

Lessons Learned in Implementing a Cocoon Program to Prevent Infant Pertussis at Four Kansas Hospitals

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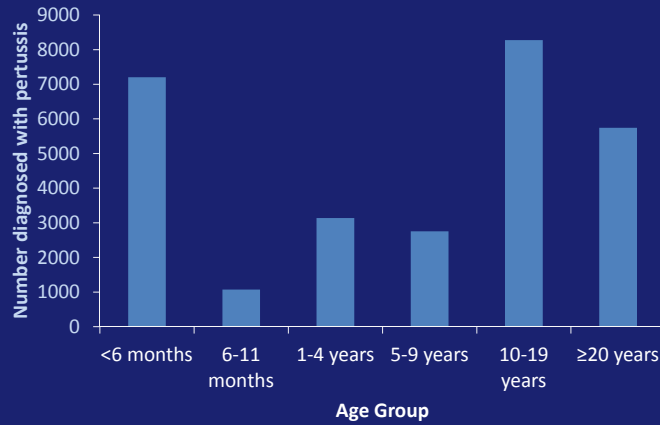
What is pertussis?



- Caused by bacterium *Bordetella pertussis*
- Known as whooping cough
- Highly contagious
- Symptoms: uncontrollable, violent coughing – can result in difficulty breathing
- Can be fatal
- Immunization can be used to protect against pertussis



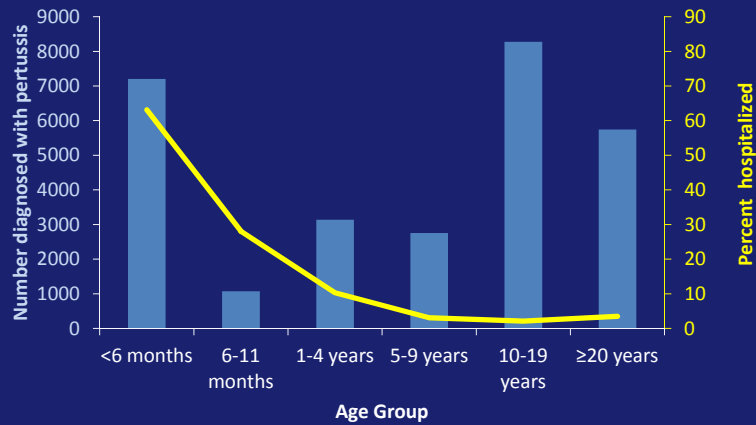
Number diagnosed with Pertussis by age group, United States 1997-2000



Centers for Disease Control and Prevention. Pertussis – United States, 1997-2000. MMWR 2002; 51: 73-76.



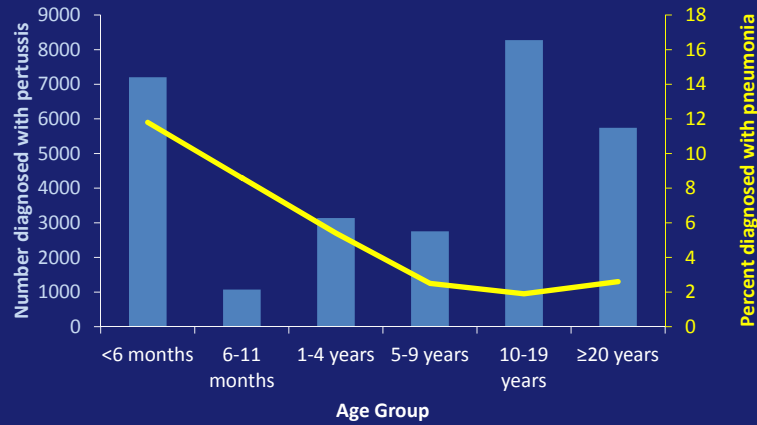
Hospitalizations due to Pertussis by age group, United States 1997-2000



Centers for Disease Control and Prevention. Pertussis – United States, 1997-2000. MMWR 2002; 51: 73-76.



