Institute for Health Metrics and Evaluation

Data Release Information Sheet

Data Summary

Dataset name: Rotavirus Vaccination Cost Effectiveness Estimates 2017

Date of release: June 21, 2022 Date of update: April 10, 2023

Summary:

The dataset contains predictions of the incremental cost-effectiveness ratios (ICERs) for the rotavirus vaccine in 195 countries. Predictions are based on meta-regression estimates of ICERs on three sets of independent variables (true variation measured by country characteristics, intervention characteristics, and bias variables). Data used in the meta-regression analysis are 515 ICERs from 68 studies in the Tufts University's cost-effectiveness analysis registries, and additional extractions of ICERs for sensitivity analyses.

Relevant publications and visualizations:

- Janko MM, Joffe J, Michael D, Earl L, Rosettie KL, Sparks GW, et al. Cost-effectiveness of rotavirus vaccination in children under five years of age in 195 countries: A meta-regression analysis. *Vaccine*. 21 June 2022.

Acknowledgements

Contributing organizations:

- Institute for Health Metrics and Evaluation

Funders:

- Bill and Melinda Gates Foundation

Suggested Citation:

Institute for Health Metrics and Evaluation (IHME). Rotavirus Vaccination Cost Effectiveness Estimates 2017. Seattle, United States of America: Institute for Health Metrics and Evaluation (IHME), 2022.

Data Files Information

Update Information

Summary was revised on April 10, 2023.

File Inventory

File Name	Description	Version Date
IHME_ROTAVIRUS_COST_EFFECTIVENESS_2017_Y2022M06D21.CSV	Rotavirus Vaccine Cost Effectiveness Estimates	June 21, 2022
IHME_ROTAVIRUS_COST_EFFECTIVENESS_2017_CODEBOOK_Y2022M06D21.CSV	Codebook	June 21, 2022
IHME_ROTAVIRUS_COST_EFFECTIVENESS_2017_INFO_SHEET_Y2023M04D10.PDF	Data Release Information Sheet	April 10, 2023

Variable Information

Variable	Variable Label	Variable Definition
country	Country	The country for which the research is performed
location_id	Location ID	Distinct ID assigned to each location
ihme_loc_id	IHME Location ID	ID assigned by IHME based off geographic location
super_region_id	Super Region ID	Distinct ID assigned to each Super Region
super_region_name	Super Region Name	Collapses all Super Region variables into a single, mutually exclusive variable. If only one super region is selected for the article, the variable displays that country. If multiple countries are selected, then the variable displays "Multiple Super Regions"
gavi_eligible	Gavi Eligible	1 if the country was GAVI-eligible in 2017, 0 otherwise
log_GDP_per_cap_2017	Log GDP per capita 2017	Log GDP per capita in 2017 US Dollars
log_burden_variable	Log Burden Variable	The natural log of burden_variable
log_vaccine_cost_2017usd	Log Vaccine Cost 2017 USD	Log-transformed cost of a 3-dose course of the HPV vaccine. Costs obtained from Linksbridge and converted to 2017 US Dollars
payer	Payer	Indicator covariate for payer perspective. Equal to 1 when the ReaderPerspectiveID is interpreted to be from the payer perspective
intercept	Intercept	Column consisting exclusively of 1s. Needed for some of the modeling architecture
burden_disc_rate	Burden Discount Rate	Discount rate for health outcomes on a percent scale
cost_disc_rate	Cost Discount Rate	Discount rate for costs on a percent scale

Variable	Variable Label	Variable Definition
coverage	Coverage	Percent (expressed as a whole number) coverage of the population
not_lifetime	Not Lifetime	This is a dummy-variable version of the column LifetimeHorizon. This column = 0 whenever the ratio calculates the ICER using all costs and D/QALYs for the individual's entire lifetime. It = 1 whenever the ratio has a finite time horizon - e.g. if they only count costs and Q/DALYs prevented up to 30 years into the future. In the Tufts' data this is 0 wherever TimeHorizonMagnitude = 100
pentavalent	Pentavalent	Indicator covariate for vaccine type. Equal to 1 when the vaccine is pentavalent, and 0 when the vaccine is monovalent. (Equal to 1 when both_types = 1 since the analysis includes pentavalent as a vaccine type)
both_types	Both Types	Equals to 1 when the ratio assumes the analysis refers to the vaccine as both monovalent and pentavalent
qalys	QALYs	Indicator covariate equal to 1 if the ICER is cost per QALY gained, 0 if it is cost per DALY averted
new_spline_cov	New Spline Covariate	Transformed version of GDP per capita. Referred to as "signal" in text of publication
predicted_icer_usd	Predicted ICER in USD	Mean predicted ICER. Calculated by predicting on log-scale, exponentiating, and averaging on the ICER scale
predicted_icer_usd_median	Predicted ICER in USD median	Median predicted ICER. Equal to exp(predicted_log_icer_usd)
predicted_icer_usd_lower	Predicted ICER in USD lower	2.5th percentile of the predicted distribution of the ICER
predicted_icer_usd_upper	Predicted ICER in USD upper	97.5th percentile of the predicted distribution of the ICER
ratio_of_upper_to_lower_prediction	Ratio of Upper to Lower ICER Prediction	Ratio of 97.5th percentile to 2.5th percentile of the predicted distribution of the ICER
predicted_icer_usd_over_gdp_pc	Predicted ICER USD over GDP Per Capita	Ratio of predicted_icer_usd to GDP per capita
pred_prob_usd	Predicted Probability USD	Predicted probability that an ICER will be cost-saving (predicted from logistic regression)
pred_val_usd	Predicted Value UDS	True if pred_prob_usd is greater than 0.5, False otherwise
adj_ICER_usd	Adjusted ICER	Mean predicted ICER adjusted for the probability of being cost-saving. Equal to (1-pred_prob_usd) * predicted_icer_usd

Variable	Variable Label	Variable Definition
adj_ICER_lower	Adjusted ICER Lower	2.5th percentile of the predicted distribution of the ICER adjusted for the probability of being cost-saving. Equal to (1-pred_prob_usd) * predicted_icer_usd_lower
adj_ICER_upper	Adjusted ICER Upper	97.5th percentile of the predicted distribution of the ICER adjusted for the probability of being cost-saving. Equal to (1-pred_prob_usd) * predicted_icer_usd_upper
GDP_usd_category	GPD per Capita Category	Ratio of adjusted predicted ICER to GDP per capita, binned into the categories <0.5, 0.5-1, 1-3, and >3

Additional Information

Terms and Conditions

http://www.healthdata.org/about/terms-and-conditions

Contact Information

To request further information about this dataset, please contact IHME:

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These files may be updated periodically, so we appreciate hearing feedback or additional information about how these data are being used.