

# Q FEVER ENDOCARDITIS IS ON THE RISE

MA. Mohamad Alahmad<sup>1</sup>; <sup>1</sup>University of Kansas Medical Center, Kansas City, KS (USA)

## Introduction

- Q fever is a reportable zoonotic febrile bacterial infection caused by *Coxiella burnetii*.
- In patients who are symptomatic, acute manifestations with hepatitis, pneumonia or fever represent the majority.
- Elderly men and immunocompromised populations usually present with chronic disease, usually infective endocarditis (IE).
- Herein, we study the inpatient prevalence of Q fever.

## Methodology

- We used Nationwide Readmissions Database (NRD) and included hospitalizations of adults ( $\geq 18$  years old) with a diagnosis of Q fever between January and November 2016-2019.
- Survey procedures were applied to accommodate for complex sampling design of NRD.
- Chi-square and means least-square were used for categorical and continuous variables, respectively.
- Jonckheere-Terpstra test was used to study the trends over the years.
- SAS 9.4 was used for data mining and analysis.

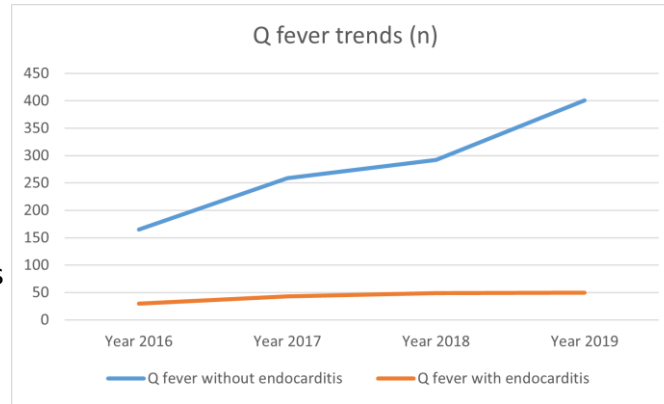


Figure 1: showing Q fever trend 2016-2019. Increase in the number (n) of inpatient cases of Q fever with and without endocarditis across the years

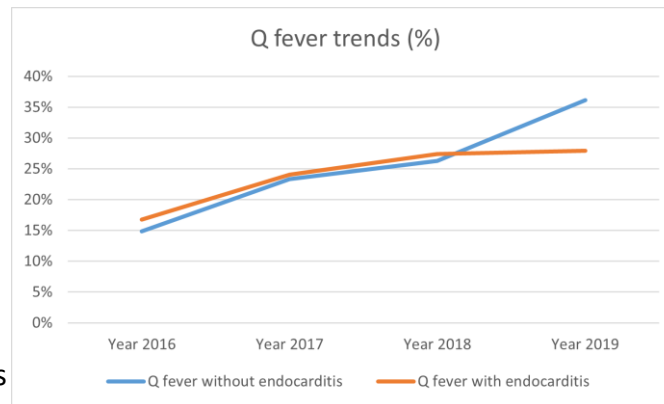


Figure 2: showing Q fever trend 2016-2019. Increase in the percentage (%) of inpatient cases of Q fever with and without endocarditis across the years. (cases in a year/ all cases in 2016-2019)

## Results

- A total of 1,289 hospitalizations with a diagnosis of Q fever were included, among which 172 (13%) cases had a concurrent diagnosis of infective endocarditis.
- The mean age of patients was 58 years, a third were female.
- Our analysis demonstrated that infective endocarditis was the most common cardiac complication associated with Q fever (96%) followed by pericarditis and myopericarditis (5 and 4% respectively).
- There is a trend of an increase in cases of inpatient Q fever with or without endocarditis over the years (from 30 and 165 cases in 2016 to 50 and 401 cases in 2019 respectively, p-value 0.04).
- Although there was no significant increase in mortality or 30-day readmission between patients with or without endocarditis, patients with IE had longer inpatient stays (mean of 19 vs. 11 days, p-value  $< 0.001$ ) and subsequently higher hospital charges (mean of \$242,615 vs. \$136,989, p-value  $< 0.001$ ).

## Conclusion

- Physicians should be aware of an increasing trend of hospitalized patients with Q fever. More studies are needed.