



# Increased subsidies for delivery costs translate into more women giving birth in health centres

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*This note presents an evaluation of the impacts of the national subsidy (which covers 80% of the cost of a normal delivery) and that of a supplementary exemption that makes deliveries entirely free for women, implemented through a pilot intervention of the NGO HELP in the Sahel region. Analysis showed both interventions had an immediate and lasting effect on health centre utilization. Three years after the national subsidy was instituted, the mean number of deliveries per year had multiplied five-fold in the Sebba district and four-fold in the Dori district, where women no longer pay anything for a normal delivery. The effectiveness of the national subsidy strategy has been demonstrated. It would be even more effective and more equitable if the total abolition of fees promised by the Head of State in February 2010 were to be applied.*

## INTRODUCTION

When women give birth in health centres attended by qualified personnel, pregnancies can be managed more effectively and the maternal mortality rate can be reduced [1]. Yet, in 2006, only 43% of women delivered in a public health centre. As well, in a context where deliveries must be paid, poor women face multiple barriers in accessing the healthcare system, the most important of which is the financial barrier. Studies have shown that only one-fifth of these women deliver in a health centre [2]. To address this issue, the State has endeavoured to lower the financial barrier by subsidizing the costs of normal deliveries in health and social promotion centres (CSPS) [3, 4]. Since these measures took effect in 2007, women must pay, in theory, only 20% of the standard cost of a delivery, or 900 F CFA for a normal delivery. The Ministry pays the remaining 80% to the CSPSs. Provision has been made for these measures in the national budget until 2015.

This study looked at the impacts of the exemption measures on service utilization in four districts of the Sahel region. Implementation of the national subsidy began there between January and April 2007. As of September 2008, it has been reinforced by the intervention of an NGO (HELP) funded by the Humanitarian Aid Department of the European Commission (ECHO). Since then, the women in two districts (Dori, Sebba) have had access to totally free care at the point of use. The NGO gives the CSPSs a subsidy equal to the women's share of the cost (900 F CFA).

## METHODOLOGY

The results of the two interventions were evaluated based on the changes in the number of normal deliveries carried out in the CSPSs each month. The sample included all the CSPSs in the four districts for which information could be obtained (62 CSPSs)<sup>1</sup>. The data were drawn from the National Health Information System (SNIS), whose quality we were able to monitor. The observation window was 72 months, extending from January 2004 to December 2009.

We therefore had access to three years of observation before the national subsidy to assess the trends prior to its application. In addition, because the full fees exemption was implemented in only two districts (Dori and

<sup>1</sup> We would like to thank the Regional Health Department team, the district management teams, the health workers and the members of the NGO HELP for their support in data collection. These analyses were funded by ECHO and the FRSQ (grant 16410). V. Ridde is a CIHR New Investigator.

