

Development of 2020 Demographic Analysis Estimates for the Population Aged 65 and Older: Combining Cohort Component- and Medicare-based Methods

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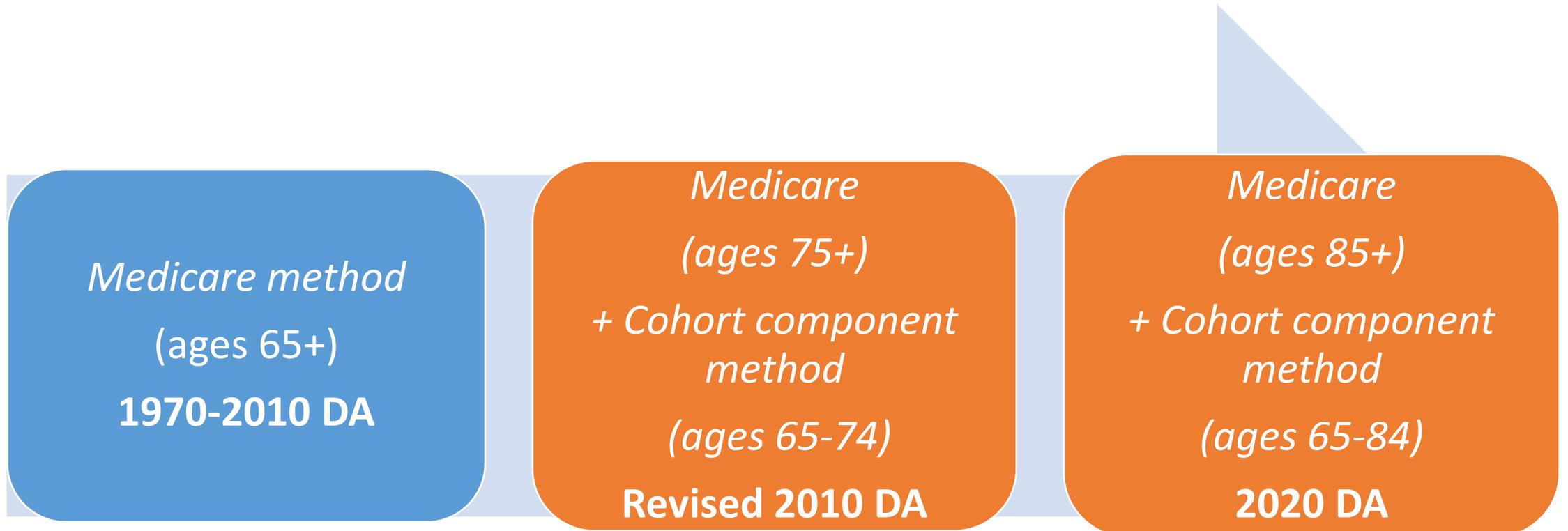
Southern Demographic Association Meetings

