

**CITY OF LUDLOW, KENTUCKY
ORDINANCE NO. 2025-1**

**AN ORDINANCE ENACTING THE “SMOKE-FREE AIR
ORDINANCE” THAT PROHIBITS SMOKING IN PLACES OPEN
TO THE PUBLIC, PLACES OF EMPLOYMENT AND CERTAIN
PUBLIC PLACES IN THE CITY OF LUDLOW, KENTUCKY.**

WHEREAS, there are several establishments open to the public that allow smoking inside buildings and other areas in the city of Ludlow; and

WHEREAS, exposure to exhaled cigarette smoke, e-cigarette aerosol and other tobacco-related emissions is harmful to health: The 2006 U.S. Surgeon General's Report, *The Health Consequences of Involuntary Exposure to Tobacco Smoke*, has concluded that (1) secondhand smoke exposure causes disease and premature death in children and adults who do not smoke; (2) children exposed to secondhand smoke are at an increased risk for sudden infant death syndrome (SIDS), acute respiratory problems, ear infections, and asthma attacks, and that smoking by parents causes respiratory symptoms and slows lung growth in their children; (3) exposure of adults to secondhand smoke has immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer; and (4) there is no risk-free level of exposure to secondhand smokeⁱ; and

WHEREAS, the 2010 U.S. Surgeon General's Report, *How Tobacco Smoke Causes Disease*, states that even occasional exposure to secondhand smoke is harmful and low levels of exposure to secondhand tobacco smoke can lead to a rapid and sharp increase in dysfunction and inflammation of the lining of the blood vessels, which are implicated in heart attacks and strokeⁱⁱ; and

WHEREAS, according to the 2014 U.S. Surgeon General's Report, *The Health Consequences of Smoking—50 Years of Progress*, secondhand smoke exposure causes stroke in nonsmokers, and that exposure to secondhand smoke causes an estimated 41,000 deaths each year among adults in the United Statesⁱⁱⁱ; and

WHEREAS, emissions from electronic smoking devices (ESDs), commonly referred to as electronic cigarettes, or “e-cigarettes,” are made up of a high concentration of ultrafine particles, and the particle concentration is higher than in conventional tobacco cigarette smoke.^{iv} Human lung cells that are exposed to ESD aerosol and flavorings show increased oxidative stress and inflammatory responses.^v The World Health Organization (WHO), the National Institute for Occupational Safety and Health (NIOSH), and the American Industrial Hygiene Association (AIHA) recommend that ESDs not be used in smoke-free environments, in order to minimize the risk to bystanders of breathing in the aerosol emitted by the devices and to avoid undermining the enforcement of smoke-free laws^{vi}; and

WHEREAS, in a study of a Hookah lounge in Lexington, KY, secondhand smoke from waterpipe smoking created high fine particulate concentrations, 3-6

times the National Ambient Air Quality Standard for outdoor air – a Clean Air Act limit on pollution^{vii}; and

WHEREAS, smoking and exposure to secondhand smoke pose significant costs for businesses and the economy: Secondhand smoke costs the U.S. economy \$5.6 billion annually in lost productivity^{viii}; and

WHEREAS, comprehensive, 100% smoke-free laws do not harm business: The 2006 U.S. Surgeon General's Report, *The Health Consequences of Involuntary Exposure to Tobacco Smoke*, has concluded that evidence from peer-reviewed studies shows that smoke-free policies and laws do not have an adverse economic impact on the hospitality industry^v; and

WHEREAS, comprehensive, 100% smoke-free laws are necessary because: A significant amount of secondhand smoke exposure occurs in the workplace. Employees who work in smoke-filled businesses suffer a 25-50% higher risk of heart attack and higher rates of death from cardiovascular disease and cancer, as well as increased acute respiratory disease and measurable decrease in lung function^{ix}; and

WHEREAS, the 2006 U.S. Surgeon General's Report, *The Health Consequences of Involuntary Exposure to Tobacco Smoke*, has concluded that establishing smoke-free workplaces is the only effective way to ensure that secondhand smoke exposure does not occur in the workplace, because ventilation and other air cleaning technologies cannot completely control for exposure of nonsmokers to secondhand smoke^x; and

