



Social Determinants and the Leading Causes of Death

Community Epidemiology
Services

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Social Determinants of Health Inequity

- Social determinants of health include socioeconomic status, education, neighborhood and physical environment, employment, social support network, and access to health care
- Independent of the person, two thirds of health outcomes can be attributed to other factors such as social circumstances & environment
- Health related behaviors are also shaped by social factors including income education and employment, etc.



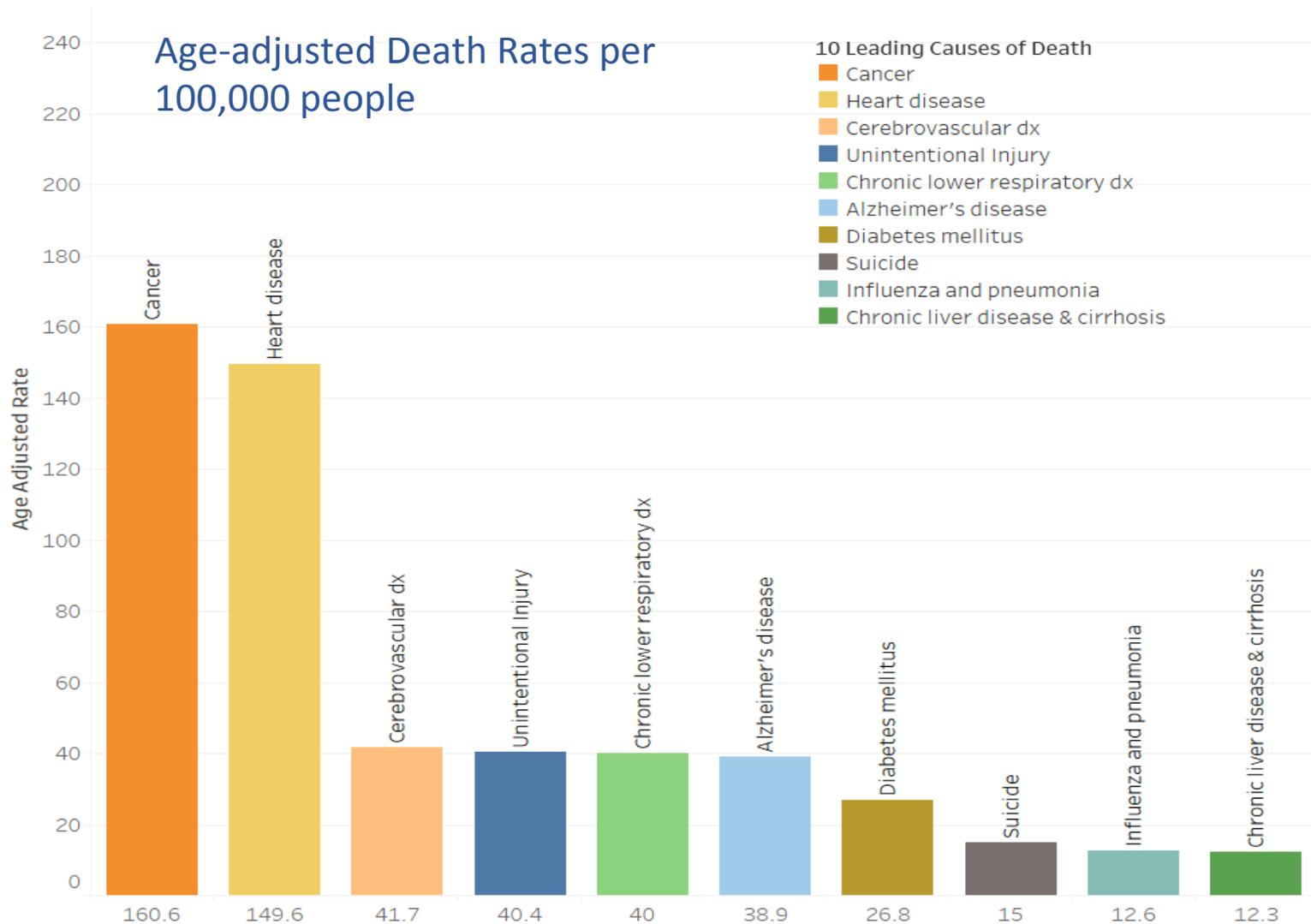
AR Braveman P, et al. 2011.
Annu. Rev. Public Health. 32:381–98