New Orleans, LA

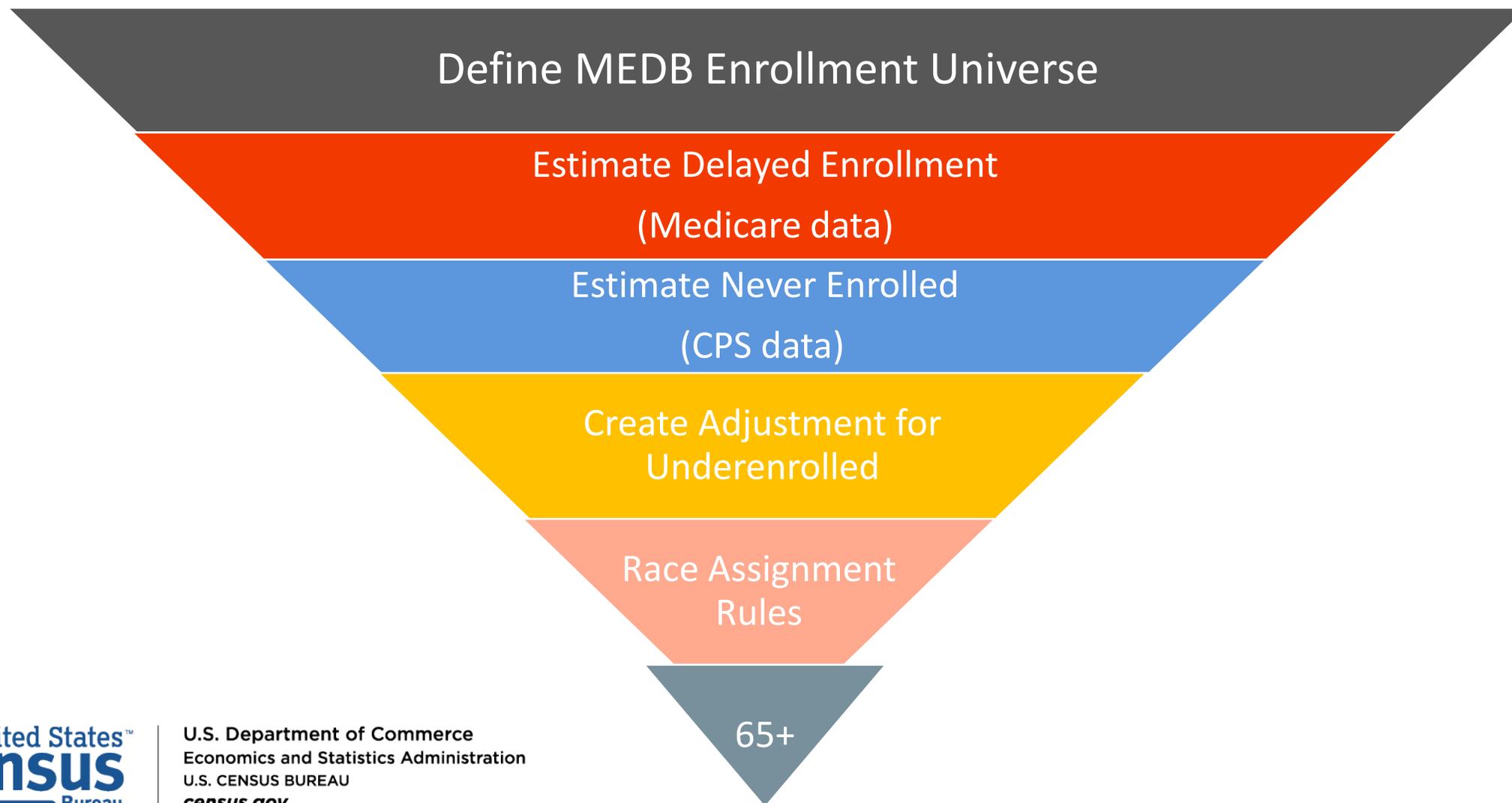
October 24-25, 2019

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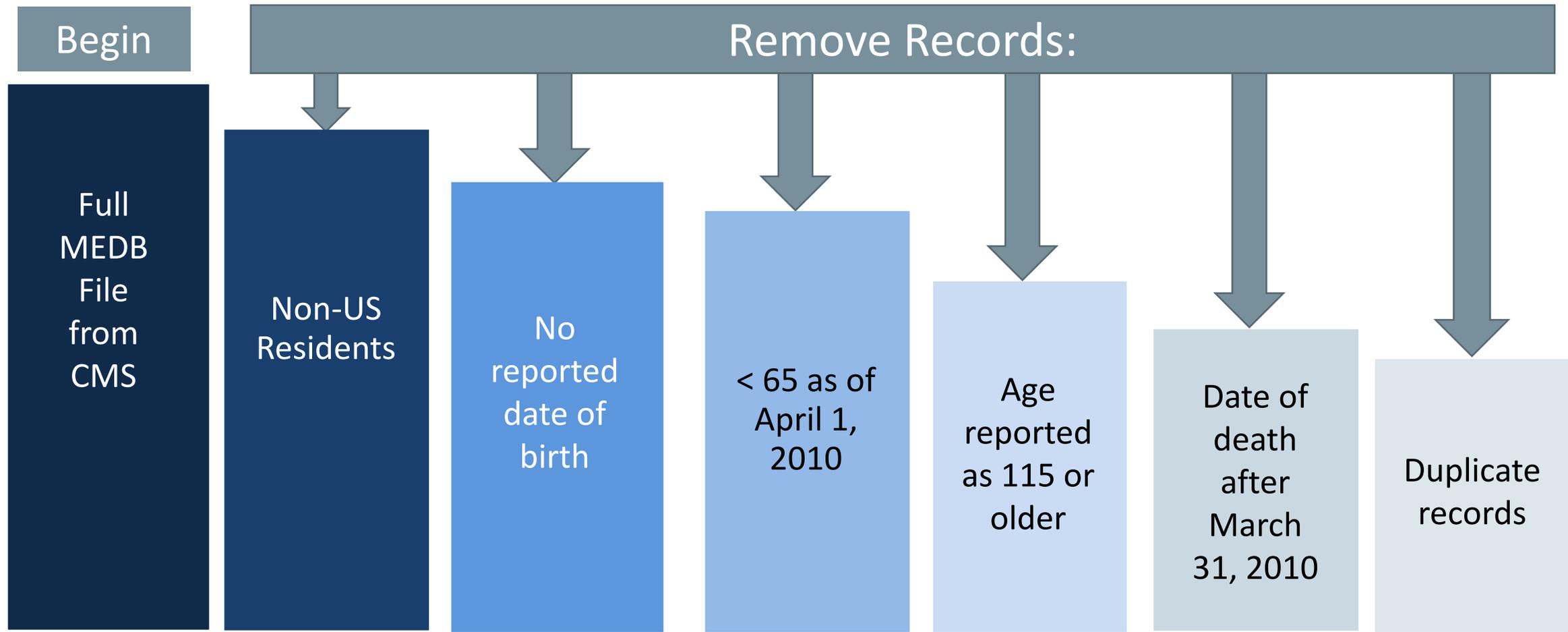
Timeline of Demographic Analysis (DA) Estimates Methods for 65+ Population: 1970-2020



