Research Protocol for CityHealth: Smoke Free Indoor Air

Prepared by Center for Public Health Law Research

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Research Protocol

I.   **Dates of Protocol:** March 24, 2015; October 31, 2016; November 3, 2016; February 3, 2017; January 31, 3018; October 7, 2019; October 30, 2019; November 19, 2020

II.   **Scope:** Compile statutes and ordinances on smoke free indoor air laws across the 40 largest cities, their respective counties, 25 states and the District of Columbia. The purpose of the CityHealth project is to collect important public health policies and determines 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 the locations where smoking is banned and the locations that are exempt from this ban. This is a cross-sectional dataset capturing currently effective law valid through August 1, 2019.

III.   **Primary Data Collection**

    a.   **Original project dates:** February 12, 2015 – April 1, 2015

    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 WestlawNext, city and county code databases; 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**: "clean indoor air," preemption, tobacco, cigarettes, smoking laws, indoor smoking ban, smoking exemption, "public place"

        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**: Laws that were internally referenced by a clean indoor air law were included only if necessary for complete comprehension of the law to answer a coding question. The team excluded laws on smoking in outdoor areas, including parks.

        i.   The scope of this project included the laws from the 40 largest cities in the United States. For each of these 40 cities, the Researchers also collected the relevant laws at the state and county level.

IV. Coding

  a. **Development of coding scheme**: The Researchers and Supervisor drafted coding questions and circulated them for review until all parties felt they had been sufficiently refined. Once the coding questions were finalized, they were entered into the MonQcle software. The team developed a coding scheme that both allows state, county, and city laws to be tracked individually and reflects the applicable law at the city level. This was achieved by coding state, county, and city laws independently, and then coding a final set of questions when all three sets of laws apply. In some states, preemption laws explicitly muted city and county laws, in others, city and county laws were only applicable when they were stronger than the state standard. The team ultimate published the preemption level questions at the state level as well as the final summary level set of questions to show what laws apply at the city level.

  b. **Coding methods:** The Researchers were responsible for coding 20 cities each, including the respective state and county laws. Both Researchers independently coded the first ten jurisdictions. The Researchers then 100 percent redundantly coded those states to evaluate the questions. The Supervisor compared the coding and the team discussed and resolved all divergences. Both researchers coded the next three states, at which point the Supervisor calculated their divergence rate at below 5%. The team met and resolved all divergences and the Researchers coded the remaining 27 records. For the remaining records, the team redundantly coded 20% of the remaining records in the dataset.

      i. When developing answer choices to fit the locations where smoking is either banned or exempted from a smoking ban, the team found that the language concerning the types of places varies across states, counties, and cities. To capture the locations consistently across these jurisdictions, the team created answer choices that represented broad categories of locations (i.e. public place, place of employment). The team coded "None," when either there was no anti-smoking law present and when the anti-smoking law did not prohibit smoking in any of the listed locations. Some bodies of law offer a long list of locations where people cannot smoke rather than using the broader term like "public place." In this situation, the team coded "public place" for states that prohibit smoking in least three locations: stores (retail establishments, malls), public buildings (government-owned), and cultural institutions (like theaters and museums).

      ii. For cities in more than one county, the team coded the county law for which the city serves as the county seat. These include: Columbus (Franklin County), Oklahoma City (Oklahoma County), Atlanta (Fulton County), Kansas City (Jackson County), San Antonio (Bexar County), and El Paso (El Paso County).

      iii. If a county was coterminous with a city, the Researchers coded the laws at the city level. This occurred in Denver, Louisville, Nashville, Philadelphia, Jacksonville, New York, San Francisco, and Virginia Beach. In Massachusetts, the Suffolk County government has been abolished. In Indiana, Indianapolis-Marion County is considered a combined city-county, so this was coded at the city level. Washington, D.C. was coded at the state level only. The five boroughs of New York City have surrendered their lawmaking ability to the city of New York.

  c. **Quality control:** The Supervisor oversaw the overall quality of the data by downloading the data from the Workbench into Microsoft Excel and reviewing it to find caution flags, missing answer choices, and errors in the coding. An original coding review sheet was sent to the Researchers for their review. Issues in the coding were discussed by the Researchers in coding meetings and resolved accordingly.

i. The Supervisor reviewed the redundant coding by downloading the data from the Workbench 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.

    1. The initial rate of divergence on March 5, 2015 was 31.33%. The team continued to redundantly code 100% of the next three records until the rate of divergence was 5%. After this was achieved, the Researchers continued to code 20% of the total number of remaining records. The rate of divergence for the remaining records was 7%.

ii. The redundant coding process helped the team define the coding scheme. When a state explicitly preempts county and city laws, only the state law is coded in the summary section. When the exemption summary exception is coded, and there are no preemption statutes, an exemption is only coded when all three levels of laws exempts the program. Hotels were considered exempt from the smoking ban when the law explicitly allowed them to have any smoking rooms. Restaurants and bars were considered exempt from the smoking ban when the law permitted any kind of indoor smoking area.

iii. Once all of these issues were resolved, the entries were re-coded accordingly. The Supervisor then did a final check of the original coding for all states and ensured that the state coding was consistent for the Arizona, California, Tennessee, and Texas entries since these states had multiple cities included in this dataset.

iv. A naïve coder was brought on towards the end of the coding process. When a divergence was identified, it was discussed with the Researchers and the naïve coder. The reason for the divergence was identified and resolved. A measure of divergence was calculated by the Researcher and the naïve coding record was deleted. There were no changes to the coding scheme in response to the naïve coding divergences.

    1. The rate of divergence on March 25, 2015 was 16.67%.

V.   October 2016 Update

a. **Data collection methods:** One Researcher conducted research to determine if any states, counties, or cities had enacted relevant legislation effective through October 1, 2016, and to identify pending legislation that may be close to passage. The Researcher used the same search terms stated above. Due to the length of time since the dataset completion, this yielded several updates in almost every record. The client reviewed coding results from the original version with a content expert on clean indoor air laws and wanted us to reevaluate the scope. They wanted our team to look into including a variable on smoking bans in casinos, as several states have recently passed legislation requiring all casinos or gaming facilities operating in the state to be smoke-free. After identifying several nuances with the smoke-free casino laws, we determined it was more efficient to move forward without adding such a variable, but did leave open the possibility to add this variable in a future version of this dataset.

i. Our team also sought to clarify the inclusion/exclusion criteria for certain variables by developing definitions. For example, while most jurisdictions do specifically ban "public places" or "interior

places accessed by the public," a few jurisdictions do simply list all the public places interior locations where smoking is banned without categorizing them as "public places." Therefore, the team developed the following definitions:

1. Workplaces/Places of employment = enclosed area in which employees have access to during the course of their employment.

2. Public place = enclosed area where the public is invited or permitted.

    a. Includes: restaurants, stores, public transit, health care facilities (including hospitals), long term care facilities, child care facilities, auditoriums, theaters, airports, schools, bars, banks, and shopping malls.

ii. For the question *"What locations are exempt from the smoking ban?"* any exemption of the area is enough to be coded as an exemption. For example, if a city exempted smoking in the residential areas of a long-term care facility, that would be coded as an exemption for long-term care facilities even if smoking was not permitted in common areas of the facility. A future version of the dataset may be able to delve into the nuances of individual location exemptions.

b. **Coding updated findings:** The Researcher collected, built, and coded the updated laws and policies. Due to these improved scoping definitions and the volume of cities requiring an update, the team decided to re-code each city as a cross-sectional record. This means that each city record displays the current law valid through October 1, 2016. The original iterations were hidden from publication, and any longitudinal records occurring after the first iteration but before the current iteration were not built. Each city should now display the current version of all laws in scope with coding that matches the above definitions, now valid through October 1, 2016.

   i. The Supervisor oversaw the quality of the data by downloading the data from the MonQcle into Microsoft Excel and reviewing for caution flags, missing answer choices, and errors in the coding. An original coding review sheet was sent to the Researchers for their review. Issues in the coding were discussed by the Researchers in coding meetings and resolved accordingly.

   ii. The Researchers noted that a few jurisdictions did not outright ban smoking in child care facilities per se, but instead exempted private residences from the smoking ban on public workplaces when the private residences were used as a child care facility, like N.M. Stat. § 24-16-12. The team decided to code such laws as a ban on smoking in child care facilities, but noted that they should re-examine this variable during the next version of this dataset so that it more clearly captured how the laws are written.

c. **Quality control:** The Supervisor originally assigned cities for redundant coding. The initial rate of divergence on November 1, 2016 was 4.62%.

   i. The team met to discuss the coding review and addressed the few divergences caused by one Researcher missing a specific mention of a cigar bar exemption in a Long Beach law. The other Researcher made the necessary edit.

   ii. Despite the low divergence rate during the first round of redundant coding, the Supervisor assigned another batch of redundant coding since so many states had been re-coded. The rate of

divergence for this batch on November 2, 2016 was 2.7%. All divergences were discussed and resolved.

VI.   December 2017 Update

a.   **Data collection methods:** The Researchers conducted a review of each city that included searching for amendments to laws that were previously collected, new policies within scope, and for any new clean indoor air laws that had been enacted since the February 2017 update. Amendments were updated through an effective date of December 1, 2017. The Researchers searched for clean indoor air laws with WestlawNext, Google, city ordinance databases, and city websites.

b.   **Coding updated findings:** In addition to researching each city for newly amended laws, additional laws, and newly enacted laws, the Researchers also made note of any potential coding inconsistencies. New or amended laws were found in Austin, Chicago, Columbus, Dallas, Denver, Fort Worth, Fresno, Long Beach, Los Angeles, Louisville, Memphis, Milwaukee, Nashville, New York City, Oklahoma City, Portland, Sacramento, San Diego, San Francisco, San Jose, and Washington, D.C.

