

NATIONAL CENTER FOR HEALTH STATISTICS/ACADEMYHEALTH
2021 DATA VISUALIZATION CHALLENGE
APPLICATION GUIDELINES
September 13, 2021

Thank you for your interest in the National Center for Health Statistics (NCHS)/AcademyHealth Data Visualization Challenge. The challenge is to create an interactive data visualization that uses two or more of the specified machine-readable tables from the annual congressionally mandated NCHS publication Health, United States (HUS). The interactive data visualization should (1) include interactive elements through which users can change the display of visuals on the page and (2) identify and explain an important trend or disparity in public health, telling a clear and policy-relevant story in the process. Please note that tooltips do not count as an interactive element.

Two winning teams (of up to 8 people total) will receive complimentary registration to attend the February 2022 Health Datapalooza and National Health Policy Conference or an equivalent monetary award.

****Before you begin to complete this application,** please review important pre-application information such as eligibility, anticipated timeline, and process at the Frequently Asked Questions webpage located at: <https://academyhealth.org/page/nchsacademyhealth-data-visualization-challenge>.

Timeline

The application cycle opens Monday September 13, 2021 and closes at 5:00 pm ET on Monday November 15, 2021 to include all application materials. No extensions will be given. The judging review period will begin in November and is expected to be completed with an announcement of winners around mid-December, depending on the number of applications received.

The complete application consists of the following parts:

1. Part One: NCHS/AcademyHealth online Intent to Apply to be completed via the AcademyHealth application web portal and;
Part Two: NCHS/AcademyHealth online application to be completed via the AcademyHealth application web portal

All components listed above must be submitted by 5 pm ET on Monday, November 15th, 2021.

This application packet contains:

- I. General Application Guidelines for the online application
 - A. Application Checklist
 - B. Eligibility
 - C. Data to be used in the Competition
 - D. Judging Criteria
 - E. Submission Instructions

Please email nchs@academyhealth.org with any questions about Parts One or Two in this application packet. All application materials must be submitted online through the AcademyHealth web portal.

I. GENERAL APPLICATION GUIDELINES

A. Application Checklist. To apply to the 2021 NCHS/AcademyHealth Data Visualization Challenge, the following items must be completed:

- i. **Intent to Apply:** As a first step, please visit <https://academyhealth.org/page/nchsacademyhealth-data-visualization-challenge> to complete a mandatory Intent to Apply form. You will receive a link to the full application form in the confirmation note and confirmation email.
- ii. **Full Application:** Using the link in the confirmation email, complete the full application form. The applicant must submit the following application items via the online application form:
 1. Applicant and project information (please keep all responses to 250 words)
 - a. What question are you attempting to answer with your data visualization?
 - b. Who is the intended audience(s) for your visualization?
 - c. Please describe the trend or disparity you are aiming to illustrate.
 - d. Please describe the relevance and utility of your visualization.
 2. Uploaded data visualization
 - a. *Confex will only allow PDF or Word submissions through the application portal. If your visualization is not in one of these formats, please submit it via email to both nchs@academyhealth.org and nchs-ah@cdc.gov in addition to uploading a PDF or Word document to the application site indicating you submitted via email.

All materials are due by 5 pm ET on Monday, November 15, 2021.

B. Eligibility: Individuals or teams of 2–3 graduate students may enter with or without a mentor. The mentor can hold one or more positions of, including, but not limited to the following: Dean, Lecturer, Professor, Associate Professor, Assistant Professor, Research Assistant Professor, Faculty Research Associate, Faculty Research Assistant, Instructor, or Teaching Assistant within a grant or research organization; or Center, Institute, or Department at a college or university in an academic setting similar to or the same as the student team.

- i. All participants must be aged 18 years or over at the start of the competition.
- ii. All participants must be United States Citizens.
- iii. Participants shall not be:
 1. a Federal entity or Federal employee acting within the scope of their employment;
 2. a Federal employee working on their applications during assigned duty hours;
 3. an employee of the Centers for Disease Control and Prevention; however, employees of other Operating Divisions within the Department of Health and Human Services (HHS) are eligible to participate.
- iv. Federal grantees may not use Federal funds to develop an application unless it is consistent with the purpose of their grant award.
- v. Federal contractors may not use Federal funds from a contract to develop an application or to fund efforts in support of an application.
- vi. An individual or entity shall not be deemed ineligible because the individual or entity consulted with Federal employees during the Challenge if the employees are made

available to all individuals and entities participating in the Challenge on an equitable basis.

C. Data to be used in the Competition: Participants will choose two or more tables from a list of machine-readable HUS trend tables that feature various topics from the National Vital Statistics System (NVSS), National Health and Nutrition Examination Survey (NHANES), National Health Interview Survey (NHIS), and the National Health Care Surveys (NAMCS and NHAMCS). The trend tables are available for free at the NCHS website link below. Participants may also incorporate external data if desired, but if so, NCHS data should be prominently featured. Tables are available in machine readable (CSV) format and include associated footnotes and codebooks (Metadata).

i. You may use any software you choose. However, to be published on the NCHS website, visualizations created in Power BI and Tableau are preferred.

- 1. NVSS** (*Tables 002, 008, and 009*): Infant mortality (linked file, 1983-2018); Drug overdose (NVSS-M, 1999-2018); Suicide (NVSS-M, 1950-2018)
 - 2. NHANES** (*Tables 026 and 027*): Obesity among adults (1988—1994 through 2015-2018); Obesity among children (1988-1994 through 2015-2018)
 - 3. NHIS** (*Tables 012, 029, and 048*): Children’s health conditions (1997—1999 through 2016—2018); Delay or nonreceipt of care (1997—2018); Medicaid coverage (1984—2018)
 - 4. NHAMCS** (*Table 075 from HUS 2017*): Injury-related visits to hospital emergency departments (2005-2006 through 2014-2015)
 - 5. NAMCS** (*Table 076 from HUS 2017*): Visits to physician offices, hospital outpatient departments, and hospital emergency departments (selected years 2000-2015)
- ii.** Table-specific or a single footnote file (or available in the corresponding Excel/PDF files) Codebook (Metadata) for machine-readable files. All files will be available for download from the 2019 Data Finder (<https://www.cdc.gov/nchs/hus/contents2019.htm>) as a CSV file

D. Judging Criteria. Candidates are reminded that each application will be reviewed with respect to the following:

i. Relevance/utility: The visualization sheds new light on a public health trend or disparity that otherwise would not have been seen and contributes to areas of policy interest.

ii. Criteria related to presentation of statistical information

1. The product effectively illustrates changes in trends, inflection points
2. The product effectively displays differences between trends among groups
3. The product effectively displays statistical variance of estimates (this does not apply to the NVSS data)

iii. Messaging: The visualization clearly identifies and explains an important trend or disparity in public health, as supported by the project description. The message is appropriate for the intended user (policymakers, researchers, community-based organizations, or members of the public). The visualization provides the needed context to help the intended user to understand the message.

iv. Accessibility: The design of the visualization is appropriate for the message being conveyed. Users can navigate through the visualization with ease.

v. Design: The visualization is visually striking and effectively uses visual elements (colors, annotations) to enhance and highlight the message.

vi. Creativity: The visualization features original design and data presentation techniques.

E. Submission Instructions. The deadline for the receipt of applications is Monday, November 15, 2021 at 5:00 P.M. ET. Applicants must submit all required application materials online.

NOTE: INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED.