

**Economics Seminar**, Indian Statistical Institute, New Delhi.

**SPEAKER:** Dale Whittington, University of North Carolina, Chapel Hill

**TITLE:** A Cost Benefit Analysis of Cholera Vaccination Programs in Beira, Mozambique

**TIME:** 11:30-1:00.

**DAY & DATE:** Friday, July 24th, 2009

**PLACE:** **Seminar** Room 2, New Building

### **Abstract**

This research comprises the first social cost-benefit analysis (CBA) for cholera vaccination in sub-Saharan Africa, using economic and epidemiological data collected in Beira, Mozambique. The analysis compares the net economic benefits of immunization strategies with and without user fees. The net benefits of three vaccination program options are estimated: (1) school-based vaccination for school children only (5–14 years); (2) school-based vaccination for all children (1–14 yrs); and (3) a mass vaccination campaign for all eligible individuals (>1 yr). All vaccination options assume the use of a low-cost new generation cholera vaccine. The analyses incorporate the latest knowledge of vaccine effectiveness, including new evidence for herd protection, and use field data for incidence, benefits (private willingness to pay, public cost of illness) and costs (production, shipping, delivery, private travel costs). Taking herd protection into account has important consequences for the economic analysis of cholera vaccination programs in Beira. Under a wide variety of possible parameter values, vaccination programs pass a CBA test in Beira. Small, school-based programs with and without user fees are very likely to provide net benefits. A mass vaccination campaign for all eligible individuals without user fees would most strongly reduce the burden of disease burden, but there is a high likelihood that the social costs of this program would outweigh its benefits, and such a program would require significant public sector investment. As user fees increase, mass vaccination of all eligible individuals becomes much more attractive, and the disease burden reduction remains above 70 percent at relatively low user fees (e.g. US\$1.0 in 2005 dollars).

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