

# Vibriocidal serum responses to oral cholera vaccine (Shanchol) when the second dose is delayed 6 months

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- Single doses have been shown to stimulate protection for months → years
- 2015 study from Kolkata compared immune responses following 14 days and 28 days.
  - Seroconversion rates and GMT vibriocidal responses were similar between the two groups.
- Outbreak response campaigns with delayed 2<sup>nd</sup> dose schedule
  - Zambia in 2016 with a 6-8-month time between doses
- Study purpose: to compare the vibriocidal responses if a second dose of OCV is given after 6 months rather than the “standard” 2 weeks.

## Study site

Lukanga Swamps





**Floating Reed Island in Lukanga Swamps**



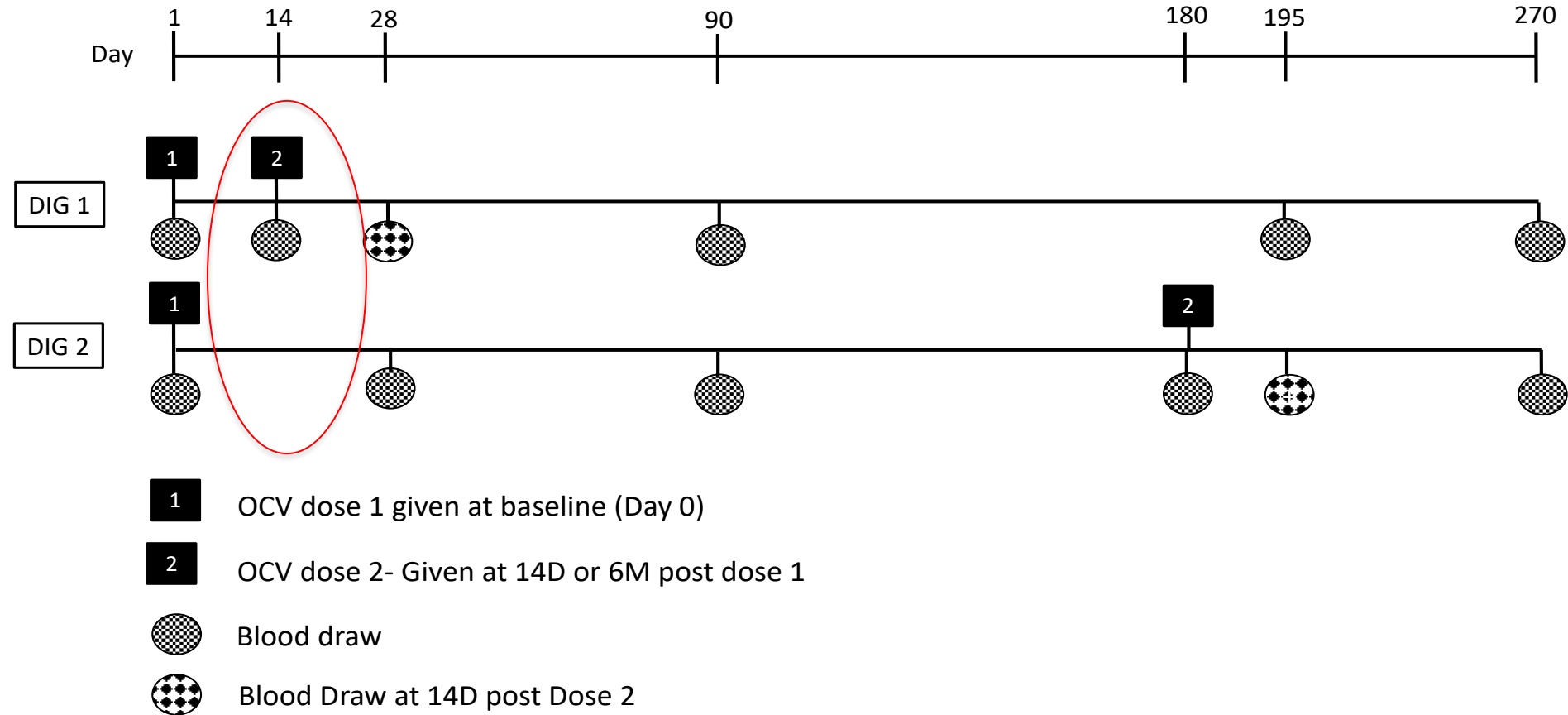