a.   **Quality control:** The Supervisor originally assigned all new and updated records for redundant coding. The rate of divergence was 7.41%. The team met to discuss the coding issues and resolved the divergences as needed. As the original divergence rate was above 5%, the team subsequently conducted a Statistical Quality Control (SQC) check. Based on our ability to conduct this work over time, we assume that the overall error rate in any resulting dataset is below 5%. We select a sample size of n coding instances from the final dataset necessary to be 95% confident with an alpha of .05 that the error rate is less than 5%. Each coding instance selected is reviewed for accuracy. For this update, the Supervisor conducted an SQC check of the records. To be 95% confident with an alpha of .05 that the error rate is less than 5%, 30 variables were redundantly coded. No divergences were identified. The Supervisor also reviewed each individual entry and compared the findings to secondary sources.

VII.   August 2019 Update

a.   **Data collection methods:** The Researchers conducted a review of each city that included searching for amendments to laws that were previously collected, new policies within scope, and for any new clean indoor air laws that had been enacted since the December 2017 update. Amendments were updated through an effective date of August 1, 2017. The Researchers searched for clean indoor air laws with WestlawNext, Google, city ordinance databases, and city websites.

b.   **Coding updated findings:** In addition to researching each city for newly amended laws, additional laws, and newly enacted laws, the Researchers also made note of any potential coding inconsistencies. New or amended laws were found in Albuquerque, Atlanta, Baltimore, Boston, Charlotte, Chicago, Dallas, Denver, District of Columbia, Jacksonville, Las Vegas, Long Beach, Los Angeles, Louisville, Memphis, Milwaukee, Nashville, New York City, Oklahoma City, Philadelphia, Portland, Sacramento, San Antonio, San Diego, San Francisco, and Virginia Beach.

c.   **Quality control:** Charlotte, Atlanta, Dallas, District of Columbia, Jacksonville, Long Beach, New York City, Oklahoma City, Sacramento, and Virginia Beach were redundantly coded. The divergence rate was 3.75%. All divergences were discussed and resolved. Each city was given an opportunity to review their assessment prior to publication.

The Supervisor checked the original coding to check for any other coding or building issues and any issues were resolved. This dataset is now valid through August 1, 2019.

VIII. **February 2020 Update**

    a. **Valid through date note for all datasets:** All of the CityHealth datasets that are currently published were published in December 2020. Please see the individual policy pages or protocols for the exact valid through date as not all of the datasets had the same valid through date for this update.

    b. **Data collection methods:** The Researchers conducted a review of each city that included searching for amendments to laws that were previously collected, new policies within scope, and for any new clean indoor air laws that had been enacted since the August 2019 update. The Researchers searched for clean indoor air laws with WestlawNext, Google, city ordinance databases, and city websites.

    c. **Coding updated findings:** In addition to researching each city for newly amended laws, additional laws, and newly enacted laws, the Researchers also made note of any potential coding inconsistencies. Updates were identified in Atlanta, Chicago, Columbus, Dallas, Denver, Detroit, Fort Worth, Mesa, Milwaukee, Oklahoma City, Sacramento, San Antonio, San Diego, Seattle, and Washington, DC. After a discussion with CityHealth the following coding rule was implemented for the February 2020 update:

        i. Policies that include a grandfather clause to enable certain locations to allow indoor smoking will not receive a medal.

    d. **Quality control:** Atlanta, Denver, Charlotte, Columbus, Detroit, Oklahoma City, San Diego, Seattle, Washington DC, and Virginia Beach were redundantly coded on March 17, 2020. The divergence rate was 2%. All divergences were discussed and resolved. The Supervisor checked the original coding to check for any other coding or building issues and any issues were resolved.

Each city was given an opportunity to review their assessment prior to publication. Two cities, Houston and Boston, responded with a question about the Smoke Free Indoor Air assessment surrounding the long-term care facilities criteria. Houston indicated that their smoke free indoor air policy covers long-term facilities, but they did note that there is a waiver allowed for smokers within private rooms and semiprivate rooms in nursing homes and long-term care facilities. Because this provision allows for smoking in private and semi-private rooms, Houston would not receive credit for smoke free long-term care facilities. Boston sent along their new smoke free air regulation which went into effect on July 10, 2020. We did assess this regulation and while the regulation does ban smoking in nursing homes, it also allows facilities to allow smoking through a grandfather clause. While only one nursing home falls into this exemption, we have not allowed cities in the past to receive credit for a ban when they allow locations to grandfather in facilities that do not need to follow the ban. (For the city of Philadelphia, there is a law that bans smoking in bars but bars are permitted to allow smoking if they fall under a grandfather clause. Philadelphia did not receive credit for the smoking ban in bars). Therefore, Boston did not receive credit for their smoking ban in nursing homes.

This dataset is now valid through February 1, 2020