



Show Number: 715

Gigi Kwik Gronvall, PhD

Richard Bruns, PhD

Model State Indoor Air Quality Act

Good Day and welcome to IAQ Radio+ episode 715 blog. This week we welcomed Dr. Gigi Kwik Gronvall, and Dr. Richard Bruns to discuss the recently developed Model State Indoor Air Quality Act

Gigi Kwik Gronvall, PhD Senior Scholar, Associate Professor

Dr. Gronvall is a Senior Scholar at the Johns Hopkins Center for Health Security and an Associate Professor in the Department of Environmental Health and Engineering at the Johns Hopkins Bloomberg School of Public Health. She is an immunologist by training.

Richard Bruns, PhD Senior Scholar, Assistant Scientist

Dr. Bruns is a Senior Scholar at the Johns Hopkins Center for Health Security, working on economic modeling and cost-benefit analysis of a variety of public health topics. Previously, Richard was a Senior Economist at the Food and Drug Administration, doing cost-benefit modeling of many FDA regulations and actions.

Nuggets mined from today's episode:

Let's start by introducing both of you to our audience. First Dr. Gronvall can you tell our audience a little about your position with at the Johns Hopkins Center for Health Security and how you got interested in indoor environments? Dr Gronvall's involvement with IAQ has been health driven. She has an immunology background with interest in infectious diseases. COVID has driven her involvement with infectious risks indoors. Her initial IAQ work was focused on schools. While working on improving IAQ in schools she became aware of the deficit in public policy regarding IAQ.

Dr. Bruns, you are also with the Johns Hopkins Center for Health Security, working on economic modeling and cost-benefit analysis of a variety of public health topics. You were also an economist at the FDA. How did you get interested in economic modeling related to public health issues and why are economic models so important? Dr Bruns is interested in federal policy work that influences the federal government. The Johns Hopkins Center for Health Security is a think tank. After developing an interest in the cost benefit analysis of IAQ, Dr Bruns was invited to join the Center for Health Security's indoor air quality team by Dr Paula Olsiewski.

Dr. Gronvall you also worked on an infographic on Reducing COVID in schools which RadioJoe found interesting? Please tell our audience more about the purpose of the document and how it has been received by schools? Advice such as: not spending time, energy and money on excessive cleaning that doesn't affect COVID transmission or IAQ devices that change indoor chemistry, has aged well. Children have developing lungs so the IAQ bar needs to be set higher. The state of Massachusetts has noticed the Model Act and is heeding the advice; other states have interest, too.

Pandemic funding remains available for upgrading HVAC systems in schools, the Center for Health and Security is helping schools access this funding.

Where did the funding for the Model State IAQ Act come from? Open Philanthropy and Effective Giving are two large charitable organizations that fund issues that meet their criteria of: important, neglected and tractable. The funders have promised additional future funding.

Where did the idea for a Model State IAQ Act come from? Dr Gronvall had prior experience with the development of public health related Model Acts before the pandemic. She opined that there is a deficit of IAQ regulation at the federal level. States can do things the federal government cannot. The Model Act was completed in less than 1 year. The Model State Act is flexible, depending on needs items can be added or deleted. Link to the Act:

<https://centerforhealthsecurity.org/sites/default/files/2023-08/230801-msiaqa-final.pdf>

Preface to the MSIAQA: Despite these clear benefits, there is little federal legal support to protect peoples' health through improved IAQ or to incentivize IAQ improvements. Consequently, major public health interventions have been left to states to implement, with inconsistent results over time. Compounding the problem, the health and economic benefits of good IAQ are also not widely known and thus not publicly demanded.

Some people immediately have a negative reaction when new regulation is proposed. What has the reaction to this Model State IAQ Act been? Most of the feedback has been positive.

Is the Model Act prescriptive like a Building Code or Standard? No, the Model Act provides the legal structure for creating codes and standards in a nonprescriptive, performance-based manner.

