State Variation and Disparity in Maternal Mortality among Black and White Women, 2011-2015

Elise Parks, Sarah Milder, MPH, Kristin Shaw, MPH, Arundel Metrics, Inc.

Background

- Compared with other high-income countries, the US has the highest maternal mortality ratio (MMR) and is one of the few countries with an increase in maternal deaths.
- The MMR for black women has been 3-4 times that of white women over the last century.
- While MMRs vary by state, a recent study suggested that 26% of the differences in statewide maternal mortality can be accounted for by the racial and ethnic composition of each state.
- This analysis explores and describes the range and variation in black and white MMRs by state.

Methodology

- Using 2011-2015 CDC WONDER data, race-specific MMRs and disparity ratios were calculated for non-Hispanic white and non-Hispanic black females to determine the statewide variation within racial groups and the magnitude of the black-white disparity for 23 states with 10 or more maternal deaths
- Based on WHO definition of maternal mortality (excludes late maternal deaths)
- Maternal mortality ratio (MMR) = Number of deaths / Number of live births, per 100,000 live births

Results

Fig. 1 Range in maternal mortality
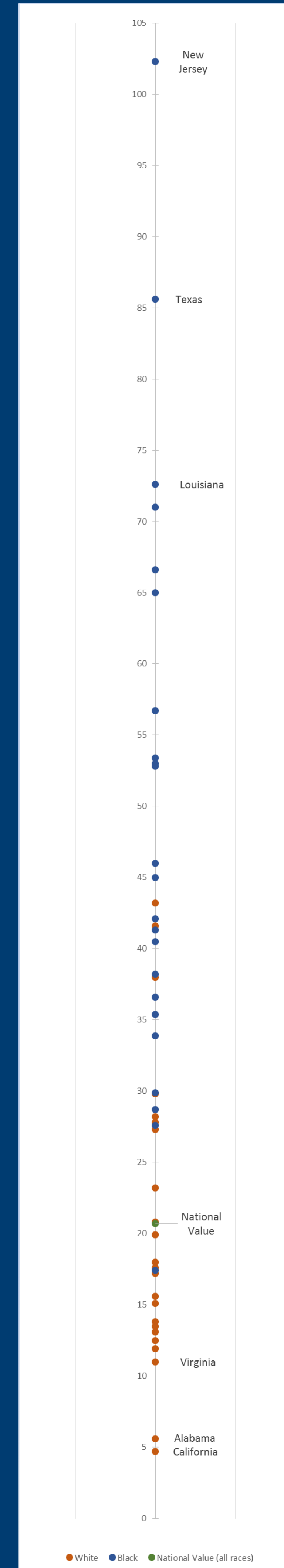
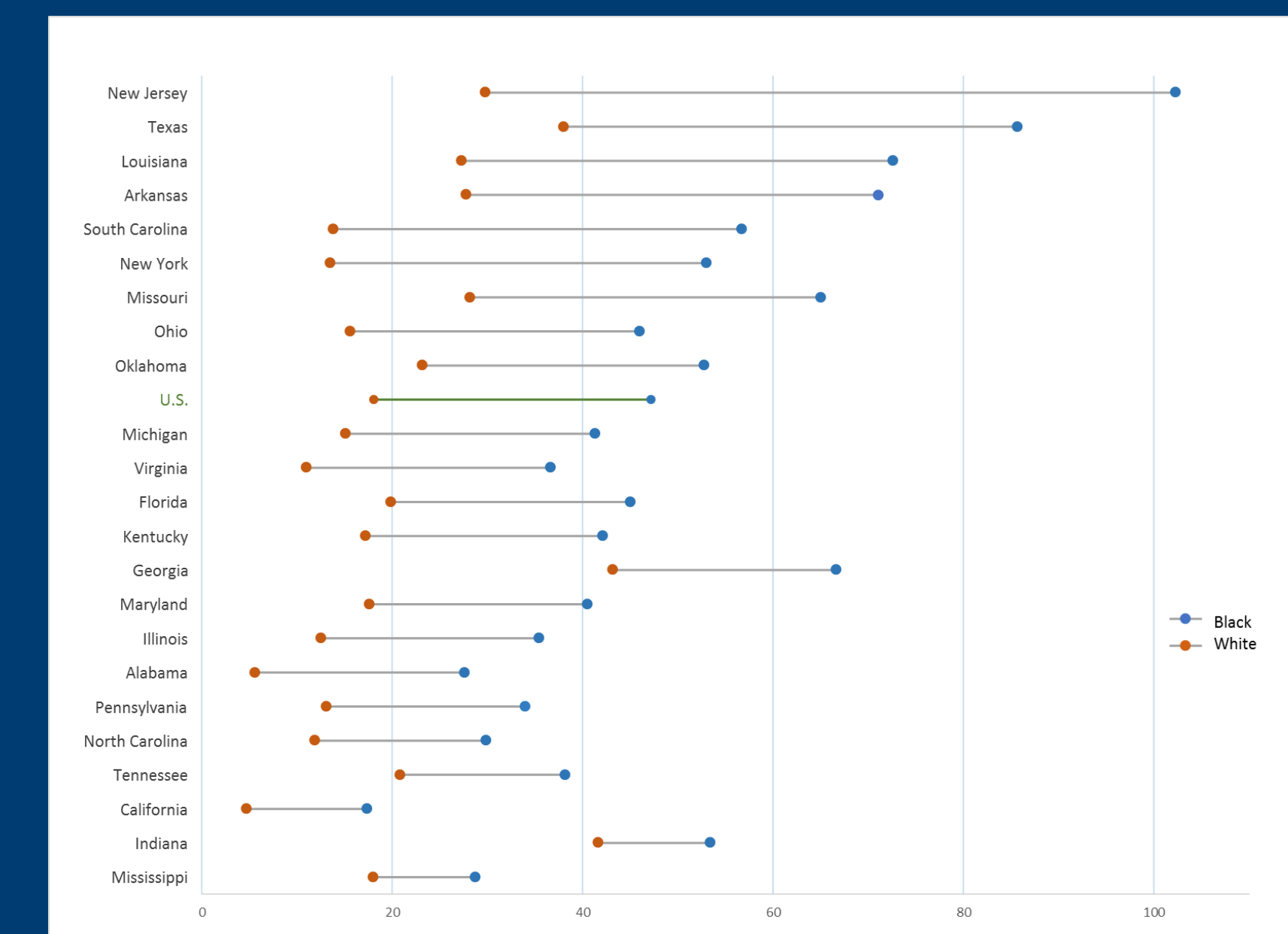All races: 4104 maternal deaths (20.7 per 100,000 live births)