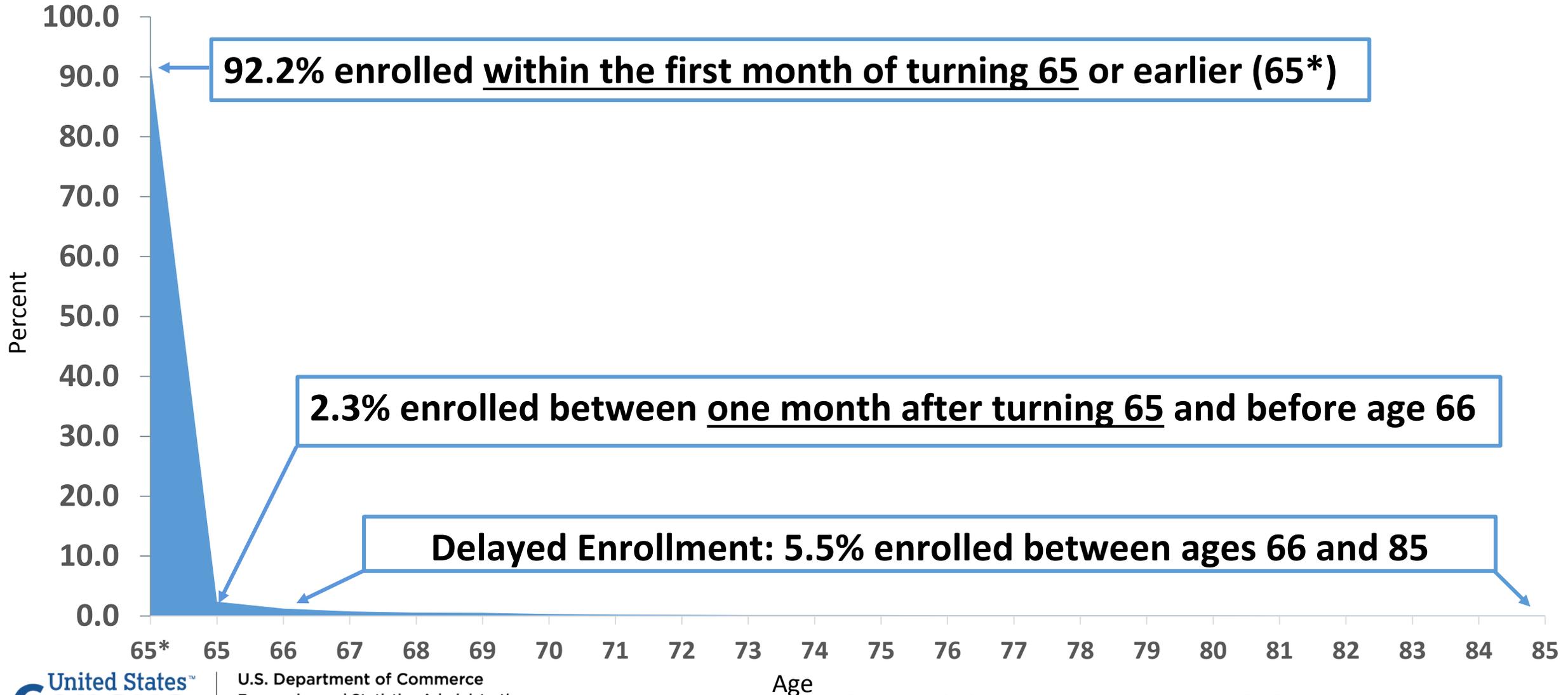
Medicare-based Method Steps



Medicare Enrollment Database (MEDDB) Universe

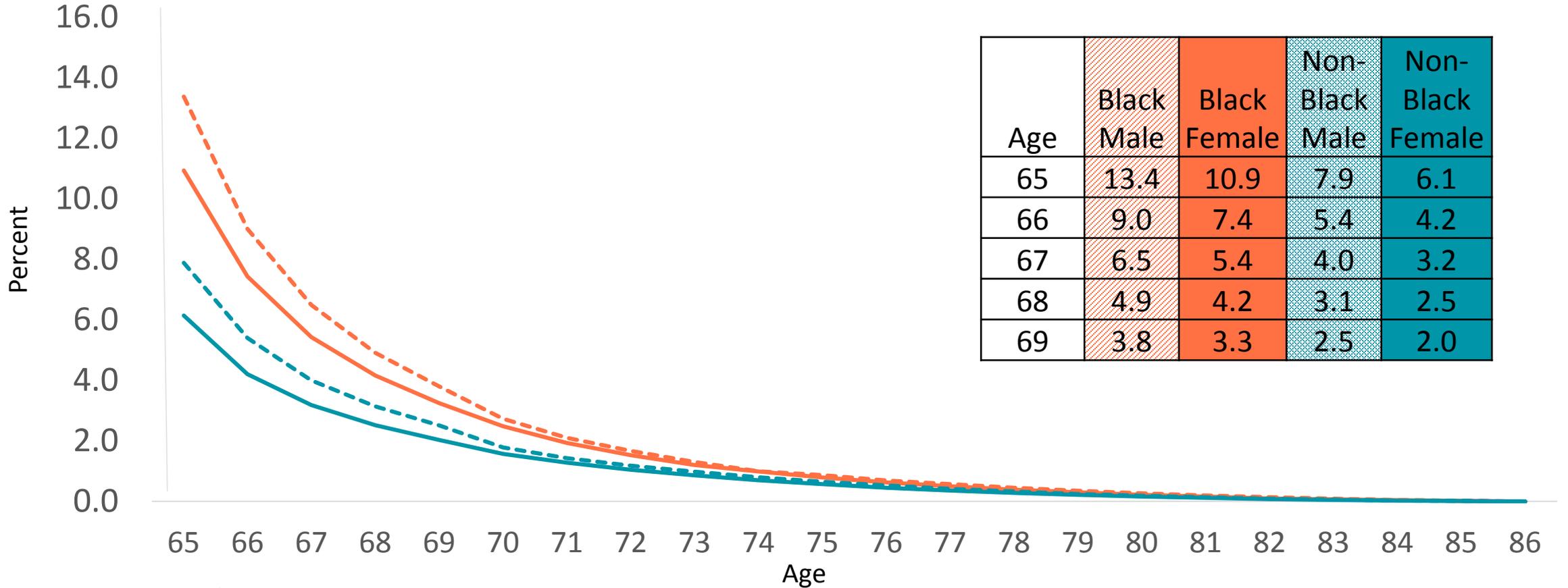


