

TRENDS AND COST BURDEN OF LEGIONELLA URINE ANTIGEN TESTING

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BACKGROUND

Legionella urine antigen (LUAg) has 80% sensitivity and 95% specificity.

The 2019 ATS/IDSA CAP guidelines recommend against routinely testing urine for LUAg except when indicated by epidemiological factors or severe cases of CAP; however, the recommendation is based on a low quality of evidence.

In 2014 & 2015 there were 32 and 39 cases, respectively in the state of Mississippi.

The purpose of this study was to evaluate the trends of ordering LUAg, positive results and estimate the cost burden at the University of Mississippi Medical Center (UMMC)

Methods

Retrospective study of patients tested for legionella with the LUAg test from Jan 3, 2013 to Dec 31, 2019.

Patient Cohort Explorer obtained de-identified data from EPIC. Test was performed during hospital encounter. Coding and billing office provided the self pay cost per test.

Results

Urine Antigen	Number Positive Results	Number of Tests	2019 Self Pay Cost of Each Test	Estimated Total Cost of Testing
<i>Legionella</i>	22	2642	\$ 132.82	\$ 350,910.44

About \$15,950.47 was spent for each positive LUAg test during the study period.

Gender distribution: 11 Female, 11 Male

Age range tested: 1 - 89 years old

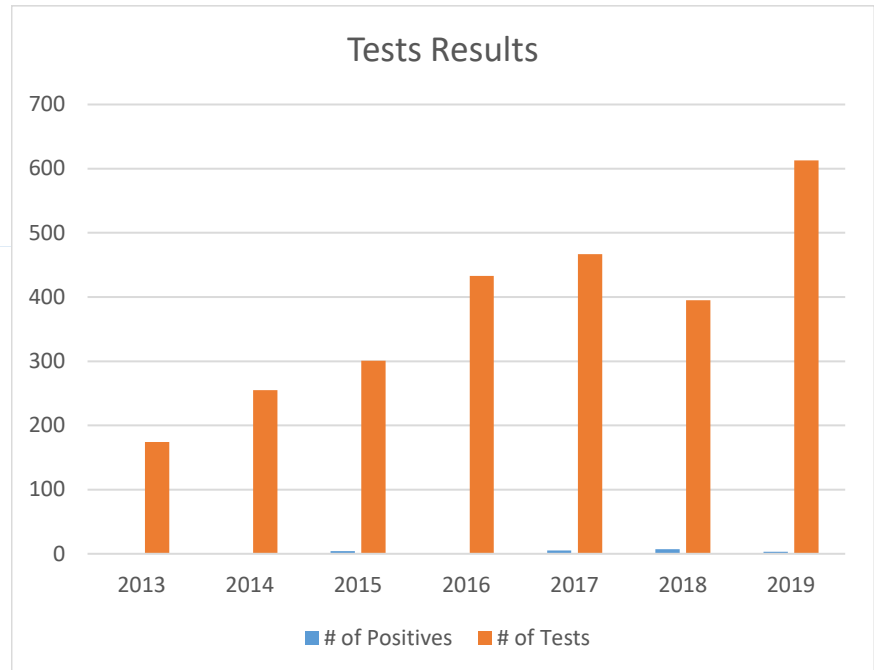
Age range positive: 21 – 72 years old

Median hospital length of stay: 7 days

Take Home Point:

Legionella is covered by empiric recommended therapy (i.e. macrolide, respiratory fluoroquinolone or tetracycline)

This study's findings suggest NOT routinely ordering *Legionella* urine antigen tests, in accordance with the 2019 ATS/IDSA Community Acquired Pneumonia Guidelines



References: Mandell LA, Wunderink RG, Anzueto A, Bartlett JG, Campbell GD, Dean NC, Dowell SF, File TM Jr, Musher DM, Niederman MS, Torres A, Whitney CG, Infectious Diseases Society of America/American Thoracic Society SO *Clin Infect Dis*. March 2007;Volume 44 Issue supplement 2: pages S27-S72.