

## Summary

Essays on Evaluating a Maternal Health Voucher Program in Rural Uganda by its Impact  
on Service Delivery and Quality

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This dissertation evaluates a maternal voucher program implemented in the rural areas of Uganda. It empirically examines (i) the quantity-quality tradeoffs when decreasing the price of health service fees; (ii) the possible negative effects of financial incentives on Community Health Workers (CHWs)' activities that are not incentivized by the program; and (iii) program sustainability. Unlike other maternal voucher-only programs elsewhere, that focus largely on cost reduction for beneficiaries, the Uganda Reproductive Health Voucher Program (URHVP) is a comprehensive voucher aimed at addressing both demand and supply-side constraints. Thus, this dissertation presents a complementary analysis of the effects of both components of the maternal voucher program.

It consists of two main chapters. In the first chapter, I examine the program's sustainable impact on maternal care use, quality of the services, and health outcomes, both

during the program implementation and after the program's withdrawal. I utilize two health-facility level panel data (administrative health facility utilization data and survey data on service quality collected from health facility staff), as well as women's pregnancy-level panel data, and apply the difference-in-differences approach with health facility and women fixed effects respectively. The estimation results indicate that, during its implementation, the program enhances the utilization of maternal care (delivery, antenatal (4<sup>th</sup> visit), and postnatal services), the perceived quality of these maternal health care services, and number of medical staff (doctors, nurses, and midwives). However, this impact on utilization and quality of services returns to pre-program levels after program withdrawal. In contrast, there is no distinct effect on maternal and child health outcomes measured by complications at birth, infant birthweight and pregnancy results. Except for the pro-poor effects on the number of medical doctors after the program's withdrawal, there is no conclusive evidence suggesting that the positive effects of the program on the usage and quality of maternal services are greater in poorer districts (in terms of per capita GDP) than in the other districts. Policy-wise, these results support the implementation of comprehensive maternal voucher programs for improving the utilization of maternal care services and quality of care. However, there is a need to address concerns of child and maternal outcomes, and the sustainability of these positive effects beyond the program period.

In the second main chapter, I investigate if short-term financial incentives that are paid to CHWs affect their service delivery and work ethic. The difference-in-differences approach with CHW fixed effects is applied to CHW level panel data obtained from a survey in Uganda. The estimation results indicate that incentives increase service delivery and the

working hours per week, and that these increases do not appear to be realized by crowding out the non-incentivized services, even though program CHWs decreased their working hours per week for other economic activities to increase service delivery. These effects are, however, unsustainable as the CHW effort levels return to pre-program levels once the incentives end. Tests for differential impact indicate no evidence that the effects of the incentives differed by gender, both during and after the program. However, the effects on household coverage and some services provided (case referrals, data collection and HIV/AIDS), were greater for CHWs who were selected through the community's popular vote than those who were not. Further, there were negative effects on the motivation of the poorer CHWs toward women counselling and health campaign services after the withdrawal of the incentives. Policy-wise, the results indicate that financial incentives clearly are a powerful mechanism in enhancing the performance of CHWs. However, the efforts of CHWs are not sustained beyond the duration of the programs that support them, which brings to question what policy makers ought to do to sustain the performance of CHWs and prevent reversion to the pre-program effects.

From the results, it is plausible that the increased usage of maternal care services is not only due to the cost subsidy enjoyed but possibly also due to the improved service provision and better motivated CHWs. Therefore, the findings of this dissertation contribute to the growing literature on the performance of voucher programs and provide timely public policy implications for improving health care service quality, utilization, and health outcomes.