GUYANA

MDG ACCELERATION FRAMEWORK

IMPROVE MATERNAL HEALTH

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Improve Maternal Health

June 2014

Produced by the Government of Guyana

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ACRONYMS

ALARM	Advances in Labour and Risk Management
EmONC	Emergency Obstetric and Neonatal Care
GoG	Government of Guyana
GPHC	Georgetown Public Hospital Corporation
IEC	Information, Education and Communication
LSCS	Lower Segment Caesarean Section
M&E	Monitoring and Evaluation
MAF	MDG Acceleration Framework
MCH	Maternal and Child Health
MDG	Millennium Development Goal
Medex	Medical Extension worker with prescription and diagnostic rights
MoAA	Ministry of Amerindian Affairs
MoCYS	Ministry of Culture, Youth and Sports
MoE	Ministry of Education
MoF	Ministry of Finance
MoH	Ministry of Health
MoLGRD	Ministry of Local Government and Regional Development
MoLHSSS	Ministry of Labour, Human Services and Social Security
OB/GYN	Obstetrics/Gynaecology
PAHO	Pan-American Health Organization
PHC	Primary Health Care
PIH	Pregnancy-Induced Hypertension
PPGHS	Package of Publicly Guaranteed Health Services
RNM	Registered Nurse Midwife
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children Fund
WHO	World Health Organization

ABSTRACT

In evaluating Guyana's progress toward the Millennium Development Goals (MDGs), the Government of Guyana has identified MDG 5 – improve maternal health – as the goal that needs prioritisation if its associated targets are to be achieved by 2015 and thus a higher standard of maternal health care is to be established and sustained in the long run. Although there has been progress toward this goal, significant challenges remain. To identify the current major bottlenecks in this area, a situational analysis was carried out using the MDG Acceleration Framework (MAF) and concrete solutions were then selected in line with the prioritised bottlenecks.

All stakeholders involved in the MAF drafting process identified the shortage of skilled human resources, especially of qualified obstetricians and gynaecologists, as the major bottleneck. Other prioritised bottlenecks were the inadequate coordination and collaboration at sectoral and inter-sectoral levels; inadequate enforcement mechanisms and monitoring and evaluation (M&E) systems; cultural barriers; and a lack of clear policy direction in areas such as sexual and reproductive health. In order to overcome, or at least to mitigate, these obstacles, a wide range of solutions was selected to introduce and sustain improved standards of care in the maternal health sector. These include, among others, expanding training programmes for health care professionals; recruiting qualified OB/GYN specialists to support the creation of a local cadre of experts in maternal health; equipping maternity wards of the national referral hospital and other key regional hospitals; strengthening information and awareness programmes; improving communication and transportation between health facilities; strengthening systems for M&E and for enforcing existing protocols and guidelines; and supporting the update of sexual and reproductive health policy.

The aim of the resulting MAF Action Plan is twofold: on the one hand, it presents a framework to guide the implementation of interventions for accelerating progress toward maternal health so that development partners' efforts can be aligned to, and thus complement central government action. On the other hand, cognizant of the reality of finite fiscal space, the Government of Guyana, with the support of relevant development partners, will be able to use the MAF Action Plan as a tool for resource mobilisation in order to fill identified financing gaps.

FOREWORD

Consistent with the Government of Guyana (GoG)'s unwavering commitment to reduce poverty, in the year 2000 Guyana adopted the Millennium Declaration along with 188 other countries and thus embraced the Millennium Development Goals (MDGs) as the guiding framework for poverty reduction and development. Since then, the annual budget allocations to the social sectors more than doubled, from GY$25.1 billion in 2000 to GY$72.4 billion in 2013, and those directed to the health sector increased more than three-fold, from GY$4.86 billion in 2000 to GY$19.0 billion in 2013.

In 2011, the Ministry of Finance (MoF) published Guyana's third MDG Progress Report in an effort to track and analyse progress toward the achievement of the MDGs. The findings of the report reflected the GoG's steadfast commitment to reduce poverty and improve the quality of life of the people of Guyana. Furthermore, the report identified key priorities for national attention.

In particular, consistent progress was demonstrated in those targets related to nutrition, education, gender equality, child health, combating HIV/AIDS, malaria and other diseases, environmental sustainability and water and sanitation. Of the goals where targets were identified as potentially to be met by 2015, the improvement of maternal health was selected by the GoG as a priority for increased and expanded focus. In recognising that the responsibility for the health of our mothers is a national one, our Government is committed to ensuring that resources are leveraged and allocated to address these issues.

Guyana's MDG Acceleration Framework (MAF) was developed by the GoG in collaboration with UNDP, with the view to accelerating progress toward achieving maternal health-related targets. This was placed in the context of the newly published National Health Strategy – Health Vision 2020 – which sets out the priorities for Guyana's health sector over the period 2013-2020. The Action Plan that resulted from the application of the MAF to the Guyanese context will lead all interventions and discussions on the topic of maternal health and will serve to harmonise multi-sectoral response in this field, including that of development partners, creating the environment to more effectively leverage resources for achieving the initial outcomes.

From November 2012 to November 2013, a wide range of stakeholders – from public and private health sector officials to end-users and civil society representatives – were involved in the identification and prioritisation of ongoing interventions and challenges and the selection of acceleration solutions. The efforts that have gone into drafting the MAF have resulted in a comprehensive document that details the agreed actions for improving maternal health. They thus justify the utilisation of this document as the guiding framework for all actors wishing to engage in improving the standard of maternal care offered to our Guyanese women.

The donor community in Guyana has been actively involved in developing the MAF document. We look forward to this energy being redirected to leveraging the resources necessary to make the adoption and implementation of the MAF in Guyana a useful and sustainable exercise even as the Government continues to prioritise allocations to social sector interventions within its limited fiscal space.

The achievement of the MDGs is fundamentally hinged on the commitment made under MDG 8 to develop a global partnership for development. To date, the international community has failed to make adequate provisions to accomplish this. In addition, only a handful of economically advanced countries have delivered on the four-decade-old resolution to channel 0.7 percent of gross domestic product to official development assistance to developing countries. Guyana's MAF Action Plan presents a concrete opportunity for our development partners to demonstrate meaningfully their commitment to supporting countries like ours to achieve the MDGs in a sustainable manner.

Honourable Dr. Ashni K. Singh, M.P.
Minister of Finance

STATEMENT - MINISTER OF HEALTH

I would like to express my appreciation to the Ministry of Finance (MoF) for recognizing that health goes beyond the Ministry of Health (MoH)'s efforts and initiatives. Indeed it requires the relevant Ministries – such as Ministry of Education, Ministry of Amerindian Affairs, Ministry of Local Government and Regional Development, Ministry of Labour, Human Services and Social Security – to collaborate and to coordinate actions in order to enhance both short- and long-term impact.

Guyana's MDG Acceleration Framework (MAF) follows and builds upon previous exercises aimed at identifying priorities for action in the maternal health sector. In 2010, an assessment of Emergency Obstetric and Newborn Care (EmONC) in maternity facilities nationwide was undertaken by the MoH in collaboration with UNFPA and the Bureau of Statistics. This was followed by the development of Guyana's Maternal, Perinatal, Neonatal, Child and Family Health Strategy 2011-2020, within which targets were set for the achievement of the MDG's as well as other national milestones.

Given this context, Guyana's MAF Action Plan has the potential to initiate the systemic changes necessary both at the central/ national level and at the institutional/ regional level to raise the quality of maternal health care offered in Guyana and to create the environment for sustained improvements. With the view of ensuring that this is indeed achieved and that a multi-sectoral approach is encouraged and maintained in order to maximize impact in this area, a Monitoring Committee will be established. The Committee's mandate will be to track implementation of the activities included in Guyana's MAF Action Plan for improved maternal health against the established timeline and targets, and it will comprise representatives of all relevant sector Ministries as well as civil society and development partner agencies.

I look forward to the financial and technical support of our development partners as we collectively work to accelerate the achievements in maternal health, even as I commit the continued dedicated efforts of our team within the health sector. I also call on every citizen to recognize their role in ensuring the maternal health of one of our most valuable resources, the women of Guyana.

Bheri Sygmond Ramsaran, MD, MP
Minister of Health
Guyana, South America

FOREWORD

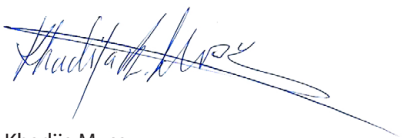
Guyana has made tremendous progress towards meeting the various targets of the Millennium Development Goals (MDGs). In particular, and as indicated in the 2011MDG Progress Report, Guyana has already met the targets for nutrition and child health and made important strides in its efforts to reduce hunger, increase access to social services and benefits, improve enrollment and completion of primary education, increase empowerment of women, and achieve environmental sustainability. The country was also on track to achieving the goals relating to education, water and sanitation, and HIV/AIDS. The UN family applauds and celebrates these achievements, and warmly congratulates the Government of Guyana.

As noted by the Finance Minister in the Foreword to the 2011 MDG Progress Report, Guyana's achievements would not have been possible without the country's strong macroeconomic performance. This strong showing by the economy in spite of a turbulent and uncertain global and regional economic environment has served as a solid foundation for Guyana's quest to achieve the MDGs. We believe that sustaining this trend of sound macroeconomic management together with deliberate and strategic targeting of the relevant social sectors will continue to benefit efforts to achieve on the MDGs.

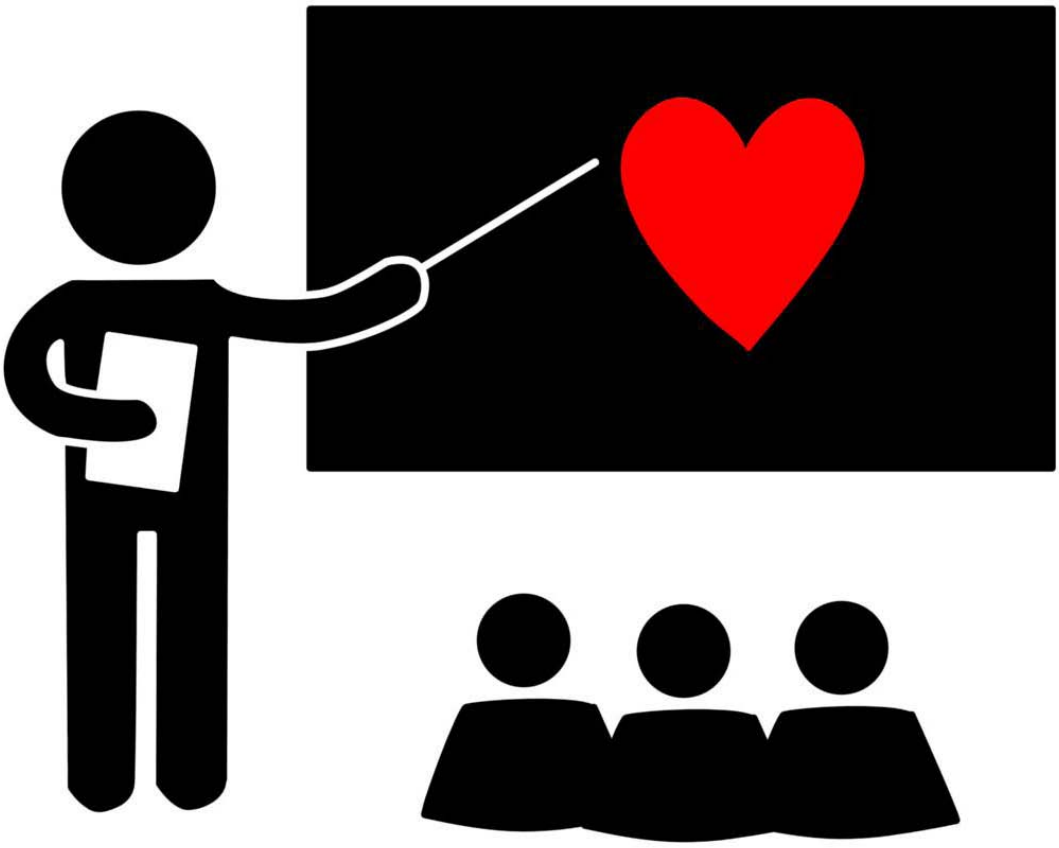
As we celebrate the achievements, we recognise that much work remains to be done. We particularly note the remaining challenges in the area of maternal health, where work needs to be stepped up towards creating an environment for a higher standard of care and long-term sustainability. In this regard, we are pleased and encouraged that the Government has strongly demonstrated its commitment to achieving the unmet MDGs by identifying MDG 5 – improve maternal health – as its priority. The Government has further set the year 2015 as the deadline for achieving targets associated with this goal.

This detailed and well-researched MDG Acceleration Framework and Action Plan is an important public record not only of the Government's commitment to achieving MDG 5, but also of its concrete plans to provide the necessary resources. Its clear effort to address key bottlenecks in order to achieve the MDG5 targets; and the development of a timeline and relevant indicators to monitor implementation, are all evidence of the thoroughness of the thought process and hard work that went into its preparation.

The UN family remains committed to providing technical assistance and cooperation in the implementation of MDG related interventions, not least those related to maternal health. In this regard we will continue to provide leadership and coordinate the efforts of development partners so as to ensure alignment and complementarity to the Government's efforts and UN principles.



Khadija Musa
Resident Coordinator
United Nations System



I. INTRODUCTION

Guyana has identified the health of its mothers – present and potential – as the most crucial area to be addressed within the MDG Acceleration Framework (MAF). According to the MDG Progress Report 2011, the fifth MDG has the potential of being achieved in Guyana by 2015. The country has in fact made progress toward improving maternal health, but still faces significant challenges in meeting MDG 5 and its associated targets. The situation analysis and the identification of bottlenecks and solutions carried out following the MAF steps have resulted in a Country Action Plan that comprises activities aimed at ensuring the success of interventions – ongoing and future – in the maternal health sector and identifies the resource gaps currently being faced by the Government of Guyana (GoG) in its efforts to improve the well-being of the country's mothers.

1.1 BRIEF OVERVIEW OF THE MDGS IN GUYANA

In 2011, the Ministry of Finance (MoF) published its third[1] MDG Progress Report in an effort to track and analyse Guyana's progress toward the achievement of the MDGs. The Report presented an overview of the policies rolled out and the interventions undertaken by the different sectors in order to achieve the Goals by 2015 and set clear priorities and policy options in order to honour the commitment that the country made to achieve the MDGs by 2015 for the benefit of all Guyanese.

The Report recorded consistent progress for several MDG targets, namely, those related to: i) nutrition – Guyana met the target of halving the proportion of people suffering from hunger; ii) education; iii) gender equality – Guyana met the target of eliminating gender disparity in primary and secondary education; iv) child health – Guyana met the target of reducing the under-5 mortality rate by two thirds from 120 per 1,000 live births in 1991 to 17 per 1000 live births in 2008; v) combating HIV/AIDS, malaria and other diseases; vi) environmental sustainability – Guyana satisfied the target of integrating the principles of sustainable development into country policies and programmes through the Low Carbon Development Strategy (LCDS); and vii) water and sanitation – Guyana met the target of halving the population without access to safe drinking water and basic sanitation.