Five-domain Model of Social Determinants of Health

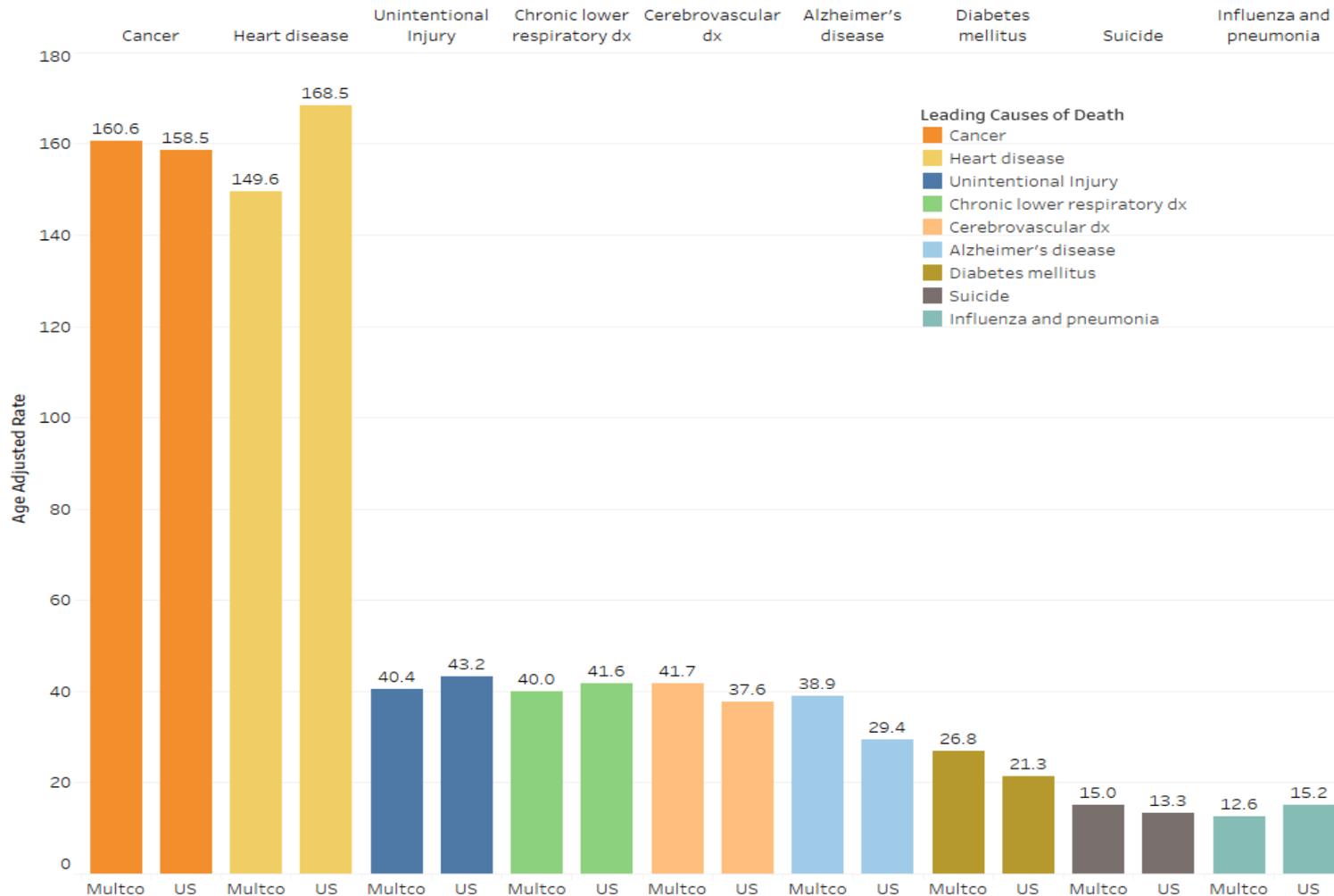


Leading Causes of Death: Multnomah County, 2015, CDC Wonder

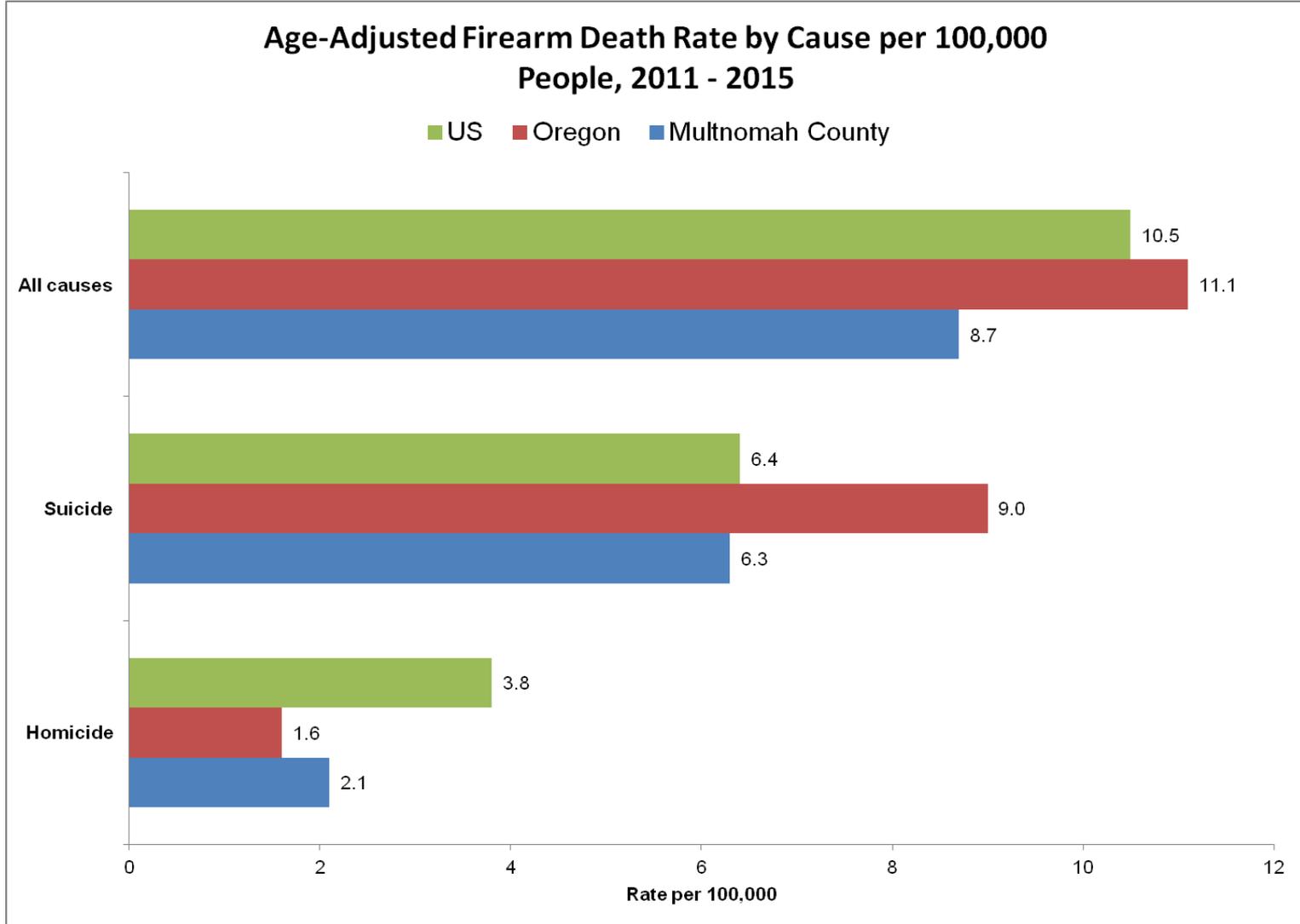


