Background

- December 17, 2001-report from ICP of a Maryland hospital of possible Salmonellosis outbreak
- 2 unrelated newborns at the same hospital positive for Salmonella
- Symptoms include fever (103.6 F, 100.8 F) and bright red blood in stool
- Stool samples sent to State Laboratory for serotyping
Hospital Demographics

- Acute care
- Not-for-profit
- 120 bed in-patient facility
- Primarily serves local residents
- 9 private Labor, Delivery, Recovery and Post-Partum rooms
- Level II Nursery
- 115-130 births per year
Next Steps

- Interview mothers for key exposures
- Determine use/storage of breast milk
- Determine use/origin of formula
- Interview hospital staff for symptoms experienced in previous 7 days
- Hold a handwashing inservice for hospital staff
- Obtain stool cultures from both mothers
Initial Findings

• **Mother A**
  – Ill in the week before delivery
  – Symptoms included diarrhea and vomiting
  – Primary caretaker of a pet iguana
  – Stool culture positive for *Salmonella*

• **Mother B**
  – Not symptomatic before delivery
  – Stool culture negative

• No healthcare workers symptomatic in the week before delivery

• Both mothers breastfed
Salmonella Serotyping

- December 21: Isolates (from Mother A, Newborn A and Newborn B) confirmed at Maryland State Laboratory as *Salmonella* Group G

- December 27: Isolates confirmed as *Salmonella poona*
Smoking Gun?

- Mother A owned a pet iguana
- Primary caretaker for iguana including feeding iguana and cleaning the cage
- Iguana not symptomatic
- Health Department requests to culture iguana refused
S. poona Background

- June and July 1991: 400+ lab confirmed S. poona infections in 23 states and Canada traced to consumption of cantaloupe from Rio-Grande region of Texas
- Pennsylvania 1994: 21 day old hospitalized for S. poona traced to family’s pet iguana
- Indiana 1994: Death of 3 week old with S. poona linked to pet iguana
- 1994 New York: S. poona linked to infection of mother and baby resulting in premature birth and death of child--family had pet iguana
Reptiles and Salmonellosis in the United States

- 1944: First documented reptile-born case of Salmonellosis
- Estimated 7.3 million reptiles kept by 3% of all American households
- CDC estimates that 93,000 (7%) of Salmonellosis cases per year are reptile associated
- As high as 90% of reptiles are natural carriers of *Salmonella*
- Iguanas carry *Salmonella* in their intestinal tracts. They shed it in their feces allowing bacteria to get on their skin, their cage and other materials.
Conclusions

- Newborn A infected with *S. poona* during delivery by an *S. poona* infected mother
- Mother A may have contracted Salmonellosis through contact with iguana
- Newborn B infected either through delivery or shortly thereafter
- *S. poona* not isolated from Mother B-theorized that infant infected by HCW
Recommendations

• Obtain history of pet ownership from pregnant women
• Educate pregnant women on ownership of reptiles
• Consider obtaining stool samples from pregnant women
• Encourage HCWs to be extremely vigilant about handwashing in the Obstetric unit