

Supplementary Table 1. Key calculations.

Parameter	Calculation
Deaths averted by UPF of diarrhea treatment	Under-5 diarrhea deaths*coverage increase*diarrhea treatment effectiveness
Deaths averted by UPF of rotavirus vaccine	Under-5 diarrhea deaths*rotavirus share of diarrhea deaths*coverage of vaccine*vaccine effectiveness
Private expenditures averted by UPF of diarrhea treatment	Diarrhea episodes*[(probability of hospitalization*hospitalization cost*copay percentage) + (probability of outpatient treatment*outpatient treatment cost*copay percentage)] – [episodes*probability of hospitalization with increased coverage*inpatient transport costs + probability of outpatient treatment with increased coverage*outpatient transport costs]
Private expenditures averted by UPF of rotavirus vaccine	Diarrhea episodes*rotavirus share of diarrhea episodes*coverage of vaccine*vaccine effectiveness*[(probability of hospitalization*(hospitalization cost*copay percentage + inpatient transport cost)) + (probability of outpatient treatment*(outpatient treatment cost*copay percentage + outpatient transport cost))]
Diarrhea treatment cost to government with UPF	Diarrhea episodes*[(probability of hospitalization*hospitalization cost*copay percentage) + (probability of outpatient treatment*outpatient treatment cost*copay percentage)] + Diarrhea episodes*increased covered percentage*[(probability of hospitalization*hospitalization cost) + (probability of outpatient treatment*outpatient treatment cost)]
Rotavirus vaccine cost to government with UPF	Population eligible for vaccine*coverage of vaccine*number of doses*(vaccine cost per dose + system cost per dose)
Mortality distribution by quintile	(Rotavirus deaths per 1,000 births by quintile)/total rotavirus deaths*quintile share of pregnancies*quintile share of diarrhea incidence
Transport costs for inpatient/outpatient visits	Transport costs in 2000 Birr*(USD/Birr average exchange rate year 2000)*(CPI USD 2011/CPI USD 2000)
Hospitalization probability by quintile	Probability of progression to severe disease/treatment seeking percentage by quintile, i.e. we assume all severe cases require hospitalization

