Improving sub-county population estimates in Florida
REVIEW OF AVAILABLE PRODUCTS
Life Expectancy Estimates

• County-level only

• Use state-produced population estimates
American Community Survey (ACS)

• 2009-2013 data
  – “Matches” temporal aggregation for mortality data

• Exploring use to calculate other health indicators at sub-county level

• Warnings/concern about margins of error
2010 Census

- Midpoint for mortality data aggregation (2009-2013)
- Avoid margin of error problem
- Limitation: not sustainable source of population estimates
Sensitivity Analysis

• 2010 census data
• Concern about availability of sub-county population estimates for <1 population
• Combined deaths and population estimates for <1 and 1-4 year age groups
• Used SEPHO to calculate estimates at state and county levels
State-level Results

• 2009-2013 ACS LE = 78.7
  – Suppressed ZIP codes
    • 46 SE > 2
    • 41 SE = 0

• 2010 Census LE = 79.7
  – Suppressed ZIP codes
    • 86 SE > 2
    • 10 SE = 0

• 2010 Census sensitivity analysis LE = 80.0
UNIVERSITY OF MASSACHUSETTS DONAHUE INSTITUTE (UMDI)

A New Partnership
Options

• Meetings with stakeholders internally to confirm needs

• Discussions with other agencies and state universities

• Outreach to Massachusetts Environmental Public Health Tracking Program
UMDI Florida Products – Phase I

• 5-year age groups 0-4 through 85+ plus age groups 15-17 and 18-19 by
  – Male and female by
  – Race groups including White Alone, Black Alone, Asian Alone, Hawaiian and Other Pacific Islander Alone, American Indian and Alaskan Native Alone, Two or More Races, and Total races by
  – Hispanic and Non-Hispanic Origin by
  – Census Tract 2010 by
  – single years 2000 through current year 2016
Special Considerations

- Controlled to University of Florida- Bureau of Economic and Business Research (BEBR) annual county-level population estimates by age group/sex/race/origin for 2000-2016

- Review child-to-woman ratios for Florida to determine the reasonable maternal age-cohort for estimates purposes for Florida

- Develop confidence intervals for all estimates years (2000-2016) by age group and cohort size based on errors observed in modelled 2010 estimates compared to Census 2010 counts
Options Under Review

• Race allocation process

• In discussion
• Distribute age/sex/race/ethnicity/year/tract estimates for 2000 through 2016 to 2010 ZCTAs using Census 2010 tract-ZCTA relationship files
• All estimates expressed in 2010 ZCTA geography
• ZCTA estimates will also include confidence intervals
UMDI Florida Products – Phase III

• Develop and test customized model for 0-4 population by single year of age using FL births and infant mortality by age/sex/race/origin/tract
• Develop an alternative method for estimating children aged 0-4 by single year of age, sex, race, and origin at the Census tract level
• Model performance compared to cohort-change ratio results
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Questions???