Evaluating Usefulness of Maine's Syndromic Surveillance System for Hospitals, 2012

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BACKGROUND

• Maine has conducted syndromic surveillance since 2007 using the Early Aberration Reporting System (EARS)
• Objectives for conducting syndromic surveillance in Maine:
  • Detect health events earlier in the disease continuum
  • Detect beginning of disease seasons
  • Verify outbreaks and monitor trends
  • Supplement traditional surveillance
• Objective: assess the system's usefulness and acceptability among emergency departments (EDs) who currently submit data and identify areas for improvement

Figure 1. Map of Participating Emergency Departments

Emergency Departments in Maine
☆ Not Participating
★ Participating
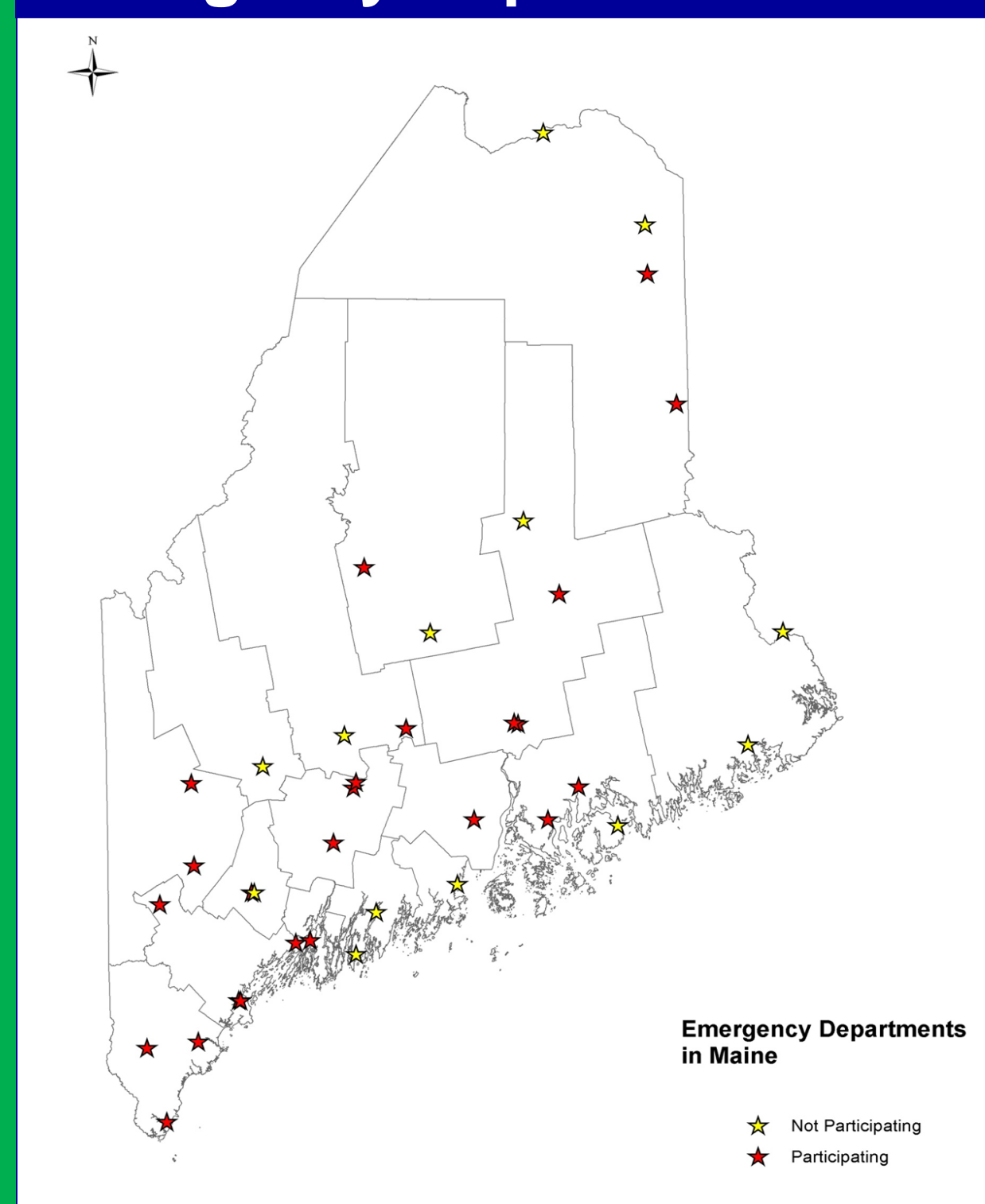
METHODS

