



Quincy Veterans' Home Multi-Year Outbreak A Case Study in Failed US Legionella Policy

by Tim Keane

Background Information on US Legionella Policy

In 2018 the National Academy of Sciences, Engineering and Medicine (NASEM) through funding by CDC, EPA, VA and the Sloan Foundation began a study on management of Legionella in water systems.

<https://www8.nationalacademies.org/pa/projectview.aspx?key=49911>

Two areas of focus in this study include;

- **Prevention and Control:**
 - *What are the most effective strategies for preventing and controlling LEGIONELLA amplification in water systems?*
 - *What are the best methods to prevent exposure to LEGIONELLA, especially in at risk populations?*
 - *Is there a minimum level of contamination required to cause disease?*
 - *What are the benefits, risks, gaps in implementation, and barriers to uptake of LEGIONELLA control programs?*
- **Policy and Training Issues:**
 - *What policies, regulations, codes, or guidelines affect the incidence, control, quantification, and prevention of legionellosis?*
 - *How might they be built upon to better protect the public?*
 - *How can LEGIONELLA control be best balanced with other water priorities?*

NASEM need go no further than the Quincy outbreak including the Illinois Auditor General's report to find the answers to most of these questions. The Quincy outbreak is a case study of key issues related to Legionella problems in building water systems including;

1. Public Health - Ronald Reagan summed up the environmental health aspects of Legionella control with respect to public health when he said, *"The nine most terrifying words in the English language are: I'm from the government and I'm here to help."*
 - a. Too often public health has erred greatly on their understanding of the Legionella control in building water systems. What happened at Quincy is nothing new but it is such a worst case failure that hopefully public health will be forced to listen.
 - b. CDC, EPA and VA have strongly supported HACCP commercial sales and marketing initiatives even though as described above, these public health personnel lack a technical understanding of Legionella in building water systems.
 - c. Belief that doing something is better than doing nothing. However, bad public health policy is worse than no public health policy. Examples of this are;
 - i. VA - Directive 1061,

- ii. EPA - Technologies for Legionella Control in Premise Plumbing Systems: Scientific Literature Review,
 - iii. ACHD - Updated Guidelines for the Control of Legionella in Western Pennsylvania, and
 - iv. CDC – Guidelines for Environmental Infection Control in Health-Care Facilities
 - d. An interest in solving the problem but not enough of an interest for:
 - i. CDC to hire an engineer in its Legionella section,
 - ii. EPA to consider small changes to Safe Drinking Water Act even if only implementation changes as recommended over 15 years ago,
 - iii. VA to publish a cost analysis of the HACCP program at Veteran’s Hospital in Pittsburgh PA where VA first recommended HACCP.
 - iv. VA to provide an unbiased technical review of the costs and benefits of VA Directive 1061 over VA Directive 2009.
 - e. Leadership by Federal Agencies, compounds rather than resolved issues
 - i. CDC, EPA and VA support of HACCP has led others including ASHRAE to support HACCP. ASHRAE leadership signed an MOU with NSFi to develop the NSF444 HACCP standard shortly after ASHRAE 188 committee voted overwhelmingly against HACCP. Still today ASHRAE staff is pursuing working with NSFi on a waterborne pathogen standard even with all these issues now public.
 - ii. Illinois Department of Public Health (IDPH) in 2018 proposed a plumbing code modification based on VA Directive 1061, even though the requirements of that code were largely implemented at Quincy Veterans’ Home in 2016 at a high cost and failed to resolve Legionella issues in 2016, 2017 and 2018.
2. Political Leadership
- a. Strong interest in both assigning blame and ignoring issues based on political expediency but little interest in long term solutions to Legionella issues. This is a huge opportunity for Governor Pritzker to take a leadership role in doing the right thing to address Legionella issues.

Is Quincy the Tip of the Iceberg

Below are excerpts from the CDC Environmental Health Presentation at NASEM
<http://dels.nas.edu/Past-Events/Management-Legionella-Water-Systems/DELS-WSTB-16-02/9725>

“Something for us to consider, in terms of capacity going forward, is that there was an overwhelming interest for these hospitals to seek guidance from the health department for setting up these programs and we’re seeing that now at CDC on our technical consult where these hospitals and other healthcare facilities are asking CDC for additional guidance on setting up these programs and also evaluating them. So, we’re really seeing a shift out there right now from just advising on water management programs, to now evaluating the effectiveness of a partially implemented or a fully implemented water management program”.

“If you are using data on a daily basis to refine that program that’s really where it’s at in moving forward with water management”.

“Environmental health Legionnaires’ disease expertise is needed at state and local level.”

Based on lessons learned at Quincy, the above statements are alarming. Once the Quincy hot water system modifications were completed in early 2016, the issue should have been easily corrected at a very low cost. Instead, illness continued for two more years and tens of millions of dollars in cost were incurred. In some cases, state health officials have been chided for not calling in CDC quickly enough when an outbreak occurs. Now, maybe this issue is better understood.

Auditor General’s Report a strong confirmation of the many issues listed above

The State of Illinois Auditor General’s office pursuant to Senate Resolution Number 1186 released a report titled, [“State of Illinois Office of the Auditor General Performance Audit of Legionnaires’ Disease at the Quincy Veterans’ Home March 2019”](#)

The report states, *“Audit standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives.”* This Auditor’s report however, failed to meet their own standards by not including evidence, findings and recommendations by the Subject Matter Experts hired by the State of Illinois in 2018 to audit and resolve the water system issues at Quincy Veterans’ home were excluded from the report. The expert opinions and recommendations conflicted completely with those of the Auditor.

Because the Auditor failed to inform the Senate and the public of these findings by Subject Matter Experts I wrote the article, [“Whitewash? Quincy Veterans’ Legionnaires’ disease report by Illinois Auditor ignores Experts’ reports conclusions and recommendations”](#)