Table 1 below assesses the likelihood of achievement for all MDG targets for which data is available. While revealing that most MDG targets show positive developments, the table also highlights those that need intensified efforts. With the exception of four targets – one related to poverty reduction (target 1A), two related to maternal health (targets 5A and 5B) and one related to the incidence of malaria and other diseases (target 6C) – Guyana is reported as likely to achieve all other assessed MDG targets by 2015.

1. Previous MDG Progress Reports were published in 2003 and 2007.

TABLE 1: **MDG STATUS AT A GLANCE (2011 MDG PROGRESS REPORT)**

Goals and targets	Will target be met?		
	2011	2007	2003
MDG 1: Eradicate extreme poverty and hunger			
Target 1A: Halve, between 1990 and 2015, the proportion of people living in extreme poverty			
Target 1B: Achieve full and productive employment and decent work for all, including women and young people			
Target 1C: Halve, between 1990 and 2015, the proportion of people suffering from hunger			
MDG 2: Achieve universal primay education			
Target 2A: Ensure that, by 2015, children everwhere, boys and girls alike, will be able to complete a full course of primary schooling			
MDG 3: Promote gender equality and empower women			
Target 3A: Eliminate geder disparity in primary and secondary education preferably by 2005...			
...and to all levels of education no later than 2015			
MDG 4: Reduce child mortality			
Target 4A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate			
MDG 5: Improve maternal health			
Target 5A: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio			
Target 5B: Achieve by 2015, universal access to reproductive health			
MDG 6: Combat HIV/AIDS, malaria and other diseases			
Target 6A: Have halted, by 2015, and begun to reverse the spread of HIV/AIDS			
Target 6B: Achieve by 2015, universal acess to treatment for HIV/AIDS for all those who need it			
Target 6C: Have halted, by 2015, and begun to reverse the incidence of malaria and other major diseases			

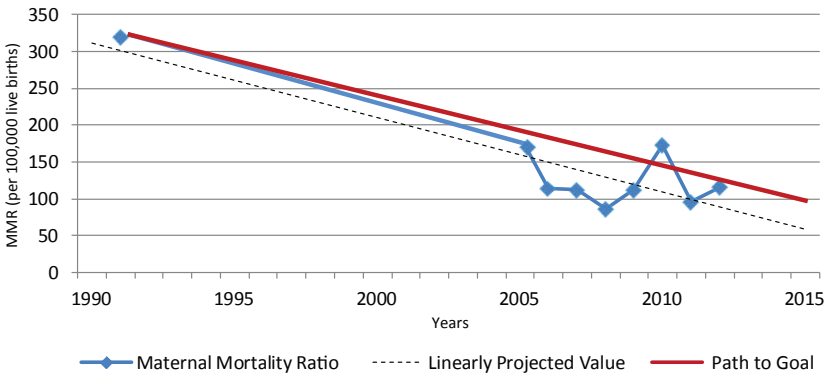
Goals and targets	Will target be met?		
	2011	2007	2003
MDG 7: Ensure environmental sustainability			
Target 7A: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources			
Target 7B: Reduce biodiversity loss, achieving by 2010, a significant reduction in the rate of loss			
Target 7C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation			
Target 7D: By 2010, to have achieved a significant improvement in the live of slm dwellers			
MDG 8: Develope a global partnership for development			
Target 8A: Develop futher an open, rule-based, predictable, nondiscriminatory trading system			
Target 8B: Address the special needs of the least developed countries, in relation to ODA			
Target 8C: Adress the special needs of landlocked developing countries and small island developing states			
Target 8D: Deal comprehensively with he de problems of developing countries			
Target 8E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries			
Target 8F: Incooperation with the private sector, make available the benefit of new technologies especially information and communications			

Note: MDG 8 to develop global partnerships has not been assessed in country. Progress made towards these trgets is largely dependent on developments in the internation al setting

Given this context, MDG 5 was chosen by the GoG as the goal to be addressed using the MAF. Figure 1 shows actual data on Guyana's maternal mortality ratio (MMR) from 1991 to 2012 as well as a linearly projected trend and the path to achieving MDG 5, given the 1991 baseline. Although the trend is decreasing, the actual data reported in the graph reflects various fluctuations in the MMR over the period; applying the MAF to maternal health in Guyana is expected to contribute to leveraging the necessary resources to reduce such fluctuations and to establish an accelerated decreasing trend in the MMR.

The need to decrease the number of maternal deaths occurring every year in Guyana is made even more urgent by the potential that improving maternal health has to accelerate progress toward other MDGs, especially those mentioned above, which have not been assessed as likely to be achieved by 2015. It is widely recognised that investments to improve maternal health will benefit growth and prosperity in any country by reducing the amount of foregone contributions – social and economic – made by women.

FIGURE 1: **MATERNAL MORTALITY RATIO, 1990-2012 (MINISTRY OF HEALTH)**



For example, a recent study carried out by the World Bank on the effect of women's economic power in Latin America and the Caribbean (LAC)[2] found that, in the period from 2000 to 2010, female income contributed 30 percent to extreme poverty reduction and was also a critical factor behind the decline in inequality in LAC (accounting for 28 percent of the reduction). It follows that channelling increased resources and efforts toward the achievement of MDG 5 can be expected to further increase the likelihood of achieving the targets related to MDG 1, i.e., the eradication of extreme poverty and hunger.

2. 'The effect of women's economic power in Latin America and the Caribbean', August 2012 – World Bank publication.

In addition to the foregone economic contributions of women, further consequences of maternal morbidity and mortality relate to the health and development of children, families, and societies at large,[3] which are hindered by the reduced role/absence of a maternal figure. Accelerating progress on MDG 5 would therefore benefit the trajectories toward the achievement of the other health-related MDGs (namely, MDGs 4 and 6) as well as the women's empowerment- and education-related MDGs (MDGs 3 and 2, respectively). More specifically and in relation to the Guyanese context, this would imply increasing the likelihood of attaining those targets that, at the time of the 2011 MDG Progress Report, were not yet considered likely to be achieved by 2015.

1.2 BRIEF OVERVIEW OF THE PUBLIC HEALTH SECTOR IN GUYANA

In Guyana, the Ministry of Health (MoH) is responsible for stewardship (setting policy, regulation, and standards) and for building and initial furbishing of facilities and is working to finance 100 percent of the employment of doctors, nurses, and medex's. By contrast, it is the 10 regions (under the Ministry of Local Government) that are responsible for the day-to-day management of the facilities and employment of all other staff working in the health sector. The Ministry of Health has Service Level Agreements with all hospitals, although there is need for further development of these tools in order to improve accountability.

There are five levels of health care in Guyana: 1) health post, 2) health centre, 3) district hospital, 4) regional hospital, and 5) national referral hospital. Each provides a specific spectrum of services to patients. Maternal health care services are currently being provided free of cost at all levels, to different degrees, from pre-conception and antenatal care, to childbirth and the immediate postnatal period, including neo-natal support. Overall, there are 364 antenatal care sites, along with 43 regular delivery sites in the 10 regions of Guyana. Occasionally, deliveries also occur at home or in the community.[4] The only referral institution for high-risk pregnancy and emergency cases is Georgetown Public Hospital Corporation (GPHC).[5]

1.3 BRIEF OVERVIEW OF MATERNAL HEALTH IN GUYANA

The GoG shares the widely accepted notion that the quality of maternal health care in a country is indicative of the quality of the overall health system. For this reason, in addition to what was discussed in Chapter 1.1, improving maternal health has been identified as a national priority and increasing efforts are being channelled to ensure that MDG 5 and its associated targets are met by 2015.

3. H. E Reed, M. A. Koblinksy and W. H. Mosley, eds. 2000. 'The Consequences of Maternal Morbidity and Maternal Mortality: Report of a Workshop' – Washington, DC: National Academy Press.
4. 87 percent of births took place in a facility in 2010 and 94 percent in 2011.
5. Seven private hospitals are licensed in Guyana (six in Georgetown and one in Berbice) to provide maternal health services, but the options for maternal health in the private sector remain limited and costly.

The chance of a woman dying from a pregnancy-related cause depends on a wide spectrum of factors: access to comprehensive emergency obstetric facilities, including functionality of national referral system for high-risk and emergency cases; the availability of skilled human resources to attend delivery; the availability of necessary equipment and supplies; the quality of antenatal care and family planning services as well as postnatal care; and the ability of patients to fully understand and follow nurses' and doctors' instructions. Most of these are, in turn, greatly affected by the functioning of the overall public health system, including existing management, supervisory, and monitoring tools. In order to improve maternal health care sustainably and hence reduce the number of maternal deaths, all of these elements need to be considered comprehensively; then, cognizant of the reality of finite resources, investment needs to be channelled to those solutions that are likely to have the greatest impact on magnitude and sustainability.

One particularly successful action by the Ministry of Health has been the implementation of the 'Safe Motherhood Initiative' at all levels of health care. This initiative, which is being implemented by the Maternal and Child Health Department of the Ministry, seeks to ensure a "healthy mother and baby" by basing interventions on five pillars: 1) pre-conceptual care (care before pregnancy through paying attention to nutritional status, HIV, and immunization of boys and girls), 2) antenatal or prenatal care, 3) clean and safe delivery, 4) management of high-risk pregnancy, and 5) postnatal care. These core elements have been incorporated into all health training programmes for medex's, midwives, and community health workers. In addition, the Ministry of Health continues to train health care workers under the Advances in Labour and Risk Management (ALARM) programme; from 2010 to 2012, a total of 150 doctors and nurses from across the country received such training. Both initiatives address the need to maintain focus on effective prevention and management of obstetric emergencies in order to reduce maternal deaths (see Tables 2 and 3).

TABLE 2: DIRECT AND INDIRECT MATERNAL DEATHS, 2010-2012 (MINISTRY OF HEALTH)

	Number of Direct[6] Maternal Deaths	Number of Indirect Maternal Deaths	Total Number of Maternal Deaths
2010	22	2	24
2011	14	5	19
2012	16	6	22

6. Direct maternal deaths are those resulting from obstetric complications of the pregnant state (pregnancy, delivery, and post-partum), interventions, omissions, incorrect treatment, or a chain of events resulting from any of the above. Indirect maternal deaths are those resulting from previously existing diseases or from diseases that developed during pregnancy and that were not due to direct obstetric causes, but were aggravated by physiological effects of pregnancy.

TABLE 3: LEADING CAUSES OF DIRECT MATERNAL DEATHS, 2010-2012 (MINISTRY OF HEALTH)

Ranking	2012 Causes of death	Number of deaths (% of total[7])	2011 Causes of death	Number of deaths (% of total)	2010 Causes of death	Number of deaths (% of total)
1	Post-partum haemorrhage/ Hypovolemic shock	5 (31%)	Pregnancy induced hypertension/ Eclampsia	5 (36%)	Post-partum haemorrhage/ Hypovolemic shock	12 (55%)
2	Pregnancy induced hypertension/ Eclampsia	3 (19%)	Post-partum haemorrhage/ Hypovolemic shock	3 (21%)	Pregnancy induced hypertension/ Eclampsia	5 (23%)
3	Placenta praevia/ Haemorrhaging	2 (13%)	Ruptured ectopic	2 (14%)	Thrombo-embolism	2 (9%)
4	Amniotic fluid embolism	2 (13%)	Septic abortion	2 (14%)	Ruptured ectopic	1 (5%)
5	Retained products of conception	2 (13%)	Retained products of conception	1 (7%)	Septic abortion	1 (5%)
6	Intra uterine death/ Thrombo-embolism	1 (6%)	Thrombo-embolism	1 (7%)	Cephalic pelvic disproportion/ Ruptured uterus haemorrhaging	1 (5%)
7	Laceration of cervix with haemorrhage	1 (6%)				
Total – Direct Maternal Deaths		**16**		**14**		**22**

One area that still needs emphasis is family planning and raising awareness on sexual and reproductive health, as this is expected to contribute to the overall reduction of maternal deaths by decreasing the number of unwanted pregnancies and thus of abortions.[8]

It is worth acknowledging that understanding, comprehending, and following medical advice and guidance remain a challenge in Guyana; this has a direct effect on the health of current and potential mothers. Further, their ability to follow medical advice that is in their best interest, and their ability to demand the appropriate level of care in terms of treatment and services before and during pregnancy, labour, and post-partum recovery is less than desired to ensure good health. Improvements in the quality of health education and the use of different methodology in the country are needed to effectively resolve this issue, which has a direct impact on the care that mothers in the country expect and receive.

7. Percentages do not sum exactly to 100 percent due to rounding.
8. In 2010, severe abortion complications accounted for 2 percent of complications and 5 percent of maternal deaths (EmONC assessment). However, these data do not take into account all those cases of abortion taking place outside licensed facilities, which would further increase the share of abortion-related maternal deaths.

Overall, Guyana has been making good progress toward improving maternal health and has succeeded in establishing a decreasing trend in the maternal mortality ratio[9] nationwide (Figure 1 above). According to the MDG Progress Report 2011, the country has the potential to meet the MDG target of reducing the maternal mortality ratio by three quarters and has a mixed outlook on the target to achieve universal access to reproductive health. Nevertheless, if the target for a MMR of less than 80 by 2015 is to be achieved, acceleration solutions are needed to overcome the problems currently being encountered when implementing interventions to improve maternal health. The objective of the MAF is to support the Government of Guyana to reduce, and ultimately eliminate, these bottlenecks.

1.4 METHODOLOGY FOR DEVELOPING THE MAF ACTION PLAN FOR GUYANA IN THE CURRENT NATIONAL CONTEXT

The MDG Acceleration Framework suggests four steps to be followed to develop the Country Action Plan.

1. Intervention identification and prioritisation – Key interventions required to achieve the selected MDG by 2015 are identified and prioritised according to their impact and feasibility (the process of identification and prioritisation is largely informed by country/sector plans).

2. Bottleneck identification and prioritisation – Direct causes of poor intervention performance are identified and prioritised according to the impact of removing/mitigating them and the availability of potential solutions to overcome them.

3. Solution identification and sequencing – 'Acceleration solutions' are identified to overcome the prioritised bottlenecks and a list of the most impactful and feasible ones is outlined for implementation (with the view to maximising near-term impact and to allocate resources in the most effective way possible).

4. Implementation planning and monitoring – The activities required to implement the selected bottleneck solutions are identified and an implementation and monitoring plan is developed and shared with potential development partners (including an accountability matrix for the government and its partners).

Guyana's Action Plan to accelerate progress toward MDG 5 will be implemented during the course of the National Health Sector Strategy 2013-2020 (Health Vision 2020); in particular, it will fall within the consolidation phase of the strategy, which focuses on strengthening the existing public health system in the period going from 2013 to 2015. This phase of the national strategy will be accompanied by a third edition of the Package of Publicly Guaranteed Health Services (PPGHS), which the Ministry of Health is currently developing. Once completed, the PPGHS will include the list of essential patient services and that of essential support services (including essential drug list, essential equipment list and essential human resource list)

9. The maternal mortality ratio (MMR) is defined as the ratio of the number of maternal deaths to the number of live births in a given year, expressed per 100,000 live births.

to be guaranteed at each level of the health care system. It will also include the listing of basic and comprehensive maternity facilities.[10] Solutions within the MAF Action Plan are expected to support the Government's efforts to guarantee the maternal health care services enclosed in the PPGHS.