Leading Causes of Death: Multnomah County Compared to the US, 2015, CDC Wonder

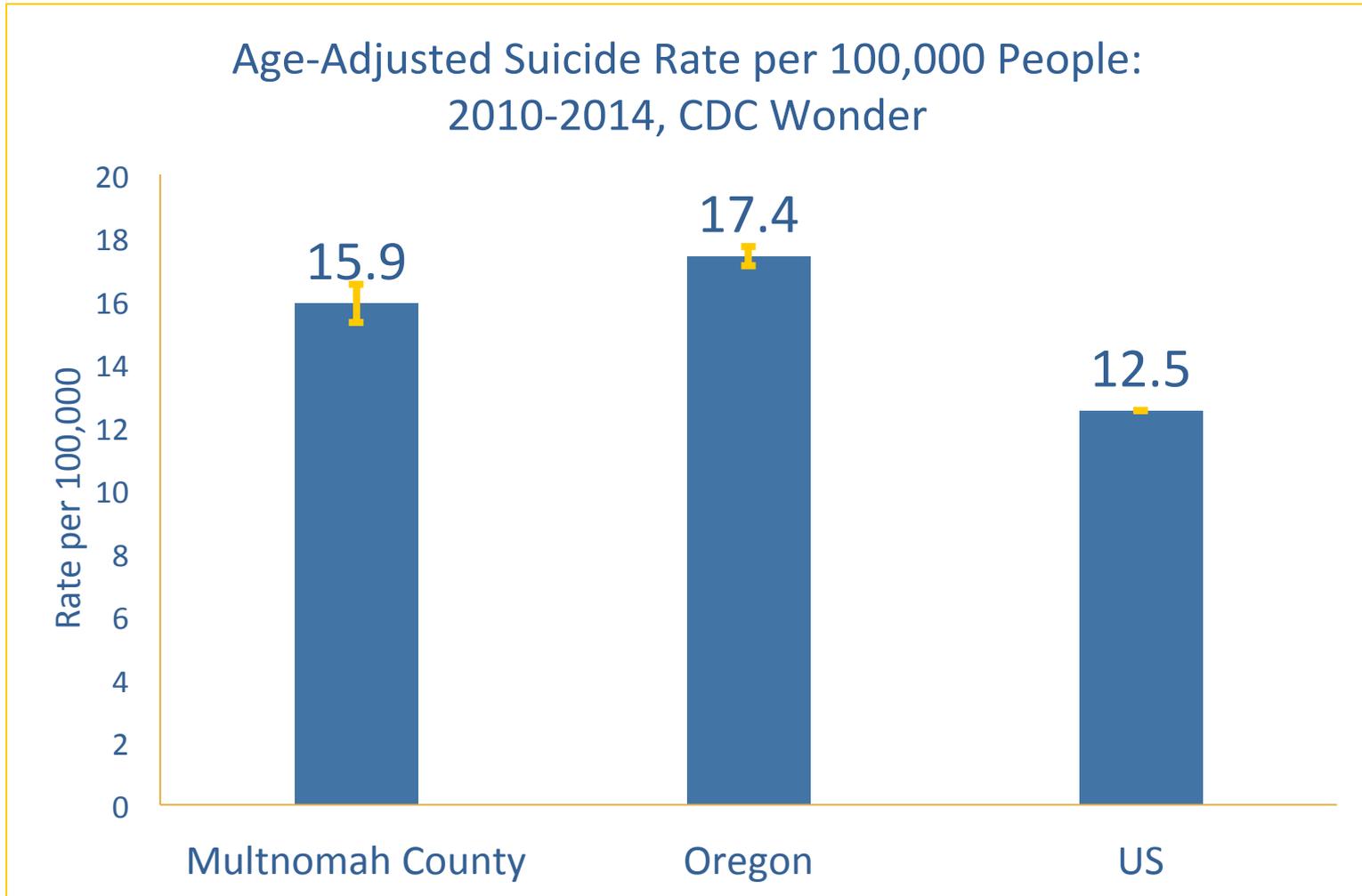
Age-adjusted Death Rates per 100,000 people



