

# The Fossil Fuel Nexus and Regional Vulnerability: The Case of the San Joaquin Valley

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Climate Change Will Improve the Fight Against Chronic Disease*

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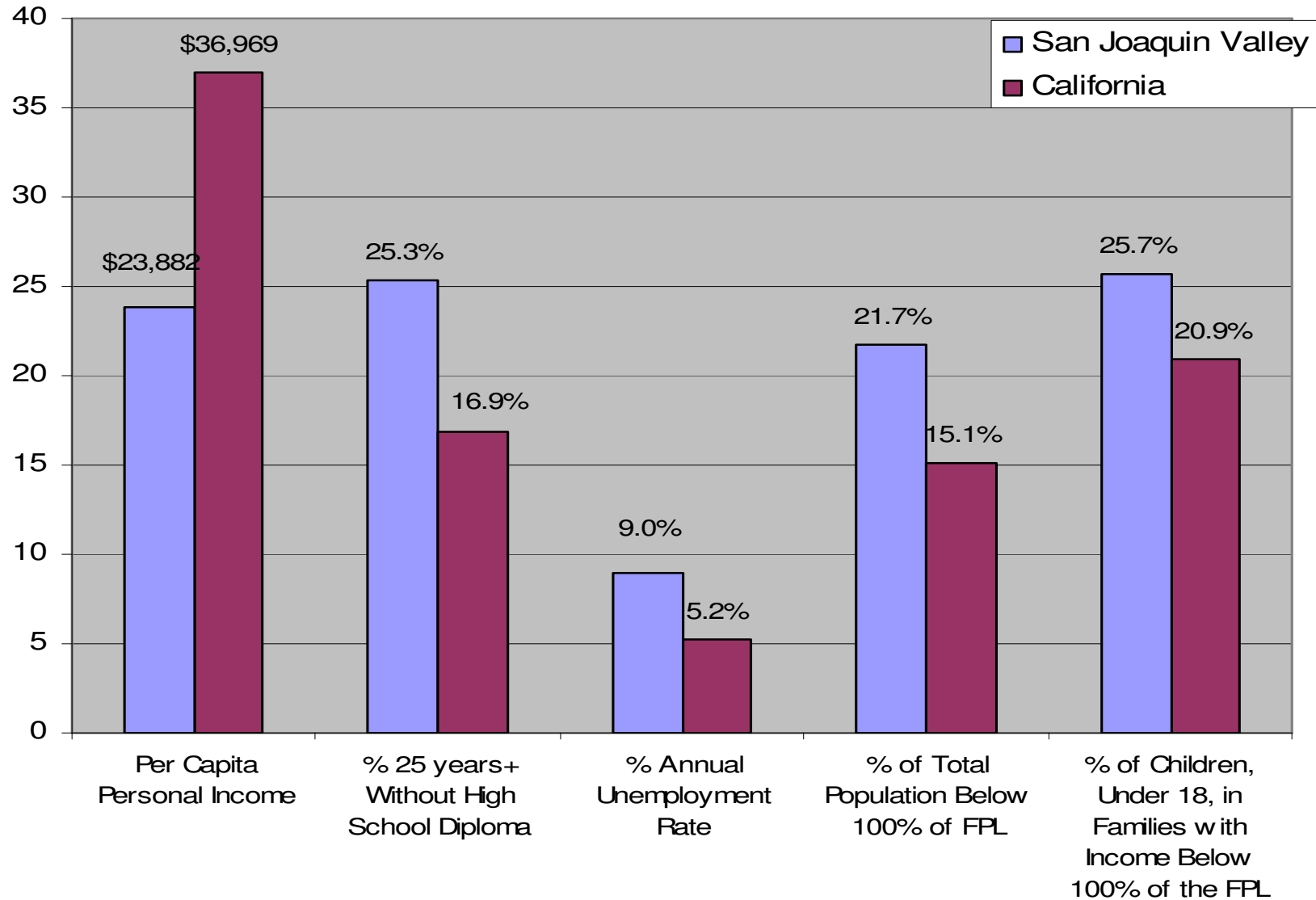
California State University, Fresno

# The Fossil Fuel Nexus

1. The fossil fuels are the lynchpins of modern society and global population growth;
2. Fossil fuels are the basis for our high calorie/low value diet, which in turn drives chronic disease;
3. Fossil fuel impacts on the hydrological cycle increases the chance of long-term drought and economic devastation, particularly in semi-arid regions;
4. Disruption of the regional nitrogen cycle by fossil fuel combustion is the primary cause of excess health impacts from ozone and PM 2.5;
5. San Joaquin poverty and low access to care act in synergy with the negative health impacts of fossil fuels;
6. Fossil fuel dependence is a central force behind the current U.S. geopolitical, fiscal, and monetary crises.

