Norovirus positive test results and collection dates

Use aggregated demographic and laboratory data to better understand characteristics of sporadic norovirus cases in TN.

Laboratories already submitting data electronically to TDH for the FoodNet Laboratory Volume project were able to onboard 2019

We identified clinical laboratories performing a high volume of norovirus testing using available TN data from January 2018 to July 2019, 359 (5%) of 7461 positive stool specimens to the TN State Public Health Laboratory for genotyping.

• Data on sporadic norovirus surveillance was obtained through recruitment of and collaboration with clinical laboratories in TN.

• Prioritizing recruitment of clinical laboratories with existing TDH partnerships allowed the prompt onboarding of facilities for this project.

• Recruited clinical laboratories were representative of the general TN population by geography and sex, but not age in this pilot.

• Predominant age groups differed between identified sporadic cases of norovirus and cases identified as part of outbreaks.

• Additional clinical data on illness severity and reason for testing could explain the discordance in age between sporadic cases and outbreak cases.

• Additional demographic and clinical decision-making information on panel-tested patients could help narrow focus to patients with a suspected viral etiology of illness.

Recruitments of Laboratories

We identified clinical laboratories performing a high volume of norovirus testing using available TN data from the Foodborne Diseases Active Surveillance Network (FoodNet) Laboratory Volume project for 2018.

Laboratories were prioritized for recruitment in descending order by norovirus testing volume. Recruitment was done by personal outreach.

Data Collection and Reporting to NREVSS

• Laboratories were requested to submit the following data elements on a regular interval:
  - Number and type of norovirus tests performed by week
  - Norovirus positive test results and collection dates
  - Limited demographic information for positive patients, including age group, sex, and county
  - TDH enrolled clinical laboratories into the NREVSS system and reported data on behalf of laboratories.

Figure 1. Sporadic Norovirus Positive Tests Compared to Confirmed Norovirus Outbreaks, TN, January 2018 – July 2019

• Of data submitted to NREVSS from July 2018 to August 2019, 359 (5%) of 7461 BioFire PCR panel tests were positive for norovirus.

• Norovirus positives represented cases from all 13 public health regions in TN and 74 (78%) counties [Figure 3].

CONCLUSIONS

NEXT STEPS

• Continue to recruit clinical laboratories to participate in data submission to NREVSS.

• Identify and recruit clinical laboratories to begin submitting norovirus-positive stool specimens to the TN State Public Health Laboratory for genotyping.

• Assess the feasibility of collecting demographic data for all reported patients tested and clinical data for norovirus positive results.

• Explore supplemental surveillance of sporadic norovirus in TN by establishing a syndromic surveillance query.

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