**Centrifuge run on car battery**



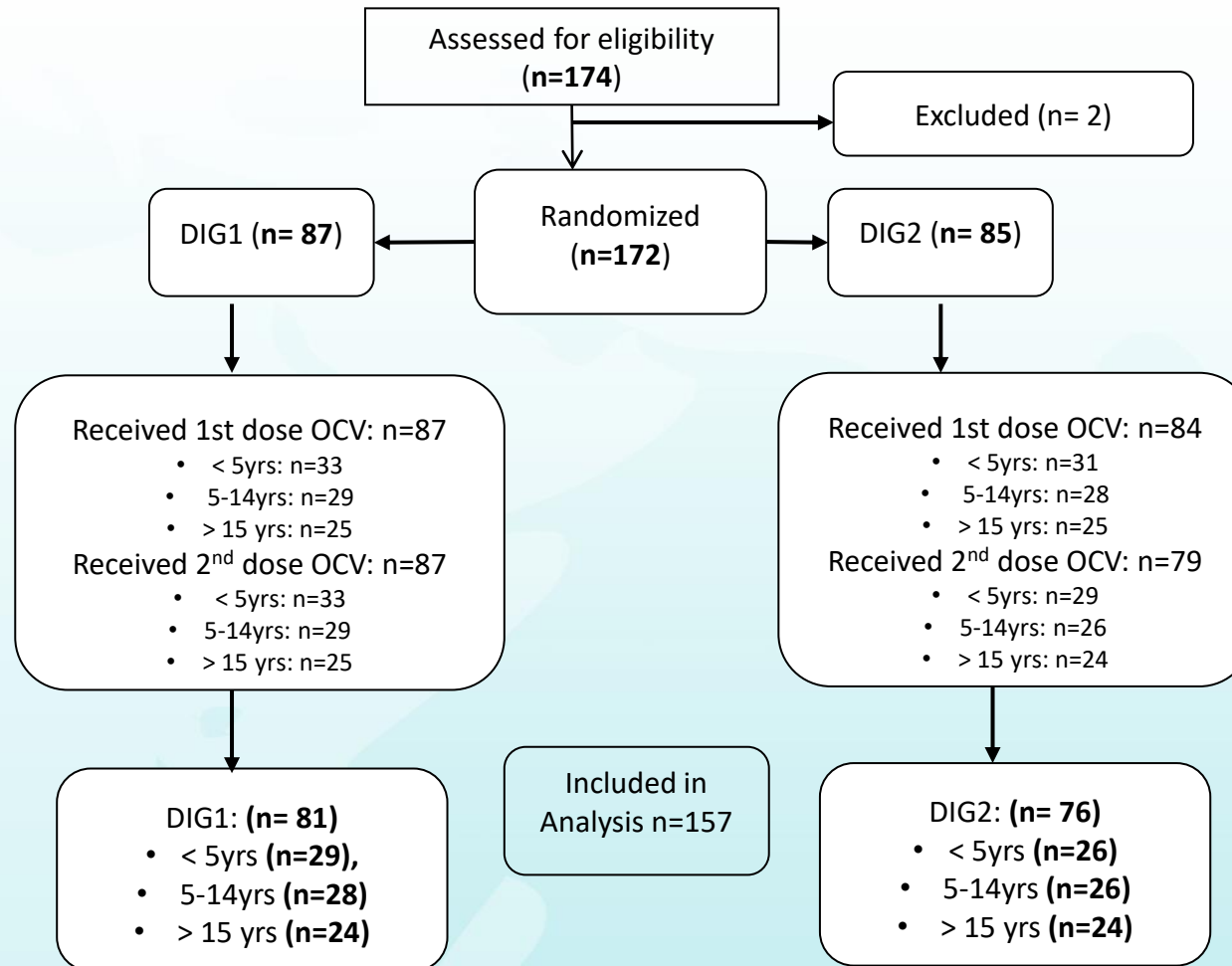
**Nurse drawing blood pre-vaccination**



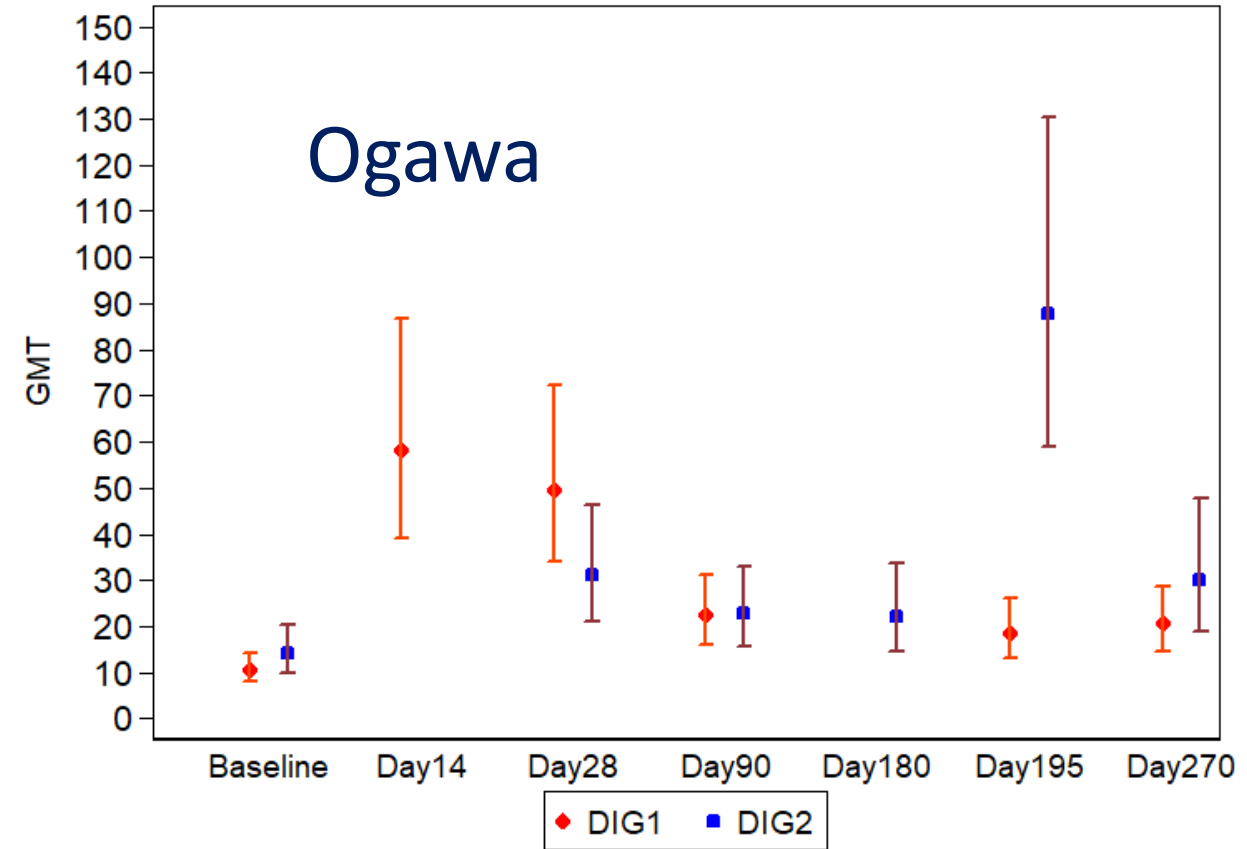
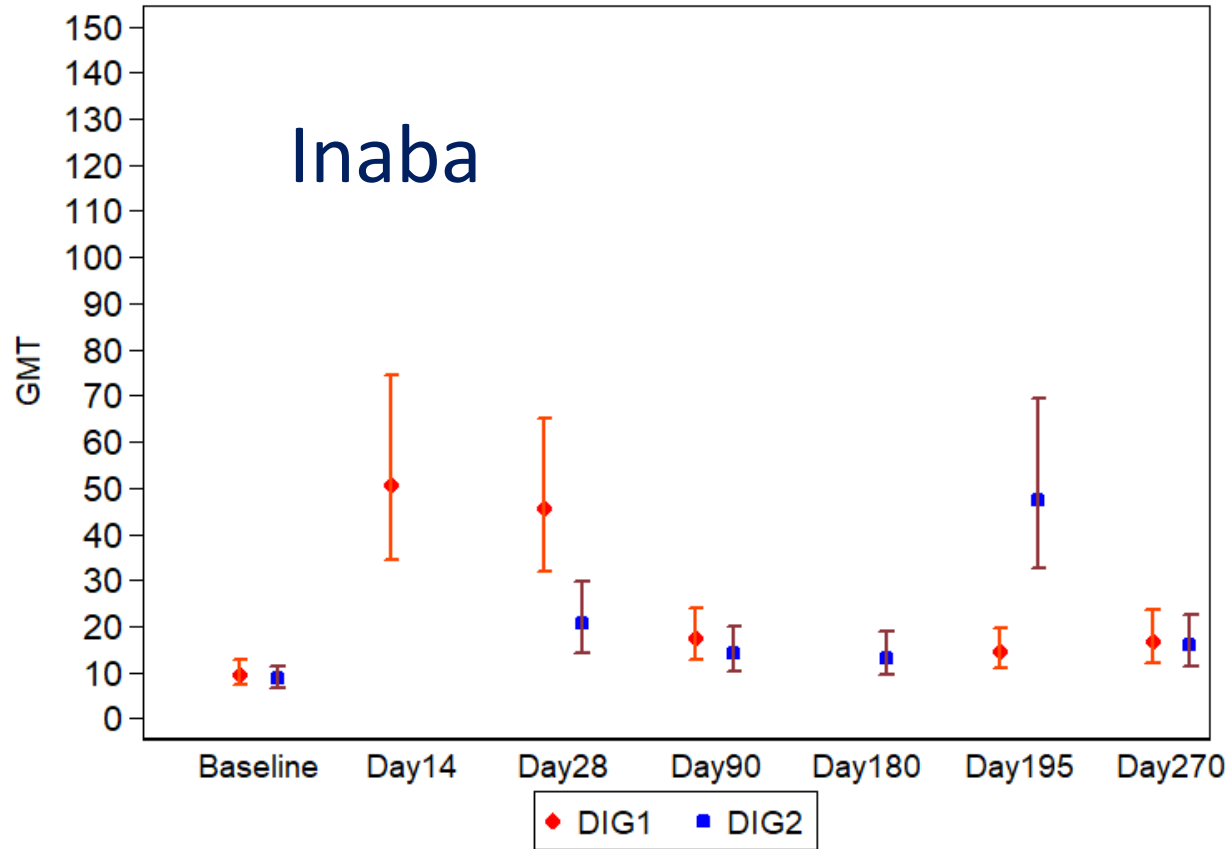
# Vaccination & Blood Draw Schedule



