Private Health Investments under Competing Risks:
Evidence from Malaria Control in Senegal

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Abstract

Do behavioral responses magnify or weaken public health interventions in Africa? We examine this question in the context of high subsidies for anti-malaria products introduced in Senegal in the late 2000s. Building upon the seminal paper of Dow et al. (1999), we develop a simple model of health investments under competing mortality risks, in which there are complementarities between investments in the prevention of cause-specific mortality risks. We predict that private health investments to fight malaria as well as other diseases should increase in response to anti-malaria public interventions. To test this prediction, we exploit original panel data from a Senegalese household survey combined with geographical information on malaria prevalence. Our strategy is to compare the evolution of child health expenditures before and after anti-malaria interventions, between malarious and non-malarious regions of Senegal. We find that health expenditures increased more in malarious regions, in proportions and in levels, and both at the intensive and extensive margins. The same result holds for parental health-seeking behavior in case of other diseases like diarrhea. We provide evidence that these patterns cannot be explained by differential trends in total income nor in child morbidity between malarious and non-malarious regions. Our results suggest that anti-malaria campaigns generate important spill-overs effects that magnify their impact on all-cause mortality for children.

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