Firearm Deaths



Suicide Death Rate: Multnomah County Compared to OR and US



Cause-specific Standardized Mortality Ratios

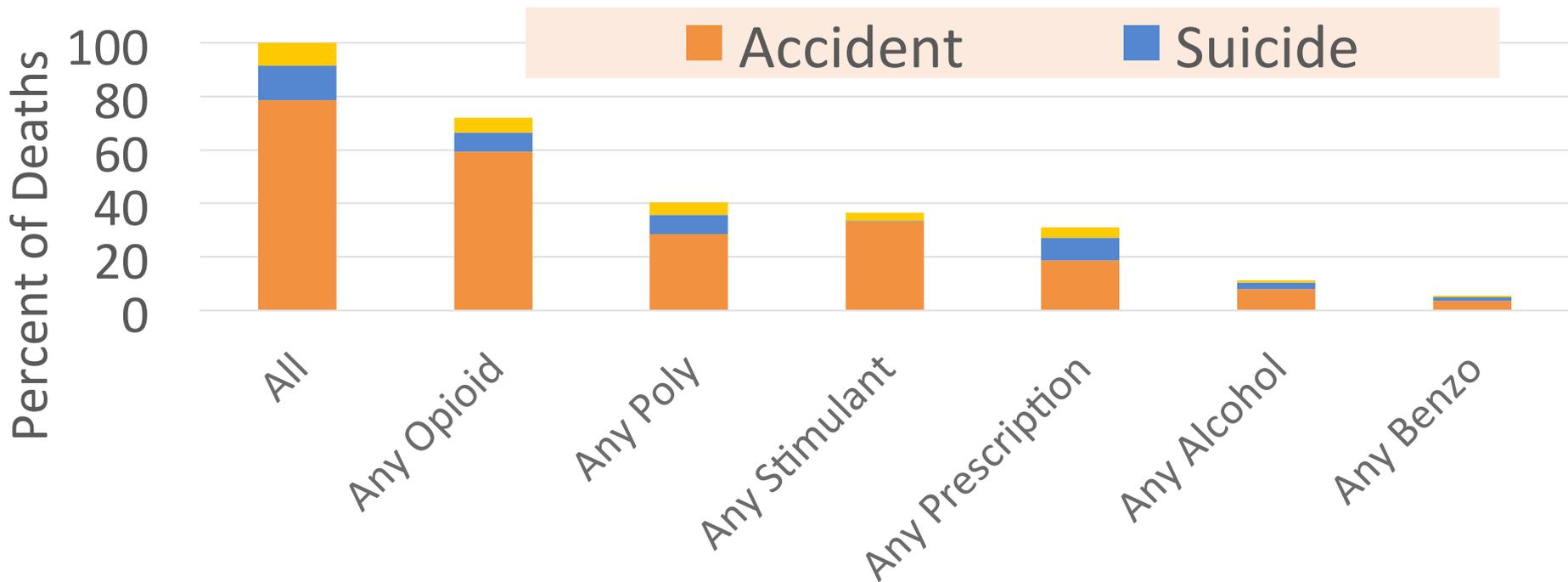
Comparing Black and White Population in Multnomah County
Top Ten Causes of Death, 2007-2016

Black-White Standardized Mortality Ratios

	All	Male	Female
1 Malignant Neoplasms	1.32	1.44	1.20
2 Diseases of the Heart	1.24	1.27	1.21
3 Unintentional Injury	1.17	1.20	1.12
4 Cerebrovascular Disease	1.68	2.18	1.31
5 Chronic Lower Respiratory Disease	0.98	1.07	0.89
6 Alzheimer's	0.84	0.91	0.81
7 Diabetes	2.87	2.55	3.30
8 Intentional Self-harm	0.49	0.50	0.49
9 Influenza and Pneumonia	1.11	0.71	1.45
10 Essential Hypertension	2.78	3.37	2.28
Drug-related Deaths	1.11	1.11	1.12



