TANIA BARHAM
HEALTH DISPARITIES AND BEHAVIOR
CPCU DAY 2021

Research Supported by: NIH, NSF, 3ie, PRB, State of Colorado, CUPC, IBS

Research Areas

Health and development economics with a focus on human capital development and poverty reduction.

- Causal effect of important social intervention programs through the life cycle
  - *Short–term effects:* on early childhood development
  - *Longer-term effects*: understand earlier changes in an individual's human capital effect later-life educational attainment, employment and income, cognition, health status, or migration…
  - *Newer Research:* intergenerational effects on the children of those who benefited when they were young
  - *Future Research:* effects on aging

Countries: Bangladesh, Brazil, Mexico, Nicaragua, Yemen, USA

Bangladesh: Mother and Child Health and Family Planning Program in Matlab (MCH-FP)

Research funded by: *NIH, NSF, 3ie, PRB, CUPC, IBS*

icddr,b: Abbas Bhuiya, *Abdur Razzaque*

University of Colorado: Jane Menken, Nobuko Mizoguchi, Elisabeth Root, Jill Williams

University of California Los Angeles: *Randall Kuhn*

Brown University: Andrew Foster

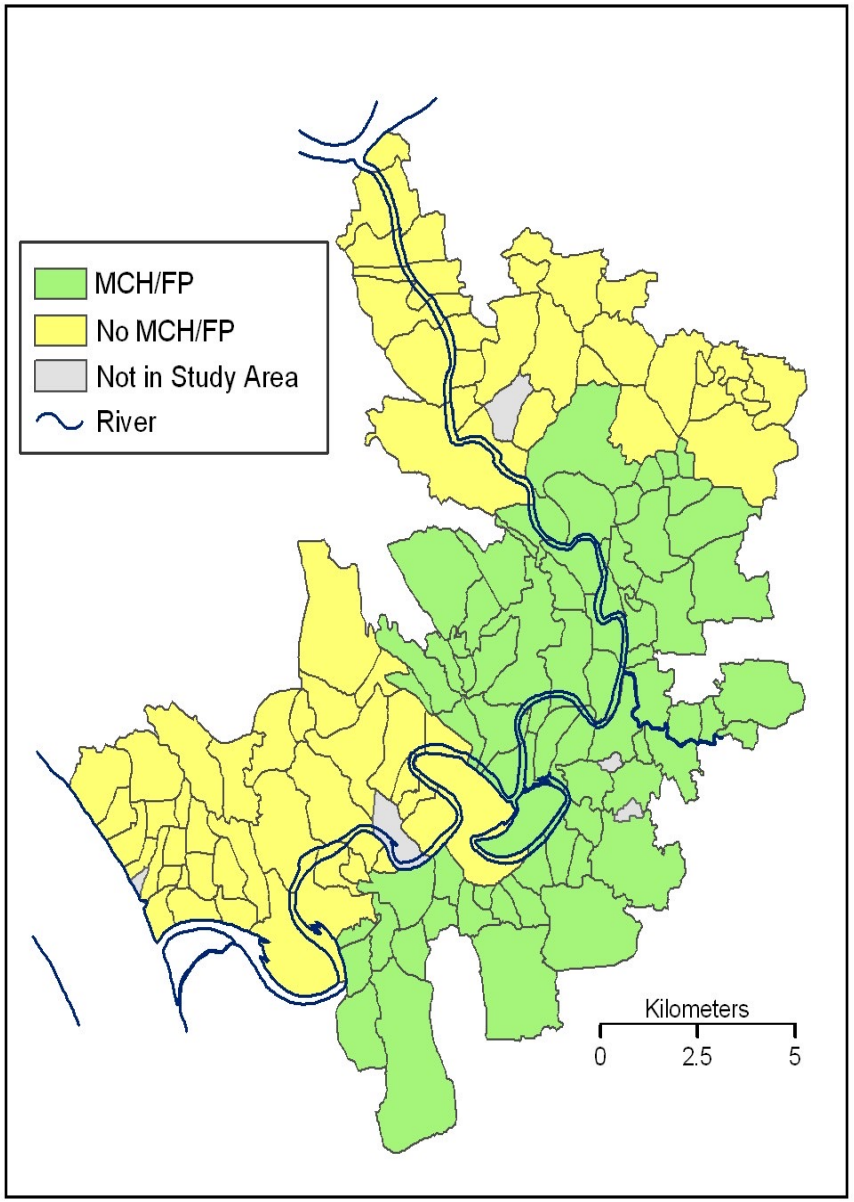
Independent University, Bangladesh: Omar Rahman