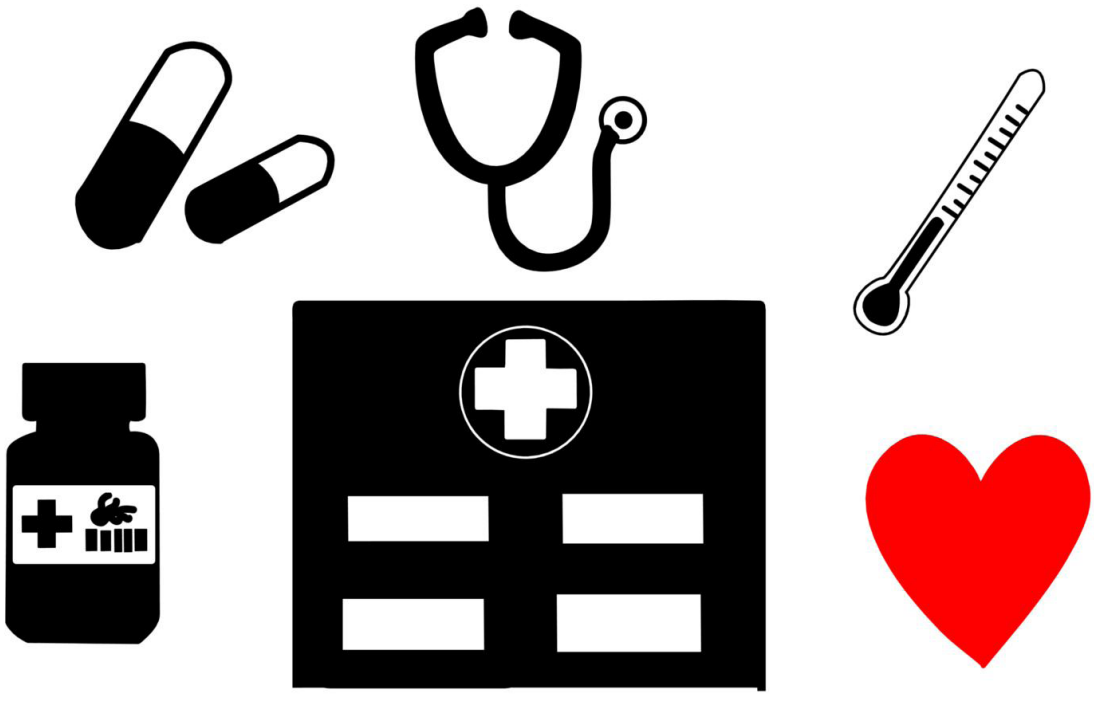
The MAF diagnostics will be organized around the stages of a woman's life cycle in order to comprehensively and consistently address the most pressing issues currently being faced in the country's maternal health sector.[11] Guyana's Maternal and Perinatal Health Strategy 2011-2020 – which was created in collaboration with PAHO/WHO, UN partners, and other stakeholders – will provide the basis for the identification of interventions, both ongoing and planned. This strategic plan, which is part 1 of Guyana's Maternal, Perinatal, Neonatal, Child and Family Health Strategy 2011-2020, is currently in use by the Ministry of Health and addresses the objectives and activities considered necessary to meet MDG 5 targets; it includes stakeholder input (such as the results from the EmONC assessment of maternity facilities) as well as an agreed list of priorities to be addressed in the coming years. The MAF will thus be used within existing national processes and initiatives with the aim of strengthening the existing prioritisation, problem recognition and solving, and accountability and monitoring systems, as well as cross-sector collaboration, in order to intensify progress toward the achievement of the MDG targets related to maternal health.

The following sections focus on interventions – ongoing and planned – deemed necessary to strengthen the maternal health sector in Guyana; they analyse the bottlenecks to successful implementation of selected activities and propose solutions to accelerate progress toward establishing and maintaining quality and comprehensive maternal health care in the country. As mentioned above, they are presented in a way that ensures inclusion and consideration of all stages in a girl's or woman's life while following the specific steps of the MAF methodology.

10. According to UNFPA definitions, a comprehensive facility can perform the following nine signal functions, whereas a basic facility performs only the first seven:

- *Administer parenteral antibiotics*
- *Administer parenteral anticonvulsants for severe per-eclampsia and eclampsia*
- *Administer parenteral uterotonic drugs, i.e., oxytocics*
- *Perform manual removal of placenta*
- *Removal of retained products (manual vacuum aspiration, dilatation and curettage)*
- *Perform assisted vaginal delivery (with vacuum extractor or forceps)*
- *Perform basic neonatal resuscitation with bag and mask*
- *Perform surgery, i.e., Caesarean section*
- *Perform blood transfusion*

11. The importance of tackling maternal health issues at a grassroots level, considering the whole timeline of a girl's or woman's life was emphasised at the recent workshop 'Universal Access to Sexual and Reproductive Health (SRH) and Rights' held in Port-of-Spain, Trinidad and Tobago, on 3-4 December 2012.



II. STEP 1: INTERVENTION IDENTIFICATION AND PRIORITISATION

Government's policy objectives and priorities, as well as concrete actions, in the area of maternal health are enclosed in Guyana's Maternal and Perinatal Health Strategy 2011-2020; this was therefore used as the starting point for Step 1 of the MAF. Additional interventions were identified by stakeholders working in the field and participants at the MAF Workshop, who represented a wide range of stakeholders involved in the maternal health sector in Guyana (including experts from the public and private sectors, donor agencies, and non-governmental and faith-based organizations). In order to facilitate collection of input from all participants, break-out sessions were included in the programme of the workshop and seven working groups were formed. These sessions and the subsequent panel discussions led to the validation and prioritisation of identified interventions.[12]

Interventions were organized around five categories: i) pre-conception care, ii) antenatal care, iii) delivery care, iv) postnatal care, and v) overall functioning of the maternal health care system. The sections below summarize Guyana's progress made to date in the five different areas, thus identifying ongoing and planned interventions and prioritizing those to be considered in Step 2.

2.1 PRE-CONCEPTION CARE

The Ministry of Health is continuing to place emphasis on the family, including the supportive role of men, safe sex, voluntary counselling and testing for HIV, and on family planning and commodity security.[13] Interventions identified in Guyana's Maternal and Perinatal Health Strategy 2011-2020 point to the intention of the GoG to consolidate efforts made to date and to intensify action in the area of sexual and reproductive health education.

The contraceptive prevalence rate[14] in Guyana has seen a steady increase from 2008 (see Figure 2) and is expected to see much greater improvement as the family planning programme expands to include HIV care and treatment sites. The advance in newer methods of contraception (e.g., emergency contraceptive pills) is also expected to improve the likelihood of achieving the target contraceptive prevalence rate of above 60 percent by 2015.

Although the proportion of adolescent live births appears to be stable at approximately 20 percent since 2007, the actual number has seen a slow marginal decline over the period. This is to be attributed to the Safe Motherhood Initiative – already mentioned in Chapter 1.3 – which, within the activities related to pre-conception care, focuses on young girls before they get pregnant

12. See Appendix 1 for an in-depth description of the consultative process.
13. Commodity security refers to the ability of every person to choose, obtain, and use quality contraceptives and other essential reproductive health products whenever he or she needs them.
14. Contraceptive prevalence rate is defined as the proportion of women of reproductive age (15-49) who are using (or whose partner is using) a contraceptive method at a given point in time.

and looks at particular health education to promote the prevention of pregnancies. Progress in adolescent SRH education is also linked to collaboration between health and education programmes, which include health and family life education, youth clubs, and the promotion of youth-friendly spaces in communities nationwide and of adolescent friendly health centres. Additional improvements are expected to arise thanks to the establishment, in September 2013, of a focal point for Adolescent Health within the Ministry of Health that will better guide and coordinate efforts to sensitise adolescents about pre-conception issues.

Furthermore, a teenage pregnancy clinic that was set up at the national referral hospital (GPHC) in early 2013 is expected to contribute toward decreasing the number of deaths among adolescent mothers by providing young girls with the information and counselling they need in order to safely manage current pregnancies and prevent unwanted pregnancies. It also provides girls with life skills education and prepares them for re-integration into society.

FIGURE 2: **CONTRACEPTIVE PREVALENCE RATE, 2005-2012 (MINISTRY OF HEALTH)**

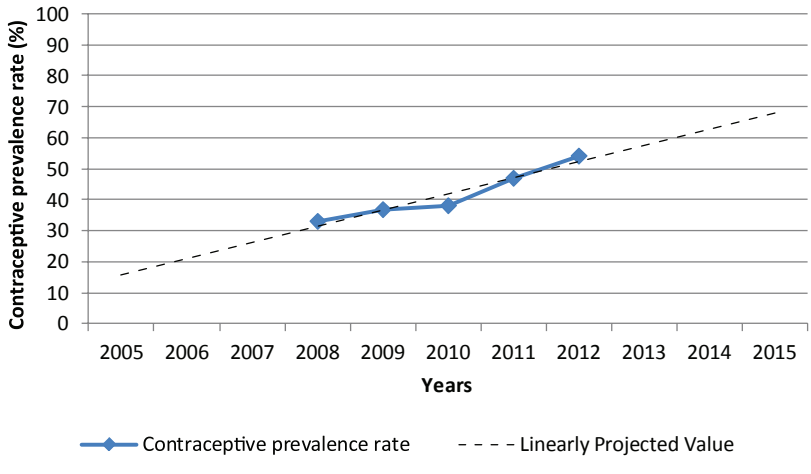
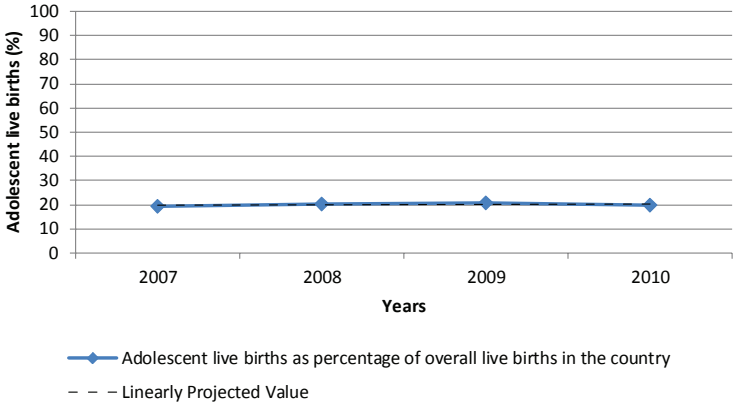


FIGURE 3: **ADOLESCENT LIVE BIRTHS AS PERCENTAGE OF OVERALL LIVE BIRTHS IN THE COUNTRY, 2007-2010 (MINISTRY OF HEALTH)**



2.1.1 PRIORITISED INTERVENTIONS FOR PRE-CONCEPTION CARE

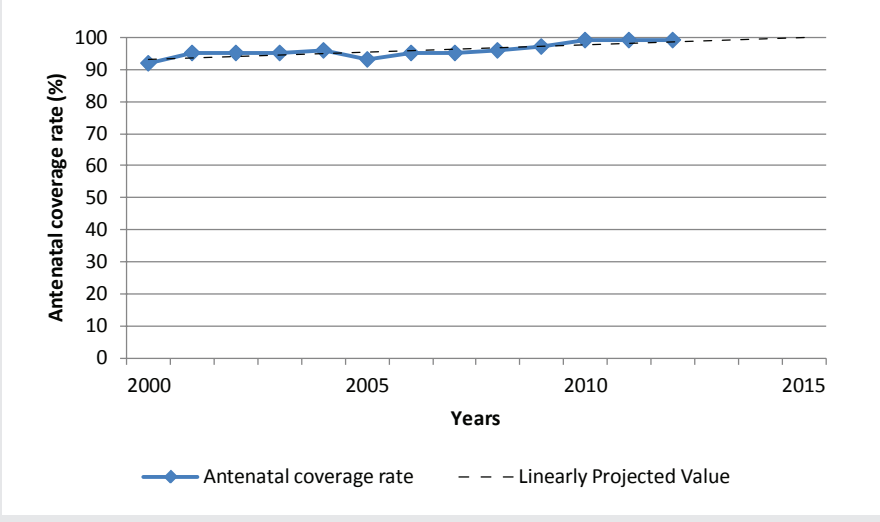
Given the present context and based on the feasibility and impact criteria of the MAF methodology, two priority interventions were selected in the area of pre-conception care: i) supporting more activities and processes for health education and for the development of educational materials and ii) improving linkages between MoH, MoE, and non-governmental organizations, including religious organizations, in order to improve Information, Education and Communication services (IEC) for young boys and girls. In addition to being aligned with government priorities as expressed in the Maternal and Perinatal Health Strategy, these interventions are expected to significantly improve the quality of and access to pre-conception care among the most vulnerable, which, in turn, would facilitate attainment of MDG target 5B.

2.2 ANTENATAL CARE

Antenatal care is available in Guyana at different levels of the health care system. Although differences still exist between the coastal and hinterland regions in Guyana, the national antenatal coverage rate has been above 90 percent since the year 2000 (see Figure 4). As reported by the Ministry of Health, the antenatal coverage rate reflects the number of new admissions to antenatal clinics throughout the country in a given year, out of the estimated total number of pregnant women in the country for that same year. The data specifies neither the timing of the first antenatal visit nor the frequency of antenatal visits. Data on these aspects, though, can be found in the 2009 Guyana Demographic and Health Survey:[15]

15. The Guyana Demographic and Health Survey 2009 was prepared by the Ministry of Health in collaboration with the Bureau of Statistics and with technical assistance from USAID.

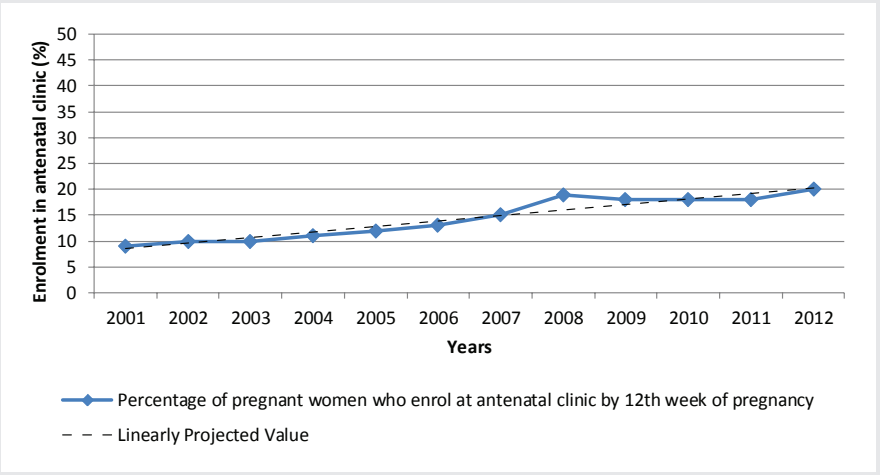
FIGURE 4: **ANTENATAL COVERAGE RATE, 2000-2012 (MINISTRY OF HEALTH)**



78.5 percent of women who had a live birth in the five years preceding the survey had four or more antenatal care visits without significant difference by place of residence. With regard to timing of the first visit, among those women who received antenatal care, the median number of months pregnant at the first visit was four: more specifically, 3.9 months for women living in coastal areas and 4.3 months for women living in interior areas.