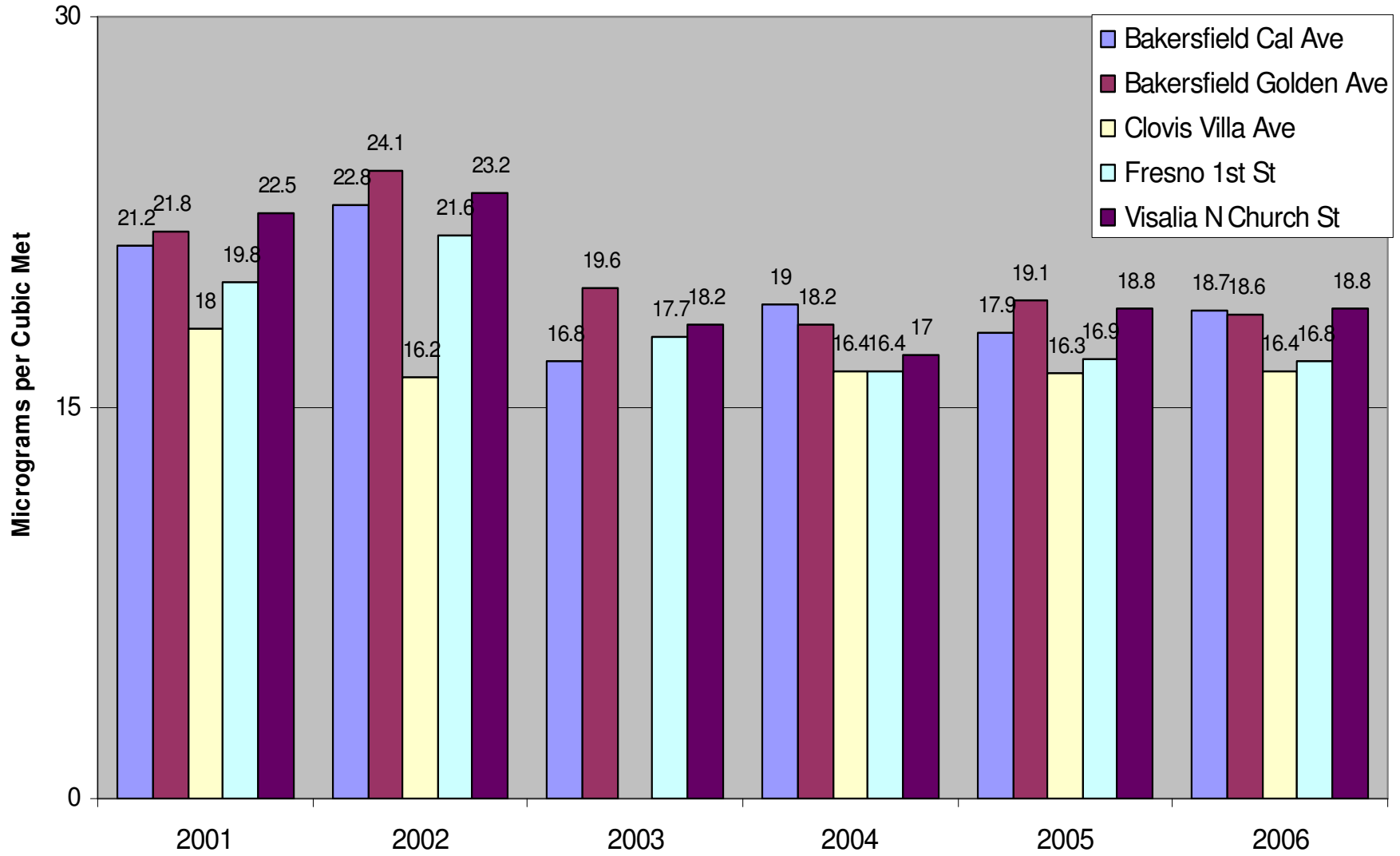
# Socioeconomic Disparity in the San Joaquin Valley