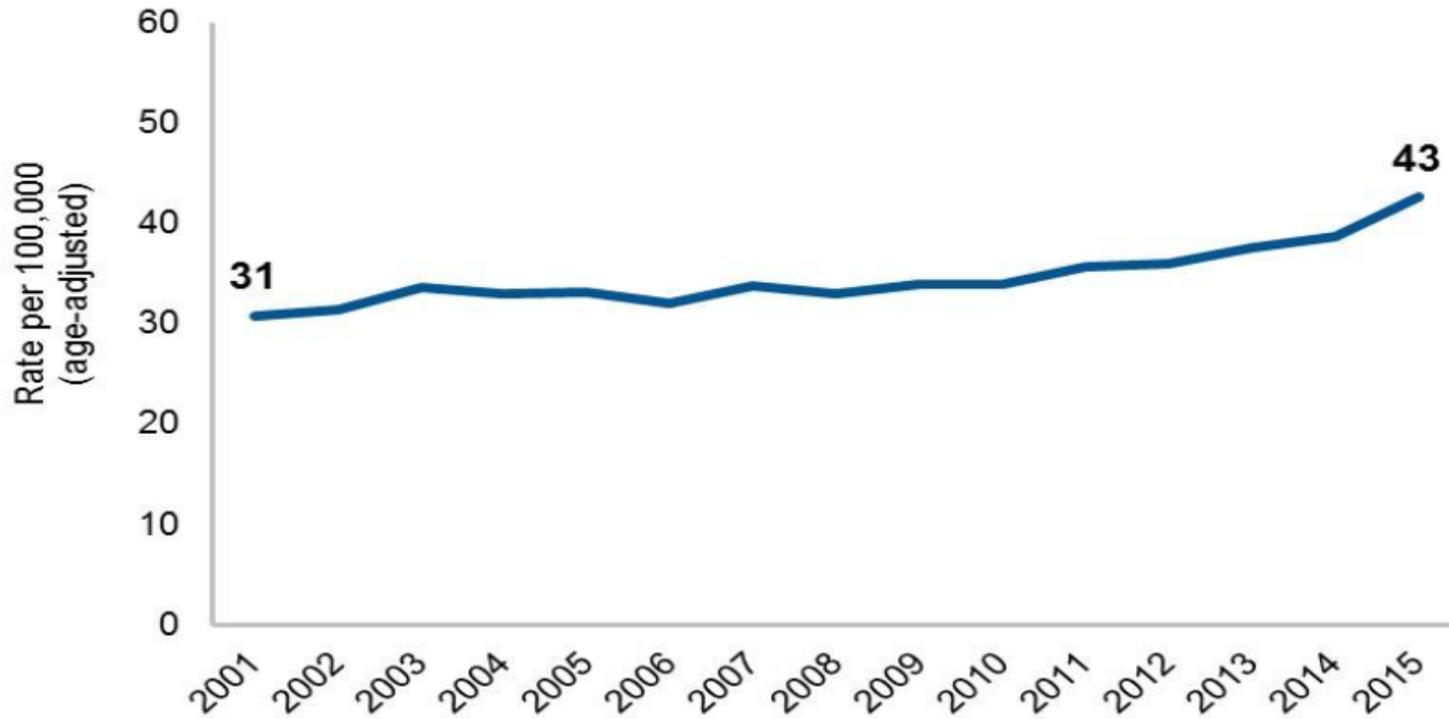
Manner and Cause of Drug and Alcohol Fatalities Portland Tri-County, 2016-2017*, N=417