The government is advocating for the early initiation of antenatal care (within the first three months) through media and print and is planning to reinforce linkages with community representatives, community-based organizations, and local authorities to address factors that influence key family practices. Figure 5 shows the percentage of pregnant women who accessed antenatal care nationwide by the 12th week of pregnancy for the period 2001-2012. The target is to have more than 40 percent of women accessing health facilities before the 12th week of pregnancy, with emphasis on the importance of seeking antenatal care as soon as a period is missed. The reason for this is that early interventions in antenatal care ensure that women can be properly screened for any abnormalities or high risk factors and treated in a timely manner, which improves the effectiveness of managing high-risk pregnancies.

FIGURE 5: **ENROLMENT IN ANTENATAL CLINIC BY THE 12TH WEEK OF PREGNANCY, 2001-2012 (MINISTRY OF HEALTH)**



Focus is also on improving nutrition among pregnant women (e.g., de-worming and multivitamin supplementation programmes), ensuring that they have access to anaemia screening, and providing supplements (iron/folic acid/sprinkles) to safeguard the health of women during pregnancy.

Another intervention to improve antenatal care has been the incorporation of birth and complication preparedness within all health facilities. This is done through advanced training for midwives and doctors focused on improving knowledge and capacity to deal with common complications of pregnancies, e.g., post-partum haemorrhage and pregnancy-induced hypertension.

2.2.1 PRIORITISED INTERVENTIONS FOR ANTENATAL CARE

In the context of antenatal care, stakeholders prioritised two interventions, given the impact and feasibility criteria specified in the MAF methodology. The first prioritised intervention relates to advocating and promoting early initiation of antenatal care before the 12th week of pregnancy through media and print; while the second one is to incorporate birth and complication preparedness into antenatal care within health facilities.

2.3 DELIVERY CARE

Multiple initiatives have been deployed by the Ministry of Health to expand access to and improve the quality of maternal health care at all levels of the public health care system and to ensure that all women can deliver their babies safely. Motivated and skilled human resources are an essential input for this and include a range of health workers: specialist consultants, doctors, nurses, midwives, and medical extension workers (medex). Various in-country training programmes for all levels of health workers are ongoing and are being institutionalized; these include the Advances in Labour And Risk Management (ALARM) training programme for doctors and nurses, training in the identification and management of high-risk pregnancies for facility- and community-based health personnel, training for doctors in the management of post-partum haemorrhage (the leading cause of maternal death in 2012), and training for nurses in emergency obstetrics and post-basic obstetrics and gynaecology.

In addition, the Post-Graduate Residency Programme in OB/GYN for doctors was established at the Georgetown Public Hospital (GPHC) in May 2012 in partnership with Case Western University Medical Center, Ohio. This four-year master's programme, accredited by the University of Guyana, aims to reduce maternal deaths through training and specialising physicians in obstetrics and gynaecology. It is expected to lay the necessary foundations for the establishment of a broader national cadre of OB/GYN experts and to support the accompanying infrastructural changes, evidence-based protocol development, and systems strengthening.

FIGURE 6: **PROPORTION OF BIRTHS ATTENDED BY SKILLED HEALTH PERSONNEL, 2000-2012 (MINISTRY OF HEALTH)**

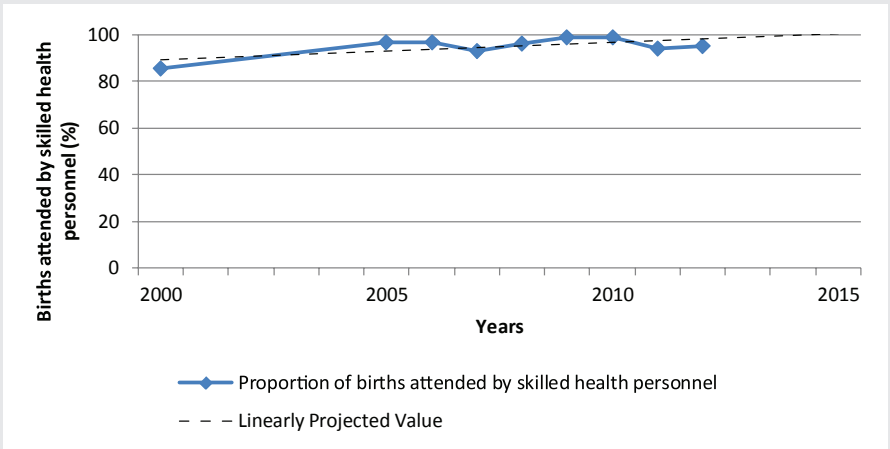


Figure 6 shows how these efforts continue to ensure a sustained availability of skilled personnel to attend births. However, addressing insufficient obstetric and gynaecological capacity in the public health sector remains a priority; in 2011, only six obstetricians were present throughout the entire public health system in Guyana. This human resource gap needs to be addressed promptly and increased efforts are needed to attract, train, and retain skilled health workers. Additional interventions that have been identified to bridge such gap are: planning, mobilising and deploying skilled human resources (especially obstetricians and gynaecologists at the referral level and midwives and medex's where there are no OB/GYN specialists), and recruiting 15 obstetricians for the national referral hospital and regional hospitals.

To ensure safe delivery, births should not only be attended by skilled personnel, but they should also take place within specialised facilities. In 2011, 94 percent of deliveries took place within a public health institution (hospital or health post/centre); however, this statistic does not take into account the standard of care available at the delivery facilities. Currently, all high-risk and emergency cases have to be referred to GPHC due to the lack of adequate resources at regional-level institutions. A recent assessment carried out by the Ministry of Health in collaboration with UNFPA established for the first time the national baseline data on availability, use, and quality of emergency obstetric and newborn care (EmONC) services as recommended by the WHO, UNICEF, and UNFPA. The report suggested that the number of facilities providing EmONC in Guyana is inadequate and that this is compounded by issues regarding competence and skills of health personnel, and provision of equipment, which undermine the quality of emergency care provided nationwide.

The Ministry of Health is planning to collaborate with Regional Health Services to upgrade the infrastructure and equipment of existing facilities so that they can provide basic or comprehensive obstetric services, depending on whether they are hospitals or health posts/centres. While these efforts will improve access to appropriate and timely treatment for all women delivering in the country and will help to avoid preventable deaths, more immediate solutions for the overburdened and under-resourced GPHC are necessary to decrease the likelihood of maternal deaths in the very near future.

Currently, nearly half of the country's deliveries take place at the GPHC,[16] which is the national referral hospital for obstetric cases. It is not surprising that most maternal deaths occur in this institution. In 2011, 14 of the 19 maternal deaths that occurred nationally – approximately 74 percent – took place at the GPHC. In 2012, this percentage decreased to 59 percent.[17] Of these, six in 2011 and four in 2012 were referred cases.

Given the volume of patients seeking care at the GPHC, it is of paramount importance that staffing shortages be tackled in order to improve the quality of care guaranteed to Guyanese mothers and to further reduce the maternal mortality ratio. Currently, there are three OB/GYN consultants at the GPHC, who work alongside 12 doctors who are enrolled in the Obstetrics and Gynaecology Post-Graduate Residency Programme.

16. In 2011, the GPHC alone accounted for 41 percent of all deliveries nationally, with a total of 5,497 live births.
17. In 2012, 13 of the 22 maternal deaths that occurred nationally took place at the GPHC.

FIGURE 7: **NUMBER OF MATERNAL DEATHS BY INSTITUTION, 2011 (MINISTRY OF HEALTH)**

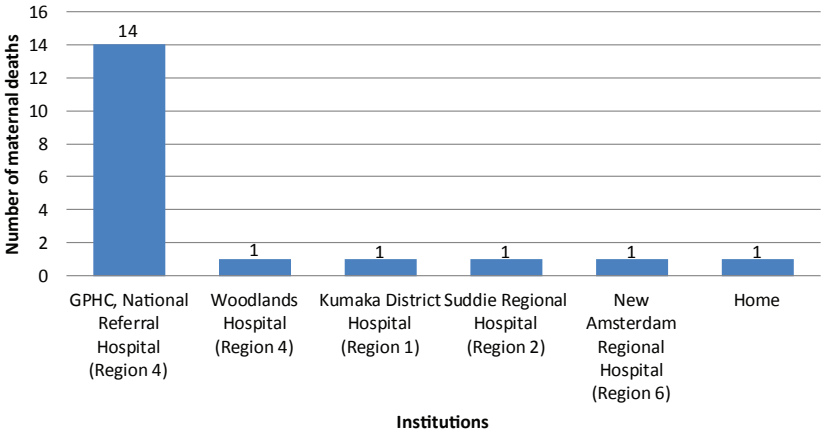
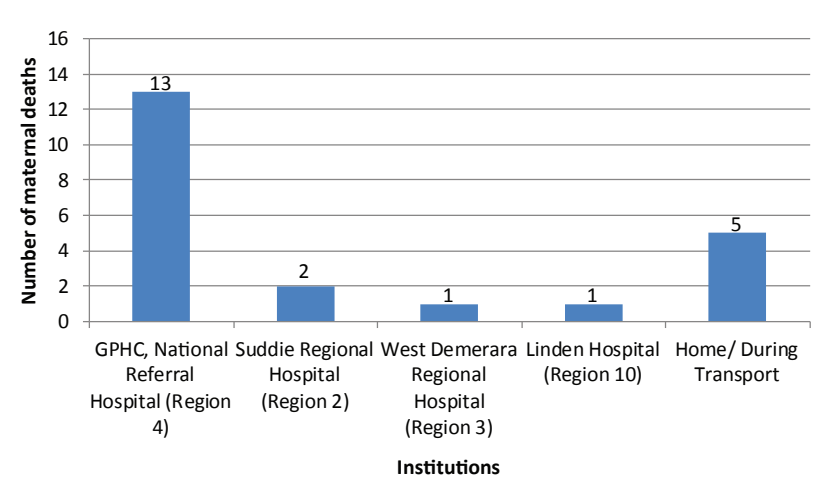


FIGURE 8: **NUMBER OF MATERNAL DEATHS BY INSTITUTION, 2012 (MINISTRY OF HEALTH)**



Guyana's geography poses further obstacles to access to health care in hinterland regions. The 2011 MDG Progress Report noted that relatively few specialist human resources and facilities serve relatively large geographic areas with difficult terrain. Measures to identify delays in the referral system for high risk and emergency obstetric cases and to resolve them and improvements in the linkages between health facilities and laboratory services to ensure availability of blood and blood products for emergencies are addressing this.

2.3.1 PRIORITISED INTERVENTIONS FOR DELIVERY CARE

The vast majority of stakeholders involved in the consultative process highlighted the need to establish a cadre of competent human resources as a crucial step for improving delivery care and overall maternal health care in Guyana; this is also reflected in the activities prioritised in the Maternal and Perinatal Health Strategy 2011-2020. Keeping in consideration the national context as it relates to delivery care and based on the criteria of the MAF methodology, the following interventions were prioritised for consideration in Step 2: i) training and retaining competent and skilled specialists at all levels of the health care system – including ensuring sustainability of the Post-Graduate Residency Programme in Obstetrics and Gynaecology, and ii) strengthening the referral system for high-risk and emergency obstetric care.

2.4 POSTNATAL CARE

Postnatal care involves educating new mothers about aspects of care for themselves and their newborns as well as family planning advice in order to adequately space future pregnancies. It also involves providing clinical care as required in the postnatal period. The Ministry of Health has strengthened postnatal care interventions to emphasize the need for mothers to have three visits, rather than just one, within six weeks of delivery. Currently, the Ministry is working to improve nutrition counselling and the education of mothers in the postnatal period and to strengthen exclusive breastfeeding in communities countrywide. Moreover, midwives make home visits to mothers who have recently delivered to ensure that mother and baby have good follow-up care, although such visits are not as frequent as desirable. Case trackers and community resource personnel are also deployed in the regions to ensure adequate follow-up care.

2.4.1 PRIORITISED INTERVENTIONS FOR POSTNATAL CARE

Given Guyana's particular geography, home visits are crucial in order to capture those mothers who are not likely to travel back to a health facility after delivery; this way their health in the postnatal period is monitored.

2.5 OVERALL FUNCTIONING OF THE MATERNAL HEALTH CARE SYSTEM

Two of the priority areas identified within Guyana's Maternal and Perinatal Health Strategy 2011-2015 relate to the improvement of the overall functioning of the maternal health care system. They include interventions to strengthen the availability and use of strategic information, including monitoring, evaluation and research, and the governance capacity of the health sector, including regulation and strengthening of regional health capacities. Also noteworthy

here is the recent work of the Ministry of Health to develop a third edition of the PPGHS, which will comprehensively and easily provide all services that facilities at each level of the health care system must provide and the personnel, equipment and supply resources necessary to do so.

Specific interventions addressing the overall functioning of the maternal health sector include updating supervisory tools and quality improvement processes at all levels of the health care system in order to ensure that they reflect existing policies, guidelines, and protocols; collaborating with the nursing/medex association to revise the regulatory framework in order to allow midwives and medex to provide life-saving interventions; and collaborating with Standards and Technical Services in order to enforce a regulatory framework for health providers to include the private sector for family health reporting.

2.5.1 PRIORITISED INTERVENTIONS FOR OVERALL FUNCTIONING OF THE MATERNAL HEALTH CARE SYSTEM

The one intervention that was prioritised when considering the need to accelerate progress in improving the overall functioning of the maternal health care system was the updating of supervisory tools and quality improvement processes at all levels of the health care system in order to ensure that they reflect existing policies, guidelines, and protocols.

TABLE 4: PRIORITISED INTERVENTIONS

Maternal Health Component	Prioritised interventions
Pre-conception care	• Supporting more activities and processes for health education and for the development of educational materials • Improving linkages between MoH, MoE, and non-governmental organizations, including religious organizations, in order to improve IEC services for young boys and girls
Antenatal care	• Promote early initiation of antenatal care before the 12th week of pregnancy through media and print • Incorporate birth and complication preparedness in antenatal care within health facilities
Delivery care	• Training and retaining competent and skilled specialists at all levels of the health care system, including ensuring the sustainability of the Post-Graduate Residency Programme in Obstetrics and Gynaecology • Strengthening the referral system for high-risk and emergency obstetric care
Postnatal care	• Home visits to mothers who have recently delivered
Overall functioning of maternal health care system	• Updating supervisory tools and quality improvement processes at all levels of the health care system in order to ensure that they reflect existing policies, guidelines, and protocols

III. STEP 2: BOTTLENECK IDENTIFICATION AND PRIORITISATION

As for Step 1, a wide range of stakeholders was involved in the identification and prioritisation of bottlenecks. This included representatives of the supply side of maternity services as well as the user side, including a sample of patients from the GPHC and other selected regional hospitals and community members in Regions 1, 3 and 5. The discussions on bottlenecks were held during individual and group consultations and during the two-day workshop mentioned at the beginning of Chapter 2.

Sections 3.1-3.5 below describe the bottlenecks identified for the interventions that were prioritised for each of the five maternal health components and Section 3.6 outlines the prioritised bottlenecks. Table 5 summarises the prioritised bottlenecks for each prioritised intervention.

3.1 PRE-CONCEPTION CARE

The first intervention that was prioritised under the pre-conception care component was support for more activities and processes for health education and for the development of educational materials. For this intervention, bottlenecks in the categories of policy and planning, service use, and service delivery were identified.

With regard to the former, there is ongoing work on a nationwide policy on Sexual and Reproductive Health (SRH) as well as on a clear nationwide educational programme on reproductive health for adolescent girls and boys; the recently established Adolescent Health focal point at the MoH is handling this. However, until these are finalised, impediments to the implementation of health education initiatives will continue.

