



Comparative cost-effectiveness analysis of community engagement interventions in LMICs



Monica Jain
Lead Evaluation Specialist, 3ie



Liz Brown
Senior Research Fellow, 3ie

Background

It is crucial to know not only the effectiveness of interventions for improving routine immunisation of children, but also their cost-effectiveness for better informed policy decision-making. However, existing literature on it is sparse.

Aim

In a recent systematic review (SR) on community engagement interventions, we examine their cost-effectiveness from the analytical perspective of a policymaker intending to choose the intervention with the largest gains in child vaccination per dollar spent in LMIC settings.

Intervention Inclusion Criteria

Experimental and quasi- experimental impact evaluations (IEs) of community engagement interventions considering outcomes related to routine child immunization in LMICs.

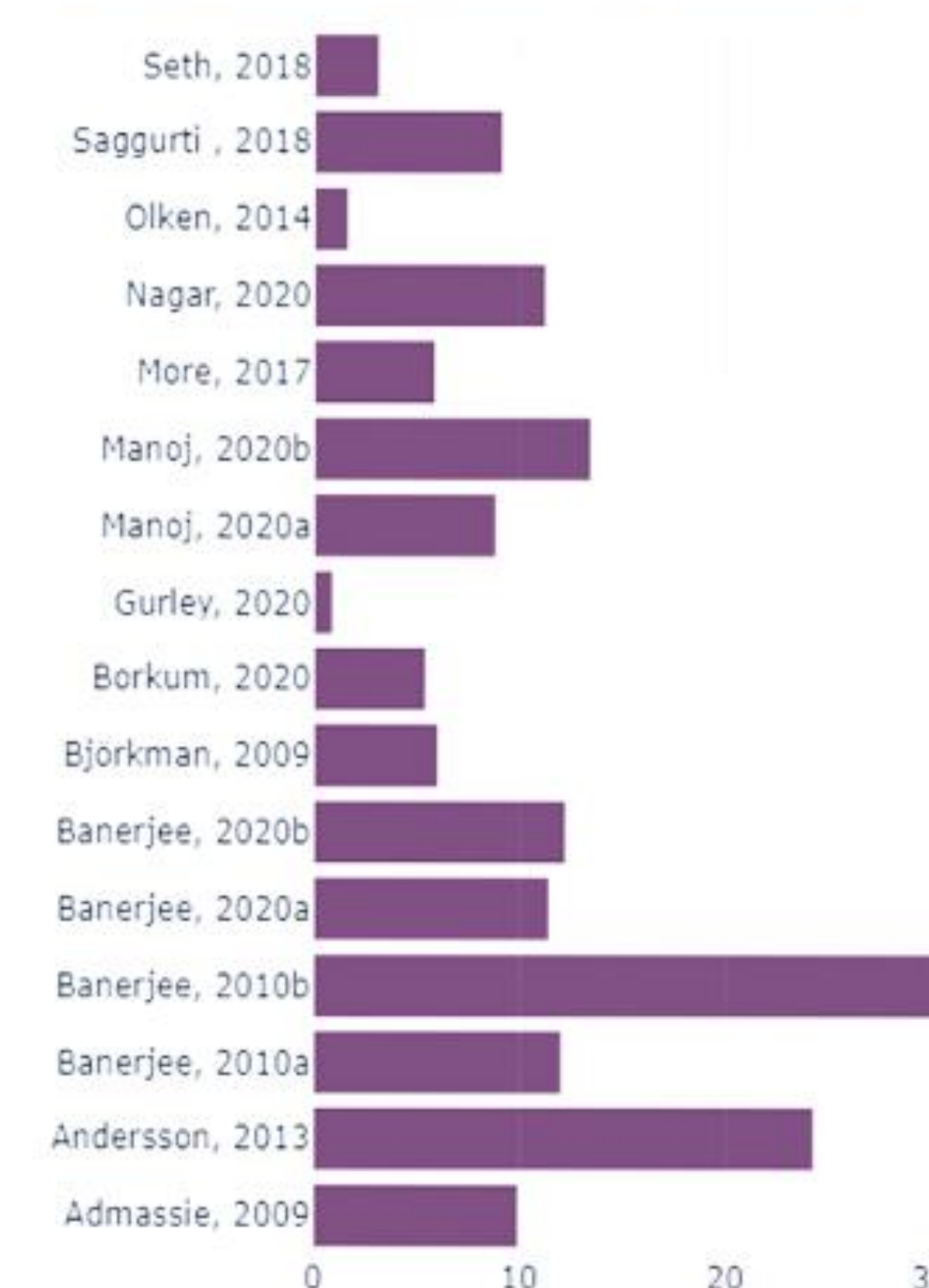
Incremental Cost Effectiveness Ratio (ICER)

$$ICER = \frac{C_T - C_C}{E_T - E_C} = \frac{\text{intervention cost per treated child per vaccine dose (excluding vaccines cost)}}{\text{absolute immunization coverage change (intervention - control)}}$$

