



NATIONAL INSTITUTE OF STATISTICS

**POLICY BRIEF**

ANALYSIS OF THE EXPLANATORY  
FACTORS OF THE RESORT TO SKILLED  
ASSISTANCE DURING DELIVERY



**ACCELERATING THE REDUCTION  
OF MATERNAL MORTALITY**

August 2020





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# Analysis of the explanatory factors of the resort to skilled assistance during delivery: accelerating the reduction of maternal mortality

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This policy brief aims to present the explanatory factors of resorting to skilled assistance during delivery in the perspective of accelerating the reduction of maternal mortality. Data from the Cameroon Demographic and Health Surveys (CDHS) from 1991 to 2018 show that there is an upward trend in the proportion of skilled assistance during delivery. However, women in rural areas, those in the 35-49 years age group, those with a low level of education, those who are poor, multiparous and those who don't attend antenatal care benefit less from assistance by trained health personnel during delivery. Explanatory analysis show that the place of delivery, the survey region, the level of household economic welfare and the number of antenatal care visits attended are determinants of resorting to skilled assistance during delivery over the study period. Consequently, increasing awareness and improving the living conditions of these women are among the fundamental elements that can further enhance the resort to skilled assistance during delivery and thus reduce maternal mortality in Cameroon.

## I. INTRODUCTION

According to the World Health Organization (WHO), maternal mortality is defined as "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes". Estimated at 406 maternal deaths per 100,000 live births over the seven-year period preceding the 2018 CDHS-V (NIS, 2020), the maternal mortality ratio in Cameroon remains very high compared to the target of 70 per 100,000 live births set by the Sustainable Development Goals (SDGs) by the 2030 horizon. Furthermore, the pregnancy-related<sup>1</sup> mortality ratio, a proxy

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<sup>1</sup> *Death of a woman during pregnancy or childbirth or within two months of childbirth or termination of pregnancy.*

indicator calculated by the DHS programme and used to measure the level and trends of maternal mortality, has remained high and is on an upward slope for several decades in Cameroon. This situation particularly reveals the precariousness of women's condition, especially with regard to women access to health care and how the health system is meeting their needs. This is mainly due to direct factors such as family planning, antenatal consultation, delivery service, skilled assistance during delivery, access to emergency obstetric care and postnatal care (Dr. Diallo J.P., 2001; WHO/UNFPA/UNICEF/World Bank, 1999) and to indirect factors which can be socio-demographic, economic, environmental or administrative (Dr. Diallo J., 2001; WHO/UNFPA/ UNICEF/World Bank, 1999).

Aware of the situation, the government, with the support of development partners and particularly UNFPA, has taken numerous measures and actions that have reduced the pregnancy-related maternal mortality ratio by 40% between the periods 2004-2011 and 2011-2018. These measures and actions focused on direct factors, notably the following three pillars, (i) family planning, (ii) follow up of pregnancy and deliveries attended by trained health care provider, (iii) emergency obstetric care.

The aim is to maintain the dynamics of the reduction of the level of maternal mortality by continuing to act on these pillars, by emphasising on the explanatory factors of resorting to skilled assistance during delivery, which, together with antenatal consultation, constitute the main pillars according to the 2016-2027 Health Sector Strategy.

Furthermore, it is estimated that nearly 80% of maternal deaths are directly due to several causes, including haemorrhage, dystocia, postpartum infections and pre-eclampsia/eclampsia, etc. (CARMMA\_2011-2013), which, in most cases, can be treated by trained health personnel in a health centre.

The identified determinants will allow the Government, with the support of development partners, to continue promoting skilled assistance during delivery, in order to sustain the drop in the level of maternal mortality in Cameroon with a view of achieving target 3.1 of the SDGs.

## **II. METHODOLOGY**

The data used in this article come from the series of five Demographic and Health Surveys in Cameroon from 1991 to 2018.

The results of these household surveys are representative at the national level, by region and by area of residence, except for maternal mortality, which is measured only at the national level. Sample sizes range from about 3,500 in 1991 to 15,000 households in 2011; in each sample household, all women aged 15-49 years are interviewed. This note is based on descriptive and explanatory analyses of the data collected on assistance during delivery. At first glance, analyses consist in the presentation of trends of skilled assistance during delivery from 1991 to 2018 according to certain socio- demographic and economic characteristics. Subsequently, using the logistic regression model, the determinants of resorting to skilled assistance during delivery are identified from each survey data.