WHEREAS, the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) bases its ventilation standards on totally smoke-free environments. ASHRAE has determined that there is currently no air filtration or other ventilation technology that can completely eliminate all the carcinogenic components in secondhand smoke and the health risks caused by secondhand smoke exposure and recommends that indoor environments be smoke-free in their entirety. In 2015, ASHRAE amended its ventilation Standard for Acceptable Indoor Air Quality (62.1) to include an environment that is completely free from marijuana smoke and emissions from electronic smoking devices^{xi}; and

WHEREAS, during periods of active smoking either outdoors or indoors, peak and average outdoor tobacco smoke levels measured in outdoor cafes and restaurant and bar patios near smokers rival indoor smoke concentrations^{xii}; and

WHEREAS, secondhand smoke exposure may increase the risk of smoking, especially among never-smoking college students^{xiii}; and

WHEREAS, accordingly, the Ludlow City Council finds and declares that the purposes of this ordinance are (1) to protect the public health and welfare by prohibiting smoking in public places and places of employment; and (2) to guarantee

the right of all residents and visitors to breathe smoke-free air, and to recognize that the need to breathe smoke-free air shall have priority over the desire to smoke; and

WHEREAS, for the reasons set for in Section 117.02, titled “Findings and Intent” below, the Ludlow City Council believes that this ordinance is needed to protect the public health and welfare by prohibiting smoking in public places and places of employment, guarantee the right of all residents and visitors to breathe smoke-free air, and recognize that the need to breathe smoke-free air shall have priority and override the desire to smoke in all places of employment and public places in the City of Ludlow.

NOW THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNCIL OF THE CITY OF LUDLOW, KENTUCKY:

SECTION I

That New Sections § 133.30 through § 133.48 of the Ludlow Code of Ordinances (“Code”), titled the “Smoke-Free Air Ordinance,” is hereby enacted as follows:

§ 133.31 TITLE.

This Ordinance shall be known as the City of Ludlow Smoke-Free Air Ordinance.

§ 133.32 FINDING AND INTENT.

Accordingly, the Ludlow City Council finds and declares that the purposes of this ordinance are (1) to protect the public health and welfare by prohibiting smoking in public places and places of employment; and (2) to guarantee the right of all residents and visitors to breathe smoke-free air, and (3) to recognize that the need to breathe smoke-free air shall have priority over the desire to smoke.

§ 133.33 DEFINITIONS.

The following words and phrases, whenever used in this Ordinance, shall be construed as defined in this Section:

“Bar” means an establishment that is devoted to serving alcoholic beverages for consumption by guests on the premises and in which the serving of food is only incidental to the consumption of those beverages, including but not limited to, taverns, nightclubs, cocktail lounges, and cabarets.

“Business” means a sole proprietorship, partnership, joint venture, corporation, or other business entity, either for-profit or not-for-profit, including retail establishments where goods or services are sold; professional corporations and other entities where legal, medical, dental, engineering, architectural, or other professional services are delivered; and private clubs. This definition does not

include “home occupations,” as set forth in Chapter 154, Article IX, § 9.11 of the Ludlow Code of Ordinances.

“Electronic Smoking Device” means any product containing or delivering nicotine or any other substance intended for human consumption that can be used by a person in any manner for the purpose of inhaling vapor or aerosol from the product. The term includes any such device, whether manufactured, distributed, marketed, or sold as an e-cigarette, e-cigar, e-pipe, e-hookah, or vape pen, or under any other product name or descriptor.

“Employee” means a person who is employed by an employer in consideration for direct or indirect monetary wages or profit, including a contract employee, or a person who volunteers his or her services for a non-profit entity.

“Employer” means a person, business, partnership, association, corporation, including a municipal corporation, trust, or non-profit entity that employs the services of one or more individual persons.

“Enclosed Area” means all space between a floor and a ceiling that has forty percent or more of its perimeter closed in by walls or other coverings of any material, doorways, or windows, whether open or closed. A wall includes any retractable divider, garage door, or other physical barrier, whether temporary or permanent and whether or not containing openings of any kind.

