- Cost-effectiveness (CE) analysis calculates the incremental cost-effectiveness ratio of a new healthcare intervention compared with the current situation. It compares that result against a threshold such as the gross domestic product per capita of a country. The analysis allows the determination of an acceptable CE-price range for the new intervention.
- Our hypothesis is that this technique might not be appropriate for vaccines in low-income countries in which existing expenditure on healthcare intervention is low and the existing disease burden high. The analysis may lead to a too wide CE-price range with paradoxical results when compared with high-income countries. We tested our hypothesis on nine countries across the world for rotavirus vaccination.
- We found that in low-income countries the price range at which the rotavirus vaccine is still cost-effective as assessed using the WHO GDP threshold value was much wider than that determined for high-income countries paradoxically leading to a higher CE-price maximums for low-income countries.
- Therefore other methods for the assessment of value for money, such as adjustment of the threshold value to represent the opportunity cost of healthcare expenditures, budget optimization, or return on investment, may be better suited to low-income countries if the objective is to work within reasonable price-bands for those countries.

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