Percentage of Enrollees by Age of Enrollment: 2000

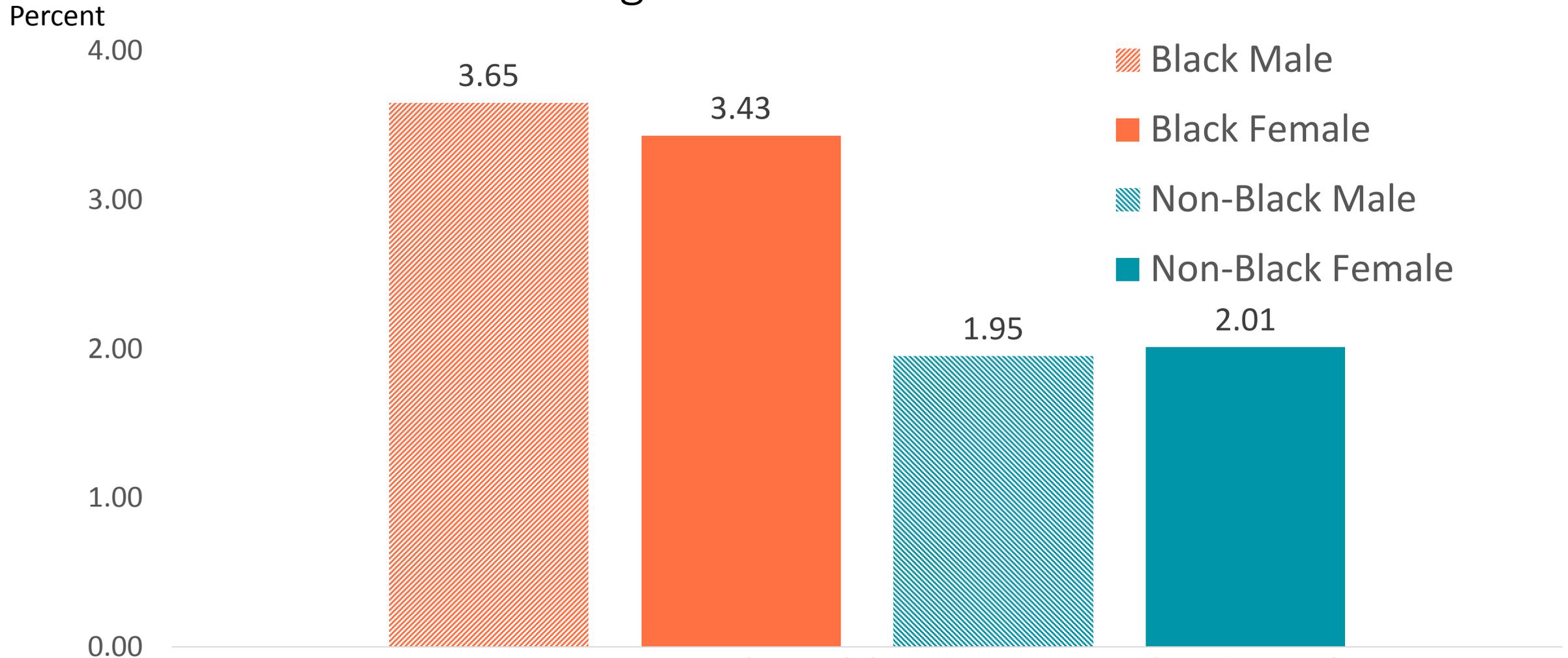


Delayed Enrollment by Age, Sex, and Race: 2010

