015 will certainly inaugurate a new era in global health.

However, we are entering that new era with unfinished business that can and must be addressed. There still exists inequalities that contribute to the tragic and unacceptable number of preventable deaths of our women and children. We need to sharply reduce these mortality rates. We write to you today with a request that you be part of the progress still to be made.

We have decided to hold a delegation, which will allow you, the great young minds of the world, to come together and design an initiative that will create profound and lasting change. In 15 years' time, our wish is for the people of our country to not be condemned to preventable deaths simply because they were born into poor families and impoverished communities.

Achieving and sustaining such a reduction will re-shape the future of Haiti; it is the first step to seeing our health, our society, and our economy transformed.

We are confident that if we work together, we can end these deaths. The journey to change will not be easy, but we, together, will do what needs to be done.

On behalf of our colleagues, our patients, and the communities we serve, *mesi anpil.* Thank you very much.

Best wishes,

Dr. Florence Guillaume
Minister of Health, Haiti

Dr. Fernet Léandre
Co-Executive Director, Zanmi Lasante

Introduction

In September 2000, world leaders came together to set the Millennium Development Goals (MDGs) – eight ambitious and inspired targets with the global commitment to end extreme poverty by 2015. MDGs 4 and 5, reducing child mortality[1] and improving maternal health[2] respectively, stood at the centre of the framework to dramatically reduce millions of preventable deaths. Despite a profound intentioned difference to meet these two specific goals, these senseless deaths are still a reality in many countries.

In September 2015, world leaders will again come together to adopt the Sustainable Development Goals (SDGs) that are to be achieved within the next 15 years. SDG 3, "to ensure healthy lives and promote well-being for all at all ages", is of particular interest in regards to maternal, newborn and child health. Relevant targets[3] include:

- 3.1 Reduce the global maternal mortality ratio to less than 70 per 100,000 live births
- 3.2 End preventable deaths of newborns and children under five years old
- 3.4 Reduce by one-third pre-mature mortality from non-communicable diseases
- 3.7 Ensure universal access to sexual and reproductive health care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes
- 3.8 Achieve universal health coverage, access to quality health care services, and access to sage, effective, quality and affordable essential medicines and vaccines for all
- 3.12 Increase health financing and the recruitment, development and training of the health workforce in developing countries

To achieve these aims, we must renew and double-down on our efforts in key areas affecting maternal, newborn and child health (Countdown, 2014):

1. Meeting the vast unmet need for contraception, so that women and families can better control their fertility and their lives.
2. Ensuring that there are enough adequately trained health care workers equipped with the supplies needed to provide high-quality care before, during, and after pregnancy to make pregnancy and childbirth safer for both mother and baby.
3. Improving maternal and newborn survival, including reducing preterm births and stillbirths, by investing in care on the day of birth when the risk of mortality is highest.

[1] MDG 4: Reduce Child Mortality. Target 4.A: Reduce by two thirds, between 1990 and 2015, the under-five mortality rate. (United Nations, 2015)

[2] MDG 5: Improve Maternal Health. Target 5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio. Target 5.B: Achieve, by 2015, universal access to reproductive health. (United Nations, 2015)

[3] See more goals and targets with an interactive tool, here: http://www.theguardian.com/global-development/ng-interactive/2015/jan/19/sustainable-development-goals-changing-world-17-steps-interactive

4. Addressing the infectious diseases, especially pneumonia and diarrhea, that needlessly kill millions of children because they do not have access to effective treatments, appropriate nutrition, safe water, and adequate sanitation facilities.
5. Confronting the huge burden of undernutrition that retards both the growth and the life opportunities of far too many children and adolescents.

Underlying each of these issues is the reality of a multitude of challenges that must be overcome. This includes more equitable high-quality health care coverage, and a greater commitment to data evolution that would result in more and better data use for improving programs (Countdown, 2014).

The next stage then, is enabling the progress by spotlighting the successes, the gaps, the programmatic innovations, the inequities, and the lessons learned along the way.

Haiti at a Glance

Situated in the Latin American and Caribbean (LAC) region, Haiti sits in the Caribbean Sea, occupying the western third of the island of Hispaniola. It is bordered by the Dominican Republic in the east, and shares maritime borders with the Bahamas, Colombia, Cuba and Jamaica (Nations Online, 2015). The country is divided into ten departments (ie. provinces), with the capital city being Port-Au-Prince (Fig 1).

