

Countries with fragility have significantly higher pediatric mortality than countries with conflict.

Child mortality and health outcome differences in conflict-affected and fragile countries: A multicountry ecological study

Background: Countries with fragility, conflict, and violence (FCV) have previously demonstrated more disparate access to health resources, higher burden of infectious diseases, and higher overall mortality rates than non-FCV countries. This study investigated differences in pediatric mortality rates and child health outcomes for children living in conflict-affected and fragile settings.

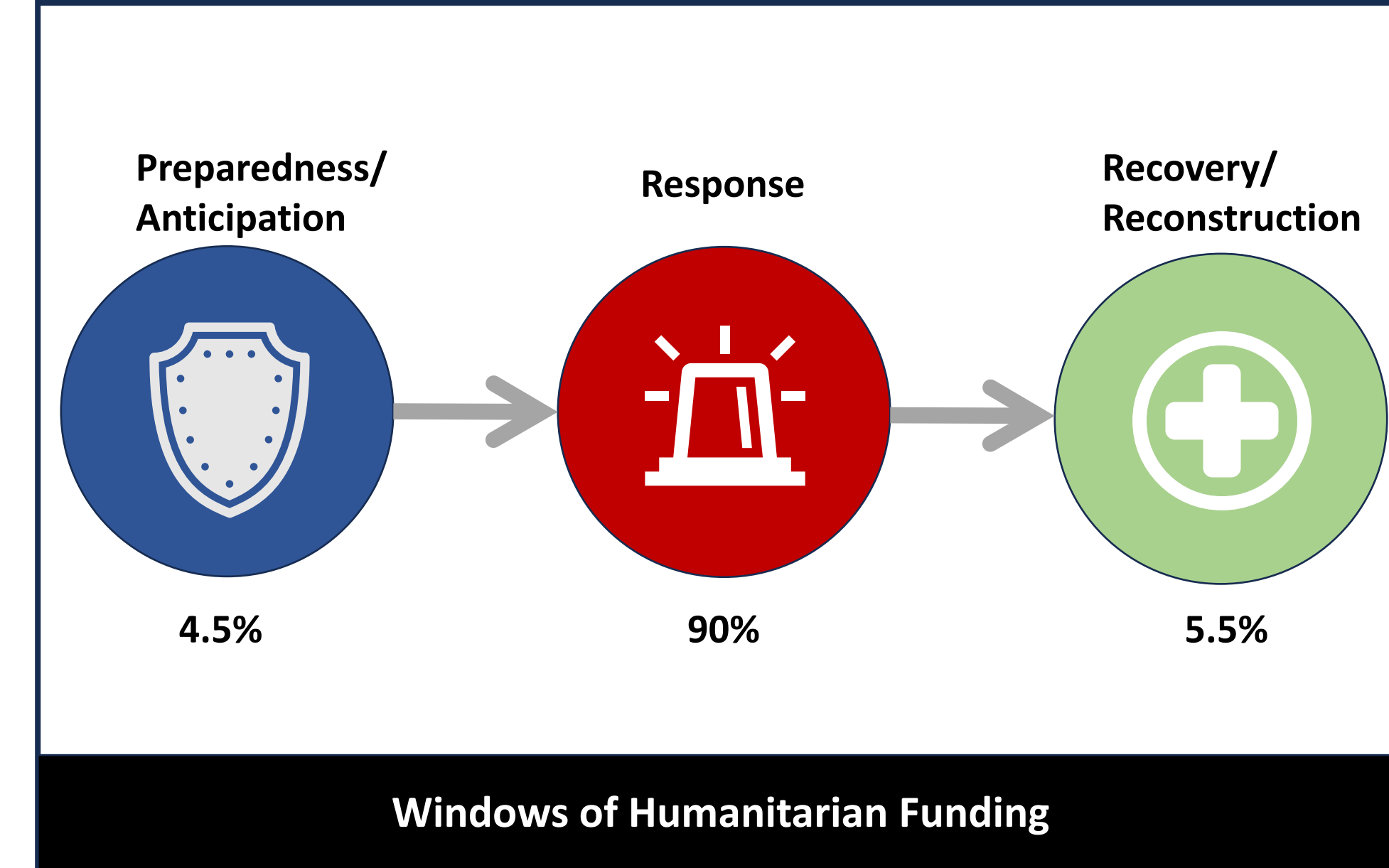


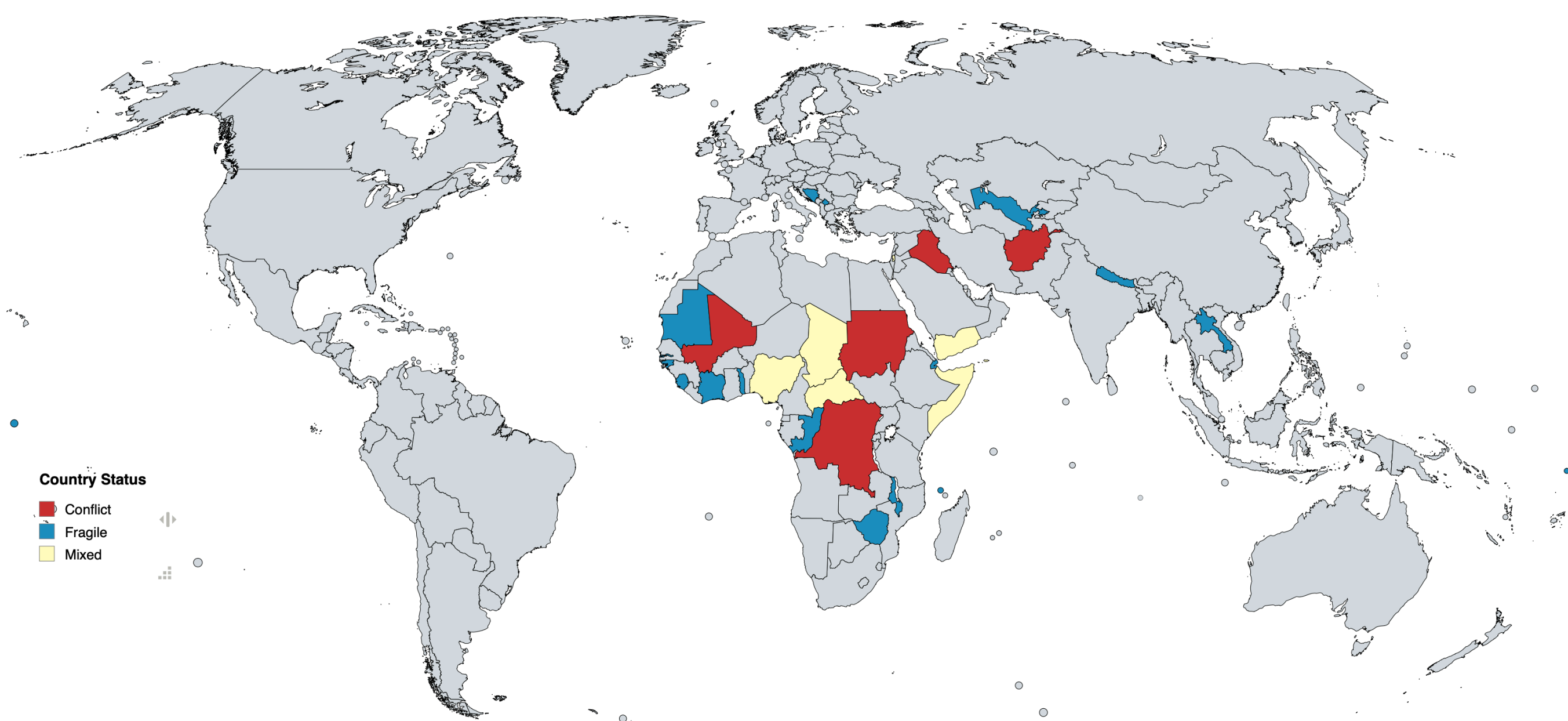
Figure 1: Source: OECD DAC Creditor Report System Data via Anticipation Hub