“Healthcare Facility” means an office or institution providing care or treatment of diseases, whether physical, mental, or emotional, or other medical, physiological, or psychological conditions, including but not limited to, hospitals, rehabilitation hospitals or other clinics, including weight control clinics, nursing homes, long-term care facilities, homes for the aging or chronically ill, laboratories, and offices of surgeons, chiropractors, physical therapists, physicians, psychiatrists, dentists, and all specialists within these professions. This definition shall include all waiting rooms, hallways, private rooms, semi-private rooms, and wards within health care facilities.

“Hookah” means a water pipe and any associated products and devices which are used to produce fumes, smoke, and/or aerosol from the burning or heating of material including, but not limited to, tobacco, shisha, or other plant matter.

“Place of Employment” means an area under the control of a public or private employer, including, but not limited to, work areas, private offices, employee lounges, restrooms, conference rooms, meeting rooms, classrooms, employee cafeterias, hallways, construction sites, temporary offices, and vehicles. A private residence is not a “place of employment” unless it is used as a childcare, adult day care, or health care facility.

“Playground” means any park or recreational area designed in part to be used by children that has play or sports equipment installed or that has been designated or landscaped for play or sports activities, or any similar facility located on public

grounds.

“Private Club” means an organization, whether incorporated or not, which the owner, lessee, or occupant of a building or portion thereof uses exclusively for club purposes at all times, which is operated solely for a recreational, fraternal, social, patriotic, political, benevolent, or athletic purpose, but not for pecuniary gain, and which only sells alcoholic beverages incidental to its operation. The affairs and management of the organization are conducted by a board of directors, executive committee, or similar body chosen by the members. The organization has established bylaws and/or a constitution to govern its activities. The organization has been granted an exemption from the payment of federal income tax as a club under 26 U.S.C. Section 501.

“Public Event” means an event which is open to and may be attended by the general public, including but not limited to, such events as concerts, fairs, farmers’ markets, festivals, parades, performances, and other exhibitions, regardless of any fee or age requirement.

“Public Place” means an area to which the public is invited or in which the public is permitted, including but not limited to, banks, bars, educational facilities, gambling facilities, health care facilities, hotels and motels, laundromats, public transportation vehicles and facilities, reception areas, restaurants, retail food production and marketing establishments, retail service establishments, retail stores, shopping malls, sports arenas, theaters, and waiting rooms. A private residence is not a “public place” unless it is used as a childcare, adult daycare, or healthcare facility.

“Reasonable distance,” for purposes of outdoor smoking under Section 117.08 and Section 117.09 of this ordinance, shall mean a reasonable distance between an individual who is smoking and a child or adult who is not smoking (“nonsmokers”), taking into consideration atmospheric conditions, such as wind and precipitation, and the confines of the outdoor space, but at no time shall the outdoor smoker be closer than ten (10) feet to nonsmokers.

“Recreational Area” means any public or private area open to the public for recreational purposes, whether or not any fee for admission is charged, including but not limited to, amusement parks, athletic fields, beaches, fairgrounds, gardens, golf courses, parks, plazas, skate parks, swimming pools, trails, and zoos.

“Restaurant” means an eating establishment, including but not limited to, coffee shops, cafeterias, sandwich stands, and private and public-school cafeterias, which gives or offers for sale food to the public, guests, or employees, as well as kitchens and catering facilities in which food is prepared on the premises for serving elsewhere. The term “restaurant” shall include any bar area(s) within the restaurant.

“Service Line” means an indoor or outdoor line in which one (1) or more persons are waiting for or receiving service of any kind, whether or not the service involves the exchange of money, including but not limited to, ATM lines, concert lines, food

vendor lines, movie ticket lines, and sporting event lines.

“Shopping Mall” means an enclosed or unenclosed public walkway or hall area that serves to connect retail or professional establishments.

“Smoking” means inhaling, exhaling, burning, or carrying any lighted or heated cigar, cigarette, pipe, hookah, or any other lighted or heated tobacco or plant product intended for inhalation, including marijuana, whether natural or synthetic, in any manner or in any form. “Smoking” includes the use of an electronic smoking device which creates an aerosol or vapor, in any manner or in any form, or the use of any oral smoking device for the purpose of circumventing the prohibition of smoking in this Ordinance.

§ 133.34 CITY OF LUDLOW FACILITIES AND PROPERTIES.

All enclosed areas, including buildings and vehicles owned, leased, or operated by the City of Ludlow or under the control of the City of Ludlow shall be subject to the provisions of this ordinance.

