NHANES Diabetes Project – Summary Report

Key Participant Statistics

Objective:

Analysis of health and socioeconomic data from 9,813 participants to identify key trends and relationships.

Key Participant Statistics:

Income, glucose, and triglycerides are right-skewed; medians are more representative of the typical participant than means.

Variable	Mean	Median	Std Dev	Min	Max
BMI	25.6	24.7	7.6	12.1	82.9
Waist (cm)	87.3	87.8	21.2	40.2	177.9
Glucose (mg/dL)	107.5	105	23.5	40	604
HDL (mg/dL)	52.6	51	13.5	10	173
Triglycerides (mg/dL)	95.8	88	66.4	13	4,233
Income (USD)	48,585	40,000	31,941	2,500	100,000

◆ **Note:**

Income, glucose, and triglycerides show outliers; medians give a clearer picture than means.

👥 Demographic Distribution

Age Groups

Largest: 0–9 years (2,405 participants)

43% of sample is under 20 years

Balanced spread across older groups

Race

Non-Hispanic White: 36%

Non-Hispanic Black: 22%

Mexican American: 17%

Others: 25% combined

Education

"Unknown" dominates (43%) → interpret with caution

Among known: Some College/AA (18%), College Graduate (14%)

💲 Income by Age Group

Age Group	Avg. Income (USD)
Adult	52,253
Teen	47,585
Child	46,590
Old	44,824
Overall	**48,585**

Adults earn the most; income declines in **Older adults**

Median income is **$40,000**, lower than the mean due to high-income outliers

▫ Health & Diabetes

Diabetes Status	Avg. BMI	Avg. Glucose
Diabetes	32	109.1
No Diabetes	25	107.1
Unknown	**26.9**	**111.3**

BMI is much higher in Diabetes group (32 vs 25)

Unknown group has highest glucose (111.3) → possible undiagnosed risk

Glucose outliers (max 604) suggest a few extremely high readings

🔑 Key Insights

Higher BMI strongly linked to diabetes in this sample

Adults earn the most, while **Older adults** show reduced income

Unknown diabetes status group needs closer attention due to elevated glucose

Skewed variables (income, triglycerides, glucose) → report **median** alongside mean

Recommendations

Use **short titles** for dashboard visuals: *Age Breakdown, Race Distribution, Education Breakdown, Income by Age Group, BMI & Glucose by Status*

For **glucose/triglycerides**, show **boxplots or medians** to avoid distortion from outliers

Highlight or separate **Unknown categories** (Education & Diabetes) for clarity

KPI cards (for dashboard top row):

N (Sample Size): 9,813

Median BMI: 24.7

Median Glucose: 105 mg/dL

Median Income: $40,000