This analysis uses cost data from the trial and entomologic results from previous studies to model cost-effectiveness of various scale-up options for Indonesia.

**Background**
- Dengue is one of the world’s fastest growing vector-borne diseases.
- 97 million symptomatic infections and US$9 billion in annual costs globally.
- The scale-up gross and net cost per DALY averted are $1,335 and -$4,017 per person, respectively.
- Wolbachia mosquitoes only need to be released once.
- Highly cost-effective in dense urban environments.

**Conclusions**
- Wolbachia strategy costs depend on the area covered; therefore, it is most cost-effective in dense urban setting.
- Likely more cost-effective than routine vaccination in such areas.
- Projected health care savings (about $50 million/year) would offset program costs over a decade.
- If city government surveillance systems supplemented dengue hemorrhagic fever with dengue fever, they could monitor Wolbachia coverage efficiently.
- If field trials confirm pilot data, the scale up of Wolbachia to major cities appears at least highly cost-effective.
- The technology might prove cost-saving in major cities (see Figure 2 below).

**Methods**
- Each option’s cost was summarized as present value of cost in US dollars.
- Each option’s effectiveness was summarized as the present value of Disability Adjusted Life Years (DALYs) averted.
- We incorporated the projected impact of Wolbachia in a dengue transmission model and the associated costs.
- Cost-effectiveness was presented as $/DALY averted.

**Results**
- Full Wolbachia deployment in Yogyakarta city is projected to cost US$4.4 million. This is $118,797 ($77,923-$181,228) per square km.
- 534 (138-1,213) DALYs averted per year, a 97.4% reduction.
- $1,123 per DALY averted on a gross basis (counting only program costs).
- Negative cost per DALY averted, i.e. -$82, on a net basis (net savings are generated when averted medical costs are included).

**Selected references**