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Detection of a Salmonellosis Outbreak using Syndromic Surveillance in Georgia

Rene Borroto, Jessica Pavlick, Karl Soetebier, Bill Williamson, Patrick Pitcher, Cherie Drenzek

Georgia Department of Public Health, Atlanta, Georgia, United States

Objective

Describe how the Georgia Department of Public Health (DPH) used data from its State Electronic Notifiable Disease Surveillance System (SendSS) Syndromic Surveillance (SS) module for early detection of an outbreak of salmonellosis in Camden County, Georgia.

Introduction

Evidence about the value of syndromic surveillance data for outbreak detection is limited [1]. In July 2018, a salmonellosis outbreak occurred following a family reunion of 300 persons held in Camden County, Georgia, where one meal was served on 7/27/2018 and on 7/28/2018.

Methods

SendSS-SS and SAS were used for cluster detection of Emergency Department (ED) patients with similar Chief Complaint (CC), Triage Notes (TN), or Discharge Diagnoses (DDx) by facility, time of ED visit, and zip code / county of residence. A SAS-based free-text query related to food poisoning in the CC and DDx fields was also performed on a daily basis. County- and hospital-specific charting of the Diarrhea syndrome was also conducted in SendSS-SS, whereas county- and zip code-specific charting of the same syndrome were done in both SendSS-SS and SAS [2].

Results

On Sunday July 29th, 2018, three children and three adults were seen within 18 hours at the ED of Hospital A in Camden County, Georgia. All patients complained of diarrhea, vomiting, and food poisoning, after a large family reunion that had been held the day before. This early cluster was detected by the SAS- based free-text query of 'food poisoning' and the SAS-based cluster detection tool for patients with Diarrhea syndrome. The District Epidemiologists (DE) in the Coastal Health District were notified on Monday, July 30th, 2018. One-year high daily spikes of the Diarrhea syndrome occurred from July 29th to July 31st, 2018 in a local hospital ED (Fig 1), Camden County, and zip code 31548. Two HIPAA-compliant line lists with a total of 27 patients seen at EDs were emailed to the DEs to support active case finding. No further spikes of the Diarrhea syndrome were detected in Camden County during the 2-week period after the 3-day spike. Conclusions Syndromic surveillance was a useful surveillance tool for early detection of a salmonellosis outbreak, helping with the active search for outbreak cases, tracking the peak of the outbreak, and assuring that no further spikes were occurring.

Acknowledgement

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References

1. Hopkins R, Tong C, Burkom H, et al. 2017. A Practitioner-Driven Research Agenda for Syndromic Surveillance. *Public Health Rep*. 132(1_suppl), 116S-26S. PubMed https://doi.org/10.1177/0033354917709784

2. Zhang G, Llau A, Suarez J, O'Connell E, Rico E, et al. 2008. Using ESSENCE to Track a Gastrointestinal Outbreak in a Homeless Shelter in Miami- Dade County, 2008. *Advances in Disease Surveillance.* 5, 139.

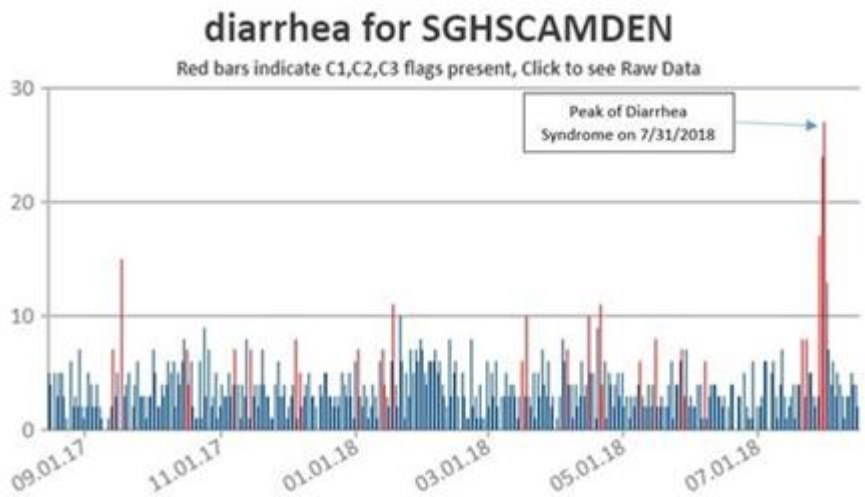

Figure 1. Emergency Department patients with syndrome of Diarrhea, Camden county, 8/16/2017 – 8/15/2018