Source: CVHPI Healthy People 2010 Report



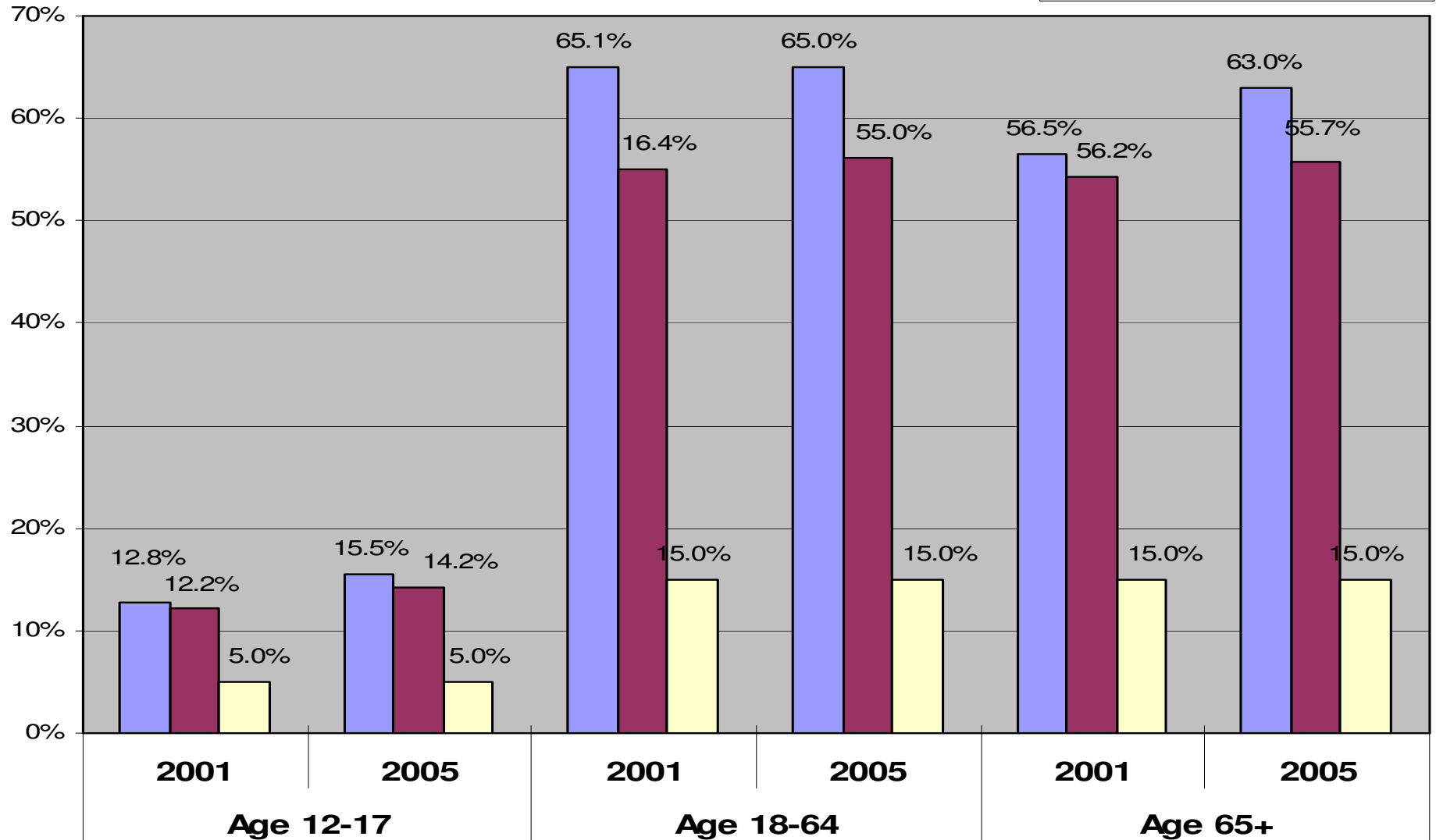
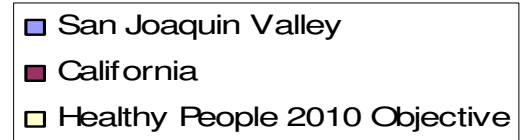
# Excessive PM 2.5 in the San Joaquin Valley

(15 micrograms is the Federal Standard for Annual Daily Average Exposure)



