

Research Protocol for CityHealth: Smoke-Free Indoor Air

Prepared by Center for Public Health Law Research

June 2025

RESEARCH PROTOCOL

June 2025

CityHealth: Smoke Free Indoor Air

- I. **Dates of Protocol:** August 2022; November 2022; December 2022; November 2023; November 2024; November 21, 2025.
- II. **Scope:** Compile statutes and ordinances on smoke free indoor air laws across the 75 largest cities, their respective counties, 32 states and the District of Columbia. The purpose of the CityHealth project is to collect important public health policies and determine what makes a healthy city. For a particular health policy, the goal is to display the state, county, and city law involved in shaping this policy at the city level. This dataset contains coding questions examining smoke-free indoor air laws banning indoor smoking in certain locations. This is a cross-sectional dataset originally capturing effective law valid through June 1, 2025, and crediting laws passed prior to final publication with future effective dates.
- III. **Primary Data Collection**
 - a. **Project dates:** January 1, 2022 – December 1, 2022
 - b. **Data collection methods:** The team building this dataset consisted of three team members: two legal researchers (“Researchers”) and one supervisor (“Supervisor”) overseeing the quality control process.
 - c. **Databases used:** Searches conducted using Westlaw Next and HeinOnline; the laws were then collected from state-specific legislature websites. County and city laws were collected from official government websites, municode.com and amlegal.com.
 - d. **Search terms:** smoking, smoking bans, clean indoor air, smoke-free indoor air, e-cigarette smoking, marijuana smoking, cannabis smoking, multi-unit housing smoking, casino smoking, gaming smoking, public places smoking, place of employment smoking, workplace smoking, nursing home smoking, long term care facilities smoking, bar smoking, restaurant smoking
 - i. Key word searches were supplemented by examination of the table of contents of each relevant section of the law identified.
 - ii. Once all the relevant laws were identified in each jurisdiction, a master sheet was created for each jurisdiction that summarized the relevant laws within the scope at each jurisdictional level. This summary included the statutory history for each law and the effective date for that version of the law.
 - e. **Information about initial returns and additional inclusion or exclusion criteria:**
 - i. This dataset does not capture temporary COVID-19 emergency laws.

IV. Coding

- a. **Development of coding scheme:** For the version 2.0 Policy Package, starting with the 2022 yearly assessment, the CityHealth team opted to revise the scoring criteria from version 1.0, though several of the coding points remained similar. CityHealth worked with the Americans for Nonsmokers' Rights (ANR) Foundation to develop the scoring criteria for this policy. The Center for Public Health Law Research (CPHLR) developed a set of coding questions to identify the information more efficiently in the state, county, and city laws for the assessment. This set of coding questions was reviewed by the CityHealth team.
- b. Below are coding rules determined in consultation with CityHealth and subject matter experts:
- i. Smoking bans for all public indoor areas without exception include coding bans for bars and restaurants, barring an explicit exemption for those locations.
 - ii. Bars are coded for smoking bans in "age restricted venues."
 - iii. Laws that permit smoking in a semi-private room of a health care facility "if all patients within the room are smokers and request in writing to be placed in a room where smoking is permitted" is not coded as a common room of a nursing home ban since it involves a semi-private room.
- c. **Coding methods:** The Researchers were responsible for coding all 75 cities, including the respective state and county laws for each of the cities. Both Researchers independently coded their assigned jurisdictions in the MonQcle software platform.

Following the quality control process for the coding (described below), the Supervisor used the final data results to apply the coding for each jurisdiction to the scoring criteria to determine the final medal score for each city. These medal results were compiled into a score overview spreadsheet and reviewed by the CityHealth team.