Data for Ages 65-69 by Sex and Race

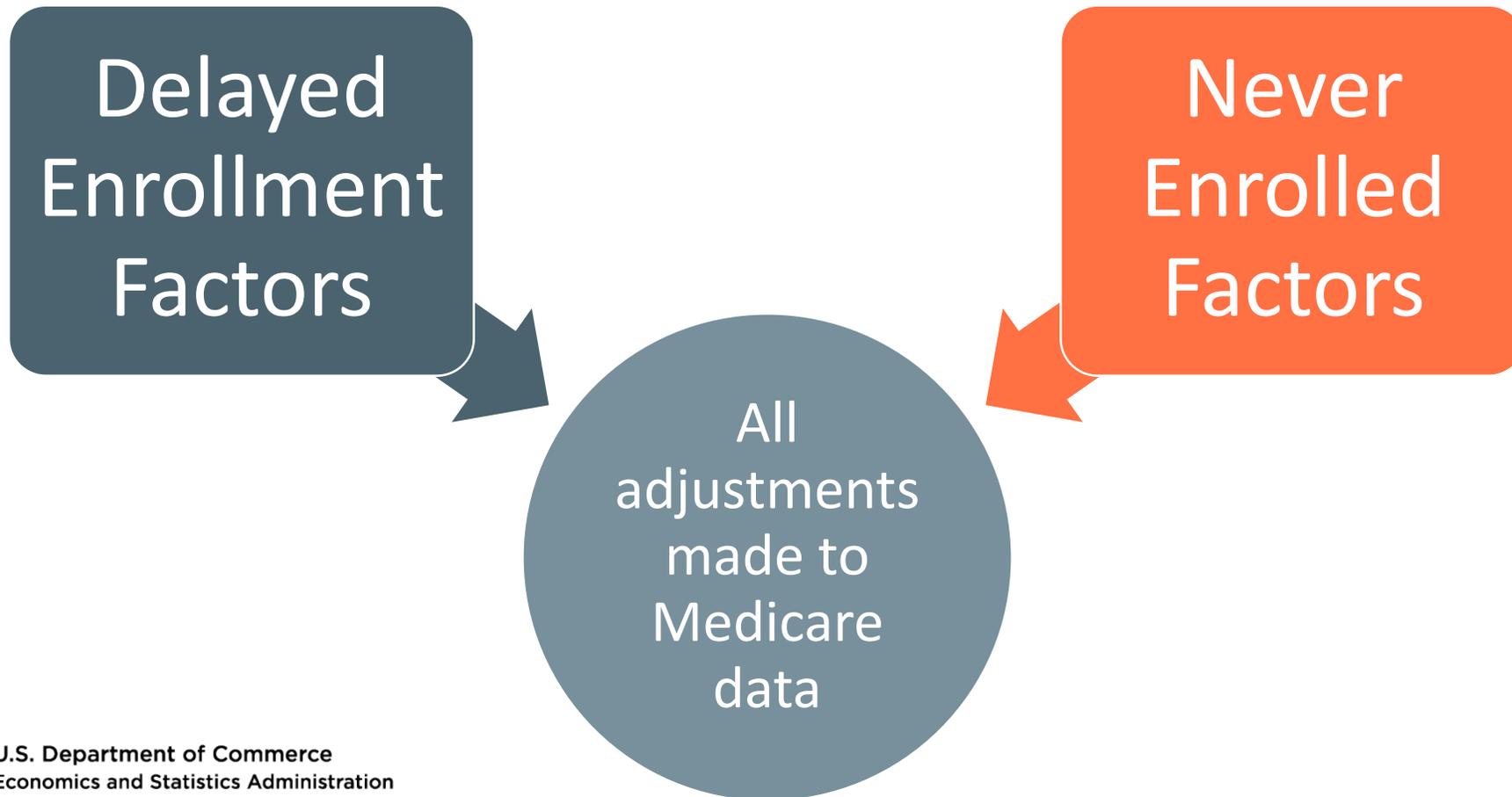


Never Enrolled Factors by Race and Sex for the Population