

# Unprotected People #17

## Pneumococcal

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### Two deaths in a nursing home ignite pneumococcal vaccine campaign

*Editor's Note: Pneumococcal disease causes approximately 40,000 deaths, 500,000 cases of pneumonia, and 50,000 cases of bacteremia each year in the United States. A 1997 CDC survey indicated that only 45% of adults 65 years of age and older have received their recommended dose of pneumococcal vaccine (MMWR, October 2, 1998, vol. 47, no. 38).*

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According to Devora Goodnight, it wasn't just luck that only two people died in a recent outbreak of deadly pneumococcal disease where she works at the Houston County Nursing Home in Crockett. What undoubtedly saved lives when the outbreak began was a combination of the nursing home staff's recognizing the seriousness of the outbreak and their getting an immediate response from experts at the Texas Department of Health (TDH). But perhaps the most decisive single factor was the quick immunization of all potential patients with a vaccine which often is overlooked by physicians and patients alike.

After two patients died of streptococcal pneumonia infections and one other was stricken, Goodnight said, "We knew we had a situation that might cost many of our residents' lives if it got further out of hand. We had never had anything like this happen before and didn't even know what to expect if we called TDH for help. But we knew we would most likely lose more of our 'family' if we didn't."

At TDH's Infectious Disease Control and Surveillance Division, epidemiologist Beverly Ray said that Goodnight and the home's nursing director Debbie Hargrove showed "the highest standard of concern for their residents."

Ray explained that although outbreaks of pneumococcal disease caused by the *Streptococcus pneumoniae* bacteria are rare, the bacteria spread rapidly among unimmunized people whose health may already be compromised. People in good health with normal immune systems are not as likely to develop infections, but ill people, such as elderly nursing home residents with existing problems, are especially at risk of developing pneumonia after exposure to the bacteria.

According to Ray, *Streptococcus pneumoniae* causes about half a million individual cases of pneumonia, some 3,000 cases of meningitis and about seven million ear infections in the United States every year. The most susceptible people are the elderly and ill, such as those at the Crockett nursing home, infants and toddlers, people with chronic health conditions such as diabetes or emphysema, and people without spleens or with weakened immune systems. Outbreaks of the disease occur most commonly during the winter months, among nursing home patients, jail or prison inmates, and other groups who share close living quarters and often breathe the same air.

The U.S. Centers for Disease Control and Prevention recommends that all people 65 years of age or older receive one dose of pneumococcal vaccine. Those at greatest risk for serious complications from pneumococcal disease need to receive a second dose five years later. The vaccine is effective against at least 23 different strains of streptococcal bacteria and is fast acting. However, Ray said that in a recent survey of Texans 65 and older, only 42 percent said they had been vaccinated against bacterial pneumonia.

Ray said, "This vaccine is one of the most effective, fastest-acting vaccines we have for averting outbreaks among such groups as nursing home residents, yet it is unbelievably underused. We hope

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that physicians will offer the vaccine more often to their own patients who may be at risk, and that more patients or family members will remember to ask for the vaccine if they have not already had it.”

After TDH received the Crockett nursing home’s call for help on Jan. 23, Ray and a team of other epidemiology staff drove directly to Crockett to begin taking blood samples from about 90 nursing home residents and staff and obtaining permission to begin vaccinating as many of the residents as possible. Only 14 of 88 residents had previously been immunized. Vaccinations began the following morning, Jan. 24.

According to Hargrove, she and others on the nursing home staff “were amazed at how quickly TDH brought the outbreak under control.”

Although two patients out of the first three diagnosed with pneumococcal disease died, the remaining victim of the outbreak survived and has recovered. The vac-

cines which the other residents received have begun protecting the home’s residents from further infections. For a few days after the residents were vaccinated, some of their visiting friends and family members were advised to take antibiotics as an additional precaution against more pneumococcal infections, but no other cases occurred.

Goodnight said that the loss of the two residents who died from pneumococcal disease has been hard on the other residents and the staff alike. “They were part of our family. We always try to operate as one big family here, and a death is personal to all of us. We are just very, very grateful that help was there when we needed it to prevent even more tragedies,” she said.