# Prevalence of Overweight or Obese in the San Joaquin Valley

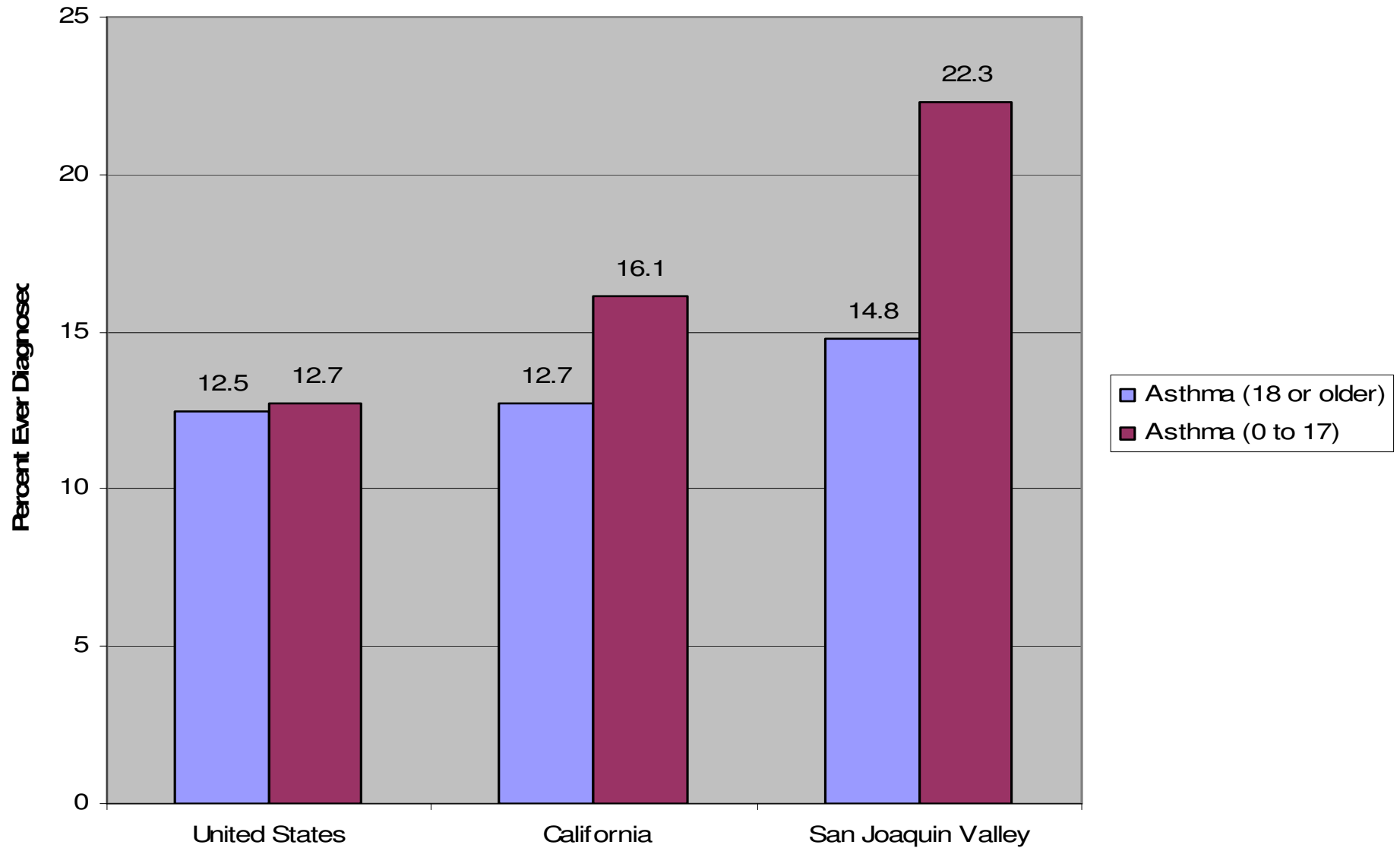
Source: CVHPI Heathy People 2010 Report



# Asthma Prevalence for Adults and Children (2005 Data)

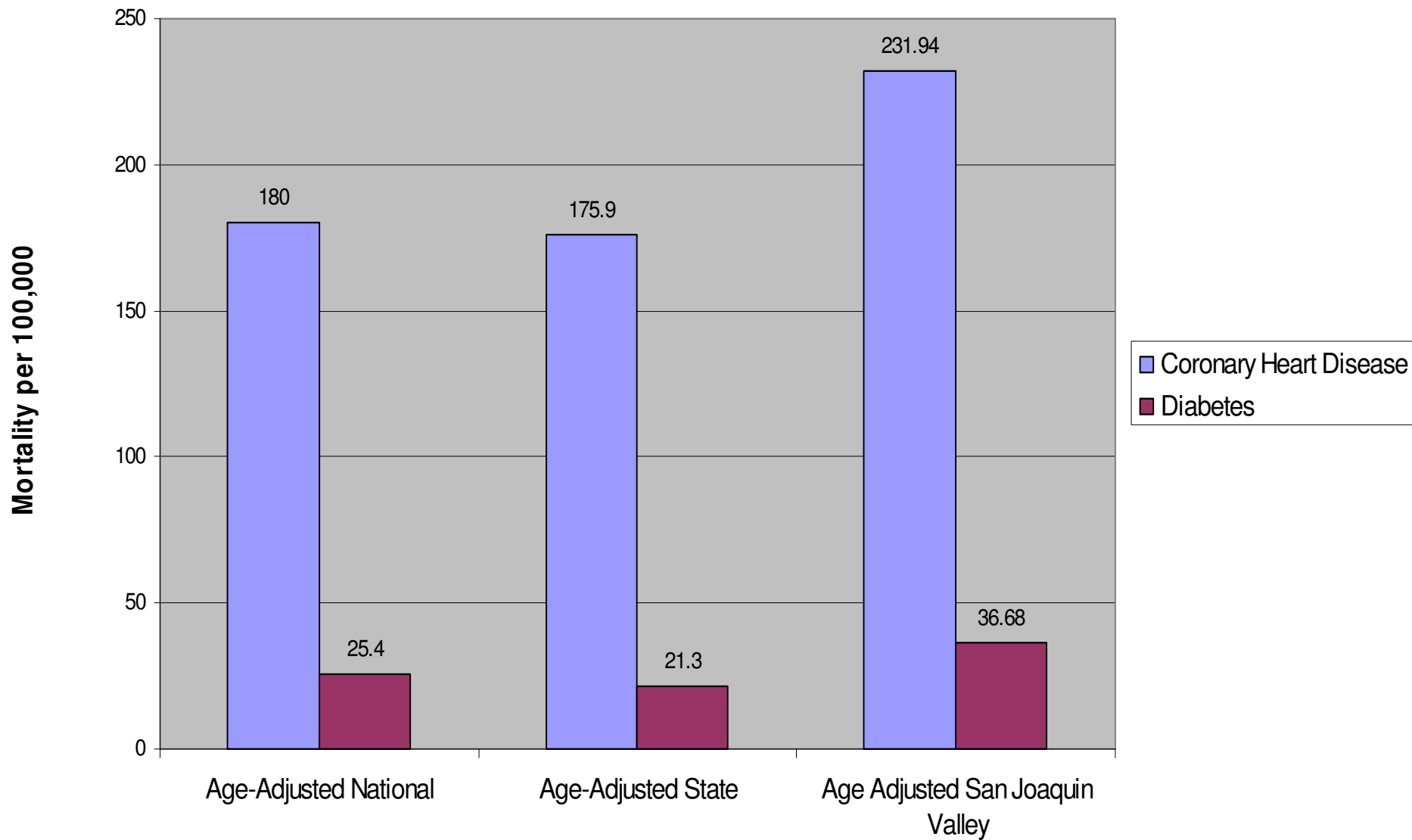
California Data: CHIS

U.S. Data: CDC



# Mortality Disparity in the San Joaquin Valley: Coronary Heart Disease and Diabetes

Data Source: California DHS



# New Collaborations in the San Joaquin Valley

- **Central California Regional Obesity Prevention Program (CCROPP):** Community-led efforts to improve the social and physical environment for healthy eating, active communities, and wellness.
- **San Joaquin Valley Regional Blueprint:** The eight Councils of Governments (COGs) are developing a coordinated Valley land use planning framework. Reinforced by passage of SB375.

# Takeaway Points

1. Fruits, nuts, and vegetables from the San Joaquin Valley are the lynchpins to an affordable, healthy diet in the U.S.;
2. The largest public health threats from climate change in the San Joaquin Valley are from the loss of Sierra snowpack and long-term drought;
3. Confronting fossil fuels creates the opportunity for new alliances and public investments derived from carbon taxes or fees;
4. Investments in public education about the fossil fuel nexus is a key prerequisite for increased political will;
5. The public health community is well positioned to lead a public education effort (K-12 and adults) grounded in the principles of human ecology.