

# Potential cost-effectiveness of a rotavirus immunization program in rural China.

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**BACKGROUND:** To assess the incidence and economic burden of rotavirus diarrhea and the potential cost-effectiveness of a rotavirus immunization program in rural Zhengding County in Hebei Province, China.

**METHODS:** Population-based surveillance was conducted during the peak season for diarrhea among children who were <5 years of age in Zhengding County from 14 October 2004 through 19 January 2005. The cost of illness was measured from the perspectives of both patient and society. A decision-analytic model was applied to the cost-effectiveness analysis using real data derived from surveillance and from a cost-of-illness study.

**RESULTS:** During the surveillance period, 500 episodes of diarrhea were registered. Of these 500 episodes, 125 (25%) occurred in patients who were positive for rotavirus. Of these 125 episodes, 63 (50%) occurred in patients who were hospitalized. The overall incidence rate of rotavirus infection was 61.4 cases per 1000 children per year during the 14-week epidemic season. For a Chinese cohort of 5000 newborns, a universal rotavirus immunization program would prevent 1764 cases of rotavirus diarrhea, averting 882 hospitalizations of patients <or=5 years of age. At 2004 prices, the net savings due to the immunization program would be US\$14,112 from a societal perspective and US\$34,751 from a patient perspective.

**CONCLUSION:** Rotavirus was a leading cause of severe diarrhea among children <5 years of age and an economic burden for farmers in rural Zhengding County. Rotavirus vaccination should be considered as a potential cost-effective measure against rotavirus infection in China.

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