§ 133.35 PROHIBITION OF SMOKING IN ENCLOSED PUBLIC SPACES.

Smoking shall be prohibited in all enclosed areas of public places within City of Ludlow.

§ 133.36 SMOKING BANNED IN ENCLOSED PLACES OF EMPLOYMENT.

- A. Smoking shall be prohibited in all enclosed areas of places of employment without exception. This includes, without limitation, common work areas, auditoriums, classrooms, conference and meeting rooms, private offices, elevators, hallways, medical facilities, cafeterias, employee lounges, stairs, restrooms, and all other enclosed facilities.
- B. This prohibition on smoking shall be communicated to all existing employees before the effective date of this ordinance and to all prospective employees upon their application for employment.

§ 133.37 SMOKING BANNED IN CERTAIN ENCLOSED RESIDENTIAL FACILITIES.

Smoking shall be prohibited in the following enclosed areas of residential facilities:

- A. All private and semi-private rooms in long-term care facilities.
- B. All hotel and motel guest rooms.

§ 133.38 SMOKING BANNED IN OUTDOOR PUBLIC PLACES.

Smoking shall be prohibited in the following outdoor public places:

- A. Smoking is prohibited within a reasonable distance from the outside entrance to any building in or in or on a public place so that tobacco smoke does not enter the building through entrances, windows, ventilation systems other means.
- B. All outdoor property that is owned by the City of Ludlow, and adjacent to buildings owned, leased or operated by the City of Ludlow (not privately owned property adjacent to City of Ludlow property) unless in a location designated for smoking by the appropriate city authorities (which must be a reasonable distance from building entrances).
- C. Reasonable distances from outdoor seating or serving areas of restaurants, bars or other establishments that allow outdoor seating. Outdoor smoking areas at establishment must also be a reasonable distance from pedestrian traffic.
- D. In all outdoor arenas, stadiums and amphitheaters.
- E. Outdoor playgrounds.
- F. Outdoor public transportation stations, platforms and shelters under the authority of the City of Ludlow.
- G. Outdoor service lines, including lines in which service is obtained by persons in vehicles, such as banks.
- H. Smoking shall be prohibited within a reasonable distance of other persons in all outdoor places of employment where two or more employees are required to be present in the course of their employment. This includes, without limitation, work areas, construction sites, and associated indoor areas like temporary offices such as trailers, and restroom facilities. This prohibition on smoking shall be communicated to all existing employees by the effective date of this ordinance and to all prospective employees upon their application for employment.
- I. In outdoor common areas of apartment buildings, condominiums, manufactured housing communities, retirement facilities, nursing homes, and other multi-unit residential facilities, except in designated smoking areas not to exceed 25 percent of the total outdoor common area.

§ 133.39 WHERE SMOKING NOT REGULATED.

Notwithstanding any other provision of this ordinance to the contrary, smoking shall not be prohibited in all private clubs or private residences, unless used as a childcare, adult daycare, or healthcare facility.

Notwithstanding any other provision of this ordinance, a business including but limited to bars and restaurants may allow smoking in open air areas such as patios and sidewalks adjacent to the business where business patrons gather so long as smoke is not allowed to enter the building through entrances, windows, ventilation systems other means.

§ 133.40 DECLARATION OF ESTABLISHMENT OR OUTDOOR AREA AS NON-SMOKING.

Notwithstanding any other provision of this ordinance, an owner, operator, manager, or other person in control of an establishment, facility, or outdoor area may declare that entire establishment, facility, or outdoor area as a non-smoking place. Smoking shall be prohibited in any place in which a sign conforming to the requirements of this section is posted.

§ 133.41 POSTING OF SIGNS AND REMOVAL OF ASHTRAYS.

The owner, operator, manager, or other person in control of a place of employment or public place City of Ludlow facilities or property, or residential facility where smoking is prohibited by this ordinance shall:

- A. Clearly and conspicuously post “No Smoking” signs or the international “No Smoking” symbol (consisting of a pictorial representation of a burning cigarette enclosed in a red circle with a red bar across it) in that place.
- B. Clearly and conspicuously post at every entrance to that place a sign stating that smoking is prohibited or, in the case of outdoor places, clearly and conspicuously post “No Smoking” signs in a location visible to all employees, visitors, and patrons.
- C. Remove all ashtrays from any area where smoking is prohibited by this ordinance, except for ashtrays displayed for sale and not for use on the premises.

