

## AMANHI-All Children Thrive Bio repository study

### Background /Rationale

There are no population-based pregnancy and birth bio-repositories in low- and lower middle-income countries. These bio-repositories were created as part of the AMANHI study in Bangladesh, Pakistan and Tanzania to identify bio-markers of adverse birth outcomes measured until 42 days post birth. Under this grant, the total number of pregnant women will be expanded to 10,000 and the follow up of mothers and infants will be extended to 24 months after births.

### Study Questions & Design

The aim of this study is to collect biological samples during pregnancy, birth and postnatal period, and use them to identify biological markers as predictors of important maternal and fetal outcomes. The first set of studies currently under way are evaluating genetic, transcriptome, proteomic and metabolic markers of gestational age from maternal blood samples collected in the second trimester of pregnancy. Other outcomes of interest include IUGR, stillbirths, neonatal deaths, as well as stunting and neurodevelopment at 24 months of age.

### Programmatic Implications

Use the identified predictors of healthy birth, growth and development to improve maternal, fetal, newborn and infant health.

### Locations & Collaborators

Bangladesh	Johns Hopkins University, USA (Prof Abdullah Baqui)
Pakistan	Aga Khan University, Pakistan (Dr Fyezah Jehan)
Tanzania	Centre for Public Health Kinetics, Pemba (Dr Sunil Sazawal)

### Data Collection

2015 – 2019 Data collection on outcomes will be completed in 2020.

### Funders

Bill & Melinda Gates Foundation

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