

IMMUNIZATION COSTING ACTION NETWORK (ICAN)

The Costs of Different Vaccine Delivery Strategies to Reach Children Up to 18 Months in Rural and Urban Areas in Tanzania

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INTRODUCTION

Updated cost data is needed to ensure smooth operations of Immunization and Vaccine Delivery (IVD) (including new vaccine introduction), and to **strengthen resource mobilization efforts**, particularly as Tanzania enters the Gavi Preparatory Transition phase in 2020. The study aimed to **estimate the average delivery cost per dose and per fully immunized child (FIC)**, defined as children up to 18 months receiving measles 2nd dose, **and the cost of facility delivery and outreach at existing coverage levels in urban areas, rural areas without nomads, and rural areas with nomads.**

METHODS

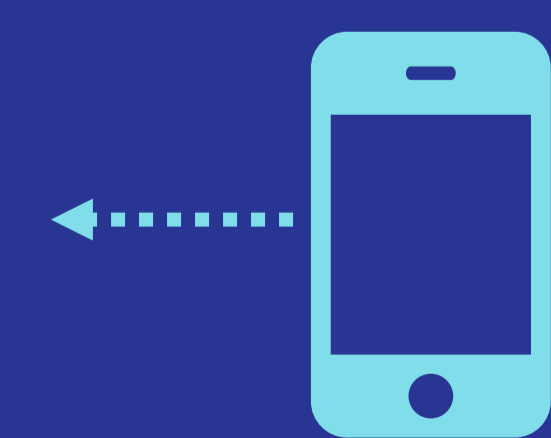
- Ingredients-based, retrospective full financial and economic costing, government/provider perspective
- For the period July 2016-June 2017
- Random, nationally representative sample of 54 facilities
- Costs from facility, district, and regional levels included
- Average unit costs were calculated using inverse probability of sampling weights and volume-weights. We used the calibration estimation method to project these results to a country-wide estimate, using auxiliary information about national delivery volumes
- Findings are presented in 2016 US\$

RESULTS

- The total cost of the IVD routine program is approximately US\$130 million, equating to a **cost per FIC of US\$81** (Figure 3).
- Apart from the cost of vaccines, salaried labor; cold chain energy; and per diem & travel allowances are the **main delivery cost drivers** (Figure 1).
- **The economic cost per dose delivered through outreach was an estimated 19% higher than at facilities** (fixed site) (Figure 2). Outreach is least expensive in urban areas, likely due to smaller distances covered.
- **The economic cost per dose is lowest in rural areas with nomads**; this may be due to lower labor costs. Rural areas without nomads have the second lowest cost per dose, followed by urban areas; part of this difference may be driven by sampling error (Figure 2).

The economic cost per dose delivered through outreach (used in urban and rural areas, with and without nomads) was an estimated 19% higher than delivery at facilities (fixed site). Outreach is least expensive in urban areas, likely due to smaller distances covered.

The economic cost per dose is lowest in rural areas with nomads; this may be due to lower labor costs.



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Figure 1. Average total facility cost for immunization program by line item