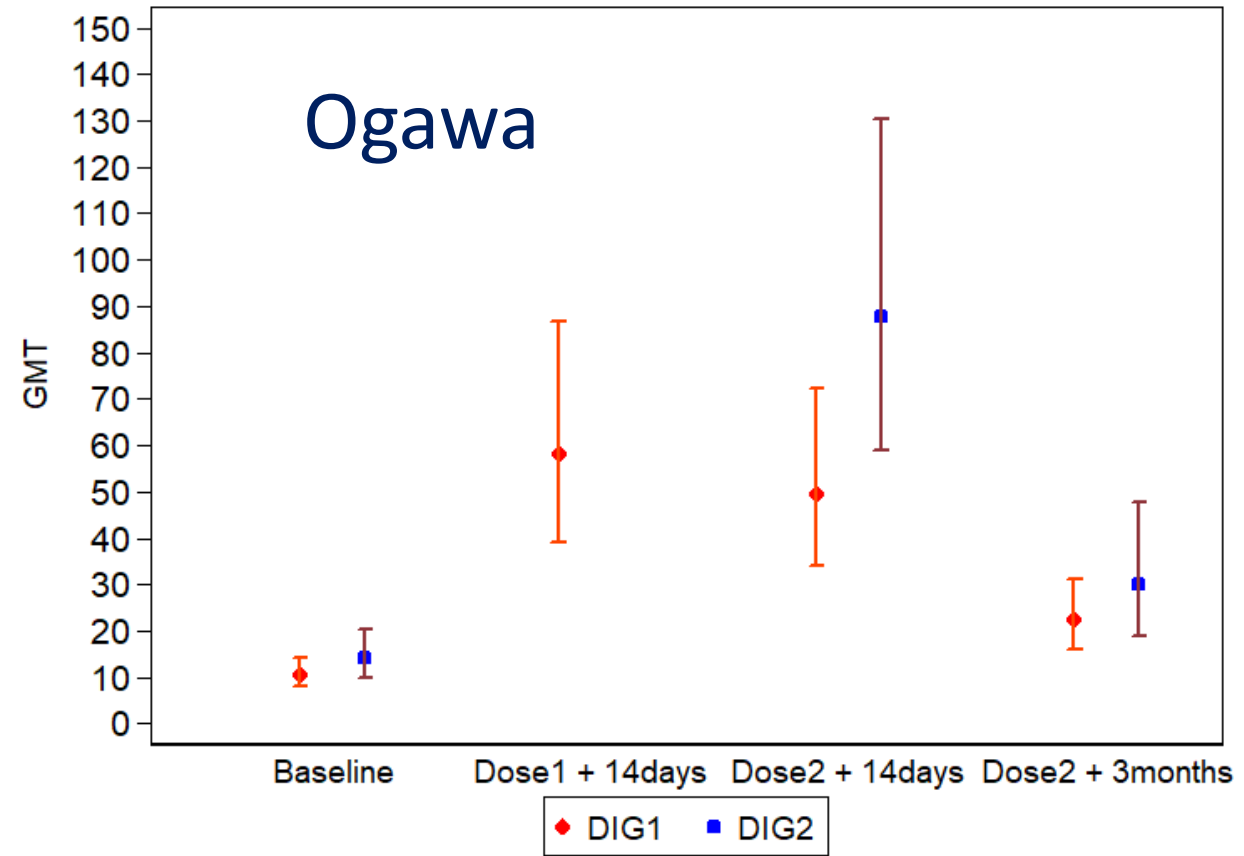
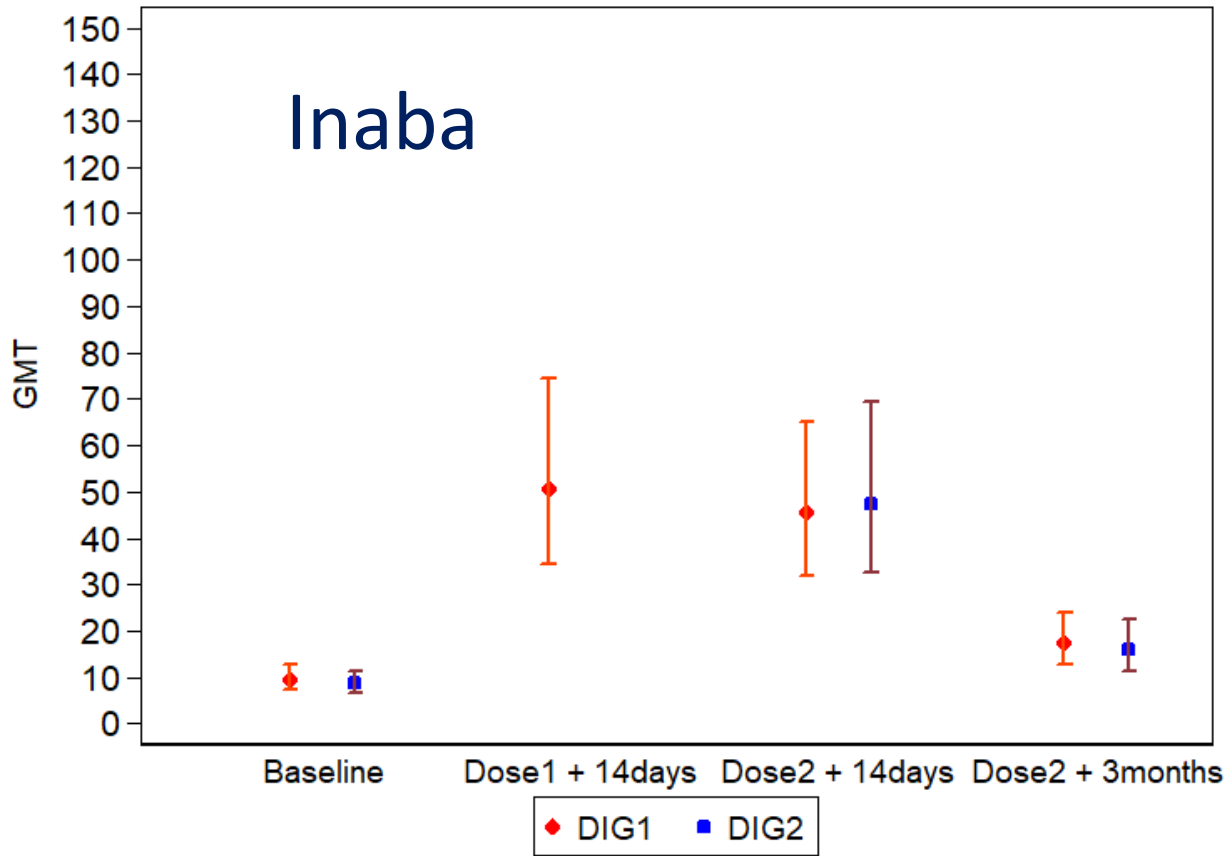
# Consort Chart