Methods:

This is a multi-country ecological study that investigated differences in pediatric mortality and child health outcomes in FCV-affected countries further classified as “Conflict-affected Countries” (CACs) or “Countries with Social and Institutional Fragility” (CISFs) consistent with the World Bank’s ‘List of Fragile and Conflict-affected Situations’ from 2006 to 2024. The United Nations Inter-agency Group for Child Mortality Estimation (UN IGME) was used for pediatric mortality data, and the UN International Child Emergency Fund (UNICEF) Multiple Indicator Cluster Surveys (MICS) were used for child health outcomes data. A Generalized Estimating Equation (GEE) model was used to assess differences between CACs and CISFs in pediatric mortality and child health outcomes while adjusting for multiple potential influencers.

Thirty-one countries met inclusion over the 18-year study period.

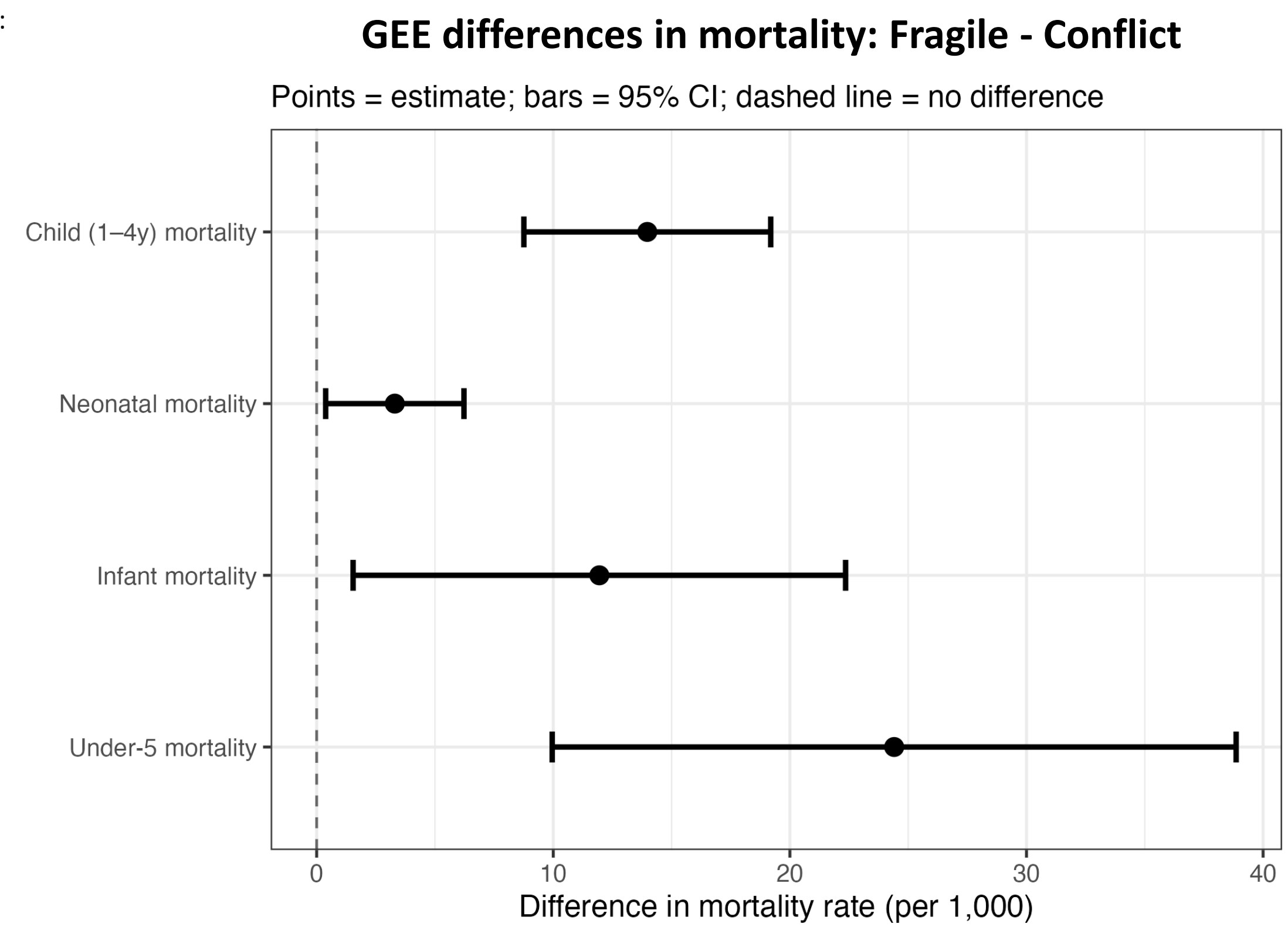
Figure 2:



