

Counting Opioid Overdose Deaths Among American Indians Using Different Definitions

The conventional public health surveillance method of counting opioid-related overdose deaths among American Indians and Alaska Natives (“AI/ANs”) relies on a racial classification that counts only single-race AI/ANs. Death counts typically include only decedents identified as non-Hispanic AI/ANs, but not mixed-race or Hispanic AI/ANs. In California, opioid-related death counts more than double under definitions that include mixed-race and Hispanic AI/ANs. However, opioid-related death rates decline when calculated using these more inclusive definitions because the AI/AN population increases over sixfold. These different ways of counting AI/AN populations may have important implications for public health interventions.

Death certificates in California allow for specification of up to three races and, independently, Hispanic origin. California vital statistics count as AI/ANs only decedents identified as AI/AN in the first race field of the death certificate. AI/ANs also identified as Hispanic or listed as AI/AN only in the second or third race fields on a death certificate are not typically counted as AI/AN. Rather, they are counted as Hispanic or as the race identified in the first race field, potentially excluding many multi-race or Hispanic AI/ANs from AI/AN opioid-related overdose death counts.

There are at least three possible definitions for how to count AI/ANs: (1) **single-race, non-Hispanic AI/ANs**; (2) **non-Hispanic AI/ANs of one or more races**; and (3) **all AI/ANs, regardless of whether they are single- or mixed-race, and regardless of Hispanic origin**.† The table displays opioid-related death counts, population figures, and opioid-related death rates in California under each of these definitions.

AI/AN Opioid-Related Death Counts, Population, and Opioid-Related Death Rates (per 100,000) in California Under Three Definitions of AI/AN*

Year	Single-Race, Non-Hisp			One or More Races, Non-Hisp			One or More Races, Hisp or Non-Hisp		
	Deaths	Pop	Rate	Deaths	Pop	Rate	Deaths	Pop	Rate
2015	20	165,510	12.1	35	393,008	8.9	45	1,078,986	4.2
2016	27	164,147	16.4	45	392,200	11.5	58	1,081,543	5.4
2017	37	164,038	22.6	55	392,139	14.0	76	1,087,183	7.0

- ⇒ For each year, opioid deaths more than double under the most inclusive definition (i.e., one or more races, Hispanic or Non-Hispanic) compared to the least inclusive (i.e., single-race, non-Hispanic).
- ⇒ Under each definition, opioid-related overdose deaths among the AI/AN population increased over the three-year period.

†Joshi, S., et al. (2018), “Drug, Opioid-Involved, and Heroin-Involved Overdose Deaths Among American Indians and Alaska Natives—Washington, 1999–2015,” *MMWR*, 67(50)].

*Sources: Death Counts: California Comprehensive Death File, 2015-2017; Population: American Community Survey, Tables PEPS5RH and PEPS6RH: <https://factfinder.census.gov/>.

Population Under Different Definitions of AI/AN

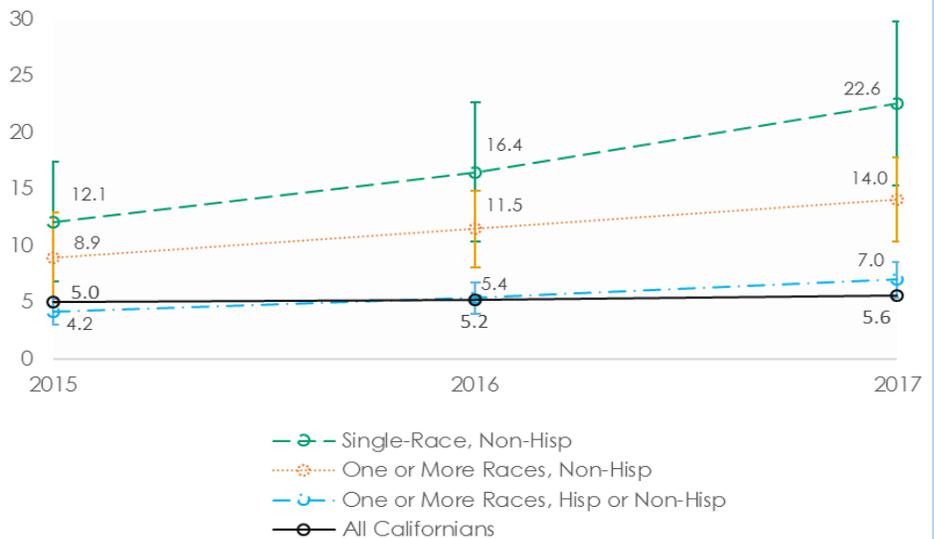
- ⇒ In each year, the AI/AN population is estimated to be about 6.5 times greater using the most inclusive definition compared to the least inclusive one.
- ⇒ Nearly two out of three AI/ANs (63.9%) under the most inclusive definition also identify as Hispanic (as seen by subtracting the second column from the third).

Larger AI/AN populations under more inclusive definitions mean that death rates per 100,000 actually decrease when these definitions are used to calculate the rates. In fact, death rates for AI/ANs under the most inclusive definition are very close to the overall

- ⇒ Death rates under the most inclusive definition are about one third of what they are under the least inclusive definition.

- ⇒ Under each definition of AI/AN, opioid overdose death rates increased from 2015 to 2017.

Opioid-Related Death Rates (per 100,000) Under Different Definitions of AI/AN



Data Limitations

Racial classifications on death certificates are subject to error. The case definition for opioid-related overdose deaths is conservative, and may be an undercount. Similarly, the American Community Survey (carried out by the U.S. Census Bureau to estimate the population between censuses) may undercount the AI/AN population. Finally, the Centers for Disease Control and Prevention (CDC) recommends linking vital statistics to tribal enrollment and health records to “validate” AI/AN tribal affiliation.‡ This brief does not use linked data.

Conclusions

There is no broad consensus on how to define AI/AN for public health surveillance, although several recent reports (e.g. Joshi *et al.* 2018) have tended to use more inclusive definitions. The CDC’s suggestion to use linked data is another way of ascertaining AI/AN identity, which would result in yet another estimate of death counts and rates. The definitions explored here yield different death counts and rates, yet show a similar overall increase from 2015-2017 and may have important implications for public health surveillance and prevention efforts.

Prepared by the Prescription Drug Overdose Prevention Initiative, Safe and Active Communities Branch, California Department of Public Health.



‡CDC, Jan 2013, *Improving HIV Surveillance Among American Indians And Alaska Natives in the United States* [retrieved 2/11/18: https://www.cdc.gov/hiv/pdf/policies_strategy_nhas_native_americans.pdf].