Related to the second bottleneck category – service use (accessibility) – and strictly linked to the absence of adequate policy, is the inadequate access to SRH for different target groups. Currently in Guyana, girls below the age of 16 do not have access to SRH services without parental approval. However there are cases of pregnancies occurring from as early an age as 11, pointing to the need to review existing policies in this area, and to fill the existing gap in availability of age-appropriate SRH information and services in schools and at local health facilities. Furthermore, disparities in access still remain between the coastal regions and the hinterland. The promotional aspect of SRH needs to be improved, taking into consideration the various target groups present across Guyana's territory[18].

With regard to the third bottleneck category – service delivery – the inappropriate attitude as well as competence of health personnel when it comes to providing women and families with appropriate information regarding reproductive health was identified by stakeholders as a further barrier to the effective support of health education activities and the development of adequate materials.

The second intervention that was prioritised under the pre-conception component was the improvement of the linkages between MoH, MoE, and non-governmental organizations, including religious organizations, in order to improve IEC services for young boys and girls. Bottlenecks in the cross-cutting category of coordination and alignment were identified and included inadequate coordination and collaboration at the inter-sectoral level, the unclear definition of

18. This was among the topics discussed at the workshop 'Universal Access to Sexual and Reproductive Health (SRH) and Rights', already mentioned in note 11.

roles and responsibilities between central and regional authorities within the same sector, the absence of a communication strategy, and the lack of a monitoring and evaluation framework to track performance and hold relevant stakeholders accountable.

3.2 ANTENATAL CARE

Under the antenatal care component, the first prioritised intervention related to encouraging women to seek early antenatal care. Bottlenecks were identified in the service use, service delivery, and budget and financing categories.

Cultural barriers were highlighted as one of the major obstacles impeding women from getting adequate and timely care. These are compounded by the fact that women do not always know about the potential consequences of not seeking early antenatal care, which results in late enrolment. In addition, geographical and transportation barriers were also identified as a bottleneck preventing women from accessing antenatal health care services, as women often do not have the financial resources necessary to reach certain health facilities.

Service delivery bottlenecks further hinder activities aimed at encouraging antenatal care. There is a shortage of trained community health workers to disseminate relevant information to end-users. Moreover, not all health workers possess the right attitude to deliver antenatal care services at health facilities, with some workers discriminating against and stigmatising patients based on those patients' circumstances (such as age, ethnicity, etc.) instead of facilitating visits and ensuring that there is confidentiality between health worker and patient. In addition, inadequate financing stymies required outreach programmes and the purchase of necessary educational material for raising awareness about the importance of antenatal care.

The second prioritised intervention was the incorporation of birth and complication preparedness in antenatal care within health facilities; for this intervention, service delivery, policy and planning, and budget and financing bottlenecks were identified.

First, without adequately trained staff, birth and complication preparedness cannot be incorporated into antenatal care services, so the shortage of skilled health workers to identify potential complications was identified as the first bottleneck to the implementation of this intervention. In addition to this, the lack of a structured procedural plan for what relates to early identification of risk factors and management of high-risk pregnancies was also identified as a bottleneck, as was the shortage of funds to equip antenatal care facilities with the necessary equipment and supplies that would support the incorporation of birth and complication preparedness.

3.3 DELIVERY CARE

Training and retaining competent and skilled specialists at all levels of the health care system was the first intervention prioritised under the delivery care component of maternal health. With regard to this intervention, all stakeholders involved in the consultative process highlighted the gap in skilled human resources as a major obstacle to the provision of quality maternal health care and to the institutionalisation of adequate capacity to sustain programmes. This gap ranges from adequately trained midwives and doctors to competent managers. There are bottlenecks to training and retaining specialist health personnel, though. The quality of training

for health workers remains inadequate due to gaps in skilled human resources to impart the training and in programme curricula. The Post-Graduate Residency Programme in Obstetrics and Gynaecology is highly dependent on the voluntary contributions of foreign OB/GYN consultants to conduct the course and mentor residents and the programme is yet to be fully endorsed by national authorities. Furthermore, there is currently no post-basic programme with a focus on OB/GYN for nurses, although there have been efforts to develop it. There is also no effective scheme for attracting and retaining skilled personnel, which results in very high staff-turnover and migration. This is exacerbated by the limited scope for continuing the professional development of specialists and the inadequate support services for doctors both in terms of nursing and other support staff as well as the availability of necessary equipment and supplies. Financing gaps for equipment provision and for ensuring the necessary presence of specialist consultants to assist with the establishment of a national cadre of OB/GYN specialists for training and mentoring junior doctors constrain the speed with which maternal health care can be improved in Guyana.

The second intervention prioritised under the delivery care component was the strengthening of the referral system for high-risk and emergency obstetric care. This is currently hindered by the inadequate dissemination and use of protocols and guidelines, the weak enforcement of processes, and, as for the previous intervention, constraints on human resources. Communication and coordination between health facilities are inadequate and weak feedback mechanisms, especially poor documentation, coupled with lack of accountability for physicians as well as for staff at all levels of health care, mean that there are insufficient systems to prevent the recurrence of errors and spurious referrals. Furthermore, insufficient monitoring of health workers' performance contributes to weak compliance with existing protocols and processes. In addition, the lack of supporting legislative frameworks for the midwifery profession prevents midwives from carrying out basic life-saving EmONC functions that would contribute to a decrease in the burden on the referral system and in the number of maternal deaths, given the current shortage of OB/GYN specialists.

3.4 POSTNATAL CARE

Under Step 1, home visits to mothers who have recently delivered was selected as the intervention for prioritisation under the postnatal care component of maternal health. Stakeholders involved in the consultative process identified human resource constraints, especially at the primary health care level, as the one bottleneck to the implementation of such interventions at the desired standard.

3.5 OVERALL FUNCTIONING OF THE MATERNAL HEALTH CARE SYSTEM

Resulting from Step 1, one intervention was prioritised under the fifth component of maternal health: updating supervisory tools and quality improvement processes at all levels of the health care system in order to ensure that they reflect existing policies, guidelines, and protocols. Given the overarching nature of this intervention, it is not surprising that the bottlenecks to its implementation were identified in the cross-cutting categories of coordination and alignment, and accountability and transparency. Specifically, stakeholders highlighted the poor

systemic control of standards and the insufficient coordination at the strategic level as well as the limited accountability and enforcement procedures.

3.6 PRIORITISED BOTTLENECKS

Guided by the MAF methodology and considering the prioritised interventions and the bottlenecks that were identified for each of them, six bottlenecks were prioritised on the basis of their impact if removed, or at least mitigated, and on the basis of the availability of feasible solutions. An additional criterion was used in the prioritisation process in order to assess the potential to address systemic issues in the provision of maternal health care in Guyana: the extent to which a bottleneck was common to interventions that had been prioritised under different components. The rest of this section describes the prioritised bottlenecks and the potential impact that removing them would have on the maternal health care system as a whole; the section also describes the progress that their removal would have in establishing higher standards of care in the immediate future and beyond 2015.

The first prioritised bottleneck, which is currently the most crucial obstacle to effective service delivery nationwide, is the shortage of skilled human resources. This refers to both the clinical level (i.e., OB/GYN specialist doctors, midwives) and the management level, as well as to the difficulty that the system has in retaining such personnel (if they are available in the first place). All stakeholders involved in the consultative process identified this and it was associated with prioritised interventions in antenatal care, delivery care, and postnatal care. Implications of this particular bottleneck include, on the one hand, the fact that not all women can receive the level of care that they require and, on the other, the fact that health facilities and patients are not appropriately and effectively managed. This is reflected in the functioning of the referral system, which remains sub-optimal and thus overburdens the national referral hospital (GPHC) without enabling a reduction in preventable deaths within the system. Filling the human resource gap would immediately affect those facilities where additional specialist staff would be assigned and would simultaneously ensure that a national cadre of competent specialists is gradually built to sustain programmes and expertise across the system in the longer term.

The second prioritised bottleneck is the inadequate coordination and collaboration at sectoral (including between central and regional authorities) and inter-sectoral levels. This was associated with the interventions prioritised in the areas of pre-conception care, delivery care, and overall functioning of the maternal health system. With regard to the first component, the bottleneck relates specifically to the current insufficient coordination mechanisms for guiding collaboration between the Ministries of Health and Education. With regard to the second component, the bottleneck relates to the inadequate coordination and communication between facilities at different levels of the health care system when it comes to referring patients between facilities. Finally, with regard to the last component, the bottleneck relates to the inadequate coordination at the strategic level necessary to ensure the establishment of effective supervisory tools and quality improvement mechanisms across the health system. Addressing coordination shortcomings is expected not only to contribute to the establishment of higher standards of care nationwide, but also to benefit the ability of the system to sustain such improvements in the long term.

The third prioritised bottleneck is the inadequate enforcement mechanisms and M&E systems necessary to ensure compliance with existing protocols and guidelines and to sanction errant behaviour. Similar to the second prioritised bottleneck, overcoming these weaknesses is expected to have a systemic impact by strengthening the capacity to sustain continuous improvements in systems and guidelines. This bottleneck was associated with interventions prioritised in pre-conception care, delivery care, and the overall functioning of the maternal health system. With regard to the first component, the inadequacy of monitoring systems was prioritised, given their potential to improve the ability to track performance and to hold stakeholders accountable after they commit to collaborating on identified activities. With regard to delivery care, this bottleneck was prioritised because of the need to ensure that the referral system effectively will guarantee sufficient accountability in health workers' performance vis-à-vis existing protocols and processes. With regard to the third component, this bottleneck was prioritised because, without adequate enforcement mechanisms and monitoring systems, the adherence to and relevance of current supervisory tools and quality improvement processes cannot be evaluated, thus rendering the prioritised intervention (i.e., updating such tools and processes) incapable of successful implementation.

The fourth bottleneck prioritised under Step 2 is the cultural barriers that prevent women from seeking timely health care. This was prioritised in relation to one of the prioritised interventions under the antenatal care component. If cultural barriers continue to hinder women's acceptance of maternal health care services, any planned intervention will not have the desired effects since it would not reach the target population. Overcoming this bottleneck, by ensuring that all women understand the importance of seeking antenatal care early and regularly throughout the pregnancy, is therefore a crucial step in reducing the number of preventable deaths, as well as in increasing the number of high-risk pregnancies that are identified in a timely manner and that can thus be handled adequately.

The fifth prioritised bottleneck is the lack of clear policy direction, which was associated with the first prioritised intervention under the pre-conception care component. The lack of policy direction in areas such as SRH and adolescent health prevents the establishment of a clear framework that could guide interventions in these areas. Although work has begun on updating the SRH policy, its intensification under the MAF would accelerate its progress. Moreover, overcoming this bottleneck would improve the capacity to coordinate and collaborate at the sectoral and inter-sectoral levels with respect to key health education activities aimed at enhancing SRH in Guyana.

In addition to the five bottlenecks described above, stakeholders involved in the drafting of the MAF emphasised an overarching one as a major hindrance to the successful implementation of interventions aimed at improving maternal health care: budgetary constraints. More specifically these constraints were associated to the ability of mobilising sufficient national resources to equip the maternity wards of key health facilities nationwide with the necessary equipment and supplies and to maintain the necessary presence of OB/GYN consultants in country to ensure sustainability of ongoing training programmes such as the Post-Graduate Residency Programme in Obstetrics and Gynaecology being delivered at GPHC. The reality of resource constraints and the existence of several competing calls for existing resources prevent the GoG from allocating the desired amount of funding to the maternal health sector in a manner and time that would ensure achievement of MDG 5 and its associated targets

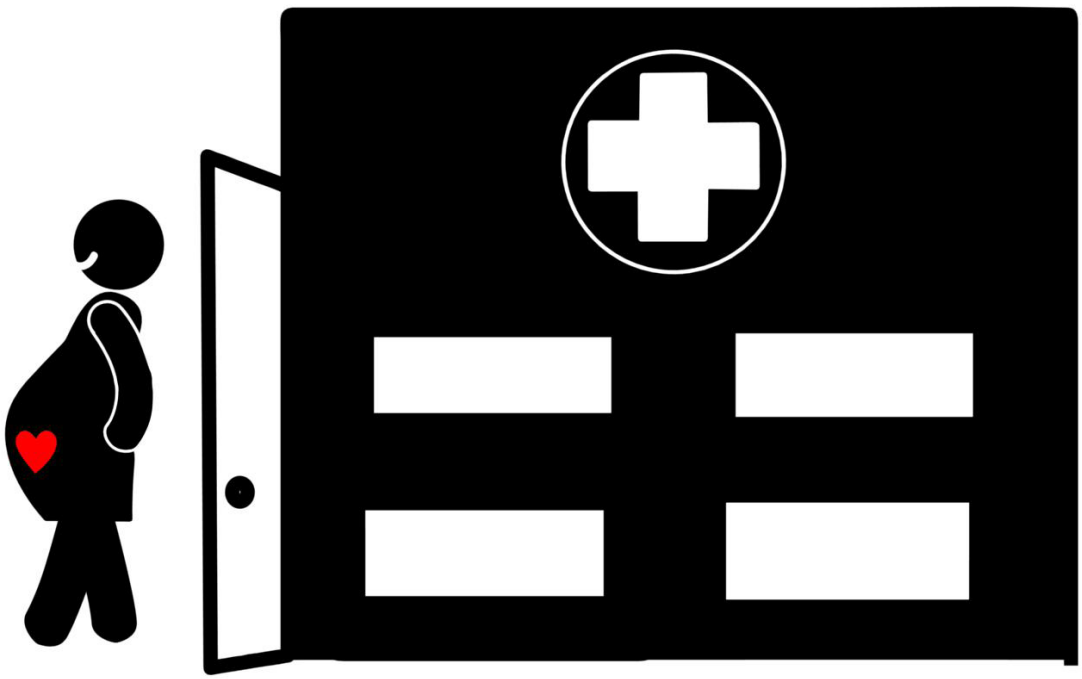
by 2015. The gradual removal of these constraints is expected to have positive spill over effects in terms of our country's ability to retain competent health personnel, given the improved work environment and support system that having adequately equipped maternity wards would contribute to create. Furthermore, increasing available funding for the Post-Graduate Obstetrics and Gynaecology Programme would ensure the necessary presence of OB/GYN consultants to conduct the course and oversee the residents who will ultimately form the local cadre of OB/GYN specialists.