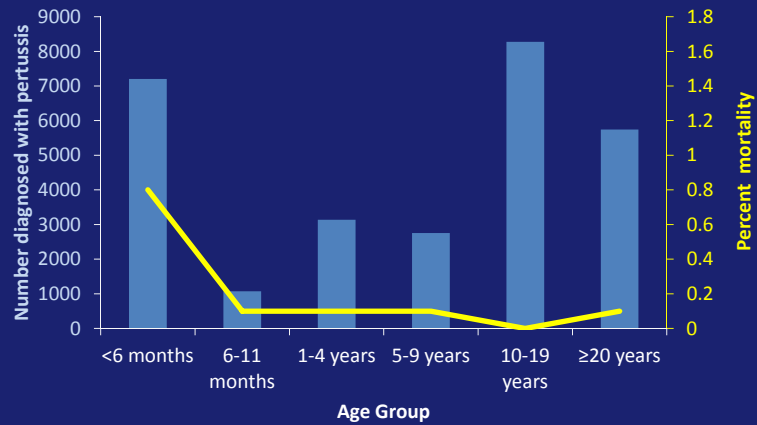
Pneumonia Secondary to Pertussis by age group, United States 1997-2000



Centers for Disease Control and Prevention. Pertussis – United States, 1997-2000. MMWR 2002; 51: 73-76.



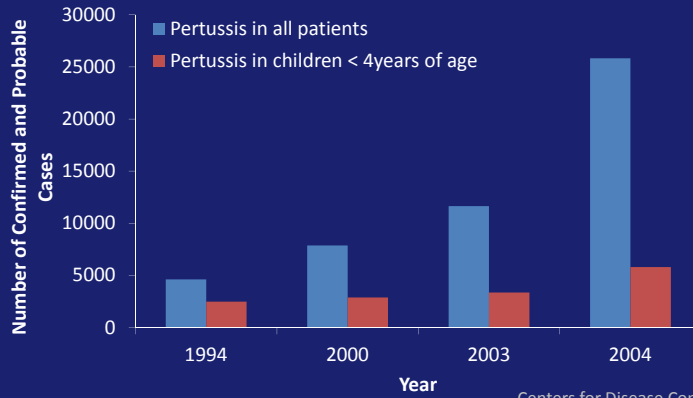
Mortality due to Pertussis by age group, United States 1997-2000



Centers for Disease Control and Prevention. Pertussis – United States, 1997-2000. MMWR 2002; 51: 73-76.



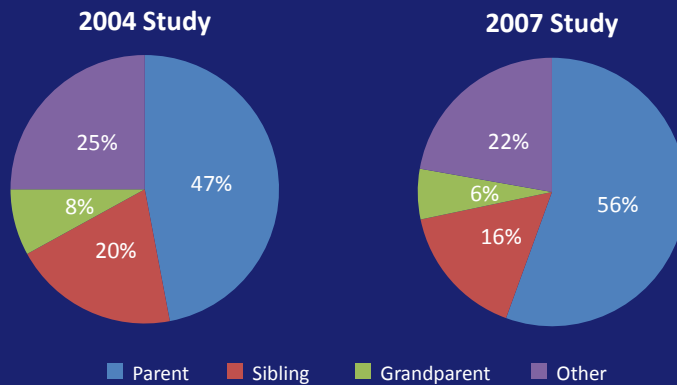
Rise of Pertussis Cases Reported to the CDC



Centers for Disease Control and Prevention.
 Summary of Notifiable Diseases, 1994-2004.
http://www.cdc.gov/osels/ph_surveillance/ndss/annsum/index.htm



Who Was the Source?



Bisgard et al. Infant pertussis: who was the source? *Pediatr Infect Dis J.* 2004; 23: 985-9.

Wendelboe et al. Transmission of *Bordetella pertussis* to Young Infants. *Pediatr Infect Dis J.* 2007; 26:293-299.



Cocooning

- 2001 - The Global Pertussis Initiative (GPI) recommended cocooning:
 - Immunization of family members and close contacts of the newborn
- 2006 - ACIP recommended Tdap booster immunization
- Two groups are targeted:
 - Postpartum women before hospital discharge
 - Contacts of infants age < 1 year



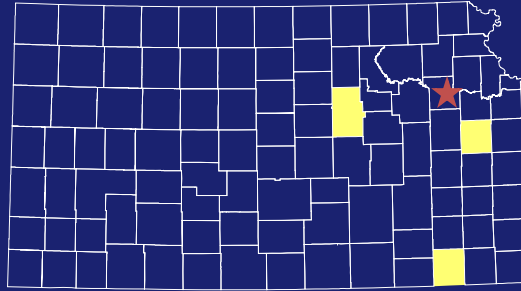
Objectives of Pilot Program

- Increase pertussis awareness through education
 - Health care providers
 - Families of newborns
- To immunize 80% of postpartum women delivering at project hospitals
- To immunize 1 primary caregiver designated by the new mother