• Developed survey to measure usefulness and acceptability among hospital partners who submit ED data
• 24 of 37 EDs collect/submit syndromic surveillance data
• 20 of 24 participating EDs receive a weekly data report
  • 2 of 20 EDs exempt (new staff)
  • 18 EDs eligible to answer survey
• Included questions about factors that influence/hinder ability to send ED data, usefulness of current report, how respondent would prefer data reported, most and least useful syndromes, and chief complaint
• Survey link was sent with August 14, 2012 report
• Numerous reminders and requests for completion
• Phone calls made to non-respondents to collect answers to the minimum required questions (usefulness and syndrome)
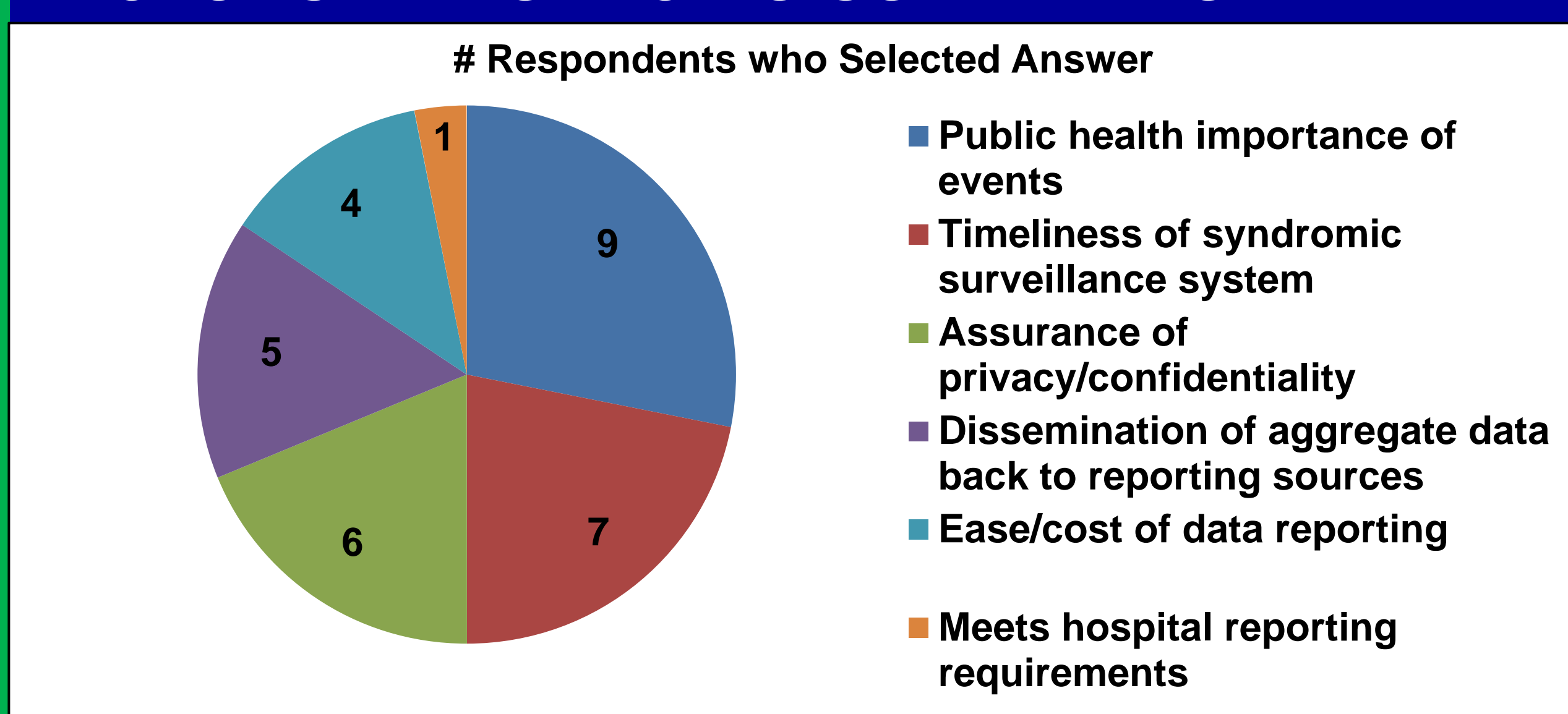• Date last surveys were completed was October 30, 2012