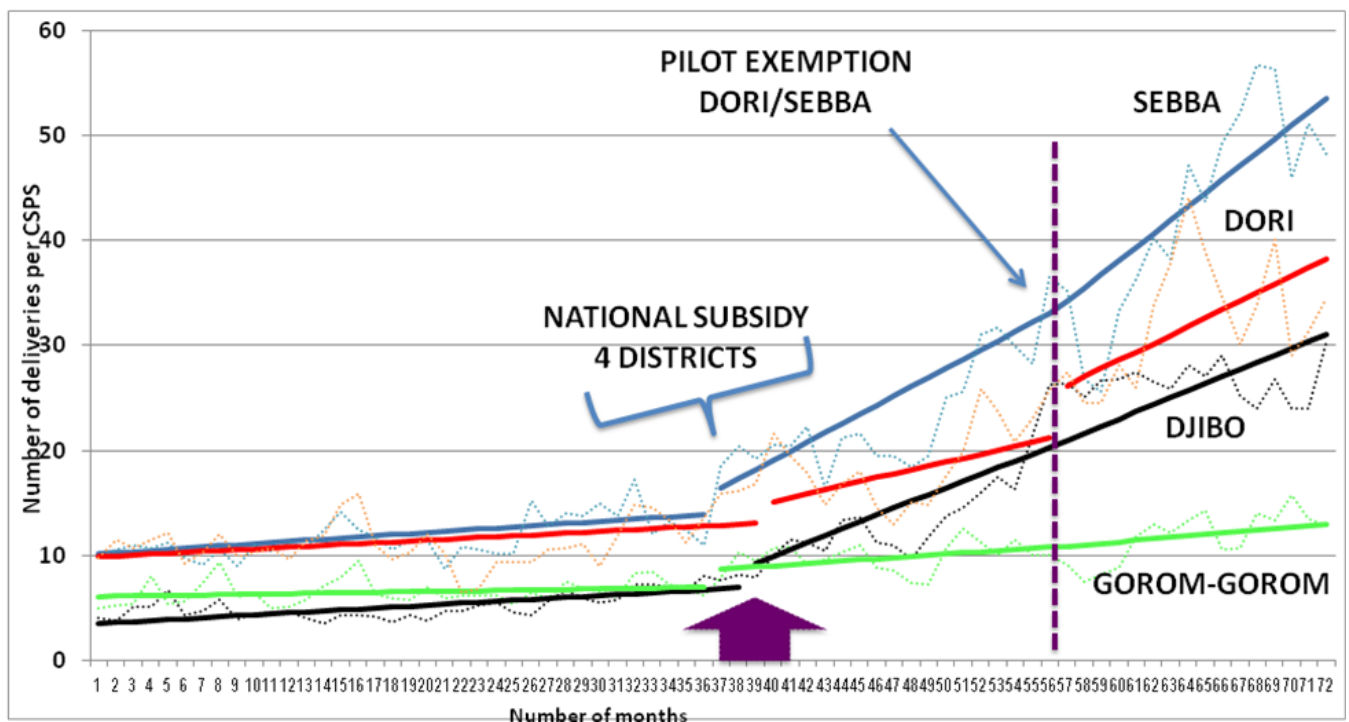


Sebba), we were able to compare changes in utilization in the two districts exposed to full exemption with the situations in those that were not (Gorom-Gorom and Djibo). Given the number of months of observation and the number of CSPSs, we had a total of 4,500 measurement points, using interrupted time series.

Using multilevel statistical models, we were able to isolate and measure the extent of the impacts of the two interventions. The models identified immediate impacts (a spike in the curve immediately following the launch of the intervention) and impacts staggered over time (in the medium term). The analysis allowed us to isolate the impacts attributable to each of the interventions and to take into account the existence of distinct secular trends by district, as well as the opening of new centres and changes in the target population pools<sup>2</sup>.

## RESULTS

The figure shows changes in the mean monthly number of deliveries per CSPS in the four districts. The dotted-line curves present the mean number of deliveries observed. Thus, the CSPSs carried out around 10 deliveries per month in Dori and Sebba in January 2004. The solid lines present the mean number of deliveries predicted by the regression models (that is, after eliminating temporal fluctuations and taking into account the effects of modifying factors).



We note straightaway that before the national subsidy, there was a rising secular trend in utilization in each district. The trend varied depending on the district, and the rates of increase were rather modest (with portions of the curves nearly horizontal).

<sup>2</sup> To assess the impacts of these interventions, it is therefore not necessary to calculate the rate of deliveries, since the populations (the denominator in the rates) are incorporated and taken into account in the regression model and in the measurement of the induced changes.



### *Impacts attributable to the government subsidy (80%)*

When the State instituted the delivery subsidy, the impact was immediate and significant in the four districts. The response to these measures translated into a visible spike in the curve the following month. Our analyses showed that there was an increase, on average, of 1.7 to 2.4 additional deliveries<sup>3</sup> depending on the districts (Table). Thus, starting in that month, there was an average increase of 15% to 30%, depending on the districts, over the number of deliveries in the month preceding the subsidy.

### *Impacts attributable to the supplementary exemption of the pilot project (100%)*

The impacts of extending the government measures with a full exemption from delivery fees in Dori and Sebba were also immediately visible (Figure, page 2). The immediate impacts were predominantly seen in Dori, with 4.6 additional deliveries in the following month. They were less pronounced in Sebba, since that district had already reacted strongly to the introduction of the first measures and had achieved a high level of utilization. In both districts, the medium-term impacts were considerable: average increases of 9.1 deliveries in Dori and 4.8 in Sebba (Table).