Of the 31 countries included, there were 56 total Multiple Indicator Cluster Surveys (MICS). 16 of these were MICS for CACs, and 40 of these were MICS for CISFs.

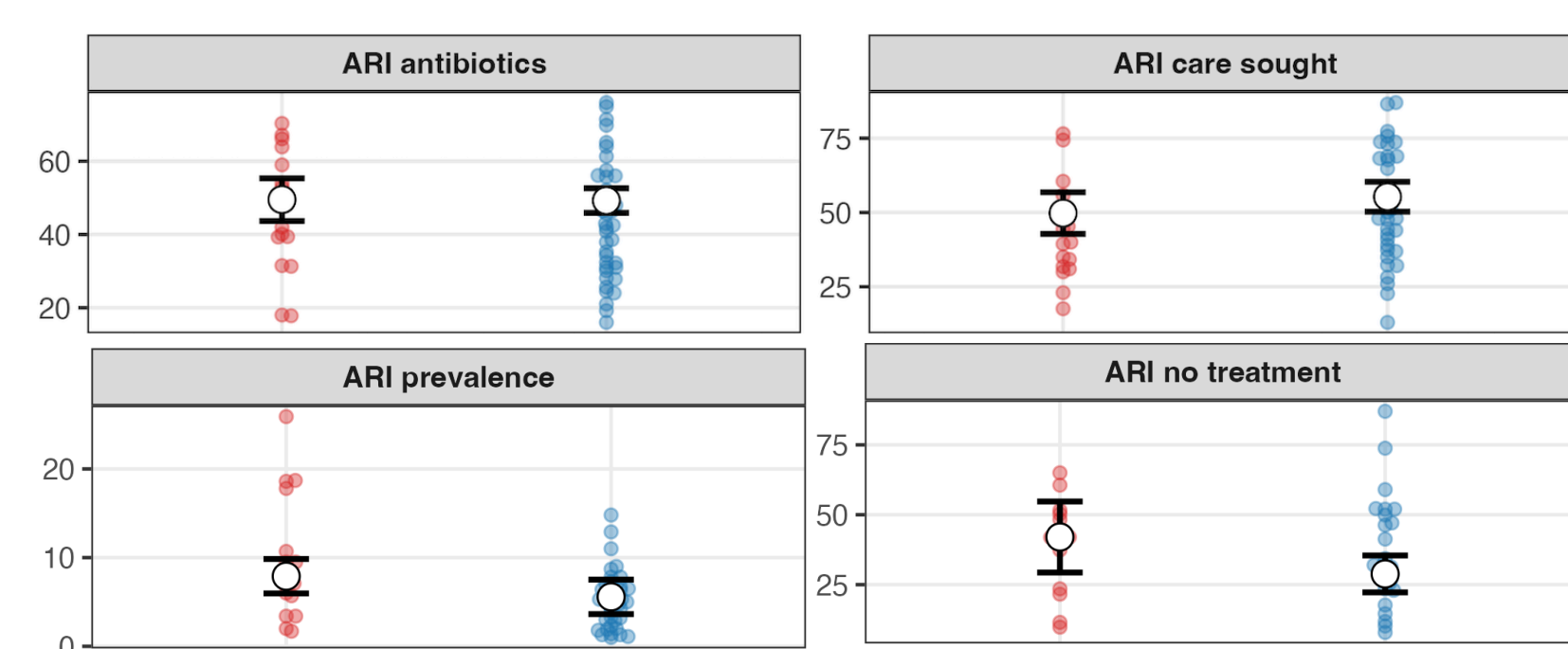
All age groups’ mortality rates were significantly higher in fragile countries compared to conflict countries.

