ENTERIC ILLNESS OUTBREAKS IN HEALTH CARE SETTINGS

COLORADO, 2004 – 2010

JANUARY 26, 2012
ASSISTED LIVING ADVISORY GROUP

NICOLE COMSTOCK, CDPHE COMMUNICABLE DISEASE EPI PROGRAM
303-692-2700
NICOLE.COMSTOCK@STATE.CO.US
Surveillance History

- CDPHE began to formally track reports of GI illness (primarily viral gastroenteritis) in health care settings (primarily long term care facilities) in late 2003
  - Guidance distributed to facilities about how to report outbreaks, control measures, etc.
  - One page report form to public health after outbreak is over
Number of Reported Enteric Illness Outbreaks in Health Care Settings, Colorado, 2004 – 2010 (N = 647)
Affected Counties

- Among 647 enteric outbreaks reported 2004 – 2010:
  - Facilities in 40 counties reported outbreaks
    - Denver – 99 outbreaks
    - Arapahoe – 98
    - Jefferson – 87
    - El Paso – 66
    - Adams – 47
    - Mesa – 37
    - Larimer – 35
    - Boulder – 30
    - Weld – 23
    - Pueblo - 21
Reported Enteric Illness Outbreak in Health Care Settings by Month of First Onset, Colorado, 2004 - 2010 (N = 604)
Specific Settings of Health Care Setting Enteric Outbreaks, Colorado, 2004 – 2010 (N=647)
Etiologies of Health Care Setting Enteric Outbreaks, Colorado, 2004 – 2010 (N=647)

- Confirmed Norovirus
- Confirmed C. diff
- Confirmed Giardia
- Confirmed Salmonella
- Suspect Norovirus/VG
- Unknown

Counts:
- Confirmed Norovirus: 320
- Confirmed C. diff: 71
- Confirmed Giardia: 13
- Confirmed Salmonella: 2
- Suspect Norovirus/VG: 1
- Unknown: 2
Attack Rates

Residents/patients:
- # of ill residents/patients – median 17 (range 0-188)
- % of ill residents/patients – median 29% (range 0-100%)

Staff:
- # of ill staff – median 11 (range 0-50)
- % of ill staff – median 15% (range 0-100%)

Hospitalizations: **143/647 (22%) of outbreaks** reported at least 1 hospitalization
  - (median 2, range 1-14, all but one were noro OB’s)

Deaths: **18/647 (3%) of outbreaks** reported at least 1 death
  - (median 1, range 1-2, all were noro OB’s)
Duration of Outbreaks

- First and last onset dates known for 465/647 outbreaks (72%)
  - Median 11 days (range 1-63 days)
Transmission Routes

- Person-Person – 464 (72%)
- Point source – Unknown Vehicle – 16 (2%)
- Point source – Food – 9 (1%)
- Other – 2 (1%) (1 was a Salmonella outbreak in a NICU)
- Animal Contact – 1 (1%) (Giardia)
- Unknown – 155 (24%)
LTCF Surveillance Forms

- Among 625 LTCF outbreaks reported, 398 (64%) had the one page form returned to CDPHE
Key Control Measures

- Implement control measures as soon as a potential outbreak is recognized

HANDWASHING
- Increase throughout facility
- Hand sanitizers – use in addition to proper handwashing

STAFF
- Exclude ill staff until at least 48 hours after last episode of vomiting/diarrhea (esp. food handlers)
  - Including work at other health care facilities
- Limit staff movement between affected / non-affected units / areas
Key Control Measures (cont.)

- **RESIDENTS**
  - Restrict ill persons to their room/apartment as much as possible until at least 48 hours after last episode of vomiting/diarrhea
  - If resident is transferred to a different facility, notify receiving facility of the outbreak

- **TRACKING**
  - Track ill staff and residents on a line list
Key Control Measures (cont.)

- **FACILITY**
  - Promptly clean any areas affected by vomit or fecal accidents (consult with public health for methods)
  - Notify visitors of the situation
  - Until outbreak is over:
    - Suspend group activities
    - Consider halting new admissions
    - Discontinue self-service or family-style dining

- **DISINFECTION**
  - Use a 10% solution of household chlorine bleach (1 c. bleach per 9 c. water) or an EPA-approved disinfectant with specific activity against norovirus - [www.epa.gov/oppad001/chemregindex.htm](http://www.epa.gov/oppad001/chemregindex.htm)
  - Clean and disinfect more frequently, especially bathrooms & commonly touched surfaces

- **EDUCATION**
  - Provide education about symptoms and control measures to all staff and residents
Number of Reported Influenza Outbreaks in LTCF's by Influenza Season, Colorado, 2004-05 to 2010-11 (N = 192)
Resources

Topics:
- Influenza
- MRSA
- VRE
- TB
- C. diff
- Norovirus
- WNV
- More in the future...

Resources

http://www.cdphe.state.co.us/hf/Protocols.htm
Reporting to Public Health

When to call public health?
- Cases of reportable conditions/diseases (the lab reports most of these too)
  - 7 day and 24 hour reportable conditions
  - Reportable conditions lists available at: [http://www.cdphe.state.co.us/dc/reportable.html](http://www.cdphe.state.co.us/dc/reportable.html)
- If you suspect an outbreak or cluster of illness, regardless of diagnosis or type of outbreak

Who to call?
- CDPHE Communicable Disease Epidemiology – 303-692-2700 (after hours 303-370-9395)
- Your local public health agency

What to expect?
- CDPHE Communicable Disease Epidemiology and/or Local Public Health will assist with the case or outbreak investigation
- CDPHE Health Facilities Division consulted as needed
Health Care Associated Infection Unit

- Within the CDPHE Communicable Disease Epidemiology Program
- Assist health care facilities with outbreak investigations (primarily non-GI and non-influenza outbreaks)
- Special projects with health care facilities through CDC grant
- Consultation
- 303-692-2700 (Dr. Wendy Bamberg – lead)