Black: 1382 maternal deaths (47.2 per 100,000 live births)
- Among black women, MMRs range from 17.4 per 100,000 live births in California to 102.3 deaths per 100,000 live births in New Jersey.
- The MMR for black women in California is 2.7 times lower than the national MMR for black women.

White: 1930 maternal deaths (18.1 per 100,000 live births)
- Among white women, MMRs range from 4.6 deaths per 100,000 live births in California to 43.2 per 100,000 live births in Georgia.

Black-white disparity ratios

*Nationally, the black maternal mortality ratio is **2.6 times** greater than the white rate.*

Alabama had the highest disparity ratio:
- Black women were **4.9 times** more likely to die from maternal mortality than white women. (Fig. 3)

Indiana had the lowest disparity ratio:
- Black women were **1.3 times** more likely to die from maternal mortality than white women. (Fig. 3)

Fig. 3 Black-white maternal mortality disparity ratios

Fig. 2 Maternal mortality by state and race
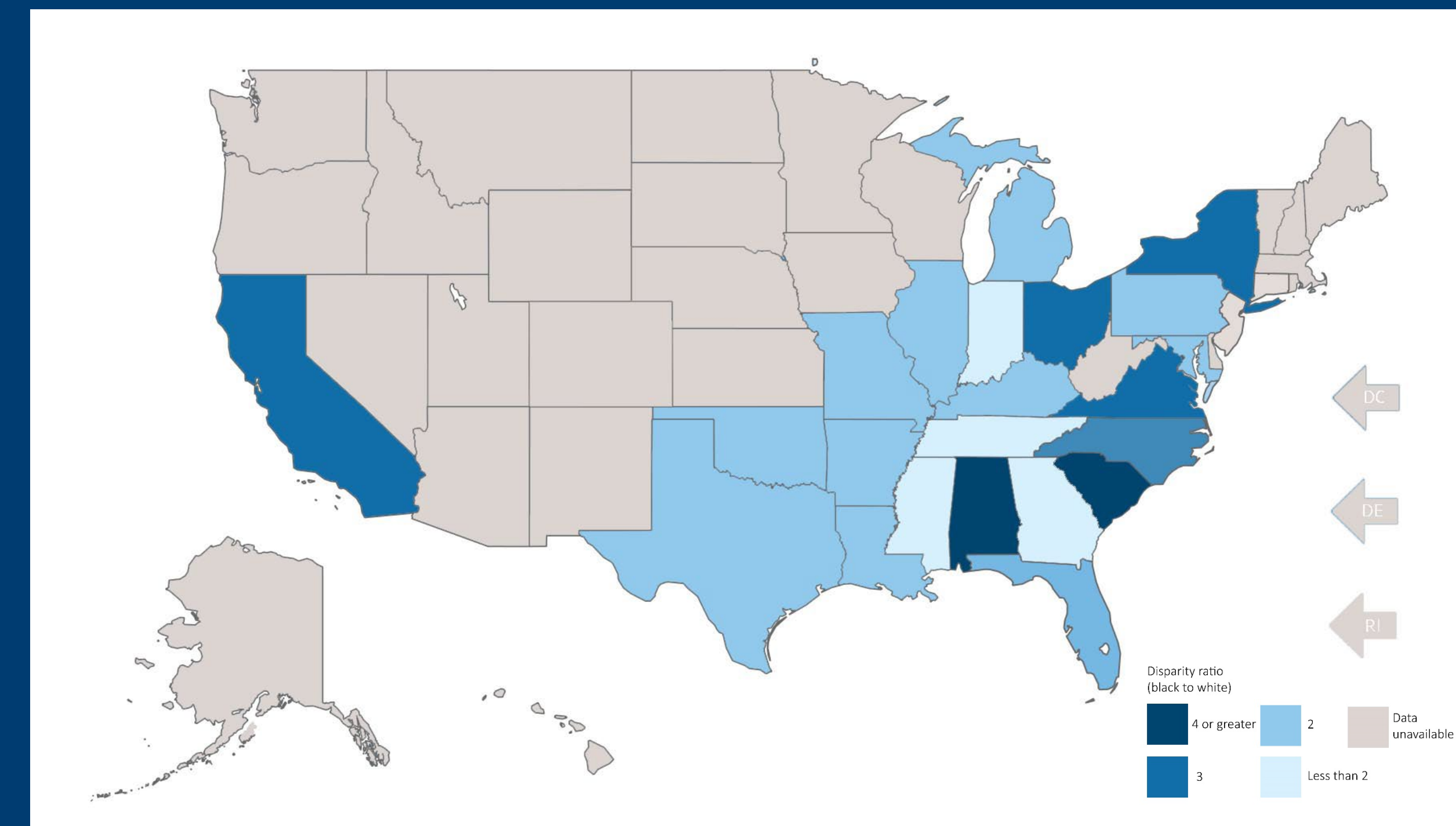
- In New Jersey there were 72.4 fewer deaths among white women than black women per 100,000 live births while in Mississippi there were 10.7 fewer deaths (Fig. 2)
- Georgia and Indiana had notably high MMRs for both races (Fig. 2)

Conclusions

- The black-white disparity in MMRs was present in every state with sufficient data.
- With high MMRs for black and whites, Georgia and Indiana had the lowest black-white disparity ratios.
- Black MMRs have a wider range than white MMRs.
- The wide variation in MMRs by state shows geographic trends beyond the racial composition of a population.
- Raising awareness of the racial disparity, especially in states with the largest disparity ratios, is key to lowering the national MMR and targeting preventions to those at greatest risk.

Limitations

- Maternal mortality is reported through death certificates at a state-level, which may be an unreliable method of determining whether or not a death was pregnancy-related.
- Recent studies have suggested national maternal mortality data may overestimate MMRs.
- Comparison between states may be inappropriate because of reporting and coding differences.
- Alabama had a small number of white deaths (n=10) which may make their MMR disparity ratio unreliable.

AMERICA'S HEALTH RANKINGS®
UNITED HEALTH FOUNDATION

Arundel Metrics