# Overall vibriocidal GMTs for Inaba and Ogawa



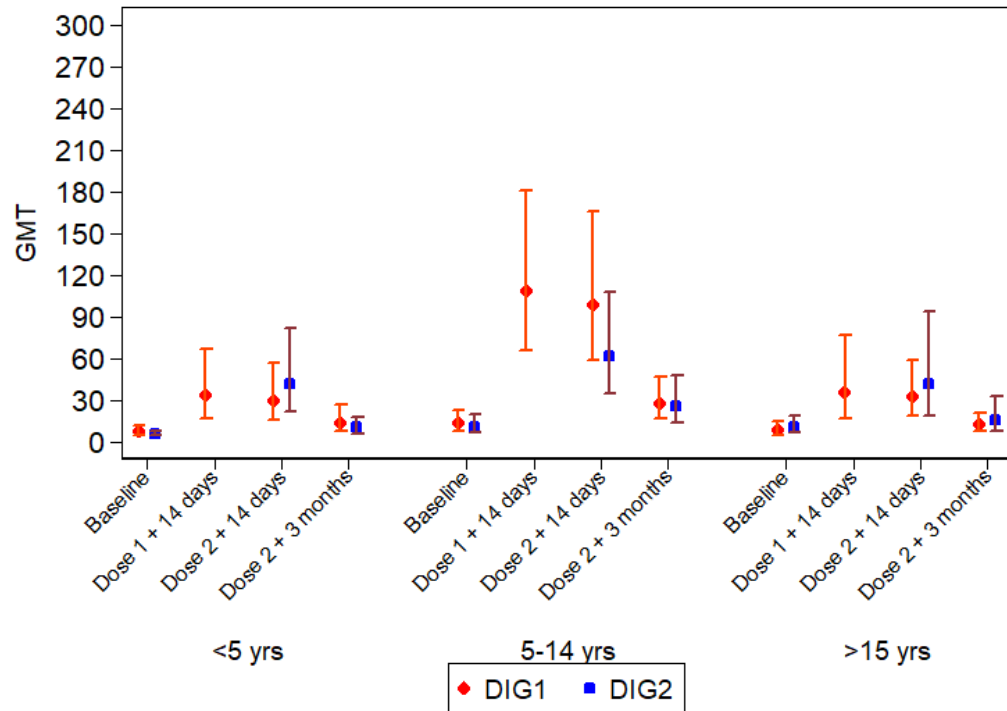
# Primary Outcome: GMT vibriocidal titers 2 weeks after 2<sup>nd</sup> dose



