

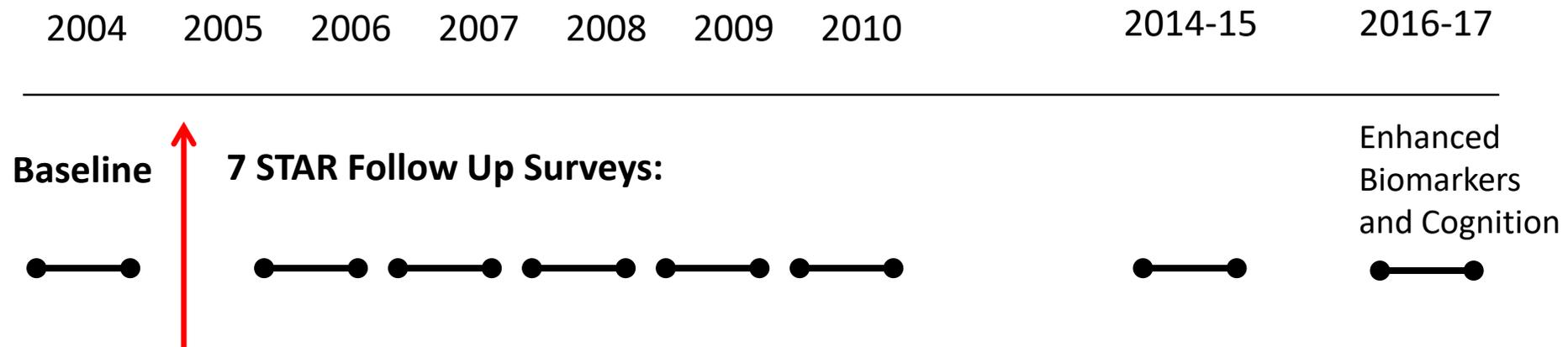
Study of the Tsunami Aftermath and Recovery (STAR)



Elizabeth Frankenberg & Duncan Thomas

Longitudinal survey of individuals, families, and communities

Indonesia: before and after the 2004 Indian Ocean tsunami



Baseline: N~26,000, ages 0-80+

96% of survivors interviewed at least once, original communities (N=487) span continuum of damage