Former Graduate Students

- Chris Jochem-Geog, Emily Steiner-Soc, *Patrick Turner-Econ, Brachel Champion-Econ,* Svetoslava Milusheva-Econ

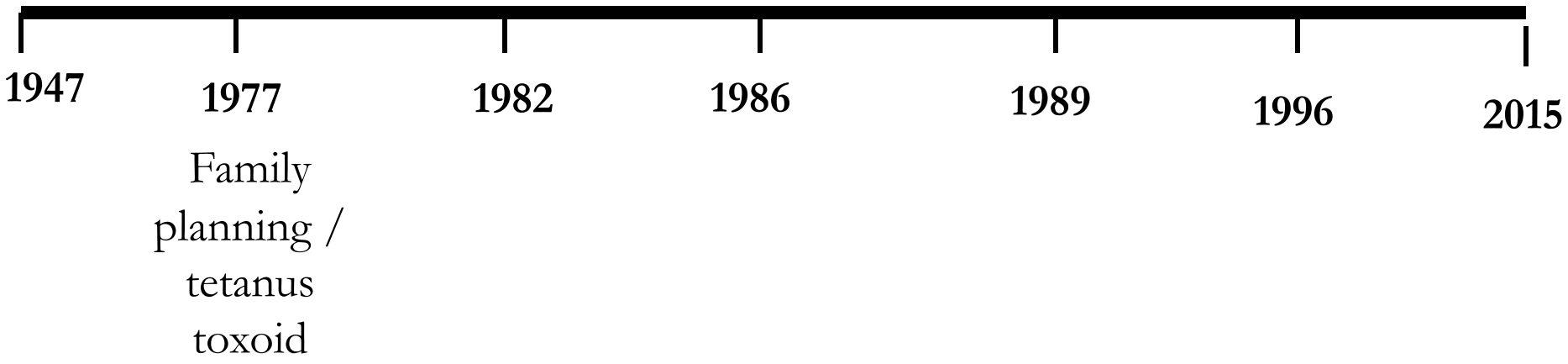
The Matlab Study Area – Rural Bangladesh

- Mother and Child Health and Family Planning Program (MCH-FP)
  - Started: ICDDR,B 1977
- Contiguous areas
  - Minimize spillovers from vaccinations
- Demographic surveillance site
- Treatment and Comparison areas
  - Binary intent-to-treat indicator
- Baseline balance good
  - Except - access tube well water, religion



MCH-FP Study Design

Intervention and Cohorts of Interest MHSS2



- icddr,b, pilot for the government
  - Vaccination <= age 5; Interventions provided in home

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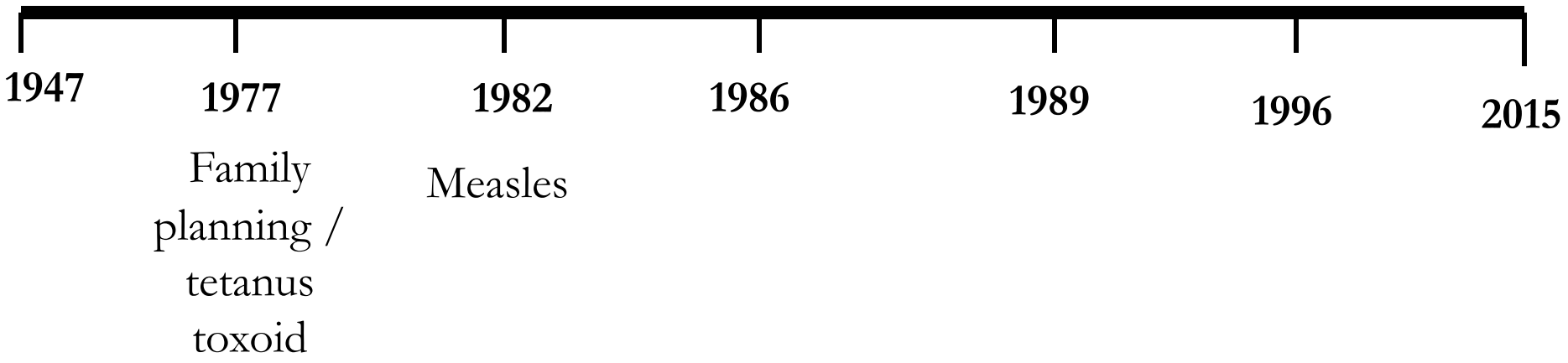