Aged 75 and Older: 2010

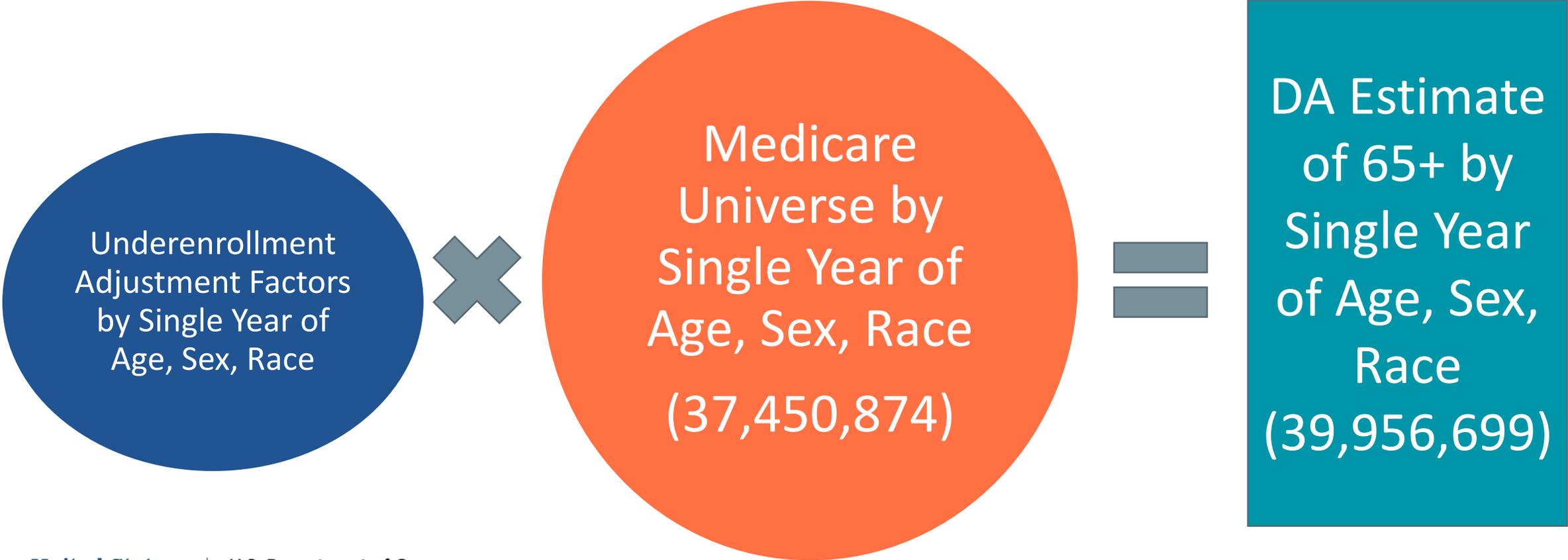


Source: U.S. Census Bureau, tabulations of Current Population Survey data.