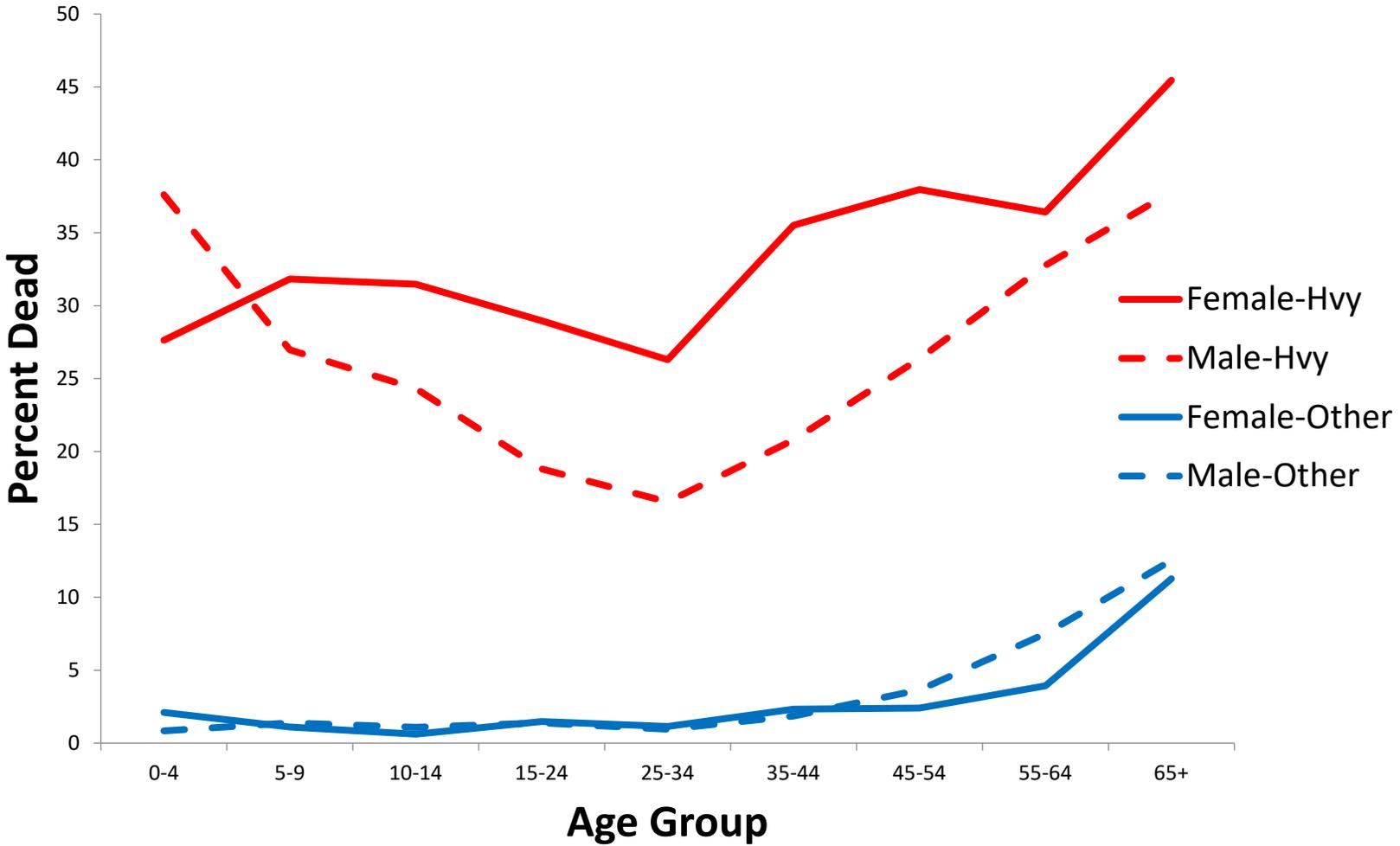
Biological components: height, weight, blood pressure, Hb, dried blood spots (hsCRP)
subsample: HbA1c, hsCRP, HDL & total cholesterol (POCTs)

Survey domains: hh composition, economic resources, education, migration, work, fertility, psychosocial health
tsunami shocks, loneliness, sleep, social support and networks



Mortality between 2004 and 2005

By Age, Gender, and whether the community was **heavily damaged** or **not**



Existing Biomarkers

Follow-ups:

Yr1: No biomarkers

Yrs 2, 3, 4 : height, weight,
5, 10 waist, hip,
blood pressure,
hemoglobin,
dried blood spots
(hsCRP on going)

Yr 13 (POCT subsample):
added hsCRP
HbA1c
cholesterol
(total, HDL)
body composition

Planned Biomarkers:

Q: What is temporal path of biological health risks following a major exogenous shock?

Extend on-going work develop panel of hsCRP post-tsunami using stored DBS

Repeat extended biomarker and cognition assessments

hsCRP, hbA1c, cholesterol, blood pressure, anthropometrics

Add other biomarkers using stored DBS for which long-term panel scientifically valuable

Limitations: Assess biomarkers in home (POCTs) or in labs in Indonesia

Develop mechanism to transport specimens out of Indonesia

(epigenetics, RNA)

Q: Can we contribute to understanding dementia and ADRD after a major shock?

Develop protocol for clinical diagnoses, key biomarkers, MRIs

Q: Are there inter-generational impacts of stresses

Investigated in utero effects

Extend to effects on child born before and after tsunami

Cognition

Word recall, pattern recognition since 2008

Mini mental state, mini-cog in three recent rounds

Executive function on tablets:

- spatial planning ("tower of London")

- emotional reactivity and control

The Future:

- repeat what we have done before

- expand tablet based executive function measures to subdomains

- more extensive Alzheimer's work up (with MRI) for subsample