*through 9/30/17; Oregon State Medical Examiner; Provisional



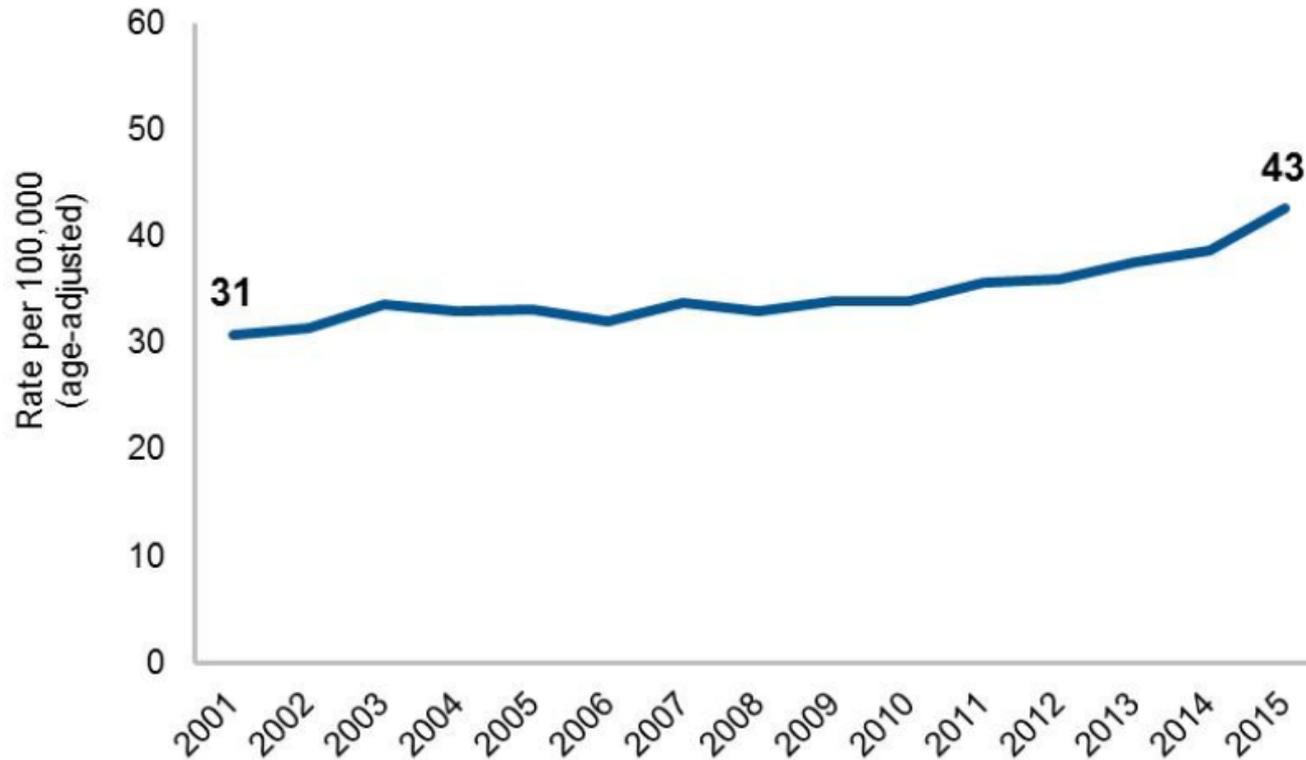
Alcohol-related deaths by year, Oregon



Source: Oregon Death Certificate Data



Apples (Alcohol) to Oranges (Opioid) Comparison Statewide Death Rates



Source: Oregon Death Certificate Data



One Rating of Harms by Drug

Expert Panel
Independent
Of Government
Interference
16 criteria
20 drugs
Weighted scores

Nutt DJ et al
Lancet
2010;376:1558-6

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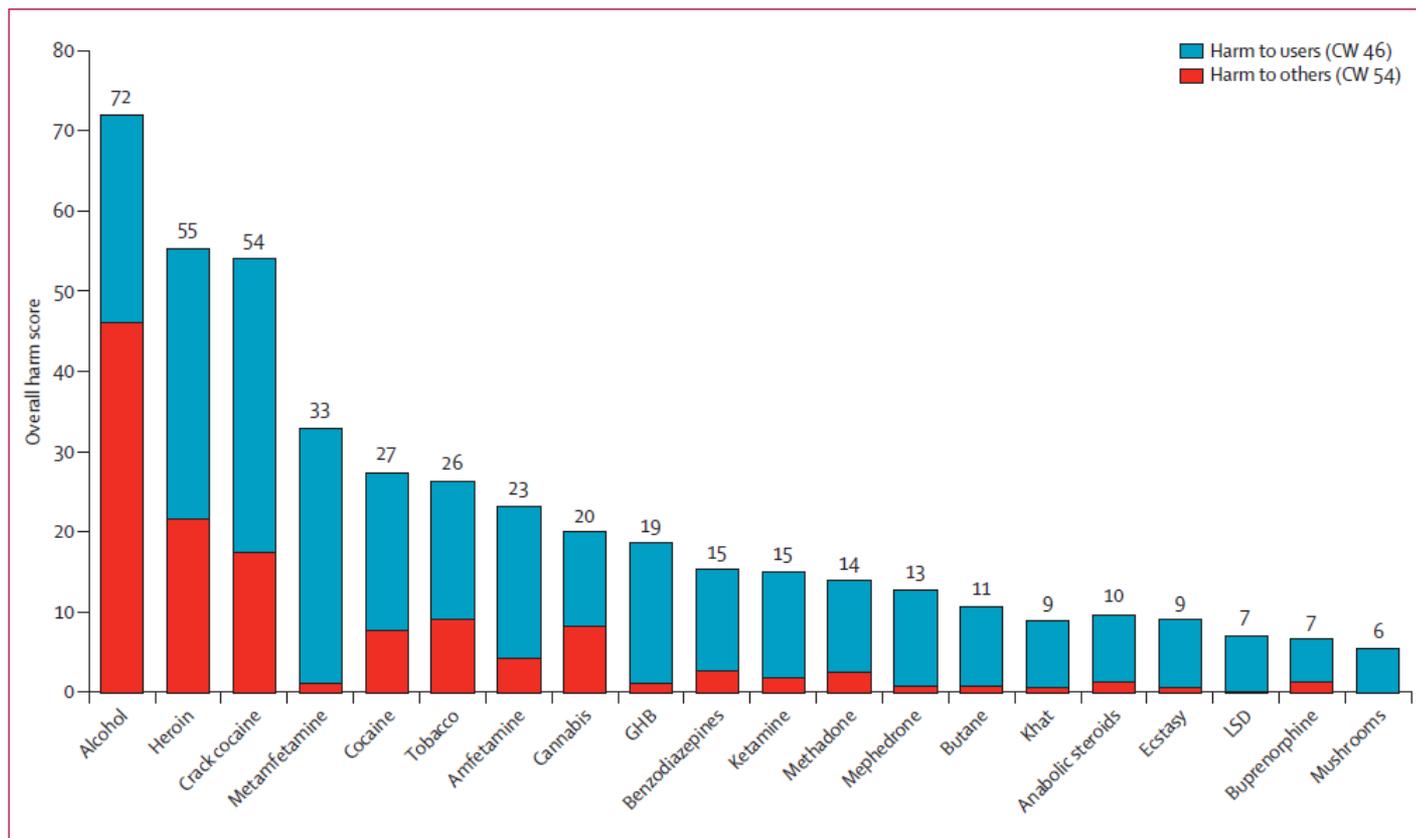


Figure 2: Drugs ordered by their overall harm scores, showing the separate contributions to the overall scores of harms to users and harm to others. The weights after normalisation (0–100) are shown in the key (cumulative in the sense of the sum of all the normalised weights for all the criteria to users, 46; and for all the criteria to others, 54). CW=cumulative weight. GHB=γ hydroxybutyric acid. LSD=lysergic acid diethylamide.



