

**NATIONAL CENTER FOR HEALTH STATISTICS/ACADEMYHEALTH**  
**2022 DATA VISUALIZATION CHALLENGE**  
**APPLICATION GUIDELINES**  
**September 12, 2022**

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### **Background and Challenge**

Thank you for your interest in the National Center for Health Statistics (NCHS)/AcademyHealth Data Visualization Challenge. The challenge is to create an informative graphic submission with a narrative that uses at least two publicly-available data sources to examine one or more social determinants of health (SDOH). The Healthy People 2030 (HP 2030) initiative defines SDOH as “the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks” (<https://health.gov/healthypeople/objectives-and-data/social-determinants-health>). The HP 2030 SDOH framework includes five broad domains of economic stability, educational access and quality, health care access and quality, neighborhood and the built environment, and social and community context. More information about the HP 2030 program, framework, and objectives can be found [here](#).

The challenge is to create an informative static or dynamic graphic submission with an accompanying narrative that uses at least two data sources to examine one or more SDOH as defined previously. At least one data source must be publicly-available NCHS data that are prominently featured, and we strongly suggest that the other data source(s) be external to NCHS. A non-exhaustive list of external data sources to NCHS includes data from the Census Bureau or another Federal statistical agency; [healthdata.gov](http://healthdata.gov); or credible, reliable, and valid public data available from a university, non-profit, public or private foundation, et cetera. The aim is to clearly illustrate and communicate an important public health issue graphically, and to write a short narrative to plainly demonstrate impact and why this issue is important, and to discuss new information provided by the graphic.

Two winning teams will receive complimentary registration to attend the February 2023 Health Datapalooza 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-frequently-asked-questions-faq> .

### **Timeline and Process**

The application cycle opens Monday September 12, 2022 and closes at 5:00 p.m. ET on Monday November 14, 2022. No extensions will be given.

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 5:00 p.m. ET on Monday, November 14<sup>th</sup>, 2022.

### **This application packet contains:**

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](mailto: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.

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## I. GENERAL APPLICATION GUIDELINES

**A. Application Checklist.** To apply to the 2022 NCHS/AcademyHealth Data Visualization Challenge, the following items must be completed:

- i. Intent to Apply:** As a first step, please visit <https://academyhealth.org/NCHSData> 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
    - a. Indicate what data tables were used
    - b. Indicate how you manipulated the data tables using your choice of software.
    - c. A short narrative to demonstrate and discuss the impact, importance, and new information provided by the graphic. (up to 750 words)
  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](mailto:nchs@academyhealth.org) and [nchs-ah@cdc.gov](mailto: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 14, 2022.**

**B. Eligibility:** Individuals or teams of 2–3 graduate students may enter with or without a mentor (a maximum total of four individuals per team). 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.

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 one of more public use files (PUFs) from data systems across NCHS (e.g., the National Health Interview Survey (NHIS), the National Health and Nutrition Examination Survey (NHANES), the National Ambulatory Medical Care Survey (NAMCS), the National Hospital Ambulatory Medical Care Survey (NHAMCS), the National Post-Acute and Long-Term Care Study (NPALS), the National Survey of Family Growth (NSFG), the National Electronic Health Record Survey (NEHRS), and/or point-estimates or trend data from provisional COVID and/or Vital Stats rapid release data, or Health United States. All data are freely available online. The NCHS data must be prominently featured.

We strongly suggest that the other public data source(s) be external to NCHS. A non-exhaustive list of external data sources to NCHS includes data from the Census Bureau or another Federal statistical agency; healthdata.gov; or credible, reliable, and valid public data available from a university, non-profit, public or private foundation, et cetera. If questions or concerns are raised about an external data source, NCHS will consult with AcademyHealth. NCHS will make the final decision about whether that data source is suitable and can be included.

- i. Winners may be published on the NCHS and AcademyHealth websites. Please note that Power BI and Tableau are the preferred software's for display on these platforms, although applicants are free to use whatever software they desire.**

- D. Judging Criteria.** Candidates are reminded that each application (including the narrative and visualization) will be reviewed with respect to the following:

- i. Relevance/utility:** The submission 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. Complexity:** This submission is technically impressive and complex, using sophisticated and advanced analytic skills to manipulate the selected data.
- iii. 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)
- iv. Messaging:** The submission 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 submission provides the needed context to help the intended user to understand the message.
- v. Accessibility:** The design of the visualization is appropriate for the message being conveyed. Users can navigate through the visualization with ease.
- vi. Design & Creativity:** The visualization is visually striking and effectively uses visual elements (colors, annotations) to enhance and highlight the message. The visualization features original design and data presentation techniques.

- E. Submission Instructions.** The deadline for the receipt of applications is Monday, November 14, 2022 at 5:00 p.m. ET. Applicants must submit all required application materials online.

**NOTE: INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED.**