Figure 3:

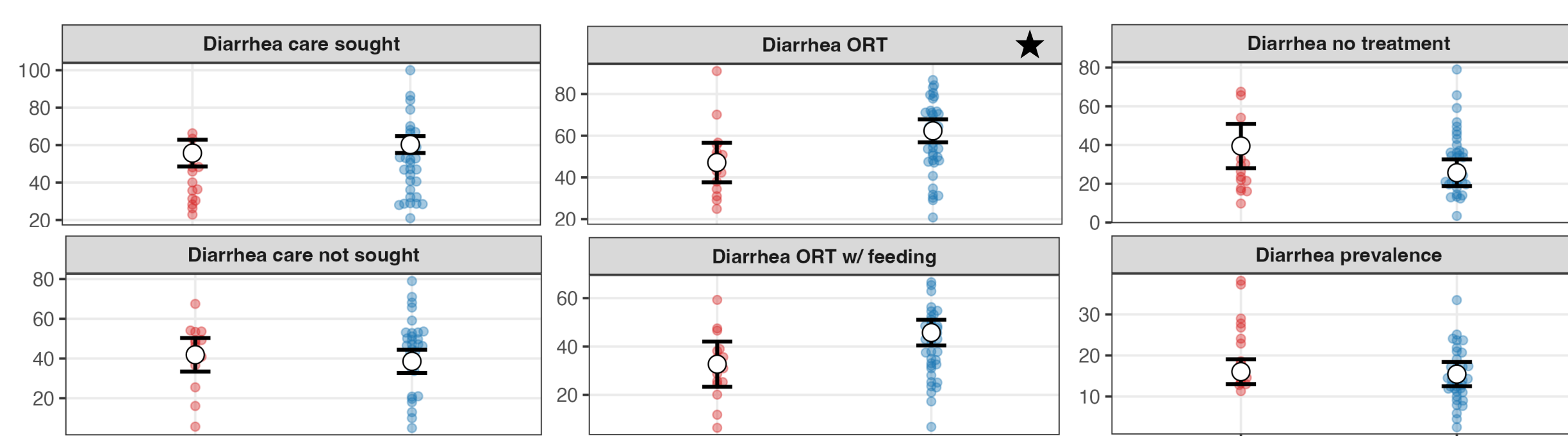


This univariate model analyzed 56 countries’ pediatric mortality rates based on country status (CAC or CISF) as a predictor of pediatric mortality and adjusted for repeated measures, weighting based on U5 population size, and clustering.