Fig 1. The ten departments of Haiti, and respective capital cities assigned by the star (Gharbi et al., 2012)

Haiti is the poorest country in the Western hemisphere, suffering from a harsh cycle of poverty and disease. It is out of this cycle that the Haitian proverb *Dèyè mòn gen mòn* emerges -- "beyond mountains there are mountains", reflecting the Haitian view that behind every solution is another problem waiting to be solved (Kidder, 2004).

The two official languages of Haiti are Haitian Creole and French. About 10% of the population speak the latter and is associated with the elite class (Léonidas, 1995). Religion is a powerful force in Haitian culture. Though the majority of the population is Catholic, many Haitians believe in the practice of voodooism, including faith in its ability to cure illness as well as in the ability to send evil spirits to deliver disease (Kidder, 2004).

There is significant and understandable distrust of authority due to a long history of oppression and exploitation. Haitians suffered for decades under the brutal authoritarian rule of Francois Duvalier and his son Jean-Claude Duvalier, in power for nearly 30 years (1957-86). In 1990, Jean-Bertrand Aristide, a former Catholic priest, was elected President. He was forced into exile after a military coup in 2004, supported by American and other external forces (Farmer, 2005). Since then, Haiti has had two presidents and continuing political instability[4].

In January 2010, a massive 7.0 magnitude earthquake struck Haiti, 25km west of Port-Au-Prince. Estimates are that over 300,000 people were killed and some 1.5 million left homeless. The earthquake was assessed as the worst in the LAC region over the last 200 years (CIA, 2015).

The Need in Haiti

Maternal Mortality

The Maternal Mortality Ratio (MMR) in Haiti is the highest in the Western hemisphere, officially estimated at 380 per 100,000 live births, with a lifetime risk of maternal death of one in 80 women (WHO, UNICEF, UNFPA, The World Bank & United Nations, 2014). Haiti is the only country in the LAC region with maternal health indicators comparable to countries in sub-Saharan Africa and South Asia, where economic and social development issues have been typically more challenging. As in other developing countries, most maternal deaths in Haiti are due to hemorrhage, eclampsia, sepsis, and complications resulting from unsafe abortions (PAHO, 2012)—all of which can be prevented if health facilities are properly equipped and care is accessed and provided in a timely fashion.

Some of the causes contributing to high maternal mortality in Haiti can be addressed through access to comprehensive and skilled obstetric care during pregnancy, childbirth, and the postpartum period (Anderson et al., 2007; Kirigia et al., 2006). Despite this, only 36% of Haitian women deliver babies in a facility and only 37% receive care from a skilled provider during delivery (Cayemittes et al., 2012). This is most pronounced in rural areas, which have only 23% of women delivering at a health facility and 24% of births being assisted by a skilled provider in

[4] For further information on Haiti's political and historical past, see this interactive timeline: http://www.today.com/id/34831414/ns/today-today_news/t/interactive-haiti-timeline/#.VbA9iPnw9rY

obstetrics (USAID, MSPP, UNICEF, UNFPA, UNDP, CIDA, Global Fund, Institut Haitien de L'Enfance & IHSI, 2012). As a result, it is estimated that 113 births with complications occur on a daily basis in Haiti and go untreated (UNFPA, 2011).

Many pregnant women in Haiti face the "three delays" that impact their ability to access the care they need: the delay in the decision to seek care; the delay in reaching appropriate care; and the delay in receiving care at facilities. All of these delays contribute to the high rates and increased risk of maternal morbidity and mortality in Haiti. In addition to geographic access to the facility, these three delays can also be impacted by the quality of services received and social norms contributing to gender inequality and unequal decision-making power in the home.

In Haiti, women are known as the *poto mitan* —the central pillars of the family and community, yet they are the most underserved and at-risk members of the community. Access to care, health and psychosocial services are severely limited by lack of resources, economic insecurity, gender power imbalances, and widespread poverty. In poor and uneducated households, the effects of gender inequities are compounded when it comes to maternal health: Women living in households in the lowest wealth quintile (10%) and those with no formal education (14%) are least likely to have a skilled obstetrics provider present during birth (USAID, MSPP, UNICEF, UNFPA, UNDP, CIDA, Global Fund, Institut Haitien de L'Enfance & IHSI, 2012). Gender imbalances may also prevent women from delivering in facilities if they also have responsibilities to take care of other children, with no alternatives.

