

Responses of Pediatric Patients with Otolaryngologic Infections and Nonprotective Streptococcal Titers to Vaccination

Caroline Bonaventure, BS; David Thompson, MD; Adele Evans, MD
LSU School of Medicine, New Orleans, LA



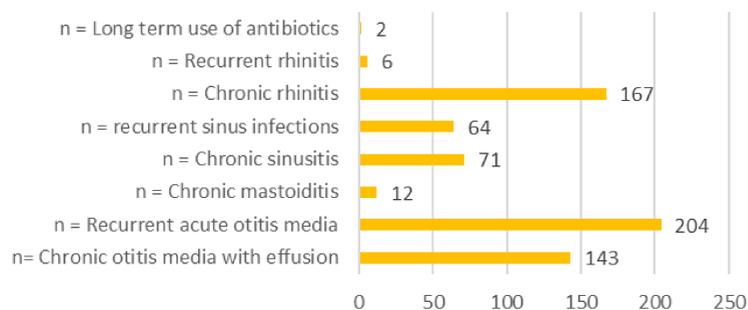
Introduction

- Streptococcus pneumoniae is the most common bacterial cause of sinus and ear infections in pediatric patient populations. Fortunately, pneumococcal conjugate vaccines exist and are routinely administered in pediatric populations
- Unfortunately, immunologic response to the vaccine varies between individuals, with conferred immunity providing varying levels of protection from subsequent pneumococcal infections.
- This study aims to determine the relationship of pneumococcal vaccine response with recurrent and chronic pneumococcal infection, especially in children who have been revaccinated after a measured non-responsive titer level.

Study Design

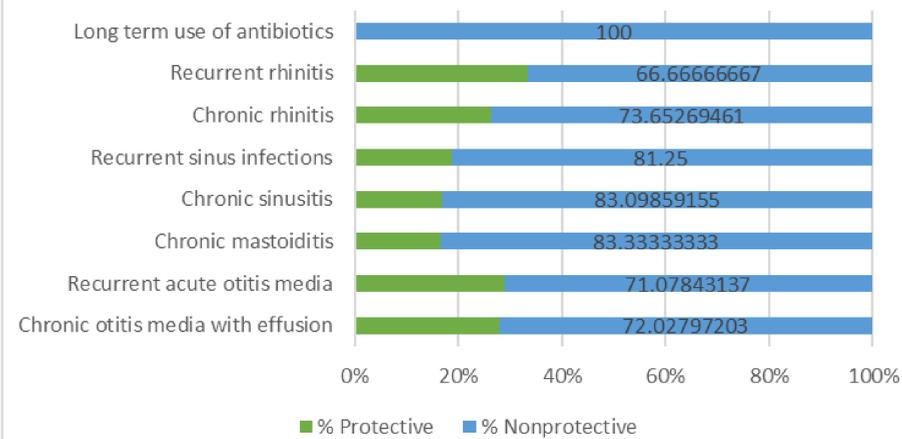
- Patients with at least one of eight chronic or recurrent ENT infections were identified via chart review
- Patients additionally had completed at least 1 dose of PCV7/13 (Pneumovax) before their first titer
- Patients who were revaccinated with PPSV23 (Pneumovax) and then had a titer measurement were identified and classified based on response

Total of Diagnosis



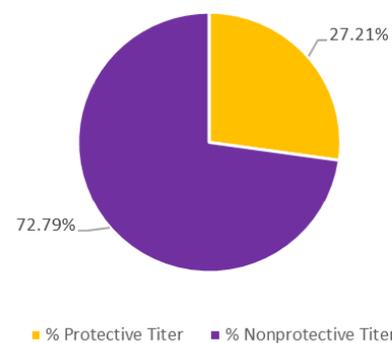
Titers on Presentation

Presentation Titers by Diagnosis

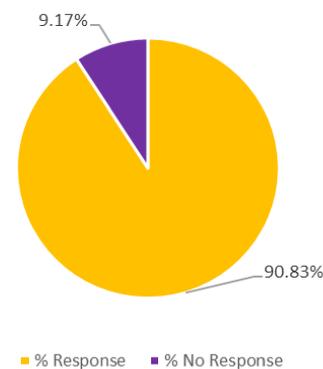


Total Response

Titers on Presentation

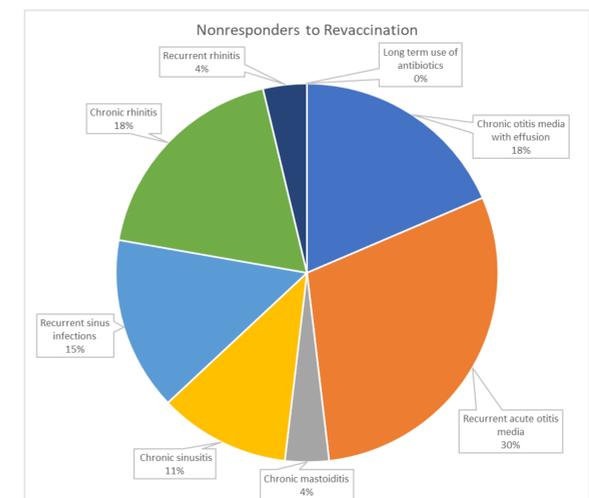
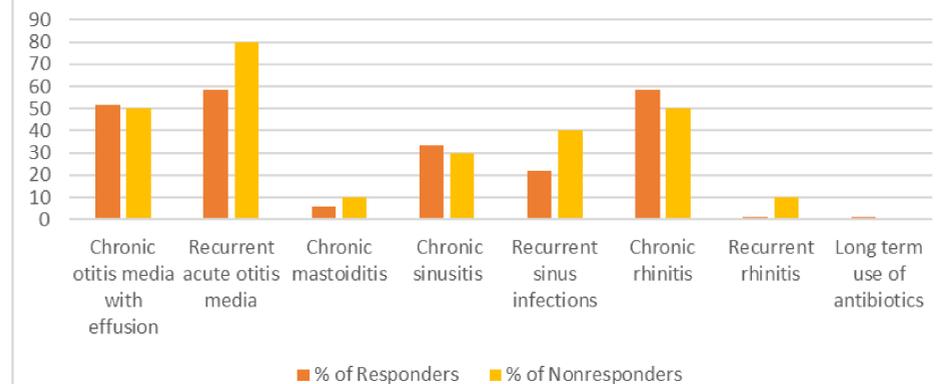


Titers after Revaccination



Revaccination with PPSV23

Response to Revaccination by Diagnosis



Conclusions

- Only 27% of patients identified with chronic or recurrent ENT infections and at least 1 dose of PCV7 or PCV13 had a responsive titer at presentation. This is compared to a CDC reported response rate of 97%.
- 91% of patients with a nonprotective titer responded to vaccination with PPSV23 (Pneumovax). This is compared to a CDC reported response rate of 60-70%.
- 10 patients did not respond to revaccination. 30% of these patients had a diagnosis of recurrent acute otitis media. 70% had more than one diagnosis.