### *The combined effects of the subsidy and the supplementary exemption*

The study showed that both interventions together helped to improve the levels of CSPS-based deliveries in Dori and Sebba substantially. Less than three years after the measures were applied to reduce costs for pregnant women, average activity in Sebba had increased five-fold, and in Dori, four-fold.

The bulk of this increase is directly attributable to the combination of the two interventions. In Sebba, for example, the analyses showed that, if the government measures had not been implemented and the average activity levels in the CSPSs had continued their natural pattern of growth, they would have reached 16.5 deliveries by the end of the observation period. In fact, the average activity is now 48.7 deliveries thanks to the two successive interventions. Thus, the attributable increase (net effect) is assessed to be 32.2 deliveries per month, which is 131% higher than in the month preceding the launch of the national subsidy in early 2007. These impacts are very substantial. By effectively supplementing the national subsidy, the pilot project made it possible to lower the barriers to access to healthcare even further.

Impacts after...	National subsidy			Pilot exemption			Both interventions
	1 month	6 months	12 months	1 month	6 months	12 months	33rd month after the national subsidy
<b>Dori</b>	<b>1,9</b>	<b>3,5</b>	<b>5,3</b>	<b>4,6</b>	<b>6,6</b>	<b>9,1</b>	<b>22,5</b>
<b>Djibo</b>	<b>2,2</b>	<b>5,0</b>	<b>8,5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20,4</b>
<b>Gorom- Gorom</b>	<b>1,7</b>	<b>2,1</b>	<b>2,6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,4</b>
<b>Sebba</b>	<b>2,4</b>	<b>6,2</b>	<b>10,9</b>	<b>0,3</b>	<b>2,3</b>	<b>4,8</b>	<b>32,2</b>

### *Heterogeneity of district responses*

The people living in three of the four districts benefited greatly from the cost reduction. The situation was different in Gorom-Gorom, where the level of activity barely changed and the gap with respect to the other districts deepened. The reasons behind this different evolution remain to be determined. Similarly surprising gaps have been seen in other districts with respect to vaccine coverage [5]. In those cases, the observed heterogeneity was associated with district team leadership and relations between the health workers and the populations.

<sup>3</sup> This is a net effect, that is, after taking into account secular trends and variations in target population sizes.



## CONCLUSION

The State-instituted subsidy of delivery costs since 2007 has significantly increased women's use of CSPSs for deliveries assisted by qualified personnel in the Sahel region. The full fees exemption organized subsequently helped amplify this increase and allowed even more women to benefit from qualified assistance. This study confirmed that utilization continues to be constrained by women's contributive capacity. Thus, to combat maternal mortality, it is imperative that this effort be further extended by totally abolishing user fees for deliveries, as was promised by the Head of State in February 2010 [6].

*This note and other documents on the financial accessibility of healthcare services in West Africa are available on the websites of the NGO HELP ([www.help-ev.de](http://www.help-ev.de)), the HHA's "Financing Communities of Practice" (<http://www.hha-online.org/hso/financing/knowledge>), and the University of Montreal (<http://www.medsp.umontreal.ca/vesa-tc/ressrc.htm>).*

## References :

1. De Brouwere, V. and W. Van Lerberghe, eds. Réduire les risques de la maternité: stratégies et évidence scientifique. (SHSOP 18). 2001, ITGPress: Antwerpen. p. 481.
2. Gwatkin, D., S. et al, Socio-Economic Differences in Health, Nutrition, and Population. Burkina Faso. 2007, The World Bank- HNP: Washington. p. 149.
3. Ridde, V., S. Kouanda et M. Yaogo, La politique de subvention des soins de santé maternelle au Burkina Faso. Programme « Abolition du paiement ». Note d'information n° 2. Novembre 2010. CRCHUM/IRSS-CNRST/LASDEL
4. Ministère de la Santé, Stratégie nationale de subvention des accouchements et des soins obstétricaux et néonataux d'urgence au Burkina Faso. 2006, Ministère de la Santé: Ouagadougou. p. 65.
5. Haddad, S., A. Bicaba, et al., System-level determinants of immunization coverage disparities among health districts in Burkina Faso: a multiple case study. BMC Int Health Hum Rights, 2009. oct 14(9 (Suppl 1)): p. S15.
6. Amnesty International. President of Burkina Faso commits to lifting financial barriers to maternal health in a meeting with Amnesty International. March 18, 2010.