TABLE 5: SUMMARY OF IDENTIFIED AND PRIORITISED BOTTLENECKS

Maternal Health Component	Prioritised Interventions	Identified Bottlenecks	Prioritised Bottlenecks	Bottleneck Category
Pre-conception care	• Supporting more activities and processes for health education and for the development of educational materials	• Absence of finalised nationwide policy on SRH and of a clear nationwide programme on reproductive health for adolescents • Gap in availability of age-appropriate material for SRH education/ weak promotional aspect of SRH • Shortage of staff with adequate attitude and capacity	• Lack of clear policy direction (bottleneck 5)	*Policy and Planning: Sector Strategies, Policies and Plans*
	• Improving linkages between MoH, MoE and non-governmental organizations, including religious organizations, in order to improve IEC services for young boys and girls	• Inadequate coordination and collaboration at the inter-sectoral level • Unclear definition of roles and responsibility between central and regional authorities • Lack of an effective communication strategy • Lack of a M&E framework to track performance and hold relevant stakeholders accountable	• Inadequate coordination and collaboration at inter-sectoral level (bottleneck 2) • Inadequate M&E systems (bottleneck	*Cross-cutting: Coordination and alignment* *Cross-cutting: Accountability and transparency*

Maternal Health Component	Prioritised Interventions	Identified Bottlenecks	Prioritised Bottlenecks	Bottleneck Category
Antenatal care	• Advocate or promote early initiation of antenatal care before the 12th week of pregnancy through media and print	• Cultural barriers • Inadequate knowledge of women about importance of seeking timely antenatal care • Geographical barriers and related financial constraints on patients to reaching facilities • Shortage of trained community health workers to disseminate relevant information to end users • Poor attitude of health workers at facilities • Shortage of financing to conduct required outreach programmes and to purchase necessary educational material	• Cultural barriers (bottleneck 4) • Inadequate attitude of health workers (bottleneck 1)	*Service use: Acceptability* *Service delivery: Human Resources*
	• Incorporate birth and complication preparedness in antenatal care within health facilities	• Shortage of adequately trained human resources • Lack of structured procedural plan • Shortage of funding for equipment and supplies	• Shortage of skilled human resources (bottleneck 1) • Lack of necessary funding to equip facilities (bottleneck 6)	*Service delivery: Human Resources* *Budget and Financing: resource allocation/ resource expenditure*
Delivery care	• Training and retaining competent and skilled specialists at all levels of the health care system, including ensuring sustainability of Post-Graduate Residency Programme in Obstetrics and Gynaecology	• Shortage of skilled human resources at clinical and managerial levels to impart training and establish higher standards of care • Gaps between content of existing courses and the needs identified on the ground • Lack of effective scheme to attract and retain skilled personnel, including lack of scope for professional development • Lack of necessary funding to equip maternity wards of key facilities and to maintain necessary presence of OB/GYN consultants to implement Post-Grad Programme at GPHC	• Shortage of skilled trainers (bottleneck 1) • Misalignment between nature and curricula of identified training courses and system's needs (bottleneck 1) • Lack of competitive retention package for specialist personnel (bottleneck 1) • Lack of necessary funding to equip maternity wards of key maternity facilities and to maintain necessary presence of OB/GYN consultants to implement Post-Grad Programme at GPHC (bottleneck 6)	*Service delivery: Human Resources* *Budget and Financing: resource allocation/ resource expenditure*

Maternal Health Component	Prioritised Interventions	Identified Bottlenecks	Prioritised Bottlenecks	Bottleneck Category
	• Strengthening the referral system for high-risk and emergency obstetric care	• Inadequate dissemination and use of protocols and guidelines • Weak enforcement mechanisms • Shortage of skilled human resources • Lack of accountability for physicians and health professionals at all levels of health care • Insufficient monitoring of performance • Lack of supporting legislative framework for the midwifery profession	• Inadequate coordination and communication between facilities (bottleneck 2) • Inadequate enforcement mechanisms and M&E systems (bottleneck 3)	*Cross-cutting: Coordination and alignment* *Cross-cutting: Accountability and transparency*
Postnatal care	• Home visits to mothers who have recently delivered	• Shortage of skilled human resources, especially at the primary health care level	• Shortage of skilled human resources (bottleneck 1)	*Service delivery: Human Resources*
Overall functioning of maternal health system	• Updating supervisory tools and quality improvement processes at all levels of the health care system in order to ensure that they reflect existing policies, guidelines, and protocols	• Poor systemic control of standards • Insufficient coordination at strategic level • Limited accountability and enforcement procedures	• Inadequate coordination at sectoral and inter-sectoral levels (bottleneck 2) • Inadequate enforcement and monitoring systems (bottleneck 3)	*Cross-cutting: Coordination and alignment* *Cross-cutting: Accountability and transparency*



IV. STEP 3: SOLUTION IDENTIFICATION AND SEQUENCING

Solutions selected for implementation under the MAF initiative are directed at strengthening the foundations on which a well-functioning, comprehensive, and sustainable maternal health care system can be built. In order to do so, they address the bottlenecks prioritised in Step 2 above. If adequately supported and effectively implemented, these are expected to have immediate impact toward the achievement of MDG 5 targets by 2015 as well as positive spill-over effects to enable and maintain systemic improvements.

In the context of the five components of maternal health, the sections below describe the identified solutions for each of the prioritised bottlenecks and explain the selection criteria for the prioritised ones. Table 6 then summarises Steps 1-3.

4.1 PRE-CONCEPTION CARE

In order to successfully carry out prioritised interventions in pre-conception care, solutions were identified for the removal, or at least mitigation, of the three prioritised bottlenecks associated with this component of care.

First, the governance capacity of the health system in the area of pre-conception care needs to be strengthened by establishing an adequate and enabling regulatory framework for sexual and reproductive health and family health. Supporting the updating of the draft policy for SRH and disseminating it among relevant stakeholders is expected to trigger improvements in the delivery of pre-conception care. The current work being done by the Ministry of Health on the Package of Publicly Guaranteed Health Services is expected to contribute to successfully update the SRH policy. In addition, the PPGHS will set out the standards and regulatory requirements relative to the provision of family health services at different levels of the health care system. Once this is finalised, efforts will need to be directed toward ensuring their implementation (e.g., by training relevant health personnel in existing SRH policies and regulations).

In order to develop and subsequently execute policies for family and sexual and reproductive health, coordination and collaboration among relevant stakeholders is key, as is the capacity at the central strategic level to guide such coordination and collaboration efforts with the view of ensuring effective delivery of services. Effective mechanisms for ongoing cooperation among different stakeholders (such as MoH, MoE, relevant NGOs) need to be developed – e.g., regular stakeholder meetings, clear definition of roles and responsibilities, and strengthened M&E systems. Bringing together all stakeholders in adolescent health and identifying shared values and programmes, forming inter-sectoral groups to develop and execute policies for SRH education, establishing clear roles and responsibilities among governmental agencies from different sectors and between central government and regional authorities within the same sector, as well as finalising and disseminating a communication strategy were all identified as possible solutions to the inadequacy of current coordination and collaboration mechanisms. Training in leadership and organizational skills for all relevant health personnel was suggested as another step to take in order to improve coordination in adolescent health and SRH education for young girls and boys. Finally, coordination and delivery of services in line with updated policies and regulation would be facilitated by the development of a standard health literacy tool for strengthening educational and awareness programmes that deal with SRH in an age-appropriate manner.

Once the regulatory framework is in place and clear roles and responsibilities among relevant stakeholders are defined, then competent and motivated staff needs to be involved in order to effectively implement activities and processes to strengthen health education and the development of educational materials. In addition to the need to address the general shortage of skilled personnel currently serving within the public health sector, sessions to raise awareness among health workers already in the system about existing SRH policies and regulations need to be incorporated into routine training programmes.

Finally, once regulations are finalised and implementation of activities and delivery of services begins, effective monitoring and evaluation systems must be put in place to ensure adherence to the regulatory framework and continuous adjustment to existing programmes based on expected and actual outcomes and results.

4.2 ANTENATAL CARE

In the area of antenatal care, the prioritised bottlenecks reflect the need to improve the acceptability of services as well as to leverage more resources in order to provide facilities with the necessary equipment and supplies.

Solutions proposed to overcome cultural barriers that currently discourage women from accessing care in a timely manner during pregnancy include training staff to be culturally sensitive, expanding the amount of health centres that are user-friendly, and strengthening the IEC component of interventions in maternal health so that knowledge and practice of patients and health workers is enhanced.

A national cadre of staff with the adequate attitude and competence to deliver antenatal health care services is necessary for the implementation of any intervention under this component. In addition to the 'customer care' training mentioned above, relevant staff needs to be exposed to guidelines and protocols that regulate antenatal care so that they can be guided in their day-to-day activities and be held accountable for compliance. One such protocol relates to the management of high-risk pregnancies; in order to facilitate adherence to this particular protocol, training should be imparted to all categories of health workers in the management of high-risk pregnancies so that they have the capacity to comply with the necessary requirements.

With regard to the need to fill financing gaps in order to bring antenatal facilities up to desired standards in terms of available equipment and supplies, stakeholders identified the need to increase budgetary allocations where possible, to share resources between relevant ministries, and to use the MAF Action Plan as tool to leverage the necessary resources from among international development partners.

4.3 DELIVERY CARE

In line with the bottlenecks prioritised in Step 2, solutions identified under the delivery care component reflect the need to urgently address the shortage of skilled human resources in the maternal health sector, to fill the current financing gap as it relates to the ability to equip to desired standards the maternity wards of key facilities and to sustain ongoing training programmes, to improve coordination and communication between facilities, and to strengthen monitoring as well as enforcement systems. By doing so, they are expected to

facilitate the training and retaining of competent personnel and to strengthen the referral system for high-risk and emergency obstetric care (i.e., the two interventions that were prioritised under Step 1 for delivery care).

When looking at the shortage of skilled human resources under the delivery care component, the shortage of trainers to build adequate capacity at the local level in terms of OB/GYN skills specifically needs to be addressed. Recruiting and placing 10 qualified OB/GYN specialists throughout the public health system for a period of four years on a rotational basis[19] would in the short run contribute to filling the current gap in specialist human resources and in the longer term contribute to building a competent national cadre of OB/GYN specialists by supervising and providing training to local doctors through existing channels. One such channel is the Post-Graduate Residency Programme in Obstetrics and Gynaecology at the GPHC; faculty needs for this programme include 3 resident consultant-level OB/GYN's and 12 visiting faculty who ensure a 26-week coverage per year. In addition to mitigating one of the specific bottlenecks prioritised under the delivery care component, these specialist OB/GYN's would also assist in setting up systems (e.g., supply-chain management, M&E, etc.) that would contribute to building the foundation for systemic improvements. South-South cooperation initiatives, including diasporas, as well as existing agreements with overseas institutions, were proposed as sources of experts to bring into the country. Furthermore, providing scholarships in specialised areas to cover the shortage of skilled trainers was another identified solution.

However, adequate human resources to impart training and supervise doctors as they start building their specialist skills are not enough to ensure that training courses achieve the results for which they were set up. The nature of the courses and the content of the curricula have to be aligned with the type of services that need to be delivered at the facility level. Developing a national comprehensive training programme was identified as a possible solution, as was the establishment of a post-RNM programme to deal with complex and high-risk obstetrics and gynaecology patients that would complement the Post-Graduate Residency Programme taking place at the GPHC and provide doctors the level of support they need in order to provide quality health care to the country's mothers. Improving the midwifery curriculum to meet international standards and extending their scope of practice to enable midwives and medex's to carry out basic EmONC life-saving functions would also allow training programmes to be more successful in producing personnel able to provide the necessary services. Furthermore, training local doctors and medical officers in surgery in basic obstetric emergencies (including LSCS and manual vacuum extraction) as well as anaesthesia (including spinal anaesthesia) was proposed as short-term solution while the national cadre of specialist OB/GYN's is being established.

With regard to the capacity of retaining competent personnel in country, the bottleneck being faced is the absence of a competitive retention package. Solutions identified to overcome this include the identification of non-monetary incentives and providing maternity wards at key facilities with the necessary equipment and supplies to bring them up to standards and to enable specialist doctors to deliver the services for which they are trained. The latter solution is strictly linked to the ability to mobilise the necessary resources to bridge the existing financing gaps. For this, the proposed solutions included increasing budget allocations, sharing resources between ministries, and using

19. This was suggested in the EU MDG Initiative Concept Note and is deemed to still reflect current needs adequately

the MAF Action Plan as tool to leverage support from relevant development partners.

In order to strengthen the referral system, solutions were considered on the basis of the prioritised needs to improve coordination and communication between facilities and to strengthen enforcement and monitoring systems.

With regard to the first prioritised need, and as for pre-conception care, training in leadership and organizational skills was identified as a possible solution to strengthen the system's coordination capacity. In addition, and with more specific relevance to the functioning of the referral system, it was proposed that communication devices be used more effectively at health centres countrywide – which involves procurement and timely maintenance of necessary equipment (e.g., radios and phones) – and that access to transportation for major health centres be improved – which would involve procuring ambulances for regional hospitals and vehicles for hinterland areas.

With regard to the second prioritised need as it relates to the strengthening of the referral system, emphasis was placed on improving the accountability of health professionals and monitoring capacity throughout the system. In order to clarify the roles and responsibilities of parties involved in the referral system, it was proposed that a robust system of credentialing for physicians be created and a system for ongoing certification of competence be established. Related to this was the proposed solution to provide detailed job descriptions for all available positions and to ensure that these be filled by persons with the required competence and expertise. A suggestion to fill the existing gap in the definition of 'specialist' was also raised in this context.

Furthermore, the establishment of an M&E unit at the MoH would ensure that processes and procedures are followed in accordance with existing protocols and regulations and provide guidance in sanctioning for non-adherence; ongoing in-service training in existing policies, regulations, and protocols was identified as a possible solution to improve compliance, as was increasing collaboration between the central ministry and Regional Health Services. Strengthening the audit system in order to include staff feedback was also suggested as a possible way of ensuring constant improvement of protocols and procedures and thus ultimately to enhance the general functioning of the referral system. The strengthening of the computerised database for the maternal health sector was another solution suggested to improve the effectiveness of existing documentation and feedback mechanisms in order to ultimately strengthen the referral system in Guyana.

4.4 POSTNATAL CARE

Solutions identified in the postnatal care component address the prioritised bottleneck related to the shortage of human resources necessary to supply quality postnatal health care services and in particular to pay home visits to mothers who have recently delivered.

Expanding training programmes for all health workers to include basic OB/GYN and community care services, redeploying health care workers to different locations for three to six months (especially to those areas assessed as having the widest gaps in staff availability), and engaging the increased and better qualified numbers of midwives produced by improved training programmes were identified as possible solutions under this component.

4.5 OVERALL FUNCTIONING OF THE MATERNAL HEALTH SYSTEM

The intervention prioritised under this component in Step 1 relates to the updating of supervisory tools and quality improvement processes. According to the bottlenecks prioritised in Step 2, implementation of this intervention is hindered by weaknesses in coordination and enforcement and monitoring systems.

In order to update supervisory tools and quality improvement processes, existing ones must undergo regular monitoring and evaluation and the resulting feedback must be effectively taken into account for continuous improvement. The inadequate coordination mechanisms at the sectoral and inter-sectoral levels and the resulting lack of definition of clear roles and responsibilities prevent such regular feedback from being collected and adequately considered.

Strengthening the computerised database for the maternal health sector was identified as a possible solution to improve capacity to produce and use strategic information and thus to facilitate the updating process for supervisory tools and quality improvement processes. Developing mechanisms for ongoing coordination among relevant stakeholders, carrying out regular in-service training for health personnel in existing protocols and procedures, and having the OB/GYN specialists who will be brought to the country to train and supervise health personnel to also support in establishing functional monitoring and feedback mechanisms as it relates to quality improvement and supervisory tools, were identified as additional solutions.