Neonatal and Child Mortality

Maternal death significantly impacts the survival of neonates and children. If a family in rural Haiti experiences a maternal death, that family has a 55% increased odds of experiencing the loss of a child less than 12 years old. In addition, after a maternal death, dosage of tuberculosis, malaria and BCG immunization, and the first dose of vitamin A are significantly reduced (Anderson et al., 2007).

As briefly mentioned, although more than 90% of women in Haiti receive at least one antenatal visit, approximately two-thirds of deliveries occur at home (UNICEF, 2013). Evidence suggests that home births in low-income countries incur a higher risk for cord infection compared with institutional births in developed countries (Imdad et al., 2013). Cord infection can manifest into neonatal sepsis, a preventable cause of neonatal mortality (Mir et al., 2011; Countdown, 2014), which claims the lives of more than 520,000 newborns around the world every year (Blencowe et al., 2011). Recent research has shown that applications of 7.1% chlorhexidine digluconate to a newborn's umbilical stump during the first week of life can prevent a substantial number of cases of neonatal sepsis in low-income countries (Imdad et al., 2013; Arifeen et al., 2012; WHO, 2009). However, due to strong cultural beliefs and traditional cord care practices, often times the recommended use of chlorhexidine is not used. For example, many Haitians believe that evil spirits may be introduced into the body unless the cord is covered. As such, they cover the cord with traditional items such as crushed charcoal, ash, burned cotton, recipe of leaves and animal excrement, which they believe to be healing and/or protective, but are in actuality unhygienic and detrimental substances (Walsh et al., 2015).

MDG Target 1.C includes a focus on child undernutrition, as poor nutrition status harms a woman's own health, but is also a risk factor for intrauterine growth restriction and other poor obstetrical outcomes. Nearly half of all deaths among children under age 5 are attributable to undernutrition (Countdown, 2014). Wasting (low weight for height) and stunting (inadequate height for age) are sensitive indicators that can sharply increase a young child's risk of death. Good nutrition during the "first 1000 days", from the beginning of pregnancy to a child's second birthday, is essential for ensuring a healthy start in life and avoiding early morbidity and mortality (UNICEF, 2013).

Haiti and Partners In Health

PIH and Haitian sister organization Zanmi Lasante (PIH/ZL) work closely with Haiti's Ministry of Health and is the largest nongovernmental provider of healthcare in the country, operating clinics and hospitals at 11 sites (in the Centre and Arbitonite Departments[5]), and with a staff of more than 5000 Haitians.

When the 2010 earthquake devastated Haiti, Dr. Paul Farmer was quick to call attention to the reality of the situation: it was not "bad luck" that the situation became such a disaster, it was that the earthquake was truly "an acute-on-chronic event" that exposed underlying failures and conditions of the weak health system (Farmer, 2011). PIH/ZL were some of the first respondents, and have since been working on developing a stronger health system[6].

In 2013, PIH and the Haitian government opened a national referral and teaching hospital, University Hospital in Mirebalais, Centre, built in partnership with the Ministry of Health to address Haiti's severe shortage of health care professionals. The hospital provides free access to health care for a tertiary catchment area of 3.4 million people and is training the next generation of qualified health professionals (doctors, nurses, administrators, etc) to strengthen the country's health system[7].

PIH/ZL has always had maternal health as one of its top priorities, with the organizational goal of achieving zero preventable deaths during childbirth. As such, PIH/ZL provides care before, during, and after pregnancy. Services include family planning, prenatal care, HIV testing, delivery and emergency services, and newborn care.

PIH works to create sustainable health services by building local capacity. In Haiti, expecting mothers must travel long distances to find care, creating a delay that could be fatal during emergencies. To this end, PIH/ZL hires Haitian maternal health workers to visit homes in their communities, locate pregnant women, accompany them to clinics for prenatal care, and watch for

[5]Of 656 health facilities nationally (ie. hospitals, field hospitals, health centers, inpatient/outpatient health clinics), only 11% (72 health facilities) exist in the Centre and Artibonite departments combined (PAHO & MSPP, 2015). The limited number of health facilities in these regions further exacerbates the availability of skilled providers and the quality of health care delivery. For similar data on other departments, see this interactive tool: http://ais.paho.org/phip/viz/haiti_healthfacilities_v2.asp

[6] For an update on PIH's work in Haiti 5 years after the earthquake, see: https://www.youtube.com/watch?v=1_JvU-qo4rw

[7] For an inside look at the University Hospital in Mirebalais, see: https://www.youtube.com/watch?v=xP6ef16OCuk

warning signs during pregnancy. Before labour, they travel with women to maternity waiting homes, and continue to follow up with mother and infant after birth to ensure both are healthy. Their guidance and expertise greatly reduce the risks faced by mothers and children in poor communities.