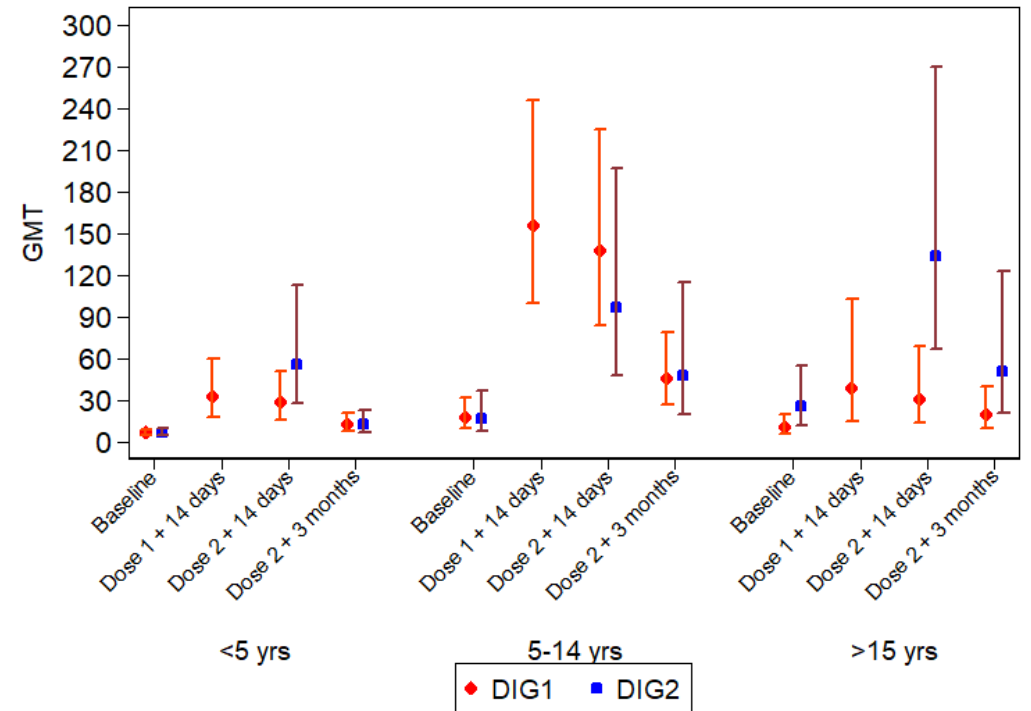




# GMT vibriocidal titers two weeks after 2<sup>nd</sup> dose by age group

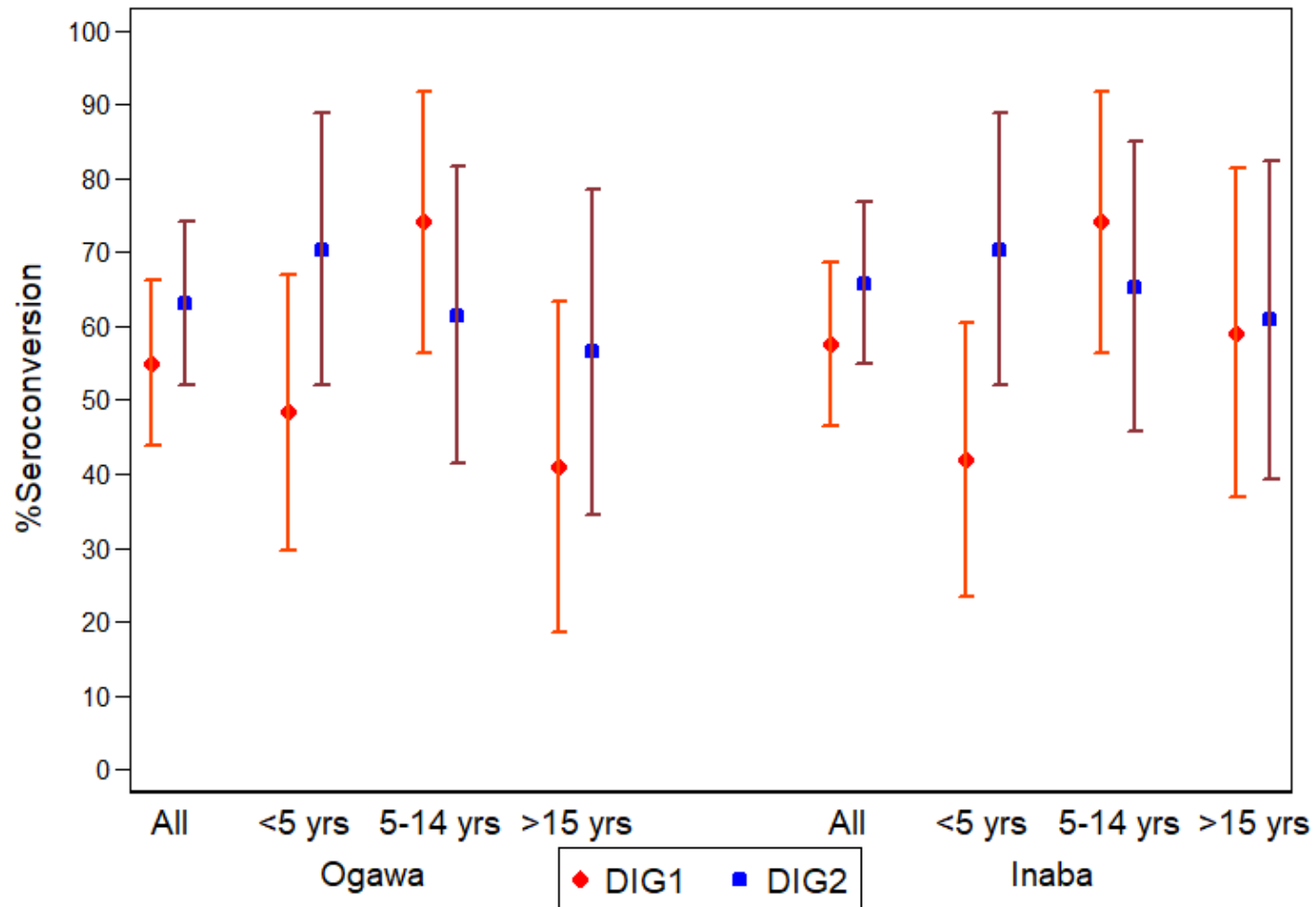


(Inaba)



(Ogawa)

## Comparison of Vibriocidal Inaba and Ogawa Response Rates 2 weeks after second dose



## Conclusions

- Vibriocidal titers 2 weeks after 2<sup>nd</sup> dose similar regardless if OCV is given 2 weeks or 6 months after first dose
- A second dose given 2 weeks after first dose maintained higher titer briefly, but by 3 months, there was no difference between DIG1 and DIG2
- All follow-up GMTs were higher than baseline through 9 months

# Additional Analyses

- Very similar study in different setting: Douala, Cameroon
  - Large urban area (v. rural Lukanga)
    - Major center of trade
  - No cholera since 2012 (no confounding with intercurrent infections)
- Cameroon analysis will include groups at
  - 2 weeks (DIG1)
  - 6 months (DIG2)
  - 11.5 months (DIG3)
- Preliminary analyses (Inaba)
  - DIG2 and DIG3 may be superior to DIG1



# Acknowledgements: The staff and communities of Lukanga



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