4.6 SELECTED 'ACCELERATION SOLUTIONS'

As criteria to select the solutions to be implemented under Guyana's MAF Action Plan, the following factors were taken into consideration:

- Political commitment to implement the proposed action and willingness of stakeholders to support in the process
- Extent to which the proposed action can have an immediate impact
- Extent to which the proposed action can provide results that can be sustained beyond 2015 and thus ensure systemic improvement in the provision of health services across the country
- Extent to which the proposed action promotes i) equity in distribution and use of health services, ii) high quality services that are user-friendly, and iii) accountable providers, improved management, and strong leadership (i.e., the three core principles guiding Guyana's Maternal, Perinatal, Neonatal, Child and Family Health Strategy 2011-2020)
- Extent to which the proposed action can address the concerns expressed by representatives of the users of maternal health services
- Extent to which the proposed action can contribute to the successful implementation of interventions in more than one component of maternal health

The solutions thus selected are listed in the table below, which shows their relation to prioritised bottlenecks and, through these, their link to prioritised interventions.

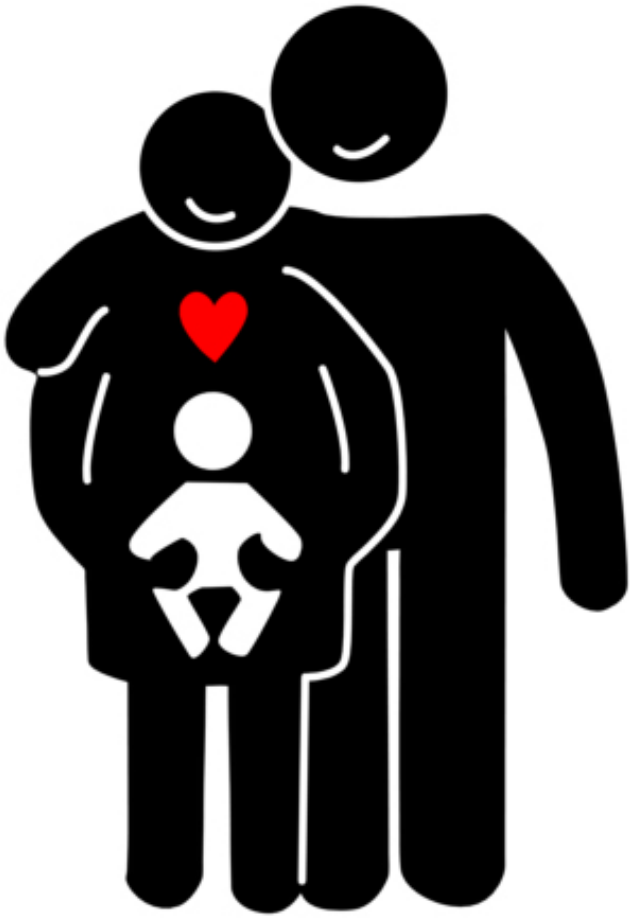
TABLE 6: SUMMARY OF MAF STEPS 1-3

Maternal Health Component	Prioritised Interventions	Prioritised Bottlenecks	Prioritised Solutions
Pre-conception care	Supporting more activities and processes for health education and for the development of educational materials	Lack of clear policy direction (Bottleneck 5)	• Support update of draft policy on SRH and disseminate it among relevant stakeholders
Antenatal care	Improving linkages between MoH, MoE, and non-governmental organizations, including religious organizations, in order to improve IEC services for young boys and girls	Inadequate coordination and collaboration at inter-sectoral levels (Bottleneck 2)	• Form inter-sectoral groups to execute policies for SRH education • Leadership and organizational skills orientation for all relevant staff • Develop a health literacy tool in order to strengthen educational and awareness programmes that deal with SRH issues in an age-appropriate manner
		Inadequate M&E systems (Bottleneck 3)	• Develop mechanisms for ongoing cooperation among different stakeholders (including government, regional stakeholders, and NGOs), including relevant M&E systems for sectoral and inter-sectoral coordination
	Advocate or promote early initiation of antenatal care before the 12th week of pregnancy through media and print	Cultural barriers (Bottleneck 4)	• Make identified health centres user-friendly • Strengthen IEC component in maternal health interventions to improve women's understanding of the importance of seeking care in a timely manner
		Inadequate attitude of health workers (Bottleneck 1)	• Train staff to be culturally sentitive/ customer care training
	Incorporate birth and complication preparedness in antenatal care within health facilities	Shortage of skilled human resources (Bottleneck 1)	• Train all categories of obstetric/ maternal health workers in management of high-risk pregnancies
Delivery care	Training and retaining competent and skilled specialists at all levels of the health care system	Shortage of skilled trainers (Bottleneck 1)	• Recruit and place qualified OB/GYN specialists in line with identified needs in order to fill the current gap in specialist human resources, establish systems and maintain the necessary presence of OB/ GYN consultants to support the implementation of existing training programmes aimed at establishing a local cadre of OB/GYN specialists (including the Post-Graduate Residency Programme in Obstetrics and Gynaecology)

Maternal Health Component	Prioritised Interventions	Prioritised Bottlenecks	Prioritised Solutions
			• Train local doctors/medical officers in basic obstetric emergencies (e.g., LSCS and manual vacuum extractions) and spinal anaesthesia • Improve midwifery training by extending the midwifery curriculum to meet international standards and by strengthening local capacity to impart new midwifery programme. • Develop an effective system to attract and retain skilled personnel, including non-monetary incentives • Use MAF Action Plan to leverage necessary funds to equip maternity wards of key hospitals in order to improve work environment for relevant health personnel
	Strengthening the referral system for high-risk and emergency obstetric care	Inadequate coordination and communication between facilities (Bottleneck 2) Inadequate enforcement mechanisms and M&E systems (Bottleneck 3)	• Ensure communication devices (radios, phones) can and are used in health centres countrywide • Improve access to transportation for major health centres • Establish a system to ensure compliance with existing policies, regulations, protocols, and guidelines at all levels of the health care system (including collaboration with Regional Health Services) • Incorporate sessions to raise awareness among health workers about existing policies/protocols/guidelines. • Strengthen systems of accountability at all levels of health care. • Strengthen the computerised database for the maternal health sector in order to develop a more effective mechanism for enforcing documentation and feedback systems

Maternal Health Component	Prioritised Interventions	Prioritised Bottlenecks	Prioritised Solutions
Postnatal care	Home visits to mothers who have recently delivered	Shortage of skilled human resources (Bottleneck 1)	• Engage the increased and better qualified numbers of midwives arising from improved training programmes to improve effectiveness of home visits to mothers who have recently delivered.
Overall functioning of the maternal health care system	Updating supervisory tools and quality improvement processes at all levels of the health care system in order to ensure that they reflect existing policies, guidelines, and protocols	Inadequate coordination at sectoral and inter-sectoral levels (Bottleneck 2) Inadequate enforcement and monitoring systems (Bottleneck 3)	• Develop mechanisms for ongoing cooperation among relevant stakeholders, including the definition of roles and responsibilities as it relates to the production and use of strategic information to be used for the updating process • Incorporate sessions to raise awareness among health workers about existing SRH policies and regulations in order to ensure effective implementation (once SRH policy is finalised) • Have the OB/GYB specialists who will be recruited under the delivery care component to support the establishment of functional monitoring and feedback mechanisms • Strengthen the computerised database for the maternal health sector to improve capacity to produce and use strategic information – thus facilitating the updating process of supervisory tools and quality improvement processes

The next chapter – Guyana's MAF Action Plan – describes the selected solutions in more detail by grouping them according to the bottleneck they aim to overcome. Chapter 5.1 identifies the existing financing gaps between the resources required for implementation and those available at the national level; chapter 5.2 suggests a timeline and relevant indicators to monitor implementation and to facilitate timely mobilisation of resources from relevant development partners.



V. GUYANA'S MAF ACTION PLAN

5.1 ANALYSIS OF RESOURCE GAPS AND IDENTIFICATION OF STAKEHOLDERS' ROLES AND RESPONSIBILITIES

5.1	ANALYSIS OF RESOURCE GAPS AND IDENTIFICATION OF STAKEHOLDERS' ROLES AND RESPONSIBILITIES			
Activities for Solution Implementation	**Indicative Total Cost (US$[20])**	**Indicative Available Resources**	**Indicative Resource Gap**	**Indicative Responsible Partners**
Bottleneck 1: Shortage of skilled human resources				
1. Train staff to be culturally sensitive/ customer care training	9,134.62	4,807.69	4,326.92	MoH, UNFPA, UNICEF, PAHO/WHO
2. Train all categories of obstetric/maternal health workers in management of high-risk pregnancies	225,961.54	38,798.08	187,163.46	MoH, UNFPA, UNICEF, PAHO/WHO
3. Recruit and place qualified OB/GYN specialists in line with identified needs in order to fill the current gap in specialist human resources, establish systems and maintain the necessary presence of OB/ GYN consultants to support the implementation of existing training programmes aimed at establishing a local cadre of OB/ GYN specialists (including the Post-Graduate Residency Programme in Obstetrics and Gynaecology)	1,745,400.00	210,000.00	1,535,400.00	MoH, UNFPA, UNICEF, PAHO/WHO

20. Exchange rate used to obtain figures in US$ from estimates in GYD = 208.

Activities for Solution Implementation	Indicative Total Cost (US$[25])	Indicative Available Resources	Indicative Resource Gap	Indicative Responsible Partners
4. Improve the work environment for health personnel by equipping maternity wards of GPHC and other key health facilities	876,121.54	14,504.81	861,616.73	MoH, GPHC, UNFPA, UNICEF, PAHO/WHO
5. Train local doctors/ medical officers in basic obstetric emergencies (including LSCS and manual vacuum extractions) and anaesthesia (including spinal anaesthesia)	81,000.00	4,807.69	76,192.31	MoH, GPHC, UNFPA, UNICEF, PAHO/WHO
6. Extend the midwifery curriculum to meet international standards (including revisions to course contents, evaluation tools, delivery methods etc.) and strengthen local capacity to impart new midwifery programme	257,950.00	28,846.15	229,103.85	MoH, GPHC, UNFPA, UNICEF, PAHO/WHO
7. Develop an effective system to attract and retain skilled personnel, including identification of non-monetary incentives	8,653.85	2,403.85	6,250.00	MoH, UNFPA, UNICEF, PAHO/WHO
8. Engage trained midwives to increase the number of home visits to mothers who have recently delivered	9,615.38	9,615.38	-	MoH

Activities for Solution Implementation	Indicative Total Cost (US$[25])	Indicative Available Resources	Indicative Resource Gap	Indicative Responsible Partners
Bottleneck 2: Inadequate coordination and collaboration at sectoral and inter-sectoral levels				
9. Form inter-sectoral groups to execute policy on SRH education	7,211.54	7,211.54	-	MoH, relevant sector ministries (e.g., MoE), NGOs
10.Leadership and organizational skills orientation training for all relevant staff	19,230.77	9,615.38	9,615.38	MoH, UNFPA, UNICEF, PAHO/WHO
11.Develop an age-appropriate health literacy tool to support consistency of educational and awareness programmes that deal with SRH/family health issues	8,653.85	-	8,653.85	MoH, MoE, UNFPA, UNICEF, PAHO/WHO
12.Ensure communication devices can and are used in health centres across the country – this involves procurement and timely maintenance of necessary equipment	18,389.42	12,980.77	5,408.65	MoH, UNFPA, UNICEF, PAHO/WHO
13.Improve access to transportation for major health centres	1,532,091.35	317,307.69	1,214,783.65	MoH, UNFPA, UNICEF, PAHO/WHO
14.Develop mechanisms for ongoing cooperation among different stakeholders for selected areas of intervention (e.g., adolescent health) – this involves stakeholders meetings, clear definition of roles and responsibilities, development of M&E systems	9,615.38	9,615.38	-	MoH, regional stakeholders, NGOs

Activities for Solution Implementation	Indicative Total Cost (US$[25])	Indicative Available Resources	Indicative Resource Gap	Indicative Responsible Partners
Bottleneck 3: Inadequate enforcement mechanisms and M&E systems				
15.Develop effective enforcement mechanisms for existing protocols (incl. high-risk pregnancy management) and guidelines – this involves sessions to raise awareness among maternity and primary health care staff about existing protocols and guidelines, identification of specific weaknesses in current enforcement mechanisms, dissemination of relevant documentation, and setting up of M&E systems to ensure compliance	121,355.77	-	121,355.77	MoH, UNFPA, UNICEF, PAHO/WHO
16.Strengthen systems of accountability at all levels of health care – this involves clear definition of roles and responsibilities, monitoring of performance, and sanctioning suboptimal performance	4,326.92	-	4,326.92	MoH, UNFPA, UNICEF, PAHO/WHO
17.Strengthen existing computerised database for maternal health sector – this involves procurement of necessary IT hardware and software and training sessions for relevant staff for effective use of same (two pilot regions)	22,403.85	1,442.31	20,961.54	MoH, UNFPA, UNICEF, PAHO/WHO

Activities for Solution Implementation	Indicative Total Cost (US$[25])	Indicative Available Resources	Indicative Resource Gap	Indicative Responsible Partners
Bottleneck 4: Cultural barriers				
18.Make identified health centres user-friendly – this includes male involvement programmes	19,230.77	9,615.38	9,615.38	MoH, UNFPA, UNICEF
19.Strengthen IEC component in maternal health interventions – this involves production and dissemination of relevant materials, empowerment of NGOs	143,076.92	35,576.92	107,500.00	MoH, MoE, NGOs, UNFPA
Bottleneck 5: Lack of clear policy direction				
20.Support update of draft policy on SRH and disseminate among relevant stakeholders	12,923.08	12,923.08	-	MoH, UNFPA

5.2 IMPLEMENTATION AND MONITORING MATRIX

5.2 IMPLEMENTATION AND MONITORING MATRIX

Activity	Indicator	Timeframe and Targets	
		2014	2015
Bottleneck 1: Shortage of skilled human resources			
1. Train staff to be culturally sensitive/customer care training	Number of identified main hospitals in which all maternity ward staff is trained in customer care	4	6
2. Train all categories of obstetric/ maternal health workers in management of high-risk pregnancies	Number of maternity ward staff trained in emergency obstetric care across health facilities	150	170
	Number of primary health care staff trained in safe motherhood in identified Regions	90	100
3. Recruit and place qualified OB/ GYN specialists in line with identified needs in order to fill the current gap in specialist human resources, establish systems and maintain the necessary presence of OB/ GYN consultants to support the implementation of existing training programmes aimed at establishing a local cadre of OB/GYN specialists (including the Post-Graduate Residency Programme in Obstetrics and Gynaecology)	Number of specialists recruited and deployed countrywide per year	At least 5 by December 2014	At least 10 by December 2015
	Number of consultant-level OB/GYN's resident at GPHC at all times	3	5
	Number of system strengthening measures introduced by the visiting faculty per year	At least 3	At least 3
4. Improve the work environment for health personnel by equipping maternity wards of GPHC and other key health facilities	Number of new maternity equipment items purchased for GPHC out of those identified in equipment list	All	-
	Number of priority maternity equipment items purchased for Regions out of those identified in equipment list	8	12