MAINE'S SYNDROMES

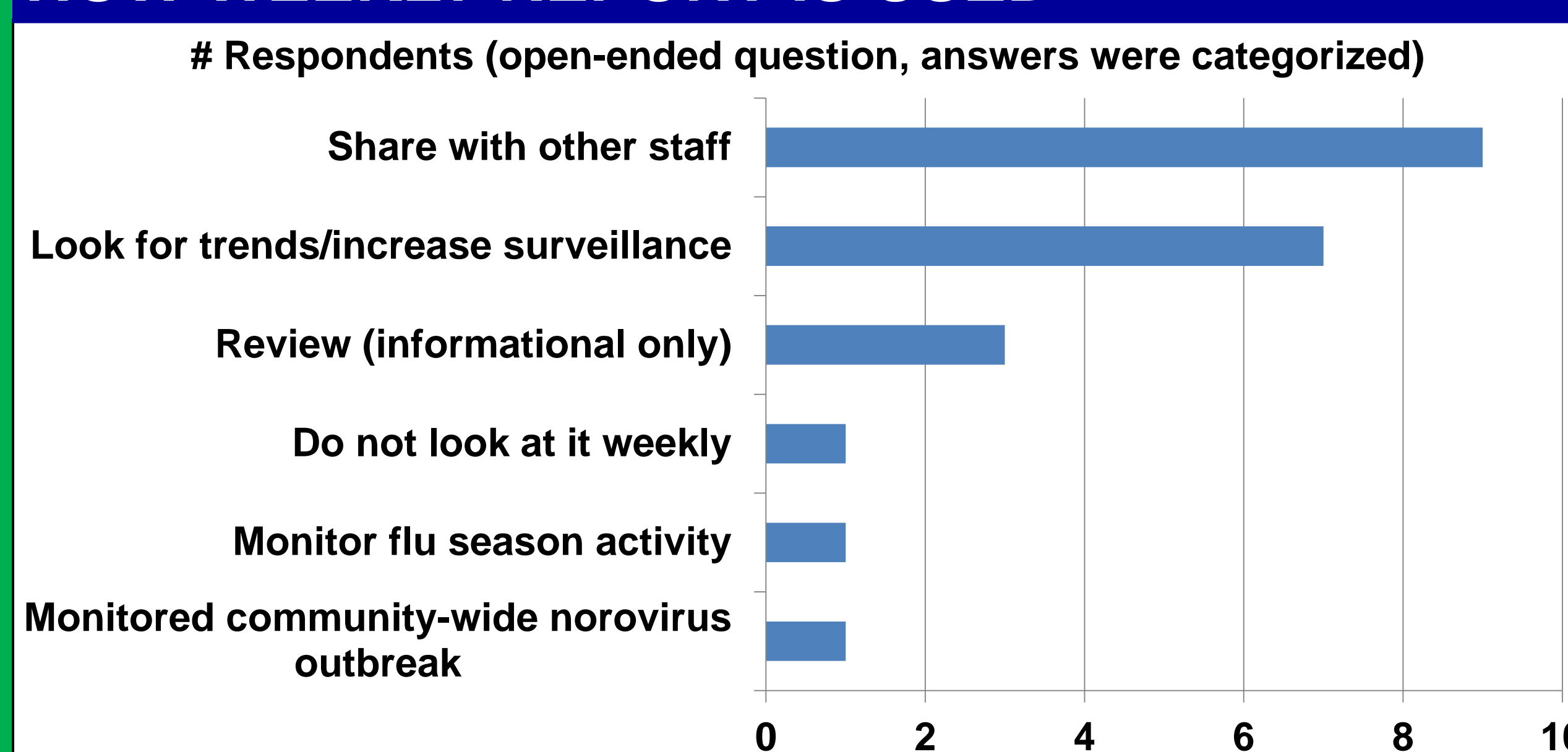|	
Carbon Monoxide (CO)	Neurologic
Dehydration	"Other" syndrome
Fever	Rash
Gastrointestinal (GI)	Respiratory, broad
Heat, broad	Respiratory, narrow
Heat, narrow	Sepsis
Influenza-like illness (ILI)	Tick

