Background: The Dept. of Veterans Affairs (VA) requires quarterly water legionella environmental testing (LET). The Minneapolis VA Medical Center (MVAMC) began LET in 2018. All results were neg until 11/2015, when a new CDC ELITE certified LET lab (Lab 1) reported Legionella spp. in 12 (20%) of 60 samples, healthcare-associated legionnaires (HAL) and LET initially were investigated. Multiple records of all 2015 MVAMC HAL cases and potentially exposed patients were reviewed. In 2016, test and control samples were sent to 4 LET labs. MVAMC water samples were collected from 5 putatively Lab-pos sites. A sterilized-water control and 4 positive controls (2 of 1000, 2 of 100, and 2 of 10 cfu/mL Lucia stock cultures) were sent. Each LET lab received 18 tests, 1 sample, 3 controls, and 5 tests, and all duplicates in aggregate, as well. Purposely LET isolates were collected from previously described water systems (MVAMC-LET, 2016).

Results: During testing in the LET Labs 1/15-11/16, Lab 1 obtained results in 87 (22%) of 286 MVAMC water samples. Positive LEGIs were identified in 80 water samples. Positive LEGIs were identified in 80 water samples. No LEGIs were identified. Positive control results were identified. The $p$-value of the test results (cfu/mL) were as shown (Table 1). In 1/2016 Lab 1 tested all sites that Lab 1 had reported as Lab-pos, including areas not previously neg. All tests were neg. By MALDI TOF, all 18 purported MVAMC LEGIs isolates from Lab 1 were diverse non-associated environmental. After learning of these results, Lab 1 withdrew from its LET contract. CDC and VA experts were notified.

Conclusions: A CDC certified LET Lab provided spurious results, with enormous consequent costs to MVAMC. Leto and VA costs were indiscernible. The results from 5 LET labs were indiscernible, with numerous consequent costs to MVAMC. Lab 1 results were indiscernible from the remaining 2 labs, raising concern about accuracy for both neg and pos LET results. Healthcare facilities must be cautious in deciding when to perform LET and how to interpret the results.

Methods: The research involved the identification of pathogenic Legionella species from water samples using several Legionella detection methods. The aim was to prevent outbreaks and improve water safety in healthcare settings. The methods included:

- **Isolation** of Legionella spp.
- **Identification** of isolates using MALDI-TOF MS and conventional testing.
- **Detection** of Legionella spp. in environmental samples using different methods.

Results: The results showed that Legionella spp. were isolated from various environmental samples, indicating the presence of potential Legionella outbreaks. The methods provided accurate and reliable results, which are critical for public health and safety. The research also emphasized the importance of routine monitoring and the need for improved detection methods to prevent Legionella outbreaks.

Conclusions: The findings highlight the importance of continuous monitoring and the use of advanced detection methods to prevent Legionella outbreaks. Continuous monitoring and the use of advanced detection methods to prevent Legionella outbreaks. Continuous monitoring and the use of advanced detection methods to prevent Legionella outbreaks.

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Bibliography: The study cited several important publications, including: