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HEALTH ECONOMICS  
*Health Econ* 19 (3): 306 (2009)  
Published online 30 June 2009 in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/hec.1635

**SOCIAL SECURITY HEALTH INSURANCE FOR THE  
INFORMAL SECTOR IN NICARAGUA: A RANDOMIZED  
EVALUATION**

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**SUMMARY**

This article presents the results from an experimental evaluation of a voluntary health insurance program for informal sector workers in Nicaragua. Costs of the premiums as well as enrollment location were randomly allocated. Overall, take-up of the program was low, with only 20% enrollment. Program costs and streamlined bureaucratic procedures were important determinants of enrollment. Participation of local microfinance institutions had a slight negative effect on enrollment. One year later, those who received insurance substituted toward services at covered facilities and total out-of-pocket expenditures fell. However, total expenditures fell by less than the insurance premiums. We find no evidence of an increase in health-care utilization among the newly insured. We also find very low retention rates after the expiration of the subsidy, with less than 10% of enrollees still enrolled after one year. To shed light on the findings from the experimental results, we present qualitative evidence of institutional and contextual factors that limited the success of this program. Copyright: © 2010 John Wiley & Sons, Ltd.

Received 21 April 2009; Revised 20 May 2010; Accepted 25 May 2010

**KEY WORDS:** health insurance; randomized experiment; Nicaragua; microfinance institutions

**1. INTRODUCTION**

In recent years, interest has grown in providing health insurance programs to poor and vulnerable populations throughout the world as a means of increasing access to priority health services and protecting families from catastrophic health-care costs.<sup>1</sup> Implementation of such programs, however, may be difficult. Research suggests that take-up of voluntary health insurance among the poor is typically low (Behrman and Knowles, 1999; Jowett, 2003; Moedach, 1999; Chankova *et al.*, 2008; Gine *et al.*, 2007; Alderman and Paxson, 1994; Fafchamps, 1999; Paddy *et al.*, 2008). Moreover, collecting payments from this population, who are generally employed in the informal sector, is challenging (Abel-Smith, 1992). Finally, if the program is not carefully designed and marketed, insurance schemes targeted to the poor may be particularly prone to adverse selection, disproportionately attracting those who are relatively sick.

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<sup>b</sup>These are a growing number of health insurance programs and academic evaluations of those programs in developing countries. See, for example, Abel-Smith (1992); Bantec (2009); Ekw and Schaner (2005); Daffar *et al.* (2006); Gokhale *et al.* (2006); Gertler and Gertler (2002); Gertler and Klerkin (2002); GTE *et al.* (2005); King *et al.* (2009); Koser *et al.* (2006); Miller *et al.* (2009); Panopoulou and Vitor (2002); Paddy *et al.* (2008); Paddy *et al.* (2008); Wagstaff (2007). See also Duncan *et al.* (2008).

# Social Security Health Insurance for the Informal Sector in Nicaragua: A Randomized Evaluation

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However, total expenditures fell by less than the insurance premiums. We find no evidence of an increase in health-care utilization among the newly insured. We also find very low retention rates after the expiration of the subsidy, with less than 10% of enrollees still enrolled after one year. To shed light on the findings from the experimental results, we present qualitative evidence of institutional and contextual factors that limited the success of this program.

June 30, 2010