

Strengthening Public Health Through Population Health Data Systems

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KEY TAKEAWAYS

1. Robust population health data systems are critical to provide reliable national- and state-level data to inform policymaking and strengthen public health.
2. Sustained investments in systems such as the National Health and Nutrition Examination Survey (NHANES) and the Texas School Physical Activity and Nutrition (Texas SPAN) Survey are essential for protecting population health and reducing long-term healthcare costs.

Population Health Data System

Population health data system is the systematic collection, consolidation, analysis, and dissemination of data.¹

- Track both infectious diseases and chronic conditions, such as injuries, chronic conditions, and environmental, occupational, and behavioral risk factors.¹
- Identify changes in the distribution of risk factors and identify population groups that are at increased risk.¹
- Provide representative data on the population health status and indicators.¹
- Monitor and evaluate the effectiveness of new measures, policies, and programs following their introduction.¹
- Identify public health priorities to inform policy and research.¹

National Example: National Health and Nutrition Examination Survey (NHANES)²

What is NHANES?

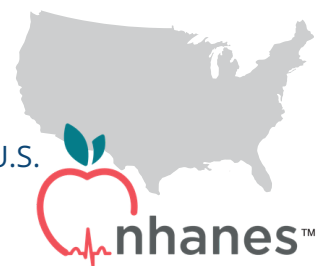
- NHANES measures the health and nutrition of adults and children in the United States (U.S). It is the only national health survey that includes health exams and laboratory tests for participants of all ages.
- NHANES has operated as a continuous survey since 1999, collecting data every year and releasing it in two-year cycles.

Key features and measurements

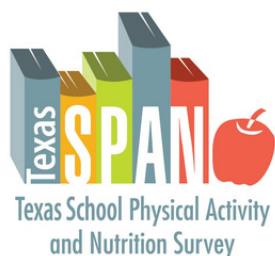
- Nutrition, diet, physical activity, sleep, supplements, health status, and population health indicators.
- Lab test: blood and urine samples
- Annual assessments of about 5,000 adults and children in communities across the U.S.

Impact of NHANES

- Provide data that represent the U.S. population.
- Inform the development of public health and educational programs and guidelines.
- Identify national priorities and develop policy and standards.



Texas Example: Texas School Physical Activity and Nutrition Survey (Texas SPAN)³

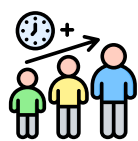


What is Texas SPAN?

- Texas SPAN is a Texas-wide population health data system that examines trends in body mass index (BMI) and prevalence of overweight/obesity among school-aged children in 2nd, 4th, 8th, and 11th grades.
- To examine and track trends in nutrition, physical activity, sedentary behavior, and health behaviors of school-aged children in Texas.

Key Features and Measurements

- Cross-sectional questionnaires and anthropometry
- BMI, Nutrition and diet, physical activity, screen time, and sleep
- Provide data on child populations:



by age
(developmental stages)



by sex



by race/ethnicity



by geographic locations

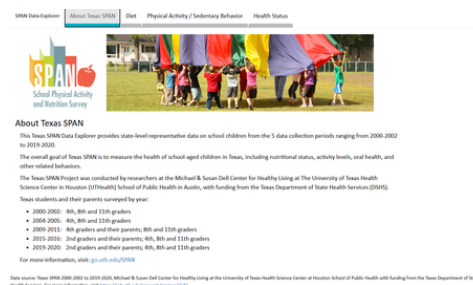
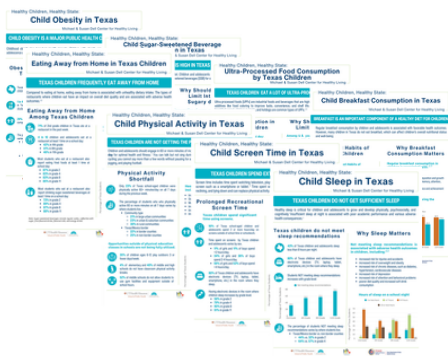
- urban vs. rural counties
- Texas-Mexico border vs. non-Texas-Mexico border counties.

Impact of Texas SPAN

- Provide state-level representative data on children: Examine population-level child health status over time.
 - Conducted 6 time points: 2000-2002, 2004-2005, 2009-2011, 2015-2016, 2019-2020, 2021-2023.
- Inform the development of public health and educational programs.
- Evaluate current State/District/School programs.
- Identify public health priorities among Texas children to inform policy development.

Resources

To make the Texas child health data more easily accessible and available to a wider audience, the Texas SPAN team developed user-friendly resources highlighting the latest status of child health and disparities in Texas to support awareness, programs, and policy action.



[Infographic - Texas Child Health Status Reports](#)

[Texas Child Health Toolkit](#)

[Interactive database - Texas SPAN Data Explorer](#)

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References

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2. CDC. (2024, December 16). About NHANES. National Health and Nutrition Examination Survey. (details for Section #3; use as much space as necessary!)
3. Texas School Physical Activity and Nutrition Survey (Texas SPAN). (n.d.). Retrieved March 16, 2026, from <https://sph.uth.edu/research/centers/dell/project.htm>

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