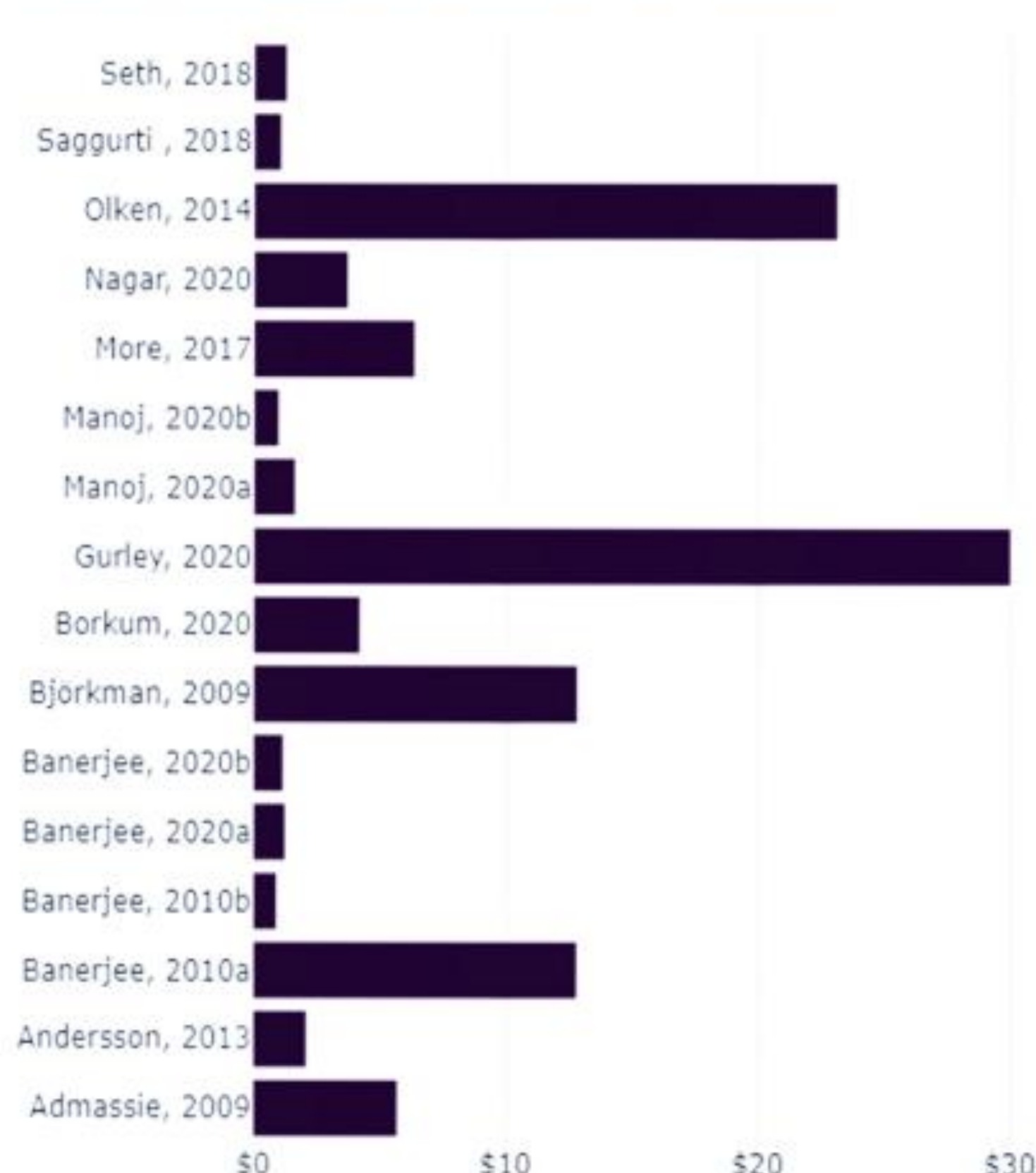
- Costs include cost of interventions that engage communities in improving routine vaccine uptake for children. The interventions use a variety of strategies.
- Total cost excludes the cost of vaccines because we do not want variation in the cost of vaccines to drive differences in the intervention cost estimates.
- It is challenging to completely evaluate the comparability of total cost, either because non-standard inclusion and exclusion criteria are used or because descriptive information on the components of average and total cost are not presented.