What is the intent of The Model State Indoor Air Quality Act (MSIAQA) and why did the group decide to put together a model State law instead of a Federal Law? It is intended to be adapted and adopted by state legislatures as a legal framework for good IAQ in public spaces, outlining best practices for how to **monitor** implementation, **inform** the public about the quality of indoor air and the benefits of good IAQ, **adjust** acceptable standards based on the latest research from expert bodies, and **seek compliance** among building owners.

Many of our past IAQradio guests, including a few that were part of the team developing this model act, have focused on trying to get better codes adopted that help with IAQ. How does the MSIAQA work with ASHRAE standards? The Model Act is designed to align with ASHRAE standards through a legal framework, providing options for states to defer to existing regulatory standards or craft their own. The Act's provisions are divided into 6 prime Articles with various key Sections framed around a broad mission **to protect and promote IAQ in public buildings through alliances among various public and private actors.**

Cost-benefit analysis of good IAQ? Dr. Bruns: The benefits of good IAQ are often not readily apparent. There are economic benefits less absenteeism, better performance, and fewer ER visits. While it is hard to compare health to money, HHS has procedures for doing this, and using those procedures for valuing health, the ratio of total benefits to costs is

between 3:1 and 100:1. Energy costs are factored into his modeling along with capital, labor, global warming. As solar power improves and spreads, there should be fewer trade-offs. While eating 1 cookie may not have an immediate adverse health effect, eating many cookies daily for 20 years would have adverse effects. Poor IAQ is an invisible killer.

The Model Act is comprehensive. Dr Gronvall: The Act is designed for public spaces, not homes, lodging industry or private spaces. It works for everything (e.g. schools, libraries, airports, train/bus stations, government buildings, etc.

Dr Bruns: Many Class A Commercial spaces are already compliant with the Model Act, the Act is designed to raise IAQ compliance of lesser properties. Informed tenants will demand office space with better IAQ.

What is the state process by which the Model Act is adopted? Dr Gronvall: Most states have some sort of laws regarding IAQ (smoking, burning, etc.) that more generally address IAQ in the state.

Bruns: The State Law Process: 1) an elected representative introduces the Model Act, 2) rewrite the Model ACT personalizing the name of the state, 3) Political process- debate, add, delete, 4) What does the public think, 5) variations 6) The Center will provide ongoing guidance in how to tweak and fulfill the mission.

Does the Model Act make provisions for people with sensitivities. Dr. Bruns: No, the Model Act is for improving health for average people at a reasonable price.

Implementation? Working with some states (e.g. Massachusetts, Wisconsin) Prioritizing efforts rolling out slowly. National Tracking system reflecting where the Act is being used and enabling participants to share and learn from the experiences of others.

ROUNDUP

The future? Dr. Gronvall: We don't know what the future holds. The future is likely to be event driven (wildfires, terrorism, etc.). Changing vaccine compliance (e.g. measles). Provide the flexibility to Dial up or Dial down depending on needs (e.g. locally acquired malaria in Maryland is an indicator of changing climate)

Dr Bruns: Interested in seeing trade-offs with new technology.

What frightens you the most? Dr. Gronvall: Unvaccinated young children Dr. Bruns: bioterrorism, and new weapons designed using Artificial Intelligence.

Recommendations: Dr Bruns: Purchase and install good air filters (MERV 13).

FINAL THOUGHTS:

- Outdoor studies show improved air quality surrounding toll plazas that converted from toll booths to Easy Pass.
- Need to Raise the public's IAQ awareness , educate
- Future plan for Model Regulations to go along with the Model Act.
- Better IAQ=Better health=Better cognition

Z-Man signing off

TRIVIA:

What is the common theme between: today's month and date, the largest city in Pennsylvania, a tavern and a US military branch?

Answer: November 10, 1775, USMC founded at Tun's Tavern in Philadelphia, PA

Answered by: John Corliss