

Impact of pneumococcal vaccination on complicated acute otitis media

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Hallmarks of the pneumococcal conjugate vaccine

The heptavalent pneumococcal conjugate vaccine (PCV7) is approved in the US

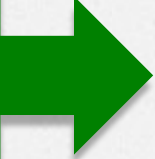
2000

1/10 PCV7 is instated in the Danish national vaccination program. Children born from 30/4 2006 is offered the vaccine

2007

19/4 PCV13 replaces PCV7 in Denmark.

2010



PCV- FAQ

- o Reduction in incidence of acute otitis media (AOM)?
- o Change the microbiology in AOM?
- o Reduction in complications such as acute mastoiditis?

Study at AUH Setup

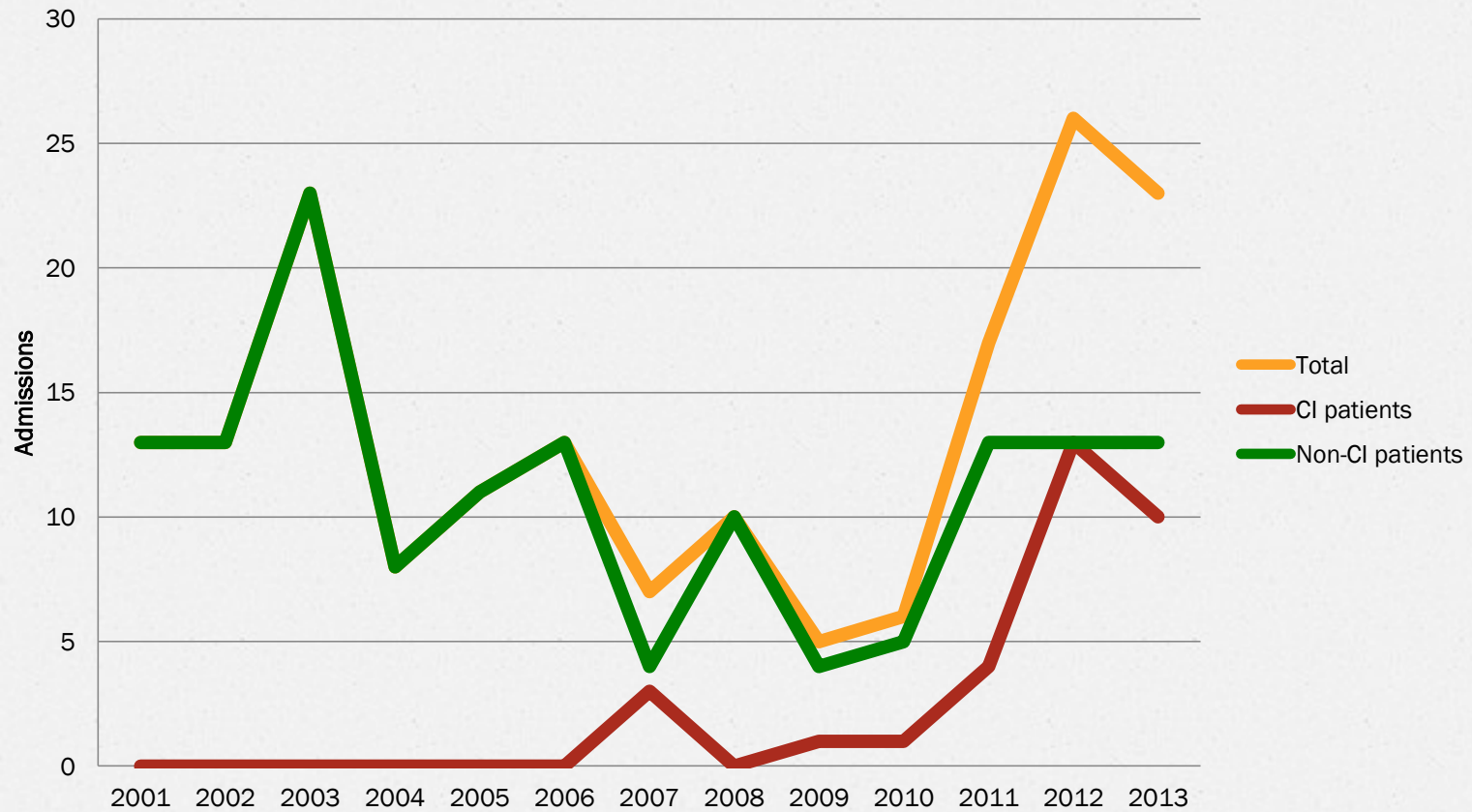
Every patient admitted in the ENT department at Aarhus University Department due to acute infection is registered in a database.