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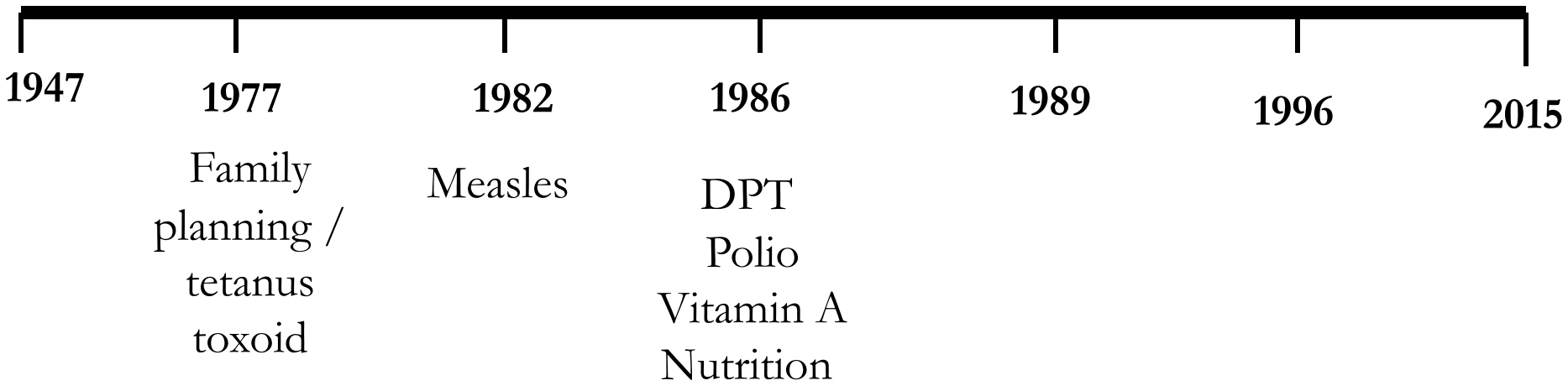

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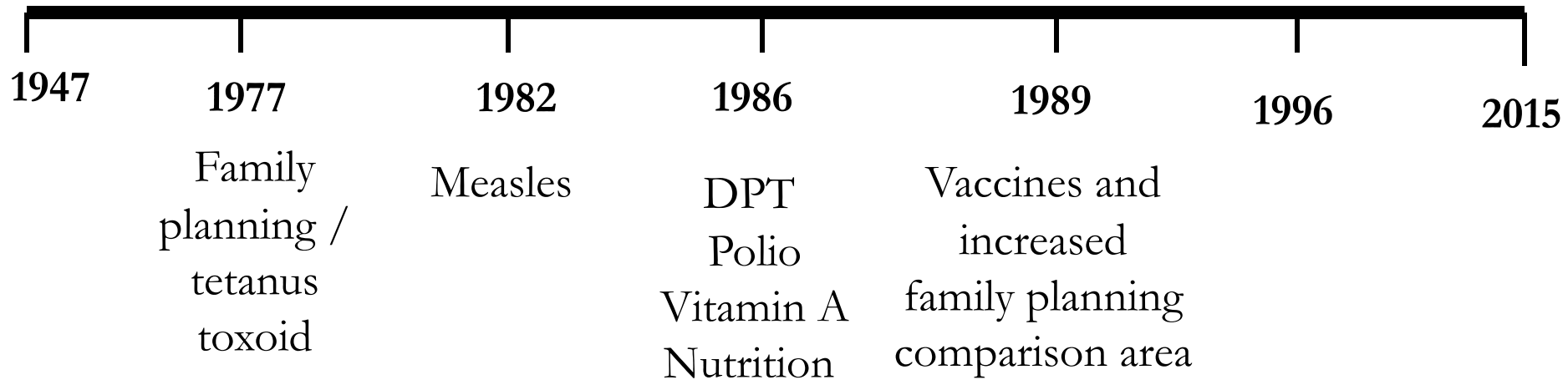

