1067-92-2336   **Erica Johnson**, **Jennifer Ortiz** and **Omayra Ortega*** (omayra.ortega@asu.edu), Arizona State University, Mathematical & Natural Sciences, PO Box 37100, Phoenix, AZ 85069. *A Stochastic Model of Rotavirus Infection and Vaccination.* Preliminary report.

Rotavirus diarrhea causes a disproportionate amount of the world's childhood mortality. Approximately 611,000 children die each year due to complications of rotavirus infections. Rotavirus is the most common diarrheal infection for children under the age of 3. All children are born susceptible, but there are vaccines that may be utilized to decrease the risk of infection. In our study, we explored using a stochastic mathematical model to better demonstrate the transmission of the virus in detail. Our stochastic model is based on a deterministic ordinary differential equations model with 16 compartments. (Received September 22, 2010)