Inequities in sugary drink-related diseases by race/ethnicity and income

Introduction
The burden of disease associated with sugary drinks is inequitably distributed across socioeconomic and racial/ethnic groups. This brief describes the variation in key health outcomes associated with consumption of sugary drinks across racial/ethnic and income groups in the United States. These data can inform messaging about taxes and tax revenue allocations to support solutions that promote health equity.

Diabetes by Race/Ethnicity and Income
American Indians/Alaska Natives have the highest rate of diagnosed diabetes closely followed by Hispanics and African Americans. The prevalence of diabetes has an inverse correlation to income. The prevalence of diabetes among people with incomes less than 100% of the federal poverty level (FPL) is twice that observed among people with incomes between 400-499% of the FPL. The following charts also show the proportion of people with diabetes whose A1C (a measure of blood sugar level) is greater than 9%, indicating poor control. The frequency of uncontrolled diabetes is more than twice as high among Hispanic and African Americans as among Whites.

Sources: Centers for Disease Control, National Center Health Statistics, National Health Interview Survey, Table A-4, Selected Diseases and Conditions among Adults Aged 18 and over, by Selected Characteristics, 2018; Healthy People 2020 Disparity Data Details D-5.1 by Family Income, 2013-2016
NA: Not Available
*Diagnosed diabetes: self-reported
**Diabetes A1C > 9%: percent among people with diagnosed diabetes

1 We use the term “Hispanic” to refer to people described as “Hispanic” or “Latino” in the various sources of data used for this report. Note that data for A1C level refers only to Mexican Americans.
Data related to A1C were unavailable for American Indians/Alaska Natives and Asians. People with incomes less than 100% of the FPL are 56% more likely to have poorly controlled diabetes than people with incomes 200-399% of the FPL.

**Obesity by Race/Ethnicity and Income**

The obesity epidemic in the United States continues unabated. Obesity is a major risk factor for chronic diseases like heart disease and type 2 diabetes. The charts below show American Indians/Alaska Natives have the highest prevalence of obesity for adults, which is 27% higher than the rate among African Americans and nearly four times that of Asians. The prevalence of obesity in children is substantially higher among American Indian/Alaska Native, Hispanic, and African American children, whose rates are nearly twice the rate among White children and over two times that of Asian children. Obesity is common among adults of all incomes and is lowest among the highest income group. The obesity rate among low income children is nearly twice that of high-income children.

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**Sources:**
- CDC, 2018.
Heart Disease by Race/Ethnicity and Income

Heart disease has been the number one cause of death in the United States for many decades. Sugary drink consumption is associated with increased risk for hypertension (HTN), stroke, and heart disease. The data below show HTN is common among all race/ethnicities although most prevalent among African Americans. American Indian/Alaska Natives have the highest rate of total heart disease and coronary heart disease. Whites are next highest in overall and coronary heart disease. African Americans have the highest rate of stroke. Income shows an inverse relationship across all cardiovascular diseases.

Source: CDC 2017, Summary Health Statistics: Heart Disease
Oral Health by Race/Ethnicity and Income

Sugary beverage consumption is a major cause of tooth decay. Recent research is uncovering a link between poor oral health and chronic diseases like diabetes and heart disease.\textsuperscript{11,12} The frequency of dental caries is a widely used measure of oral health. Dental caries are very common among children from all racial/ethnic groups (for whom data are available), ranging between 40-57%. Untreated dental caries are most common among African American children followed by Hispanic. Dental caries are strikingly more common among children from households with low incomes. The inequity in untreated caries is even larger, with children in households with incomes below 100% FPL having a rate 2.6 times higher than children in households with incomes above 300% FPL.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{oral_health_graph.png}
\end{figure}

\textbf{Conclusion}

The prevalence of diseases associated with sugary drinks is inequitably distributed. The data provided here illustrate the disparities that exist between racial/ethnic groups and income levels for diabetes, heart disease, obesity, and dental caries. Sugary drinks are a key driver of health inequities. Health advocates can use this information to develop interventions and policies intended to build health equity across populations.

\begin{figure}[h]
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\includegraphics[width=\textwidth]{oral_health_graph.png}
\end{figure}

Source: CDC 2018, Data Brief Number 307, (NHANES 2015-2016)\textsuperscript{13}

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References