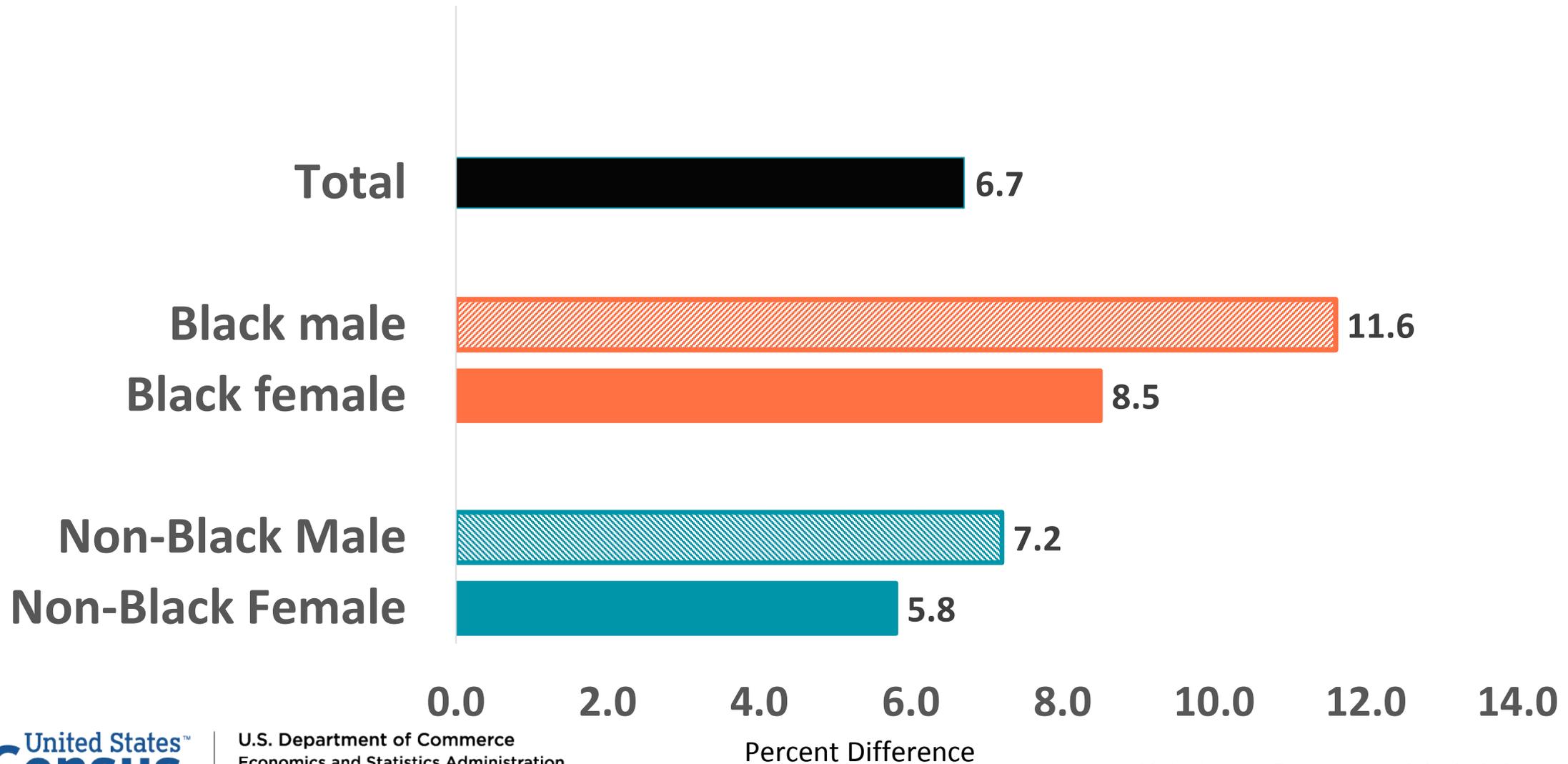
Underenrollment Adjustments to Medicare Data: 2020 DA



2010 DA Medicare-based Estimates



Percent Difference Between the Medicare Universe and Adjusted Medicare Population Estimates: April 1, 2010



Comparison of 2010 Census Data to Medicare-based DA Estimates for Ages 65-74

↓ = Census Count is Lower

↑ = Census Count is Higher

□ = Census is Within Threshold

Age	Black Male	Black Female	Non-Black Male	Non-Black Female
65	↓	↑	↓	↓
66	↓	↓	↓	
67	↓		↓	
68	↓		↓	
69	↓		↓	
70		↑		↑
71	↓			↑
72				↑
73				↑
74				↑
75				↑

Cohort Component Building Blocks

Births by Birth Cohort

— Deaths

+ Immigration

— Emigration

= DA Estimate

Ages 65-74 Methodology Overlap: Cohort Component- vs. Medicare-based Estimates

Vital Statistics Birth Year	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
Age as of April 1, 2010	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55
Eligible for Medicare?	Yes										No									
Age as of April 1, 2020	84	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
Eligible for Medicare?	Yes																			