RESULTS

• 16 respondents completed survey or required questions
• 89% participation rate: 14 by internet, 2 by phone
• 9/16 (56%) reported "Public health importance of events" as factor influencing decision to submit syndromic data
• 3 responses to factors that limit ability to send data
  • "Lack of information technology (IT) support" (n=2)
  • "Have to manually enter data/lack of electronic health records (EHR)" (n=1)
• 14 (88%) respondents find weekly report/tables useful
• 9 (56%) share weekly report/tables with other staff
• 9 (56%) would *not* find it useful to be able to directly log on to a site to view syndromic surveillance data
• 10 (63%) share syndromic surveillance data with others in their facility
• Syndromes reported least useful were Heat, narrow (n=10), Heat, broad (n=9), CO (n=7), and "Other" (n=7)

## FACTORS INFLUENCING SUBMITTING DATA

Respondents who Selected Answer

- ■ Public health importance of events
- ■ Timeliness of syndromic surveillance system
- ■ Assurance of privacy/confidentiality
- ■ Dissemination of aggregate data back to reporting sources
- ■ Ease/cost of data reporting
- ■ Meets hospital reporting requirements

HOW WEEKLY REPORT IS USED

# Respondents (open-ended question, answers were categorized)

RESPONDENTS' COMMENTS

"Used it to monitor a community-wide outbreak of norovirus…also use it to monitor flu season activity. This summer it correlated well to increased incidence of Hand, Foot, and Mouth Disease."

"Disseminate data back to ED leadership…may gauge teaching/education based on report."

"Review of what is going on in our catchment area."

"Look for increases in generalized infectious disease categories – trending."

"I don't look at it weekly, I glance at the numbers, I don't believe I have ever identified any concerning numbers. I am mostly concerned with ILI and GI."

