

## **Euro Clinical Microbiology 2020 Epidemiological study of cholera outbreak during the war in sana'a- yemen.**

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### **Introduction**

In Yemen, devastated by war, it has been reported that the cholera epidemic disease among the largest of cutting-edge times. The aim of this study is to describe the epidemiological features including the people at risk, drivers of cholera transmission and the drug resistance pattern of the aetiological agent in Sana'a- Yemen.

### **Methods**

All the suspected cholera cases presenting at the medical health laboratory centre in Sana'a during the period from January to May 2019 were considered in this study. Epidemiological variables included in addition to the results of the rapid diagnostic methods and antimicrobial susceptibility. Bacterial cultures were carried out to confirm the diagnosis.

### **Results**

The cumulative total number of suspected cholera cases from 1st January 2019 to 18th May 2019 is 49096, with 969 have been confirmed as cholera-positive for *Vibrio cholerae* O1 Ogawa strain by culture at the central public health laboratory in Sana'a and 49 associated deaths (CFR 0.10%). The highest death rate was among the elderly (>60y) represent 55% of total suspected cases. Among the clinical isolates 100 % resistance towards both; Nalidixic acid, Nitrofurantoin and 69% sulfamethoxazole/ trimethoprim. The majority of the isolates (69%) showed multidrug resistant pattern towards four different antibiotics.

### **Conclusion**

Our results suggested that the cholera epidemic in Amanat Al Asimah, Yemen is caused by multidrug resistance strains. Hence, the rapidly emerging multidrug resistance must be monitored closely and health authorities and partners should immediately enhance current control efforts to mitigate the risk of a new cholera epidemic wave in Yemen.