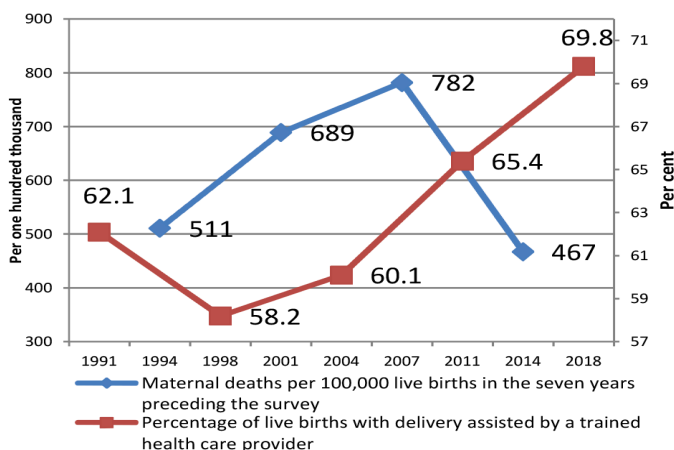
## **III. RESULTS**

### **1. Trends in skilled assistance during delivery according to certain characteristics**

#### ***An increasing trend in skilled assistance during delivery***

After a decrease from 1991 (62.1%) to 1998 (58.2%), the percentage of live births in the 3 years preceding the survey and which were assisted by a trained health care provider has increased steadily to reach 60.1% in 2004, 65.4% in 2011 and 69.8% in 2018. This ambiguity can be explained by the delay with which assisted delivery impacts maternal mortality. If this delay is taken into account, the two indicators would evolve in opposite directions. In other words, if the rate of assisted delivery is increased, the maternal mortality ratio will not reduce immediately. In order to reduce the maternal mortality ratio, there would have to be a significant and sustained increase in the rate of assisted delivery and its level would have to exceed a certain threshold.

**Figure 1: Mortality and skilled assistance during delivery**



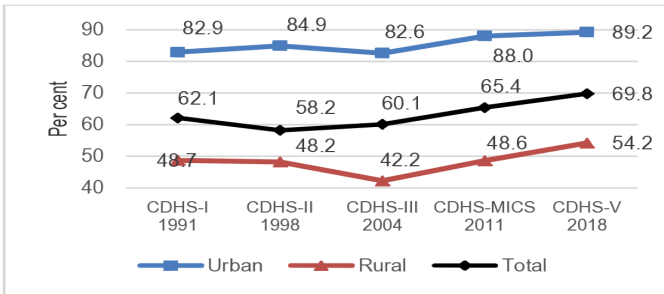
**Mothers in the 35-49 years age group are the most reluctant to resort to assistance during delivery of a trained health care provider.**

From 1991 to 1998, a downward trend was observed for all age groups followed by a continuous increase until 2018. The finding here is that the women of the age group 35-49 years record the least rate of skilled assistance during delivery.

**The rural area is always lagging behind as regards to skilled assistance during delivery.**

For each of the five years considered for analysis, the percentage of live births in the past three years before the survey, whose delivery was assisted is significantly higher in urban areas than in rural areas. The gap remained almost stable over the time.

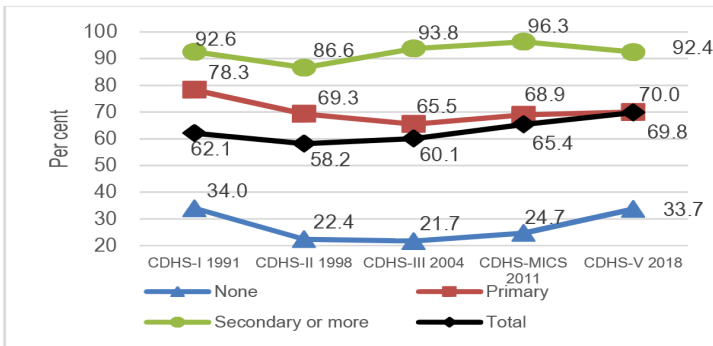
**Figure 2:** Proportion of live births with delivery assisted by a trained health care provider according to the mother's area of residence



**Less educated women are less favourable to skilled assistance during delivery.**

The percentage of deliveries assisted by a trained health care provider increases with the mother's level of education. The gap in the proportion of births assisted by a trained provider between mothers with secondary or higher education level and those with lower education level widens from 1998 to 2011 before getting narrow in 2018.