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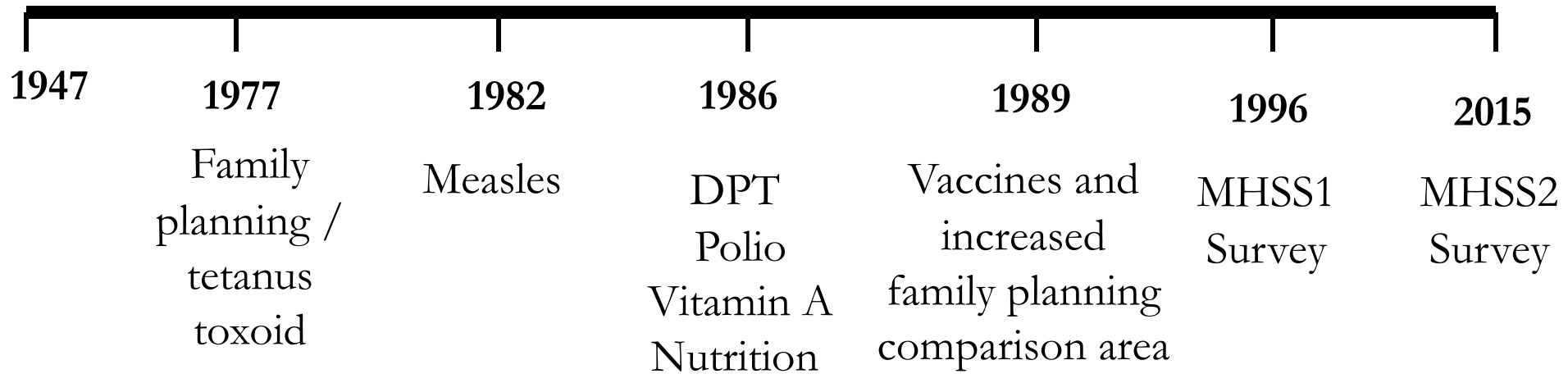

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MCH-FP Study Design

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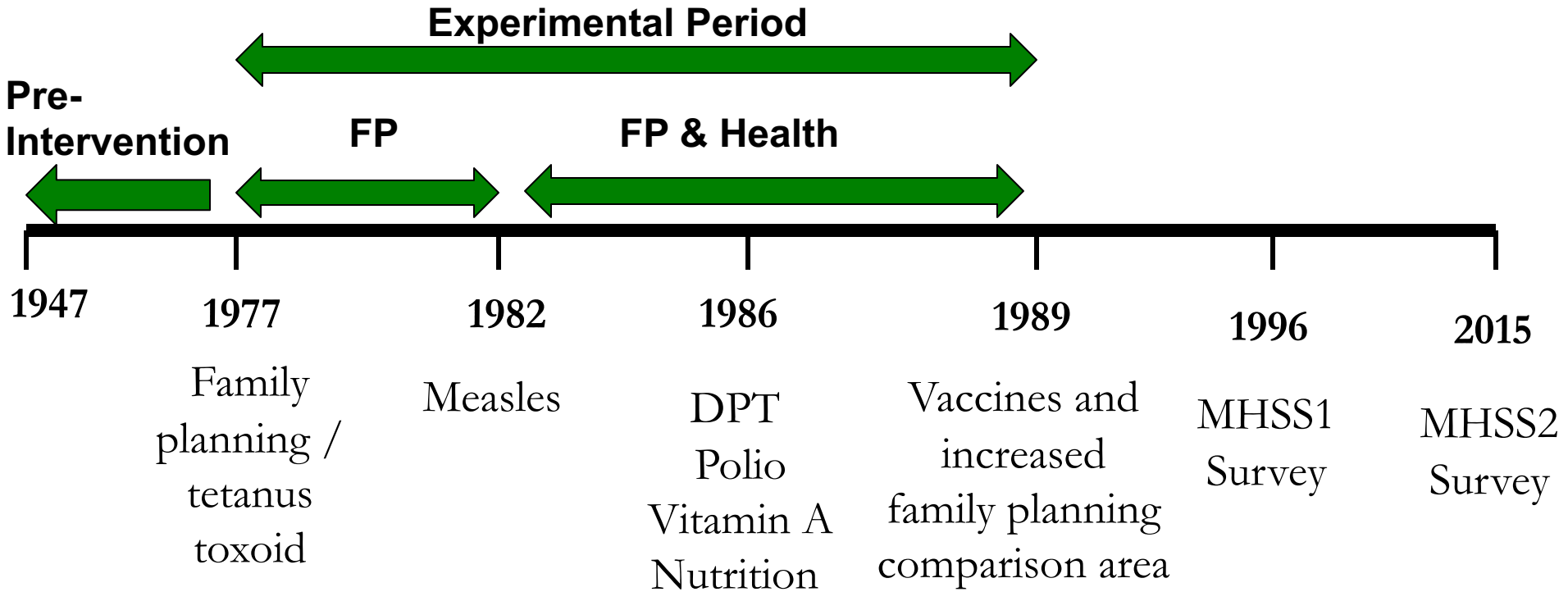

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- Key cohort: 1977-1982 & 1982-1988