Cause-specific Years of Life Lost per 100,000

Comparing Black and White Population in Multnomah County
Top Ten Causes of Death, 2007-2016

Years of Potential Life Lost Rate		
	Black	White
1 Malignant Neoplasms	1,878	1,571
2 Diseases of the Heart	1,370	775
3 Unintentional Injury	1,374	1,016
4 Cerebrovascular Disease	331	157
5 Chronic Lower Respiratory Disease	285	246
6 Alzheimer's	8	16
7 Diabetes	508	215
8 Intentional Self-harm	304	568
9 Influenza and Pneumonia	99	60
10 Essential Hypertension	158	46
Drug-related Death	637	736

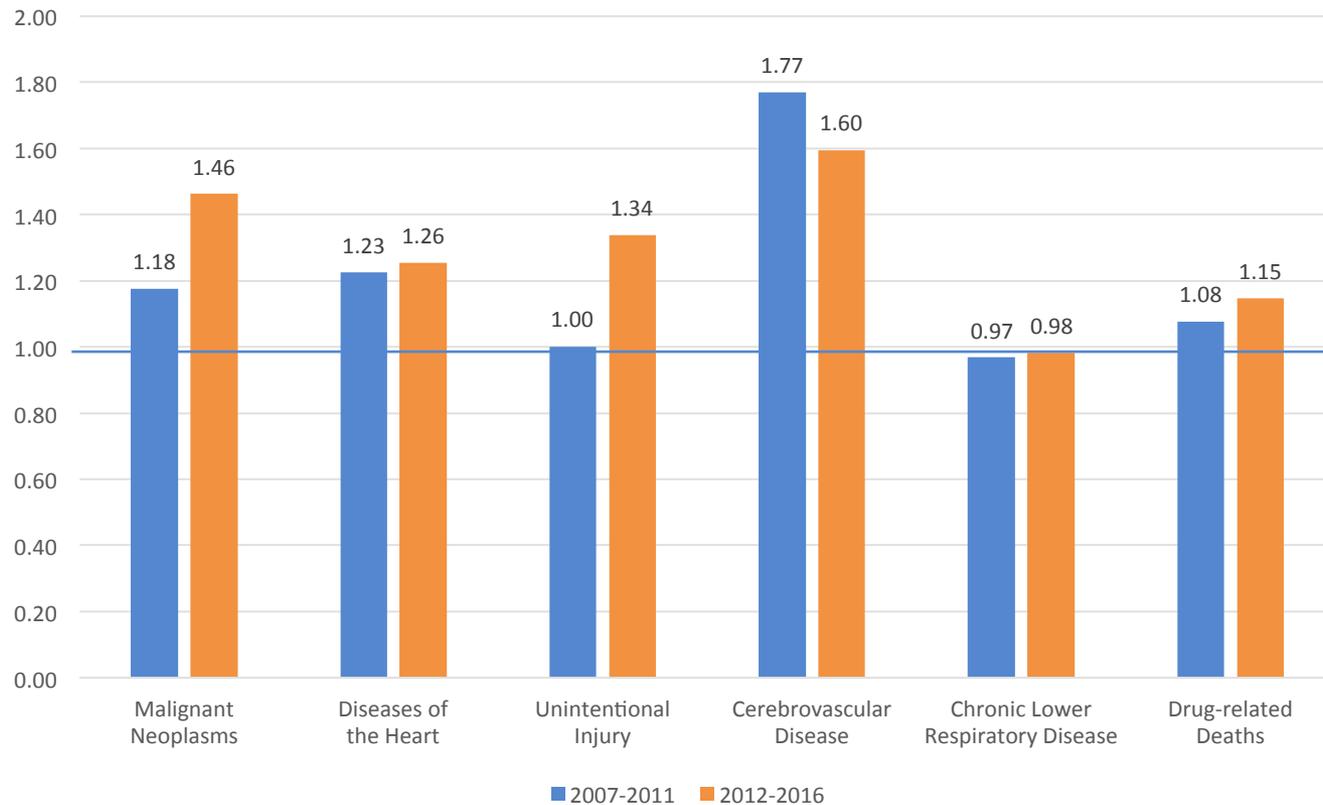
Note: Years of potential life lost prior to age 75 per 100,000 population