**Figure 3:** Proportion of live births with delivery assisted by a trained health care provider according to the mother's level of education



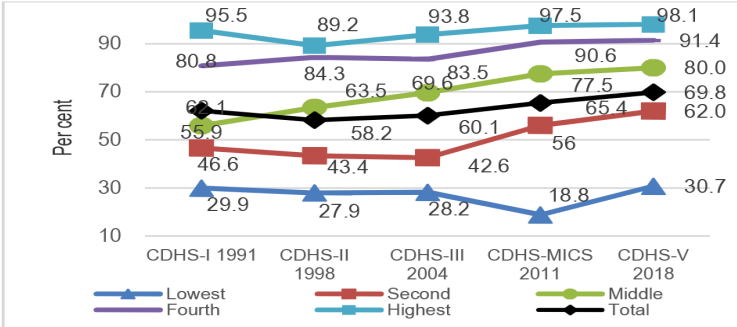
**Additional births among mothers tend to reduce the resort to skilled assistance during delivery**

The percentage of deliveries assisted by a trained health care provider tends to decrease with high birth order. The most significant gaps are observed in 2011 where 78.8% of first order births were assisted as against only 46.7% for those of order 6 or more.

**Poverty is unfavourable to skilled assistance during delivery**

The percentage of deliveries assisted by a trained health care provider increases with the wealth quintile of the household in which the mother lives.

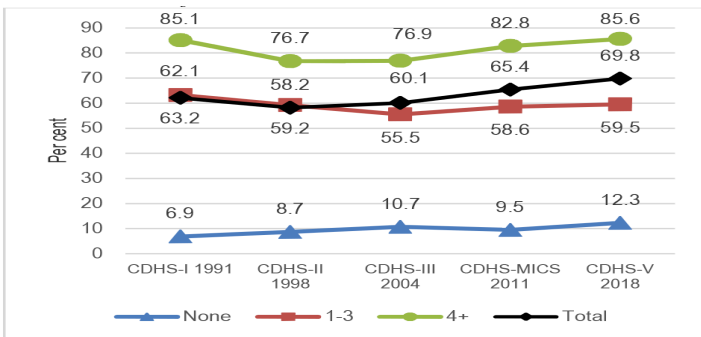
**Figure 4:** Proportion of live births whose delivery was assisted by a trained health care provider according to the wealth quintile of the household



**The number of antenatal visits seems to remain over time, a factor influencing skilled assistance during delivery.**

Whatever the year, the fact of having an assisted delivery seems to increase with the number of antenatal visits. It should also be noted that for women who have had at least four antenatal visits, the proportion of those whose last delivery was assisted by a trained health care provider varies in different ways: it decreased from 1991 to 1998; was almost stable from 1998 to 2004, and increased steadily from 2004 to 2018.

**Figure 5:** Proportion of live births whose delivery was assisted by a trained health care provider according to the number of antenatal visits





Thus, reduction in maternal mortality could be achieved by promoting systematic deliveries in health facilities.

## **2. Trends in the determinants of skilled assistance during delivery**

The determinants of skilled assistance during delivery include: place of delivery, survey region, number of antenatal visits and household living standard. It should also be noted that the mother's age at birth, apart from 2004, was found to be one of the determinants. In 1991, only the place of birth and living standard of the household were decisive.

## **IV. CONCLUSION AND RECOMMENDATIONS**

At the end of the analysis, the following observations emerge, which allow policy recommendations to be made.

**Observation N° 1:** Overall, the chances of having a delivery assisted by a trained health care provider is significantly higher when the delivery takes place in a health facility than elsewhere.

**Observation N°2:** The higher the number of antenatal visits, the greater the chances for a woman to have a delivery assisted by a train health care provider. Thus, more antenatal visits would encourage women to give birth in a centre where they could be assisted by trained health personnel.

**Recommendation N°1:** Increase awareness among women and their partners on the benefits of antenatal visits during pregnancy, and of the need to give birth in health facilities.

**Observation N°3:** The northern regions, namely the Far North, North and Adamawa, as well as East, have the lowest risks of delivery attended by a skilled health care provider. This could be due to inadequacies in terms of supply of obstetrical care, and poor use of health facilities by the populations.

**Observation N°4:** The chance of having a birth assisted by a trained health care provider increases with the level of household welfare. This result reflects inequalities in terms of access to obstetric care according to poverty status. These inequalities may be financial or related to geographic accessibility.

**Recommendation N°2:** In addition to awareness-raising measures, other specific measures should be taken to reduce inequalities in access to obstetric care, particularly in the care of women during pregnancy and delivery, by increasing access to obstetric care, especially in the northern and eastern regions, for example by reducing or subsidising the costs of access to services and by bringing health services and centres closer to the population.

**Observation N°5:** Estimating maternal mortality using a direct method of calculation with conventional DHS surveys with a limited household sample is not possible at the sub-national level. This makes it impossible to measure the magnitude and trend of this phenomenon and to determine its explanatory factors at a disaggregated level such as the region.

**Recommendation N°3:** Seek and mobilise resources to conduct a specific survey on maternal mortality based on a large household sample size. This will help to measure and study the determinants of maternal mortality at least at the regional level.

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