Other programs include:

1. Established “maternity homes” near clinics where pregnant women can stay to be near care when it comes time to deliver.
2. To eliminate transmission from mothers to children, pregnant women are immediately tested at the clinics for HIV and enrolled on anti-retroviral therapy if positive. They continue to receive care for themselves and their infants, which - in addition to medication - includes breastfeeding guidance, regular testing, and health assessments of their babies.
3. To reduce the number of unintended pregnancies, comprehensive family planning services are available at clinics, and are taken directly to homes and to people who live far away from health centers.

To ensure long-term outcomes, PIH/ZL works alongside the Ministry of Health to integrate their programs into public health systems.

Case Proposal

August 23rd, 2015

Dear All,

Your team has been shortlisted to present your proposal to address the issue of maternal, newborn and child survival and health in Haiti. Each proposal will be critically reviewed and the strongest proposal will be selected depending on the following standards:

1. Clearly outline your target population (ie. maternal, neonatal, or children) and choose a specific issue (ex. limited health facilities, traditions effecting cord care, under nutrition)
2. Incorporate expertise from a biosocial perspective to address the many diverse contributors to (and consequences of) maternal, newborn, and child mortality
3. Innovate, either by offering new solutions or by adapting proven strategies that are appropriate and effective in the Haitian context
4. Consider risks and potential unintended consequences of the proposed strategy
5. Include a brief monitoring and evaluation strategy that details specific indicators to measure outcomes and impacts at five, ten and/or fifteen years

We have attached a Haiti country profile sheet and a Haiti equity profile sheet to be the principle sources of your statistical information[8, 9]. While not necessary, feel free to use other sources to back up your proposal.

We believe that access to quality health care is a fundamental human right, and we treat the poor and/or sick regardless of their ability to pay. Therefore, there is not a specified budget for your proposal and we are not asking you to produce one. We ask only that your work shows both an appreciation for the Haitian context and an aspiration to achieve the highest possible results.

We anxiously await your proposals.

Pou bon santé peyi Ayiti nou, goodluck!

Regards,

Dr. Florence Guillaume
Minister of Health, Haiti

Dr. Fernet Léandre
Co-Executive Director, Zanmi Lasante

[8] For guidelines on how to read and interpret the country sheet, please refer to: http://www.countdown2015mnch.org/how-to-use-country-profile

[9] For guidelines on how to read the interpret the equity sheet, please refer to pages 2-3 in: http://www.countdown2015mnch.org/documents/2014Equity/How_to_Use_2014_Equity_Profile.pdf

Summary

Dr. Léandre, Dr. Guillaume and colleagues seek innovative and multi-disciplinary proposals that will reduce maternal, newborn and child deaths. The task will be a complex one, involving an integration of various factors that have long contributed to these preventable deaths. However, they are confident that teams will produce effective strategies that will improve the health outcomes for mothers and children.

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We thank our judges for their valuable expert review of the proposals:

Dr. Lawrence Loh (MD, MPH, CCFP, FRCPC; Director of Operations at The 53rd Week, Ltd.)

Dr. David LaPierre (MD, CCFP; Founder of SharinginHealth)

Mark Brender (PIHC Director)

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We gratefully acknowledge the Case Study Facilitators:

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Proposal Outline

Names of Contributors:

Target Population

Check one (or more) that apply:

- ☐ Maternal health
- ☐ Neonatal health
- ☐ Child health

Specific Issue

Max 25 words.

Proposed Initiative

Max 450 words.

Possible Risks

- Operational risks: Potential risks experienced from internal activities. For example, do you have the right people, skills to carry out the initiative? Do you have the right tools?
- Development risks: Potential risks related to the work carried out in Haiti. What are the circumstances that could prevent you from achieving results, either: political or social (civil strife, elections, etc.); or national disaster (earthquake, floods, etc.).

Max 250 words.

Sustainability of Results

- Describe how you will address local ownership opportunities, and ensure the initiative is sustained after completion of activities. Explain, for example, the following: How does the initiative plan address handover to local successor(s), and any barriers to participation, such as for gender and marginalization?

Max 150 words.

Monitoring and Evaluation

- Outline the plan to be put in place to monitor and evaluate the initiative, specifying what indicators will be used to determine success.

Max 150 words.

Date of Submission: _____