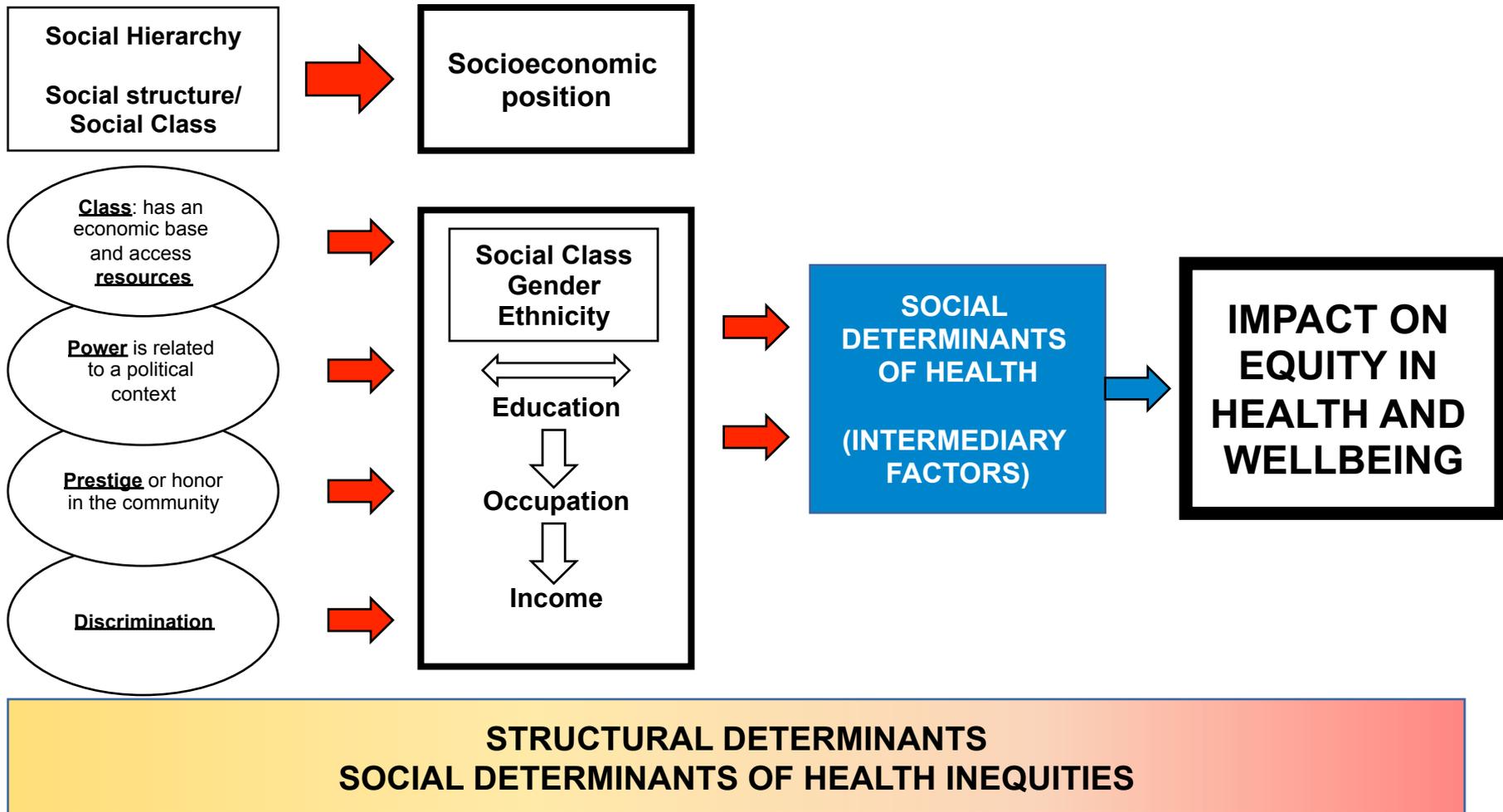


Cause-specific Standardized Mortality Ratios

Comparing Black and White Population in Multnomah County
Top Five Causes of Death, 2007-2016

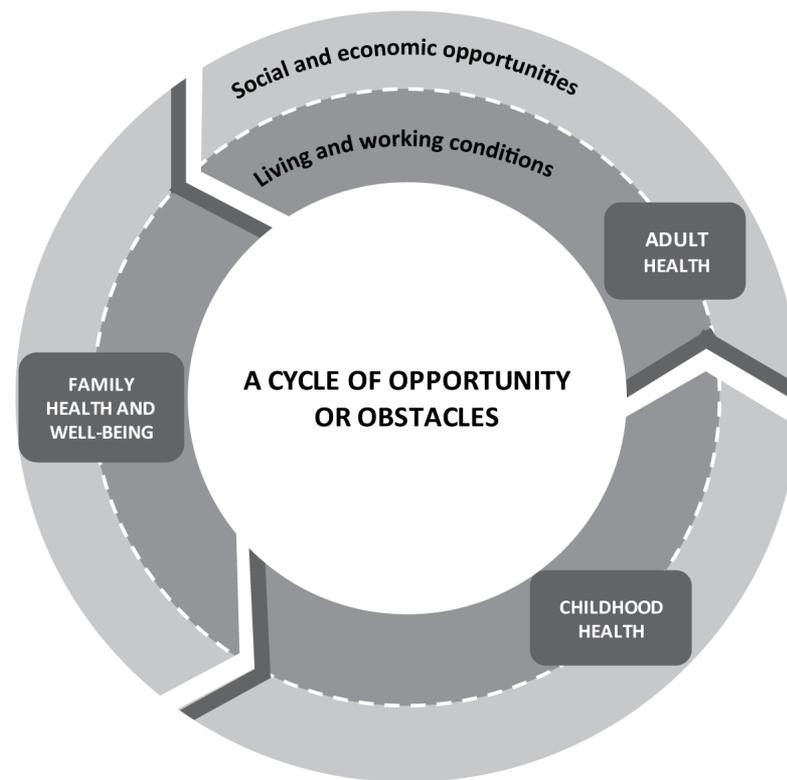
Black-White Standardized Mortality Ratios
2007-2011 vs. 2012-2016





Disrupting or Enabling Inequity?

- A cycle of disadvantage across the life course is often a consequence of exposure to an inadequate quantity and quality of social determinants;
- The probability of that exposure is a result of structural stratifiers based on race, gender, class, etc. at the compositional and contextual level



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