The chosen ones

- Number of births
- Vaccines for Children (VFC) enrollment
- Location
- Willingness to participate



Initial Implementation

- January 2010: Presentations to hospitals and local health departments
- Goals:
 - Mom
 - Standing orders for postpartum Tdap
 - Tdap administered on hospital discharge
 - Caregiver
 - Voucher given during pre-registration or during hospital stay



Voucher

Pertussis Vaccine Voucher

Mom's Initials: _____ Date: _____

Relationship to newborn:

Parent Grandparent Other _____

*Franklin County Health Department
1418 South Main St, Ottawa, KS
(785) 229-3530
M, T, R, F 7 – 4:30, W 7 – 6:15*



Results (January – June 2010)

Post Partum Women	
Number Vaccinated	Percent Vaccinated
208	83.9%

Total number of births: 248



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Post Partum Women		Primary Caregivers	
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Time for a Change

- Postpartum vaccination on target
- Primary caregiver vaccination rate lower than expected
- Barriers identified:
 - Fear of Needles
 - Time
 - Lost voucher



Local Health Department Differences

	County 1	County 2
Appointment Needed?	No	Yes
Administration Fee Charged?	No	Yes
Local health department resources used	Healthy start nurses	Packets sent to new parents
Proximity to hospital	Across the street	Across the street
Caregiver Immunization Rates, January – June	27.9%	14.3%



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Process Enhancements

- Standing order for family member vaccination prior to mother and infant discharge
- Involve stake holders
 - Medical Records, Nursing staff, Pharmacists, Pediatricians, OB/GYN, Local Health Departments

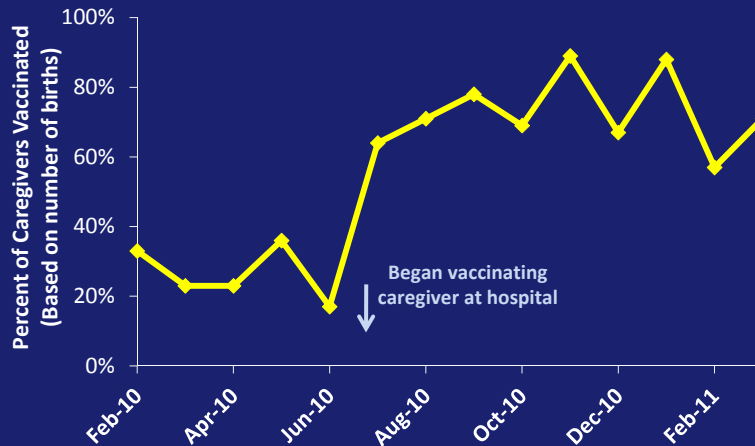


Stumbling Blocks

- Admission to the hospital versus no admission for designated family member
 - Liability concerns
 - Tracking methods
 - Cost
- Hospital conglomerates



Ransom Memorial



Lessons Learned

- The best laid plans
- There's more than one way to skin a cat
- Get them while they're hot
- Don't throw the baby out with the bath water
- It takes a village



Current Activities

- Local health departments offered Tdap to vaccinate new parents
- Tdap offered to hospitals to vaccinate mom and caregiver



Needed Actions

- Continued education of hospitals and OB/Gyns about importance of vaccinating
 - New recommendations by ACIP
- Educate new moms on pertussis
 - Brochures, etc.
- Work with hospitals to overcome barriers to vaccinating caregivers



Acknowledgements

- **KDHE Staff**
 - Martha Siemsen, ARNP-BC
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 - Immunization Staff
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 - Midge Ransom – Administrator
 - Rebecca Hastings – Immunizations
- **Montgomery County Health Department**
 - Ruth Bardwell – Administrator
 - Carolyn Mueller – Immunizations
- **Dickinson County Health Department**
 - Linda Davies – Administrator
 - Brenda Weaver – Immunizations
- All HCP's who care for pregnant women and their newborn infants
- **Ransom Memorial Hospital**
 - Larry Felix – Administrator
 - Justine Fine – OB Nurse Manager
- **Coffeyville Memorial Hospital**
 - Jerry Marquette – Administrator
 - Carla Robson – OB Nurse Manager
- **Memorial Hospital-Abilene**
 - Mark A Miller – Administrator
 - Teresa Hudson – OB Nurse Manager
- **Mercy Hospital Independence**
 - Eric Ammons - Administrator
 - Jenn Wintjen – OB Nurse Manager



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