



The lives of between 14 000 and 19 000 children under five could be saved by a national scaling-up of the user fees exemption tested in the Sahel region of Burkina Faso

Mira Johri (mira.johri@umontreal.ca), Valéry Ridde, Rolf Heinmüller, Fortuné Sossa, Slim Haddad

INTRODUCTION

In Burkina Faso, as in many low-income countries, most interventions known to be effective in saving children's lives have not been sufficiently implemented [1]. This policy brief presents the results of an evaluation of the impact on child health of an experimental program aimed at increasing the use of health services by eliminating point-of-service user fees. Established in 2008, the program was managed and implemented by the regional health department and the NGO HELP and funded by the European Union (ECHO) in two districts (Dori and Sebba) of the Sahel region. It was found to be effective in improving access to care for all, including the worst-off, while maintaining quality of care and being appreciated by all stakeholders [2]. Aside from a study conducted several years ago in 20 African countries on changes in coverage following the abolition of user fees in South Africa, Kenya, Madagascar and Uganda [3], there has been no other analysis to date of the health impacts of this type of intervention using evaluation data from a real-life intervention.

In 2010, there were an estimated 77 126 children less than five years of age in the two intervention districts, 175 288 in the Sahel region, and 2 943 625 in the country as a whole [4]. Around 100 000 children die every year, and Burkina Faso ranks 9th highest among all countries in terms of mortality rate for children under age five [5].

This study sought to estimate the impact of the program for user fees exemption on under-5 mortality at three levels: i) in the two districts where it was implemented, ii) in the Sahel region, as if the intervention were deployed region-wide, and iii) in Burkina Faso, as if it were deployed nation-wide.



METHOD

We estimated the impacts of the intervention on child survival using an internationally recognised simulation model (the Lives Saved Tool (LiST)) also used by Burkina Faso's Ministry of Health [6]. The LiST model can be used to generate projections of reductions in mortality due to scaling up coverage of proven health interventions for pregnant women and children. The model was tailored to reflect the study context using data from a wide range of sources, including household surveys, UN agency estimates, and national administrative data and research reports. Data to represent the effect of the user fees exemption program on intervention coverage come from baseline and endline household surveys conducted to evaluate the program evaluation and administrative data.

We developed several scenarios to assess the probable effect of the user fees exemption on child survival. All scenarios model impact over a single year (2008-2009) and compare the situation pre- intervention and one year after its introduction. Due to uncertainties regarding coverage levels for some interventions in the Sahel in 2008, the study explored three different scenarios representing average, low and high estimates of coverage for key interventions in the study district and in the Sahel.

Intervention coverage levels are well known at the national level; however, there is dispute about current mortality rates. National level analyses were therefore performed for two scenarios reflecting high and low mortality estimates.

RESULTS

In the two trial districts, based on average intervention coverage, it was estimated that the intervention saved the lives of 581 (95% CI¹: 180, 871) children under the age of five in one year. If this intervention were scaled up to the Sahel region, mortality for children under five would be reduced by approximately 11% (95% IC: 3%, 16%) and 1 323 (95% CI: 409, 1 983) lives saved. At low intervention coverage, the intervention saved an estimated 470 (95% CI: 180, 649) lives of children under five. If this intervention were scaled up to the Sahel region, mortality for children under five would be reduced by approximately 9% (95% CI: 3%, 12%) and 1 071 (95% CI: 409, 1 479) lives saved. At high intervention coverage, the intervention saved an estimated 760 (95% CI: 180, 1 010) lives of children under five. If this intervention were scaled up to the Sahel region, mortality for children under five would be reduced by approximately 14% (95% CI: 3%, 19%) and 1 731 (95% CI: 409, 2 300) lives saved.

¹ 1 The symbol "μ" denotes the average. The confidence interval (CI) is used to indicate the reliability of an estimate. It shows that the true number of lives saved is very likely to fall within the range 180 and 871.



Table 1: Child lives saved after one year of a user fees exemption program

Intervention coverage	Two trial districts (μ, 95% CI)	Sahel region (four districts) (μ, 95% CI)
Low	470 (180 ; 649)	1 071 (409 ; 1 479)
Average	581 (180 ; 871)	1 323 (409 ; 1 983)
High	760 (180 ; 1 010)	1 731 (409 ; 2 300)

If a similar intervention were scaled up nationally, we estimate that it would result in a mortality reduction for children under five of 16% (95% CI: 5%, 25%). Using higher mortality estimates favoured by international agencies, this translates to 18 982 (95% CI: 5 670, 28 340) child lives saved. Using lower child mortality estimates provided by the country, this is equivalent 13 709 (95% CI: 4 195, 19 238) child lives saved.

Table 2: Child lives saved after one year of a user fees exemption program if the trial were scaled up nationally

Child mortality rate (children under age five)	% reduction in child mortality (μ, 95% CI)	Number of lives saved (μ, 95% CI)
High (LiST default) 168 per 1 000	16% (5% ; 25%)	18 982 (5 670 ; 28 340)
Low (revised) 129 per 1 000	16% (5% ; 25%)	13 709 (4 195 ; 19 238)

CONCLUSION

Results from this study demonstrate the promise of the user fees exemption as a strategy for child mortality reduction. The intervention saved child lives in Burkina Faso's Sahel region, a context in which progress in reducing child mortality has otherwise proven difficult. Results are based on estimates of intervention impact drawn from two districts, and it cannot be presumed that they can be perfectly replicated elsewhere in the country. Nonetheless, an estimated 16% reduction in child mortality and 14 000 to 19 000 lives saved, with data based solely on one year of intervention and a very conservative methodological approach, is very significant when we know that around 100 000 children under five die every year in Burkina Faso. Even though Burkina Faso has maintained a downward trend in its child mortality rates since the 1990s, we know that, at its current pace, it will not be able to achieve Millennium Development Goal (MDG 4) of reducing child mortality by 2015. The estimates presented here show that eliminating user fees could help Burkina Faso in its fight against child mortality and support achievement of MDG4 within a reasonable time frame.



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This note and other documents on the financial accessibility of healthcare services in West Africa are available on the websites of the University of Montreal (<http://www.medsp.umontreal.ca/vesa-tc/ressrc.htm>), the NGO HELP (www.help-ev.de), and the HHA Community of Practice, "Financial Access to Healthcare Services (see <http://www.hha-online.org/hso/financing/knowledge>).

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