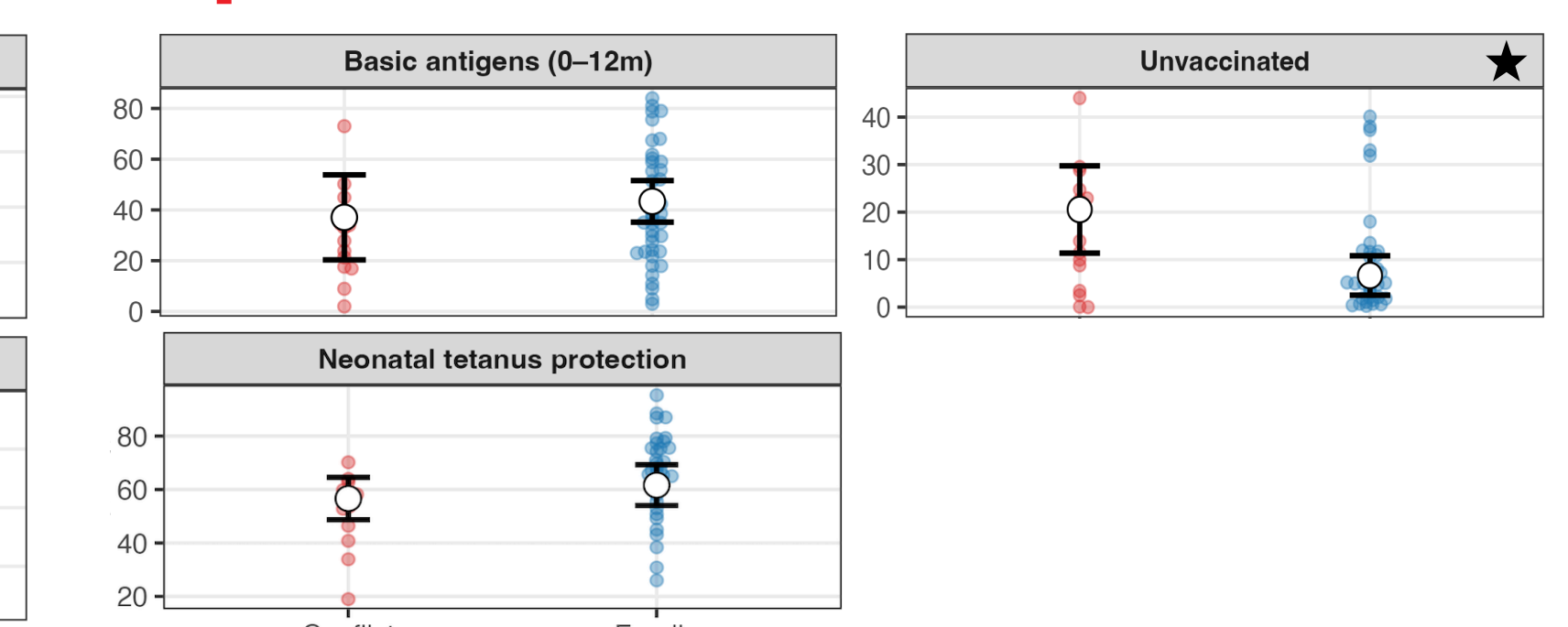
Respiratory Infection



Diarrheal Episode



Vaccination Rates



Figures 4-16: Secondary outcomes adjusted GEE model
Dots = country-years; outlined dots = marginal means; bars = 95% CI (ADJUSTED for MICS round, sub-region, population)

● Conflict ★ Significance (p<0.05)
● Fragile

Conclusion: Children in fragile settings had significantly higher pediatric mortality rates when compared to children in conflict settings. Secondary child health outcomes were similar between CISFs and CACs. However, children in CISFs displayed higher rehydration therapy usage during diarrheal episodes, and children in CACs had significantly higher unvaccinated rates. This study may indicate children in fragile settings are an under-identified and unique sub-population, even in comparison to children in conflict settings. As the number of children living in FCV-affected countries grows and as conflict and fragile settings become more chronic, these findings emphasize the need for targeted health interventions and allocation of health resources for children in both conflict and fragile settings.

Limitations: While using the UNICEF MICS allowed for secondary health outcome analysis, there were some countries on the World Bank’s FCV list that were excluded from this study due to not have correlating MICS available which limited the sample size. Over the 18-year study period, the UNICEF MICS iterations evolved in elements measured, which limited data availability for some variables.