Results

Absolute Immunization Coverage Change

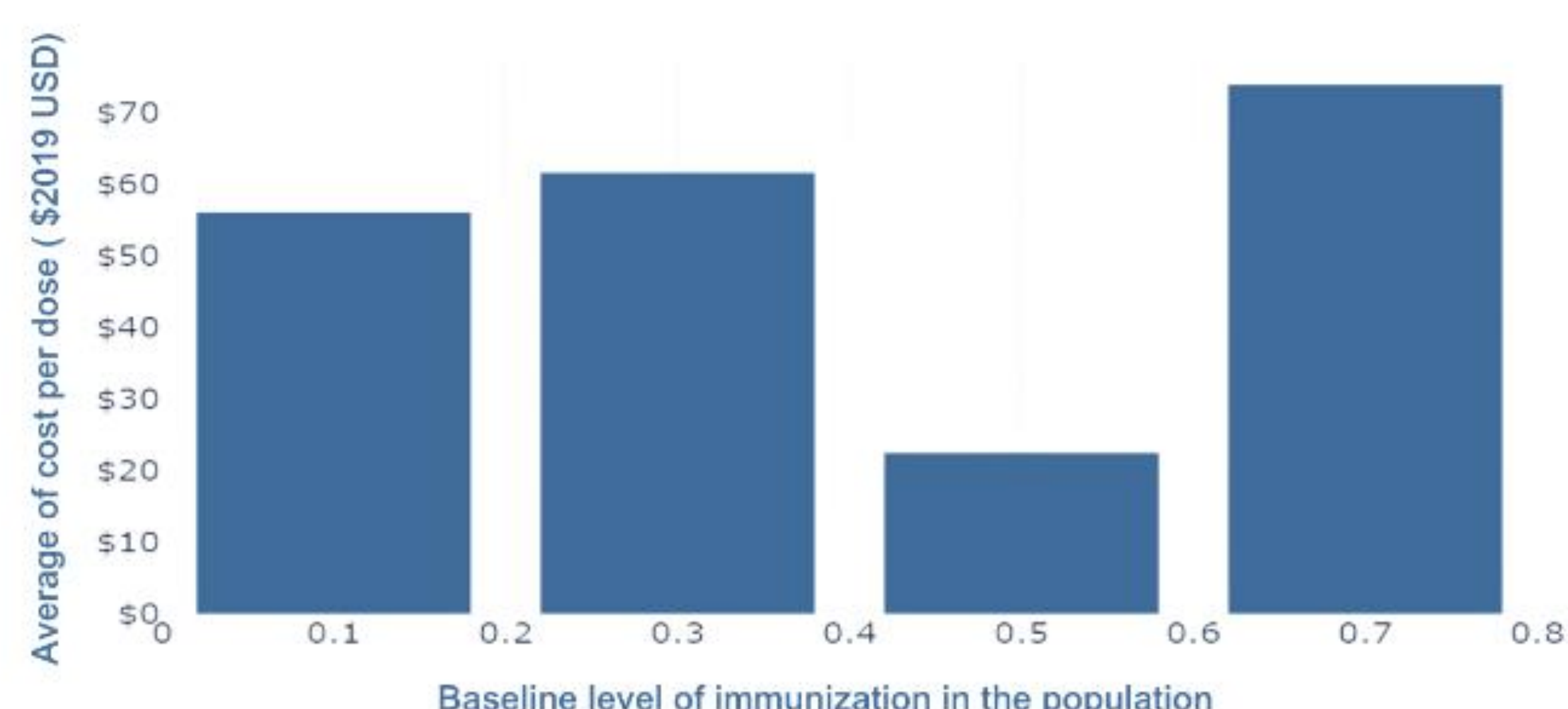


Incremental Cost Effectiveness Ratio (ICER)



It is less cost-efficient to deliver immunization to children where the baseline levels of immunization are already low or already high, but more cost-efficient in the middle of the distribution.

- Just 22 of 61 studies (IEs) reported any cost information and only in 14 it was sufficient to compare costs and effectiveness
- About half of 14 reported high quality, transparent cost estimates
- 13/22 IEs clearly stated form of economic evaluation; only 10 IEs reported perspective of costing; & 11/22 IEs described costing method
- The median non-vaccine cost per dose of community engagement intervention to increase immunisation coverage by one percent is US \$ 2.30 (in 2019 US dollars) & range is \$0.31-\$29.98



Discussion

- Cost effectiveness (CE) estimates enable decisionmakers to choose community engagement interventions based on impacts AND cost
- Critical gaps in both the quantity and quality of cost evidence exist
- Risk of bias assessment is key



What can donors do?

- Policy - require costing of interventions for funded impact evaluations
- Guidance - to plan costing studies
- Funding - for costing expertise
- Application - use CE in own decisions