§ 133.42 NON-RETALIATION; NON-WAIVER OF RIGHTS.

- A. No person or employer shall discharge, refuse to hire, fail to promote, eject, or in any other manner retaliate against an employee, applicant for employment, customer, or resident of a multiple-unit residential facility because that employee, applicant, customer, or resident exercises any rights afforded by this ordinance or reports or participates in the investigation or prosecution of a violation of this ordinance. A violation of this Subsection shall be a misdemeanor, punishable by a fine not to exceed \$1,000 for each violation. Nothing in this subsection should be construed to waive or otherwise surrender any other legal right or remedy available to the employee, applicant for employment, customer, or resident.
- B. An employee who works in a setting where an employer allows smoking does not waive or otherwise surrender any legal rights the employee may have against the employer or any other party.

§ 133.43 ENFORCEMENT.

- A. The City of Ludlow requests the assistance of the Northern Kentucky Independent District Health Department (NKY Health) to enforce this ordinance, or an authorized designee. The City will enter into an Interlocal Agreement with the NKY Health that establishes enforcement parameters in the event NKY Health agrees to assist with enforcement of the ordinance. Nothing herein shall be construed to prevent any peace officer with jurisdiction from issuing a citation for violation of this

subchapter committed in his or her presence.

- B. Notice of the provisions of this ordinance shall be given by the City to all applicants for a business license in City of Ludlow.
- C. Any person who desires to register a complaint under this ordinance may do so by contacting NKY Health by telephone or other identified methods.
- D. NKY Health or its designees shall, while an establishment is undergoing otherwise mandated inspections, inspect for compliance with this Ordinance.
- E. An owner, manager, or operator, or an employee if an owner, manager, or operator is not available, of an area regulated by this ordinance shall direct a person who is smoking in violation of this ordinance to extinguish or turn off the product being smoked. If the person does not stop smoking, the owner, manager, operator, or employee shall refuse service and shall immediately ask the person to leave the premises. If the person in violation refuses to leave the premises, the owner, manager, operator, or employee shall contact a law enforcement agency.
- F. Notwithstanding any other provision of this ordinance, an employee or private party may bring legal action to enforce this ordinance.
- G. In addition to the remedies provided by the provisions of this Section, NKY Health or any person aggrieved by the failure of the owner, operator, manager, or other person in control of a public place or a place of employment to comply with the provisions of this ordinance may apply for injunctive relief to enforce those provisions in any court of competent jurisdiction.
- H. Any person or business aggrieved by enforcement action related to this ordinance may appeal that action to a court of competent jurisdiction.

§ 133.44 VIOLATIONS AND PENALTIES.

- A. A person who smokes in an area where smoking is prohibited by the provisions of this ordinance shall be guilty of an infraction, punishable by a fine not exceeding fifty dollars (\$50).
- B. Except as otherwise provided in Section 117.13, a person who owns, manages, operates, or otherwise controls a public place or place of employment and who knowingly fails to comply with the provisions of this ordinance shall be guilty of an infraction, punishable by:
 - 1. A warning that the person is not in compliance with the law, for an initial violation.
 - 2. A fine not exceeding one hundred dollars (\$100), for a second violation within one (1) year.

3. A fine not exceeding two hundred and fifty dollars (\$250), for each additional violation within one (1) year.
- C. All fines collected are payable to NKY Health for reimbursement of services provided for enforcement of the ordinance.
 - D. In addition to the fines established by this Section, violation of this ordinance by a person who owns, manages, operates, or otherwise controls a public place or place of employment may result in the suspension or revocation of any permit or license issued by the City of Ludlow to the person for the premises on which the violation occurred.
 - E. Each day on which a violation of this ordinance occurs shall be considered a separate and distinct violation.

§ 133.45 PUBLIC EDUCATION.

The City of Ludlow will provide education and related materials on this ordinance to businesses and the public. NKY Health may assist in the education and guidance to individuals, owners, operators, and managers on the purposes and requirements of this ordinance and their compliance with it. The education may include publication of a brochure for affected businesses and individuals explaining the provisions of this ordinance.