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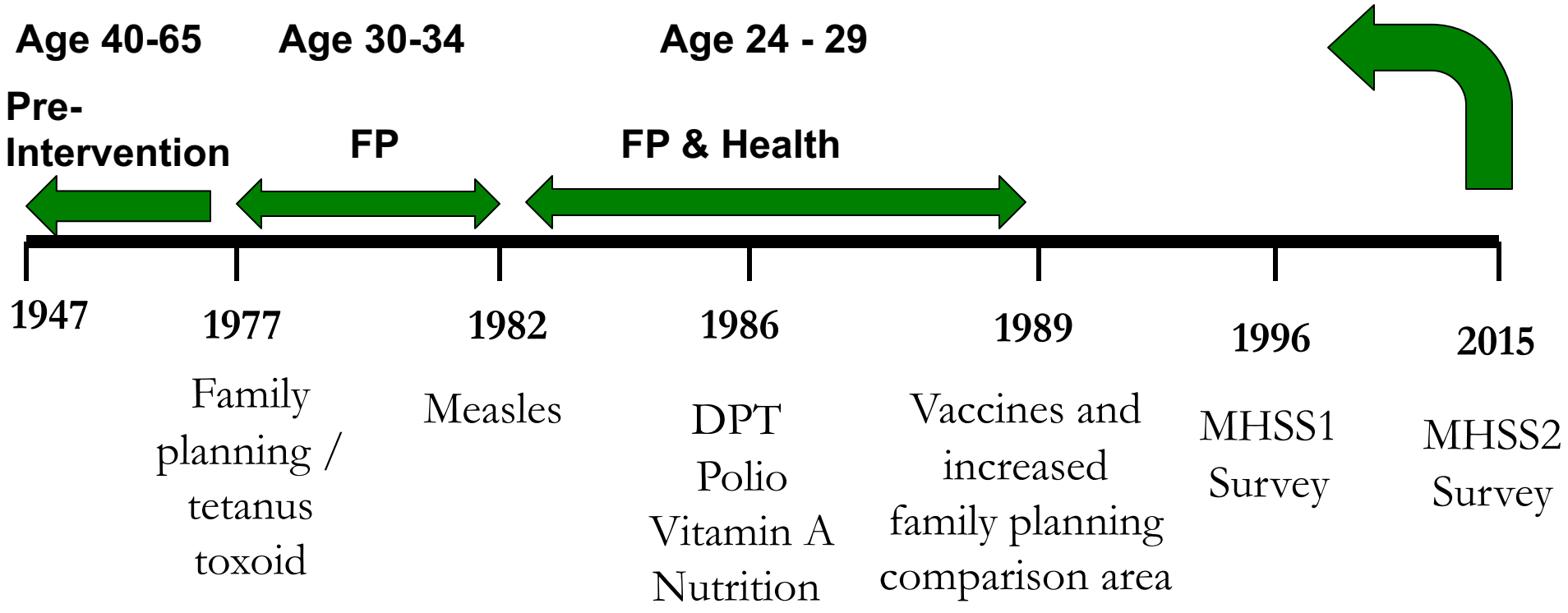

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Individual Panel Data from 1974-2012

1) Matlab Health & Socioeconomic Survey I: 1996

- Random 10% of bari's in Matlab icddr,b study area
- Large socio-economic survey

2) Matlab Health and Socio-Economic Survey 2: 2012-2015

- MHSS1 sample + all descendants + most spouses + pre-1996 migrants
- Extensive tracking of migrations **< 10% attrition**
  - 60 percent of our main male sample migrated

3) Census (1974) – Pre-Intervention Data

Intent-To-Treat Effects

Treat-Control Groups

Children born when child health interventions available:

Ages 8-14 (MHSS1): (Barham, 2012)

- significant improvements in
  - height ~ 1 cm (0.22 SD)
  - cognitive functioning (0.39 SD)
  - schooling (0.17 SD)

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Ages 24-31 (MHSS2):

- (Barham, Champion, Kagy, Hamadani 2021)
  - Human capital effects persist except for cognition
- (Barham, Kuhn, Turner 2021)
  - *Better jobs:* more professional, used more math skills, more entrepreneurial
  - 30% reduction in *migration* urban areas of Bangladesh not internationally.
  - No effect on *annual earnings,* but *welfare* higher due to reduced migration

Intent-To-Treat Effects

Treat-Control Groups

Intergenerational effects on their children (aged 0-14)

Effects for females no males - puzzle

- Height 1.6cm
- 50 percent reduction in stunting
- Higher grip strength (0.41 Sd)
- Higher cognitive functioning (0.26 SD)