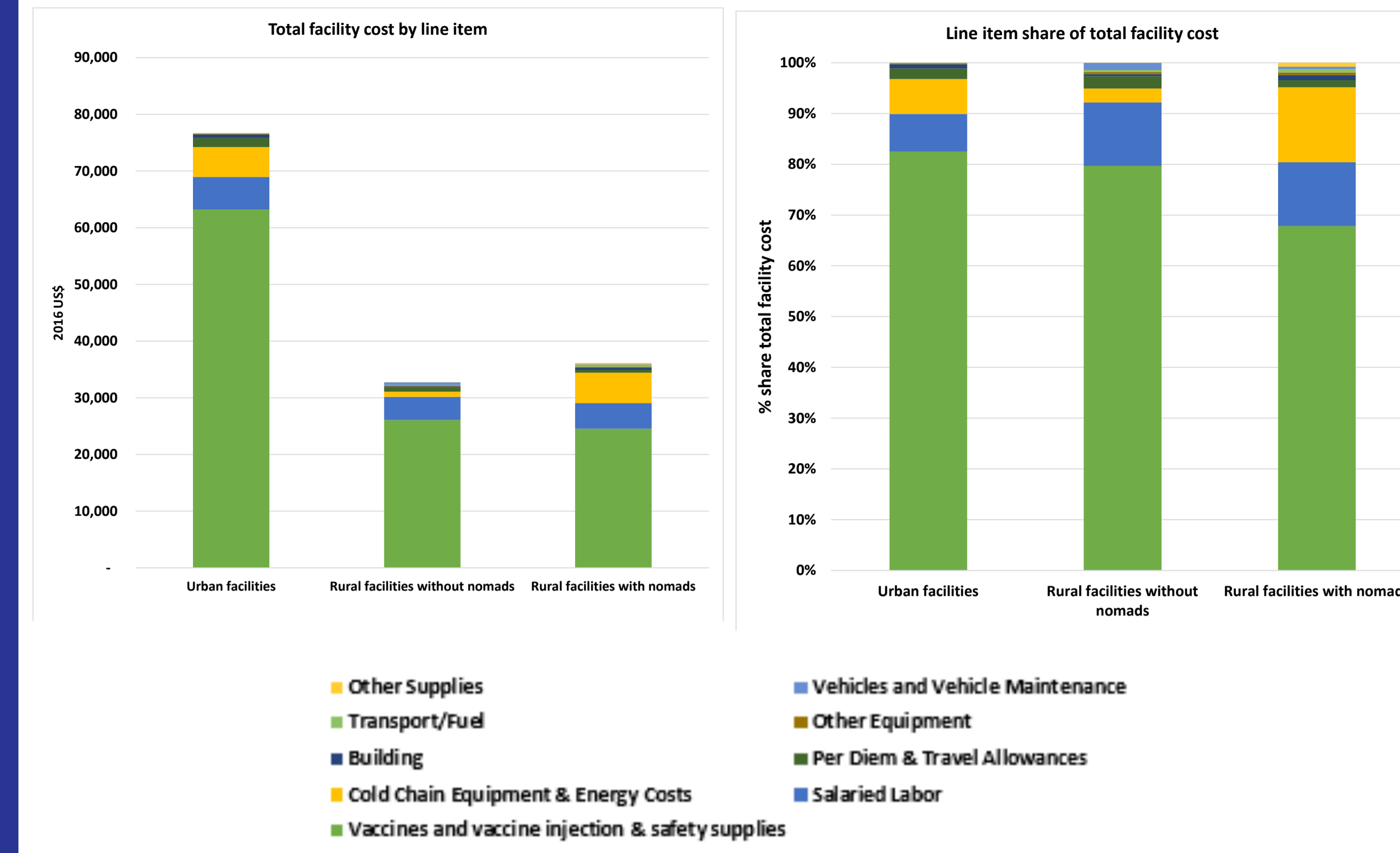
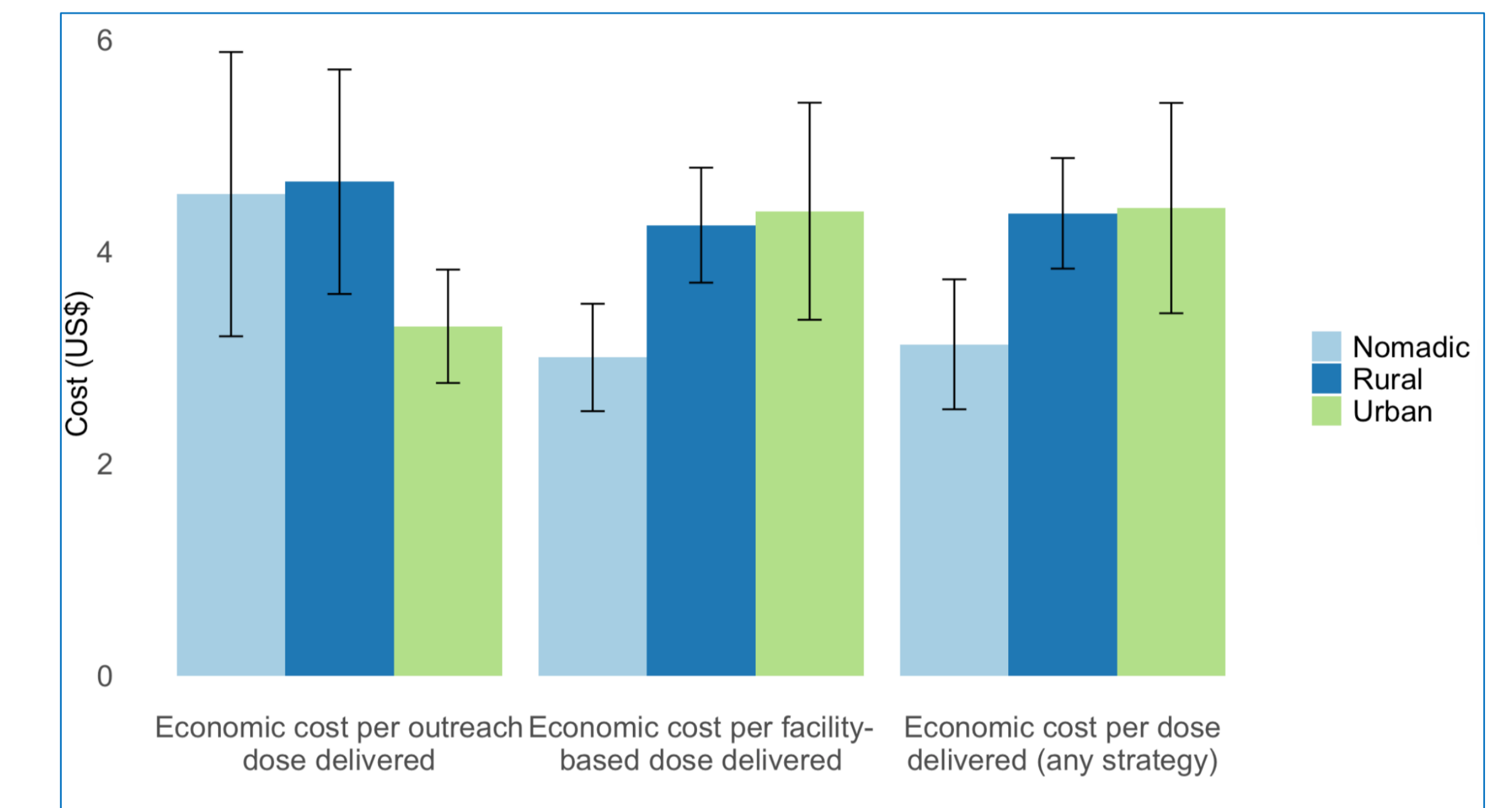
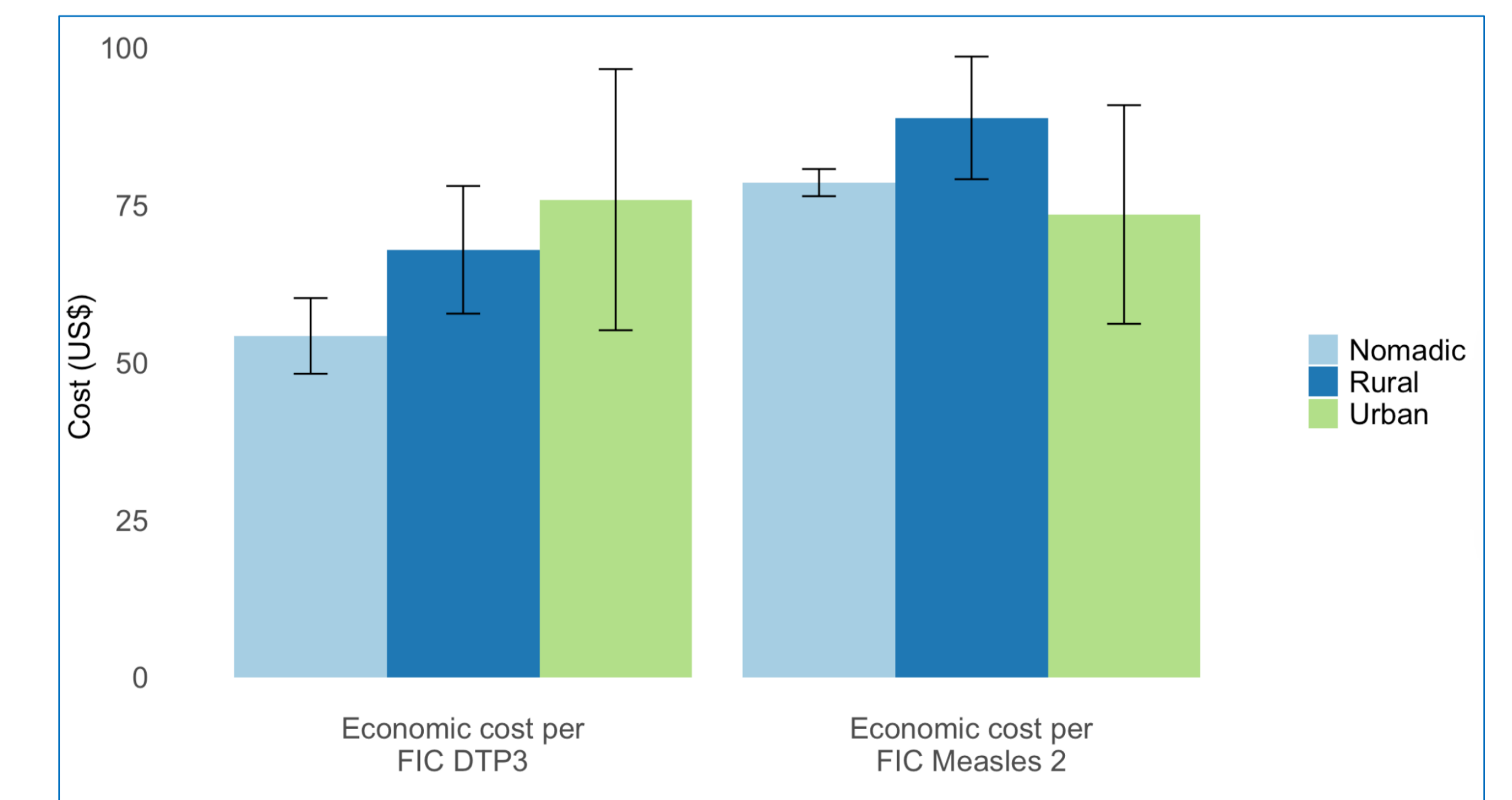


Figure 2. Average economic cost per dose delivered, by geographic area and delivery strategy



Note: 95% confidence interval bars included for each estimate.

Figure 3. Average economic cost per FIC, by geographic area and delivery strategy



Note: 95% confidence interval bars included for each estimate.