

2018

Indoor Air Quality: The United States

Paola Solano

Augustana College, Rock Island Illinois

Follow this and additional works at: <https://digitalcommons.augustana.edu/pubh100issues>



Part of the [Environmental Health and Protection Commons](#), [Environmental Indicators and Impact Assessment Commons](#), and the [Public Health Commons](#)

Augustana Digital Commons Citation

Solano, Paola. "Indoor Air Quality: The United States" (2018). *Global Issues in Public Health*.
<https://digitalcommons.augustana.edu/pubh100issues/19>

This Report is brought to you for free and open access by the Public Health at Augustana Digital Commons. It has been accepted for inclusion in Global Issues in Public Health by an authorized administrator of Augustana Digital Commons. For more information, please contact digitalcommons@augustana.edu.

Indoor Air Quality: The United States

Basic Information

Indoor air quality is an environmental condition that is becoming more recognized as a public-health issue today. Indoor air quality measures the amount of pollutants within a structure. There are numerous factors that can contribute to poor indoor air quality. Some of the causes of poor indoor air quality include particle pollution, gases such as carbon monoxide and radon, not enough ventilation, moisture damage, and many other biological contaminants (EPA, 2018). Indoor air quality is a significant concern around the world and is prevalent almost everywhere. It exists in various regions and one of the locations that struggles with this condition is our country of the United States. As the third-most populous country in the world, there are many reasons that endorse why indoor air quality is such an alarming issue. Some of the populations most affected by poor indoor air quality are children, the elderly, low-income, minority groups, and people who rely solely on solid fuels (EPA, 2018). For instance, lower-income families tend to be more at risk due to having smaller homes and more exposure to indoor air contaminants (Klepeis et al., 2017). Such factors can then lead to an increase in health consequences among our populations.

Epidemiology

Indoor air quality is a growing concern because there are many long-term and short-term effects that can affect any individual. Some of the factors of poor air quality can result in signs and symptoms of coughing, sneezing, fatigue, respiratory problems such as asthma, cancer, and possible death (CDC, 2016). Poor indoor air is spread through the air we breathe in. For example, secondhand smoke can cause serious respiratory problems even if an individual does not smoke. The condition of poor indoor air quality is not easily diagnosed because, in many occasions, symptoms are mistaken for other illnesses such as colds and allergies. One simple way to recognize whether you are struggling with poor air quality is to notice if you sense a relief of symptoms after leaving a specific room in your home or workplace. There are over 4 million people who die from illness attributable to household air annually (EPA, 2018). Poor indoor air quality is most commonly influenced by outdoor air pollutants because they are closely interconnected. Although people spend the majority of their time indoors either at home or their workplace, and the EPA has reported that indoor air has nearly five times as many pollutants than outdoor air (EPA, 2018). Another major factor as to why the number of people affected continues to rise is due to mold. Most of the mold



found inside homes come from outside sources and therefore more than a quarter of buildings are water damaged with mold issues in the United States (OSHA). Outdoor air pollutants still influence the air quality found inside homes.

Discussion

There exist many temporary solutions to poor indoor quality. Some of the causes for inferior indoor air quality include insufficient ventilation and ineffective filtration (Sireesha, 2017). Because of these, possible interventions include special house-cleaning products, air purifiers, and specific laws enforced by the government. In the late 1970's, the federal government banned the use of lead-containing paint. Many government officials encouraged for all tenants to become aware of whether their home was built before 1978, and learn if their health was in danger due to lead-based paint (EPA, 2016). This is an example of an effective intervention for indoor air quality because it helped the United States realize a potentially serious health concern that affected the majority of the population. The attempted interventions better the indoor air quality because they prevent serious health issues, but these interventions can be seen as weak because some of the products that can be beneficial are not available for all populations in the nation. Those with low-income might not have the economic accessibility or support needed to better their air quality. An innovative way to improve indoor air quality among the entire population would be to create a government program focused for low-income populations. Clean air is a basic necessity that everyone should have access to, and by creating a program that checks low-income homes, gives families working air purifiers, and helps with having access to proper cleaning house products, will help improve the quality of life and air of many.

References:

- CDC. (2016, July 22). Particle pollution. Retrieved March, 2018, from <https://www.cdc.gov>
- EPA. (2017, August 30). Protect your family from exposures to lead. Retrieved March, 2018, from <https://www.epa.gov>
- EPA. (2018, January 29). Introduction to indoor air quality. Retrieved March, 2018, from <https://www.epa.gov>
- Klepeis, N. E., Bellettiere, J., Hughes, S. C., Nguyen, B., Berardi, V., Liles, S., & ... Hovell, M. F. (2017). Fine particles in homes of predominantly low-income families with children and smokers: Key physical and behavioral determinants to inform indoor-air-quality interventions. *PLoS ONE*, 12(5), 1-24. doi:10.1371/journal.pone.0177718
- OSHA. (n.d.). Mold Overview. Retrieved March, 2018, from <https://www.osha.gov/>
- Sireesha, N. L. (2017). Correlation amongst indoor air quality, ventilation and carbon dioxide. *Journal Of Scientific Research*, 9(2), 179-192. doi:10.3329/jsr.v9i2.31107

