

1035-92-1844

**Omayra Y Ortega\*** ([omayra.ortega@asu.edu](mailto:omayra.ortega@asu.edu)), Arizona State University at the West campus, Mathematical Sciences and Applied Computing, 4701 W Thunderbird Rd, Glendale, AZ 85306.

*Evaluation of a Rotavirus Vaccine Program.*

In light of recent developments in rotavirus vaccine development and licensing, one contributing factor to assist policy makers on whether to add rotavirus vaccination to national immunization programs is to understand the costs and benefits associated with this type of policy decision. In Egypt, approximately 1,909,000 children are born each year. Within this birth cohort of children, it is estimated that close to 1,813,550 will have become ill with rotavirus more and more than 3000 die due to rotavirus before reaching the age of five. The Egyptian Ministry of Health and Population (MoHP) is the primary payer for health care and responsible for administering the Expanded Program on Immunization with the country. To inform these decision makers, a cost-benefit analysis, from the perspective of the MoHP, based on available local data from published and unpublished sources was conducted to evaluate the economic impact of introducing a rotavirus vaccine to the current national immunization schedule. Deterministic differential equations-based models are used to evaluate the roles of cross immunity and co-infection on the spread of rotavirus and simulations are run for a model with vaccination. (Received September 20, 2007)