- d. **Quality control:**
- i. **Original coding review:** The Supervisor oversaw the quality of the data by downloading the data from the MonQcle into Microsoft Excel and reviewing it to find caution flags, missing citations, and errors in the coding. Issues in the coding were discussed by the Researchers in coding meetings and resolved accordingly.
 - ii. **Redundant coding review:** The Supervisor assigned original coding records containing Smoke Free Indoor Air laws for redundant coding. Jurisdictional records were independently redundantly coded by a second researcher.
 - 1. The Supervisor reviewed the redundant coding by downloading the data from the MonQcle into Microsoft Excel and comparing the records, variable by variable, looking for divergences. When a divergence was identified, it was discussed with the researchers. The reason for the divergence was identified and resolved. A measure of divergence was calculated by the Researcher and the redundant record was deleted.
 - iii. **Final coding review:** The Supervisor did a final check of the original coding for all states and ensured that the state coding was consistent among cities within the same. The Supervisor also reviewed the coding findings against data previously collected by the ANR team to ensure cohesion. Any divergences were discussed and the coding was resolved where necessary.

- iv. **City review phase:** After the medal results were tabulated and reviewed by CityHealth, the Supervisor sent the medal results to a designated representative in each of the 75 cities to give them an opportunity to review the preliminary result and provide any notice of new or missing laws in scope or question the end results. This feedback was reviewed by both the CPHLR team and the CityHealth team prior to final publication of the final medal results.

V. 2023 Assessment

- a. **Update:** For the 2023 Assessment, there were a mix of medal changes because of amendments or new laws but also changes due to further discussion with subject matter experts and city officials:
 - i. After discussion with subject matter experts, it was decided that the Arizona state law should supersede the local smoke free laws despite their later effective date, so Arizona cities (Mesa, Phoenix, and Tucson) were re-scored relying on the state law, which earned them all Bronze medals.
 - ii. After discussion with a few Ohio cities and review of case law interpretations, Ohio cities were credited for smoking bans in bars, restaurants, and gaming facilities.
 - iii. After discussion with subject matter experts, Newark law was credited for banning smoking in the common areas of nursing homes, earning the city a Gold medal.
 - iv. Substantive amendments resulted in medal changes in Lincoln (improved to Gold from Silver), Nashville (improved to Silver from no medal), Omaha (improved to Gold from Silver)
 - 1. All substantive changes were redundantly coded; there were no divergences.

VI. 2024 Assessment

- a. **Update:** For the 2024 assessment, 24 cities were amended, though none of these amendments caused coding changes or resulted in medal changes. All changes were non-substantive.
- b. **Quality Control:** Due to the lack of substantive updates, no records were assigned for redundant coding. The CPHLR team confirmed these results with secondary sources and no changes were flagged by the subject matter experts.
- c. **City Review Phase:** Following the completion of the research and coding, all 75 cities were contacted via one or more representatives to review the findings. All cities had two weeks to response and provide feedback or additional information. All feedback was discussed between Temple, CityHealth and the subject matter expert. If necessary, any coding changes were made.

VII. 2025 Assessment

- a. **Update:**
 - i. Substantive changes were found in Dallas and Seattle.

- ii. The following cities saw increases to their scores due to substantive changes and clarifications around nursing home language and marijuana smoking laws:
 - 1. Austin, Cincinnati, Cleveland, Columbus, and Toledo increased their medals from No Medal to Gold.
 - 2. Dallas and Seattle increased their medals from Bronze to Gold.
 - 3. District of Columbia increased its medal from No Medal to Silver.
 - iii. Non-substantive changes found in Anaheim, Arlington, Austin, Baltimore, Charlotte, Chicago, Corpus Christi, Durham, El Paso, Fort Worth, Greensboro, Houston, Louisville, Memphis, Mesa, Minneapolis, Nashville, New Orleans, New York, Newark, Oklahoma City, Omaha, Phoenix, Pittsburgh, Plano, Raleigh, Saint Paul, San Antonio, Tucson, and Tulsa.
- b. **Quality Control:** Dallas, Memphis, Oakland, and Seattle were redundantly coded. The divergence rate was 0.0%. Coding results were reviewed by the CityHealth team and subject matter experts.
- c. **City Review Phase:** Following the completion of the research and coding, all 75 cities were contacted via one or more representatives to review the findings. All cities had two weeks to response and provide feedback or additional information. All feedback was discussed between Temple, CityHealth and the subject matter expert. If necessary, any coding changes were made.