Willingness to Pay for Oral Cholera Vaccines in urban Bangladesh

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Introduction:
Cholera remains a serious public health burden globally and especially in regions where poverty and poor sanitation are prevalent. Bangladesh has one of the largest burdens of endemic cholera, with 109,052 cases each year while 66 million people are at risk of cholera and over 3,000-5,000 deaths annually occurred. To address this problem, policy makers recognized that an effective vaccine and vaccination strategy is essential for Bangladesh.

Objectives:
The objective of the study is to measure the private demand for oral cholera vaccines (OCV) and to investigate the key determinants of this demand, reflected on household's willingness to pay for oral cholera vaccine.

Methods:
A contingent valuation method was employed in an urban setting of Bangladesh during December 2015 to January 2016. All respondents (N= 1051) received a description of a cholera oral vaccine (OCV) Shanchol™ which has around 60% efficacy for 2-5 years and is WHO prequalified and available in the WHO stockpile. Interviews were conducted with either the head of households or his/her spouse or a major economic contributor of the households.

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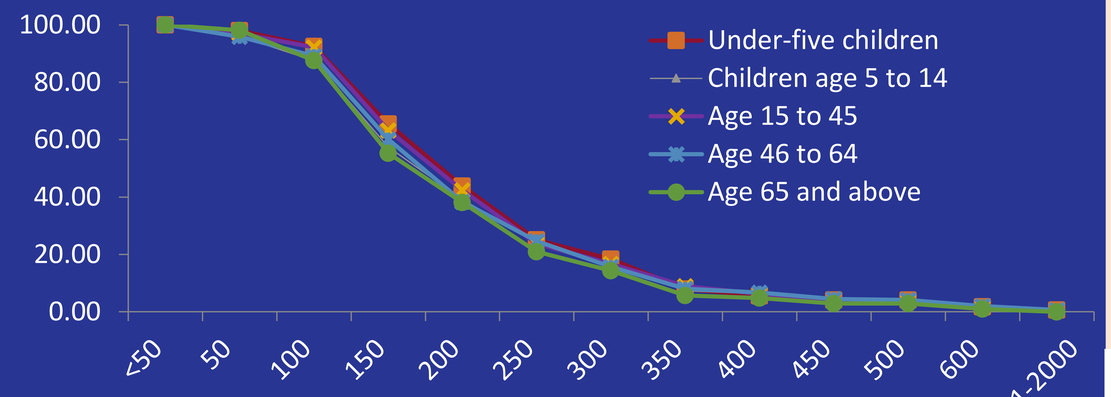
- ✓ The demand for Oral Cholera vaccines indicates that there is a potential scope for recovering a certain portion of the expenditure of immunization program by introducing direct user fees for future cholera vaccination in Bangladesh.
- ✓ A combination of revenue from private market and pooled fund (e.g., taxes) could be considered as a sustainable way of financing oral cholera vaccine in Bangladesh to secure protection against cholera infection.



Relationship between cumulative proportions of respondents willing to pay for OCV in Dhaka, Bangladesh

Results:
The mean and median WTP for OCV per vaccines (2 doses) was estimated to BDT US$ 2.23 and US$ 1.92 respectively for protection of the respondent against cholera infection. On the household level with an average number of 4.62 members, the estimated WTP was US $10 (mean) and US$ 7.69 (median) which represents the perceived private economic benefits to a household of vaccination against cholera. Among the total respondents approximately 99.4% were willing to pay for the vaccines for their own protection at some price, while 99.8% reported they would purchase the vaccine for their household members. The natural log-linear regression model revealed that a number of factors such as sex of the respondents, occupation, knowledge about cholera and oral cholera vaccine, household income, size of the households and age composition of household members are significantly associated with WTP.

Discussion:
Our research provided evidence on the perceived demand for OCV, suggesting that the households may not wait for the public vaccination campaign rather can protect themselves from cholera if the vaccine is available in private market. Our estimation supported that the households with members of age under five years were willing to pay more than any other age groups. A free of cost supply of OCV to entire population of the country would bring a perceived economic benefit of corresponding to the average maximum WTP of the households.

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