§ 133.46 OTHER APPLICABLE LAWS.

This ordinance shall not be interpreted or construed to permit smoking where it is otherwise restricted by other applicable laws.

§ 133.47 LIBERAL CONSTRUCTION.

This ordinance shall be liberally construed so as to further its purposes.

§ 133.48 SEVERABILITY.

If any provision, clause, sentence, or paragraph of this ordinance or the application thereof to any person or circumstances shall be held invalid, that invalidity shall not affect the other provisions of this ordinance, which can be given effect without the invalid provision or application, and to this end, the provisions of this ordinance are declared to be severable.

SECTION II

All ordinances in conflict with this ordinance shall be, and hereby are, repealed to the extent of said conflict.

SECTION III

If any part of this ordinance or its application is deemed invalid by a court of competent jurisdiction, the City Council intends that such invalidity will not affect the effectiveness of the remaining provisions or applications and, to this end, the provisions of this ordinance are severable.

SECTION IV

That this ordinance shall become effective upon its passage and shall be published under KRS 83A.060 (9) and other applicable law. The ordinance may be published in summary.

Passed by the City Council this _____ day of _____, 2025.

CITY OF LUDLOW, KENTUCKY

Chris Wright, Mayor

ATTEST: _____
Laurie Sparks, City Clerk

FIRST READING: _____

SECOND READING: _____

PUBLICATION: _____

REFERENCES

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- ⁱ U.S. Department of Health and Human Services. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006.
- ⁱⁱ U.S. Department of Health and Human Services. *How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2010.
- ⁱⁱⁱ U.S. Department of Health and Human Services. *The Health Consequences of Smoking—50 Years of Progress*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.
- ^{iv} Fuoco, F.C.; Buonanno, G.; Stabile, L.; Vigo, P., "Influential parameters on particle concentration and size distribution in the mainstream of e-cigarettes," *Environmental Pollution* 184: 523-529, January 2014.
- ^v Lerner CA, Sundar IK, Yao H, Gerloff J, Ossip DJ, McIntosh S, et al. "Vapors Produced by Electronic Cigarettes and E-Juices with Flavorings Induce Toxicity, Oxidative Stress, and Inflammatory Response in Lung Epithelial Cells and in Mouse Lung," *PLoS ONE* 10(2): e0116732, February 6, 2015.
- ^{vi} World Health Organization (WHO), "Electronic nicotine delivery systems," *World Health Organization (WHO)*, 2014
- ^{vii} Lee K, Bucholtz C, Robertson H, Vogel S, Hahn E. Indoor air quality in a Hookah Lounge: Is waterpipe smoking (hookah) related to indoor air pollution? 2008:1-4.
- ^{viii} Xu X, Bishop EE, Kennedy SM, Simpson SA, Pechacek TF. Annual Healthcare Spending Attributable to Cigarette Smoking: An Update. *American Journal of Preventive Medicine* 2014;48(3):326–33.
- ^{ix} Pitsavos, C.; Panagiotakos, D.B.; Chrysohoou, C.; Skoumas, J.; Tzioumis, K.; Stefanadis, C.; Toutouzas, P., "Association between exposure to environmental tobacco smoke and the development of acute coronary syndromes: the CARDIO2000 case-control study," *Tobacco Control* 11(3): 220-225, September 2002.
- ^xU.S. Department of Health and Human Services. *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006.
- ^{xi} ANSI/ASHRAE Standard 62.1-2016 – Ventilation for Acceptable Indoor Air Quality. Atlanta, GA: American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. <https://www.ashrae.org/technical-resources/standards-and-guidelines/read-only-versions-of-ashrae-standards>
- ^{xii} Klepeis, N.; Ott, W.R.; Switzer, P., "Real-time measurement of outdoor tobacco smoke particles," *Journal of the Air & Waste Management Association* 57: 522-534, 2007.
- ^{xiii} Chizimuzo T C Okoli, Mary Kay Rayens, Amanda T Wiggins, Melinda J Ickes, Karen M Butler, Ellen J Hahn, "Secondhand Tobacco Smoke Exposure and Susceptibility to Smoking, Perceived Addiction, and Psychobehavioral Symptoms Among College Students," *J Am Coll Health*. 2016;64(2):96-103