Comparison of 2010 Census Data to Medicare- and Cohort Component-based DA Estimates for Ages 65-74

↓ = Census Count is Lower

↑ = Census Count is Higher

□ = Census is Within Threshold

Age	2010 Census Data Compared to:							
	Medicare-based				Cohort Component-based			
	Black Male	Black Female	Non-Black Male	Non-Black Female	Black Male	Black Female	Non-Black Male	Non-Black Female
65	↓	↑	↓	↓			↑	↑
66	↓	↓	↓					↑
67	↓		↓					↑
68	↓		↓		↓			↑
69	↓		↓					↑
70		↑		↑				
71	↓			↑				
72				↑				
73				↑				↑
74				↑				
75				↑				

Future Research for 2020 DA Methodology

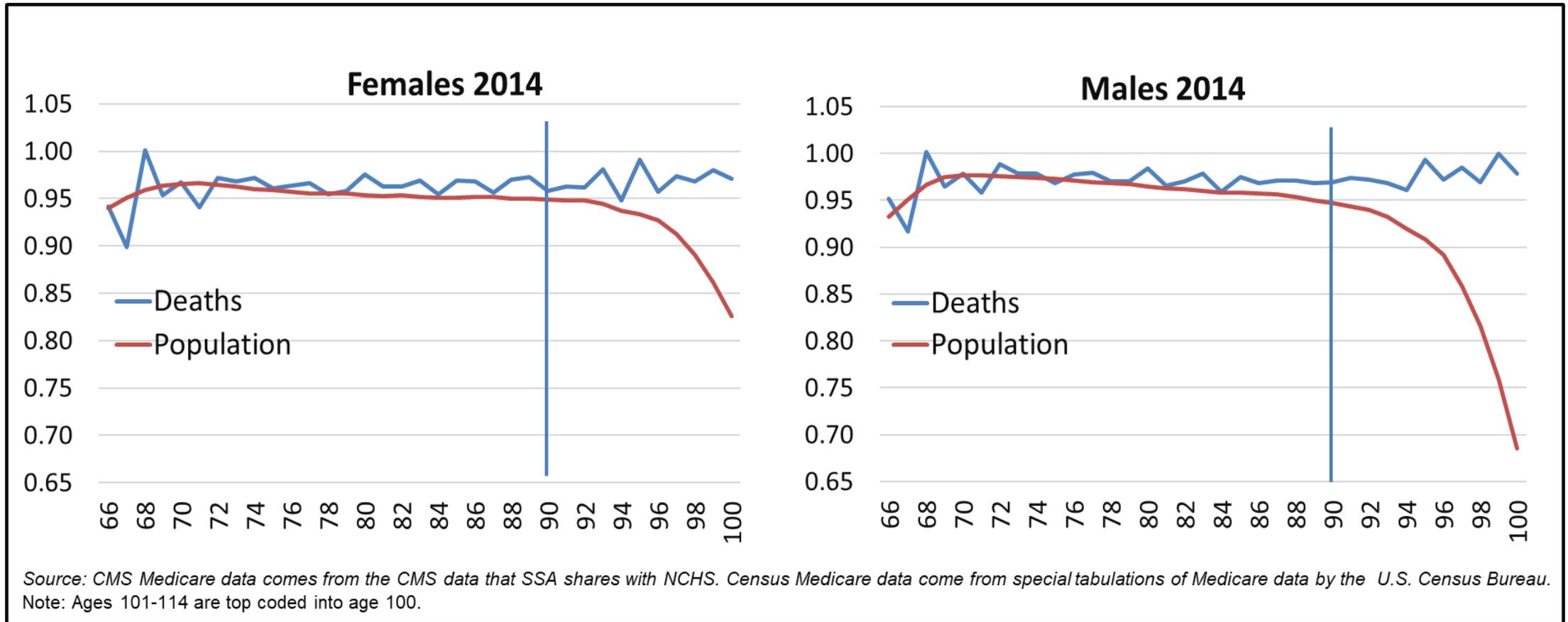
Cohort Component-based Estimates (65-84)

- Birth under-registration
- Death statistics

Medicare-based Estimates (85+)

- Define the Medicare universe
- Research “phantom” records
- Model estimates?

Ratio of CMS to Census Medicare Data: Deaths and Population Counts for Ages 66-100



Contact Information

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Information about 2010 DA:

<https://www.census.gov/programs-surveys/popest/technical-documentation/research/demographic-analysis.html>