DESIRED PRESENTATION OF SYNDROMIC DATA

Respondents who Selected Answer

MOST USEFUL SYNDROMES
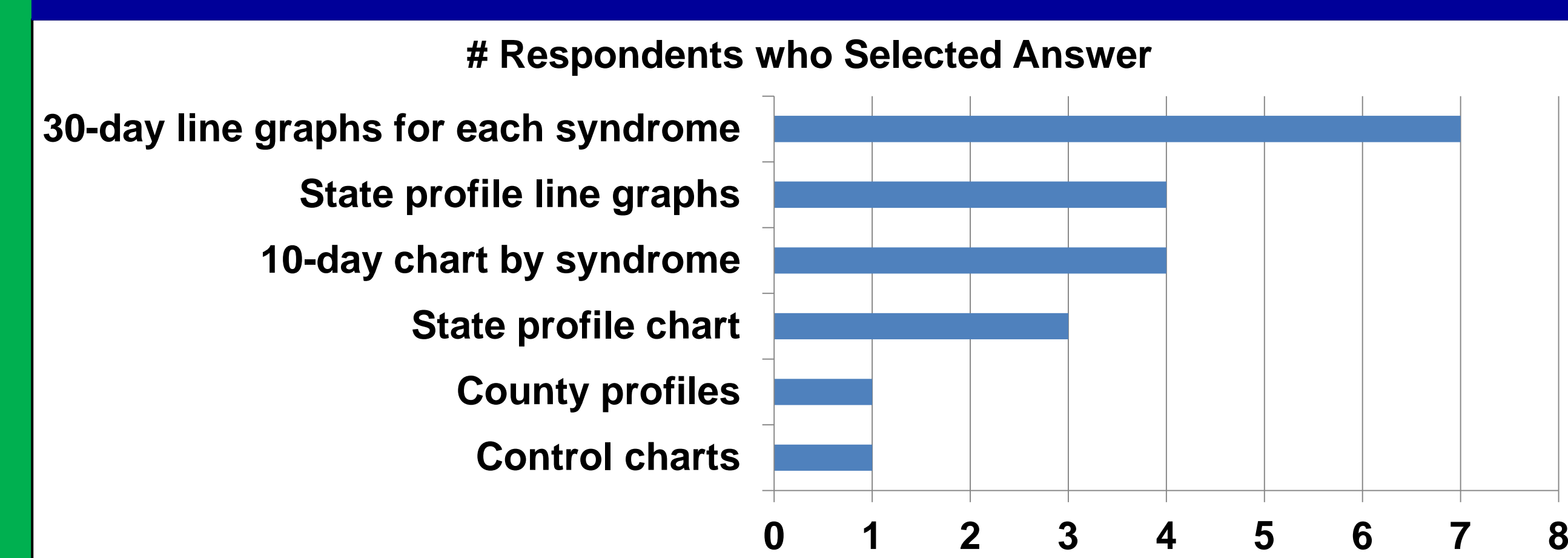
Respondents who Selected Answers
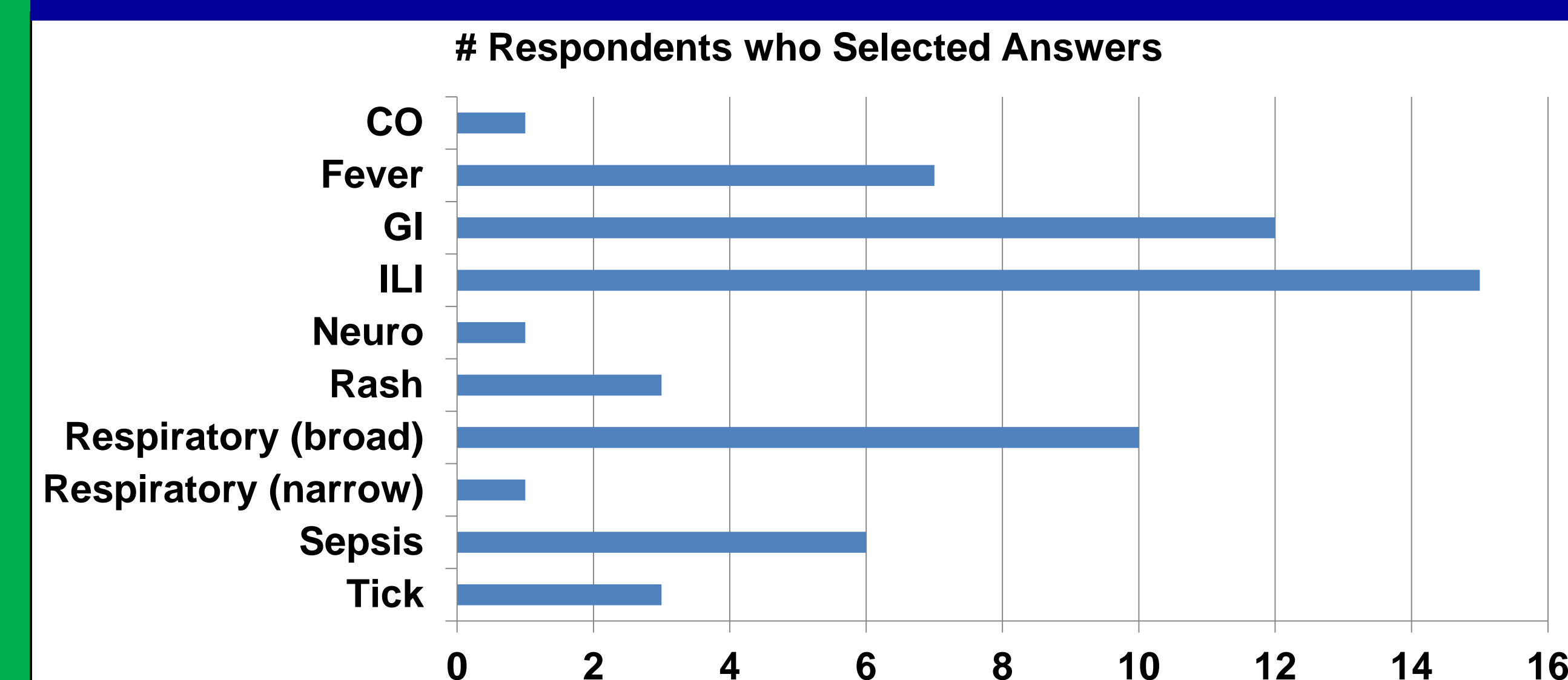
No respondents selected Dehydration, Heat (broad), Heat (narrow), or the "Other" syndromes.

SUGGESTED SYNDROMES TO ADD

• Healthcare-associated infections (n=1)
• Urinary tract infections (n=1)
• Rabies exposures (n=1)

CONCLUSIONS

• Extremely difficult getting responses with internet survey, in future would administer to all participants by phone, feasible with small N, staff turnover still an issue
• Most hospitals share weekly report with other staff
• Person who receives report is not necessarily who ends up using the information, so this person was not always able to answer the survey questions
• Environmental health syndromes (Heat x2, Carbon monoxide) not useful for respondents, but Maine CDC Environmental Health Program uses this as data source

NEXT STEPS

• Evaluate ILI syndrome (most useful) for accuracy
• Possibly change reports/reporting process to submitters
• Contribute to BioSense 2.0
• Add a rabies exposure syndrome

ACKNOWLEDGMENTS