Activity	Indicator	Timeframe and Targets	
		2014	2015
5. Train local doctors/ medical officers in basic obstetric emergencies (including LSCS and manual vacuum extractions) and anaesthesia (including spinal anaesthesia)	Number of local doctors trained in basic obstetric emergencies annually	5	5
	Number of local doctors trained in anaesthesia annually	5	5
	Number of nurses graduating from the anaesthesia programme at GPHC annually	5	5
6. Extend the midwifery curriculum to meet international standards (including revisions to course contents, evaluation tools, delivery methods etc.) and strengthen local capacity to impart new midwifery programme	Status of new midwifery curriculum	Approved by end of the year	-
	Number of local midwives trained to become future faculty	15	-
	Number of persons enrolled in new midwifery programme	-	10
7. Develop an effective system to attract and retain skilled personnel, including identification of non-monetary incentives	Retention rate of nurses beyond scholarship terms of service	-	85-90%
	Retention rate of doctors beyond scholarship terms of service	-	90-95%
8. Engage trained midwives to increase the number of home visits to mothers who have recently delivered	Number of home visits conducted by trained midwives to all mothers who have delivered within 6 weeks	At least one within 6 weeks of delivery for every woman in the community who delivers	At least one within 6 weeks of delivery for every woman in the community who delivers
Bottleneck 2: Inadequate coordination and collaboration at sectoral and inter-sectoral levels			
9. Form inter-sectoral groups to execute policy on SRH education	Number of inter-sectoral groups established for SRH activities	3	3
	Number of SRH activities executed by inter-sectoral groups annually	-	4
	Number of reports submitted to MoH on key performance indicators for SRH activities annually	-	1

Activity	Indicator	Timeframe and Targets	
		2014	2015
10.Leadership and organizational skills orientation training for all relevant staff	Number of relevant staff trained in leadership and organizational skills annually	20	20
11.Develop an age-appropriate health literacy tool to support consistency of educational and awareness programmes that deal with SRH/family health issues	Number of sets of age-appropriate material developed for SRH/ family health issues	4	4
12.Ensure communication devices can and are used in health centres across the country – including procurement and timely maintenance of necessary equipment	Number of communication devices purchased for use in identified health centres	12	5
13.Improve access to transportation for major health centres	Number of ambulances purchased for identified health facilities	2	13
	Number of water ambulances purchased for identified health facilities	2	3
	Number of paramedics trained in basic life support annually	63	84
14.Develop mechanisms for ongoing cooperation among different stakeholders for selected areas of intervention (e.g., adolescent health) – this involves stakeholders meetings, clear definition of roles and responsibilities, development of M&E systems	Number of inter-sectoral groups established for selected areas of intervention	3	3
	Number of activities executed by inter-sectoral groups in selected areas of intervention annually	-	4
	Number of reports submitted to MoH on key performance indicators for cooperation activities annually	-	1

Activity	Indicator	Timeframe and Targets	
		2014	2015
Bottleneck 3: Inadequate enforcement mechanisms and M&E systems			
15.Develop effective enforcement mechanisms for existing protocols (incl. high-risk pregnancy management) and guidelines – this involves sessions to raise awareness among maternity and primary health care staff about existing protocols and guidelines, identification of specific weaknesses in current enforcement mechanisms, dissemination of relevant documentation, and setting up of M&E systems to ensure compliance	Number of relevant staff sensitized on existing protocols and guidelines across health facilities annually Number of existing protocols and guidelines distributed to health facilities across Regions in 2014 Number of clinical audits conducted to track compliance with existing protocols and guidelines in all major hospitals	150 7 -	200 7 1
16.Strengthen systems of accountability at all levels of health care – this involves clear definition of roles and responsibilities, monitoring of performance, and sanctioning suboptimal performance	Number of systems established to monitor performance of health professionals per Region	At least 1	At least 1
17.Strengthen existing computerised database for maternal health sector – this involves procurement of necessary IT hardware and software and training sessions for relevant staff for effective use of same (two pilot regions)	Status of consolidated maternal health database Number of training sessions conducted on appropriate use of database annually in two pilot regions	- -	Completed 2

Activity	Indicator	Timeframe and Targets	
		2014	2015
Bottleneck 4: Cultural barriers			
18.Make identified health centres user-friendly – this includes male involvement programmes	Number of health centres that have male involvement programmes	31	68
19.Strengthen IEC component in maternal health interventions – this involves production and dissemination of relevant materials, empowerment of NGOs	Number of safe motherhood sets distributed annually	1,000	1,000
	Number of perinatal cards distributed annually	30,000	30,000
	Number of units of family planning material distributed annually	10,000	10,000
	Number of maternal health corners created annually	-	50
Bottleneck 5: Lack of clear policy direction			
20.Support update of draft policy on SRH and disseminate among relevant stakeholders	Status of SRH Policy	Completed	-
	Number of organizations that received SRH policy document	-	20

APPENDIX

CONSULTATIONS FOR PRIORITISATION OF BOTTLENECKS AND PROPOSED SOLUTIONS

The development of Guyana's MAF Action Plan benefited from input by a wide range of stakeholders. The timing was fortuitous given that the process to develop the MAF to improve maternal health in Guyana started shortly after the country's latest MDG progress assessment (itself a consultative process), and the launch of the country's maternal health sub-sector strategy, which was developed by the Ministry of Health alongside PAHO/WHO, UN partners and other stakeholders. The Government of Guyana (GoG) had also recently presented a concept note under the EU MDG Initiative with the view of accelerating progress towards achieving MDG 5 and its related targets by 2015; although the proposal was not successfully received by the EU, it did include a comprehensive range of consultations (experts from the public and private sectors, donor agencies, relevant NGO's, and representatives of minority groups). Mindful of the caution expressed in the MAF guidelines that a new and parallel channel of dialogue not be set up, the GoG utilised the findings of these consultative sessions to select the priority bottlenecks and the solutions most likely to contribute to achieving MDG 5 targets by 2015 and, importantly, to ensure sustained improvement of the quality of maternal health care in the country.

Additionally, with particular reference to the development of the MAF Action Plan, the GoG ensured the continued relevance of the findings from the consultative processes already carried out, and conducted several site visits to the maternity ward of the national referral hospital (GPHC) in order to provide on the ground feedback on what the practical challenges are in providing maternal health care, and more broadly on the merit and substance of the MAF proposal. This was also carried out at a regional level with MoH collecting and collating feedback and needs analyses from the maternity wards at key Regional Hospitals. Furthermore, in February/March 2013 consultations with patients both at Government facilities (namely the national referral hospital (GPHC), West Demerara Hospital, CC Nicholson Hospital, Fort Wellington Hospital, Mabaruma Hospital, and New Amsterdam Hospital) and at two private hospitals in Georgetown (Dr Balwant Singh Hospital and Woodlands Hospital) were carried out, contributing to strengthening the input from direct users of maternal health services in Guyana. Community meetings in Regions 1, 3 and 5 were also carried out during the same period of time, with the view of collecting women's perspectives on quality and use of maternal health services in their communities.

Furthermore, a validation workshop including stakeholders from government agencies, private sector, civil society and development partners, was carried out on March 11th and 12th, 2013. Specific objectives were to i) validate the interventions both ongoing and planned that are aimed at improving the quality of maternal health care provided to women in Guyana, ii)

identify, prioritize and validate bottlenecks that prevent their successful implementation, and iii) identify and discuss possible solutions to such bottlenecks. Following the workshop, clear steps were set out in order to proceed with the finalization of Guyana's MAF Action Plan and to establish clear roles and responsibilities for the implementation stage. In terms of consultations, these steps included three additional forums that were organized in May and July 2013 with those stakeholders who had not been thoroughly involved in the process yet or had been under-represented in previous consultations – i.e. civil society and to a certain extent development partners.

A Safe-Motherhood Forum took place on May 24th, 2013 and included representatives from the Ministry of Health, the regions, development partners already engaged in health-related interventions, NGOs, and faith-based organization. It is worth noting that during this session, PAHO, UNICEF, and UNFPA presented their priorities in the area of maternal health, and civil society representatives had the opportunity of sharing their concerns and suggesting collaboration possibilities. These were incorporated in the draft document and validated through two additional meetings.

The first was a civil society consultation on July 15th, 2013 during which concrete opportunities of collaboration between NGOs and MoH were discussed in the framework of the continuum of care and the need for cooperation in order to effectively accelerate progress toward MDG 5. During the second meeting, which took place on July 17th, 2013, the MoH technical team engaged with representatives of the donor community to further validate the content of the existing MAF draft.

Finally, the concerns that were raised by the leaders of Faith-Based Institutions in Guyana during the Faith-Based Forum on the International Conference on Population Development (ICPD) held at the Georgetown Club on 19 June 2013, were also taken into account, as were their specific calls for action . These also contributed to inform the identification and prioritisation of bottlenecks and solutions in Guyana's MAF.

The following table summarises all persons that were involved in the consultative process that led to the completion of Guyana's MAF and Country Action Plan:

NAME	DESIGNATION
Individual/ Small- group consultations	
Dr Bheri Ramsaran	Minister of Health
Dr Shamdeo Persaud	Chief Medical Officer, Ministry of Health
Dr Janice Woolford	Head, Maternal and Child Health, Ministry of Health
Dr Galton Roberts	OB/GYN specialist in private practice; Member, Expert Committee on Maternal Mortality
Mr Derven Patrick	Technical specialist maternal and reproductive health, UNFPA
Dr Madan Rambaran	Director, Medical Education, GPHC
Dr Ruth Derkenne	Assistant Residency Director, OB/GYN Programme
Dr Margaret Larkins-Pettigrew	Residency Director, OB/GYN Programme

NAME	DESIGNATION
Individual/ Small- group consultations	
Ms Audrey Corry	Director of Nursing, GPHC
Ms Noshella Lalckecharan	Assistant Director of Nursing Services
Ms Cato	Senior Departmental Supervisor, Maternity Ward, GPHC
Ms Prescott	Junior Departmental Supervisor, Maternity Ward, GPHC
Ms Coletta Benn-Alphonso	Quality Assurance Officer, GPHC
Ms Yolanda Renville	Quality Improvement Coordinator, GPHC
Ms Glynda McAlkster	Ward manager, Maternity Ward, GPHC
Ms Virginie Lord	Ward manager, Maternity Ward, GPHC
Ms June Emptage Morgan	Diocesan President, Mothers Union
Ms Valerie Ramsay	Diocesan Secretary, Mothers Union
Ms Rosemarie Terborg Davis	Social Policy Officer, Mothers Union
Ms Barbara Thomas	Diocesan Treasurer, Mothers Union
Patient consultations	
21 patients	GPHC, National Referral Hospital
10 patients	Mabaruma Hospital, Region 1
7 patients	West Demerara Hospital, Region 3
4 patients	CC Nicholson Hospital, Region 4
8 patients	Fort Wellington Hospital, Region 5
10 patients	New Amsterdam Hospital, Region 6
4 patients	Dr Balwant Singh's Hospital Incorporated, Georgetown
2 patients	Woodlands Hospital, Georgetown
10 community members	Mabaruma, Region 1
4 community members	La Grange, Region 3
12 community members	Fort Wellington, Region 5
Safe Motherhood Forum, May 24th	
Carleen Howard	Medex, Region 9
Andrea Budburgh	Medex, Region 2
Shondell Bruche	Social worker, Help&Shelter
Margarette Prescott	S.O.S., GPHC
Jacklyn Campbell	Region 4
Dawn Dunn	Registered Midwife, Region 8
Terry Davis-Chester	SHV, Region 6
Marjorie Arjune	Inspector, Region 4

Cornelly McAlmont	UNICEF
Tekia Hanover	Communication Officer, Region 4
June Cato	S.O.S., GPHC
Rosalinda Hernandez	FCH/HIV Advisor, PAHO/WHO
Melisa Peters	RNM, Mercy Hospital
Samantha Halls	Programme Associate, UNAIDS
Shamain Williams	Medex, Region 4
Omandell Samuels	Woodlands Hospital
Ninian Blair	Coordinator, MoH
Autry Haynes	Indigenous People's Commission, IPC
Damain Dravil	
Jewel Crosse	Adolescence Officer, UNICEF
Patricia Gittens	Child Officer, UNICEF
Shellon Eversely	Programme Development Officer, UNICEF
Cleopatra Barkage	Nursing Tutor, Region 4
Suleiman Braimoh	Country Manager, UNICEF
Wilton Benn	Director, Health Sciences, MOH
Erin Forde	Guyana Girls Guide Association
Sianna Forte	Guyana Girls Guide Association
Dennis George	USAIDS
Iona Barker	SHV, Region 4
Hally Edgilo	Medex, Region 1
Clonel Samuels	Coordinator, Women Across Differences
Deslyn Fraser	SHV, Region 5
Nebert Tucker	BFHT Coordinator, Food Policy, MoH
Shemeeza Baksh	Central Islamic Organization
Joyce Phillips	SHV, Region 4
Debra Henry	Deputy Chief Nursing Officer, MoH
Silvie Sinclair	Medex, MoH
Abigail Fresco	MoH
Angelina Karim	MoH
Concheeta Gray	Senior Child Outreach Officer, Child Care Protection Agency
Shanti Singh	Programme Manager, NAPS
Autry Corry	DNS, GPHC
Sharron Griffith	Staff Nurse/Midwife, Mahaicony Hospital
Malkia Idal	EPMA1, MoH

Michael Gouveia	Coordinator, RHS, MoH
Vivien Mitchell	Doctor, GPHC
Gary	Guyana Clinic
Sunaksha Tyeigi	Gynaecologist, Balwant Singh Hospital
Moud Aguilan	UNFPA
Ninian Blair	Coordinator, Breast Feeding
Dennison Davis	Medical Officer, CDC
Aubry Rodney	Director, PO
Dr J. Woolford	Director, MCH, MOH
Civil Society Consultation, July 15th	
Cleopatra Barkaye	Guyana Nurses Association
Zaheeda Hack	Central Islamic Organization of Guyana
Pheona Mohamed-Rambaran	GPHC-Medical Laboratory
June Cato	GPHC-Maternity Ward
Margot Prescott	GPHC-Maternity Ward
Nicole Cole	WGEC-Commissioner
Audrey Corry	GPHC-Matron's Office
June Emptage Morgan	Mothers' Union
Yolanda Renville	GPHC-Quality Manager
Sheldon Corlette	Guyana Red Cross
Mena Carto	Private Consultant
Eleanor Bentley	GT&T
B Brikpert	Bahai Earth
O. Fraser	Family Planning Association
Agnes Persaud	WPO
Angel Edwards	Ministry of Health
Faye Jones	Ministry of Health
Janice Woolford	Ministry of Health
Lindsey Evans	GPHC
Chris Prashad	GPHC
Sherlina Nageer	Red Thread
Bobby Walker	Guyana Responsible Parenthood Association
G. Nauth	Inter-Religious Organization of Guyana
Sherry Daso	WPO
Shazeena Mohammed	Ministry of Health
Cornelly McAlmont	UNICEF

Paul Furse	Chairman BIK 22
Ronald McGarrell	Inter-Religious Organization
Rosalinda Hernandez	PAHO/WHO
Krishnalall Persaud	IRO
Soorsattie Persaud	IRO
Sherine A. Powerful	UNFPA
Emile Giddings	TCG
Kimberly Monbodh	MOH
Cecilia Caio	MOF
Shamdeo Persaud	MOH
Michelle Smith	MOH
Donors validation meeting, July 17th	
Dr. R. Hernandez	PAHO/WHO
Eng. A. Vlugman	PAHO/WHO
Ms. K. Broomes	CDC
Ms. B. Giddings	UNFPA
Mr. M. Gillis	UNICEF
Mr. B. Madl	EU Delegation

JUNE 2014