Contains information regarding antibiotics prior, during admission and upon discharge.

Age, gender, durations of symptoms, length of stay.

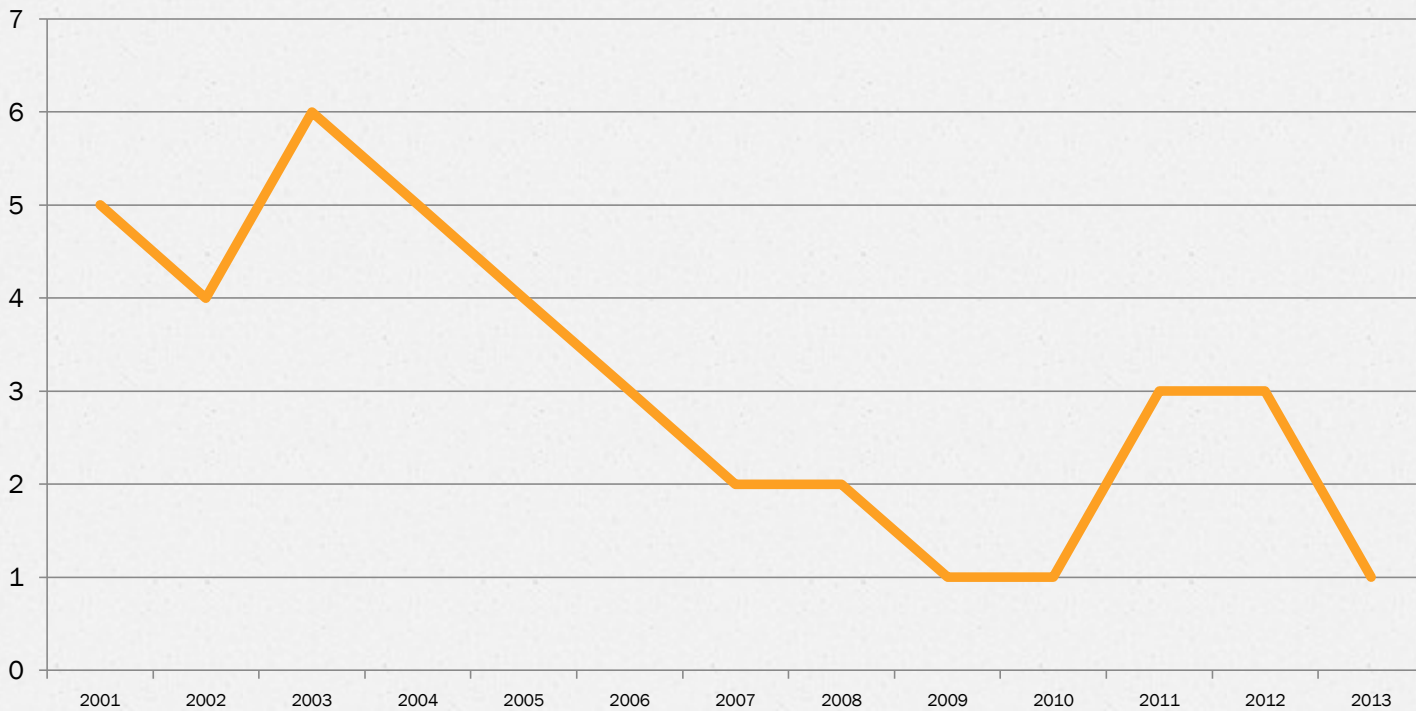
Serology and microbiology

AOM

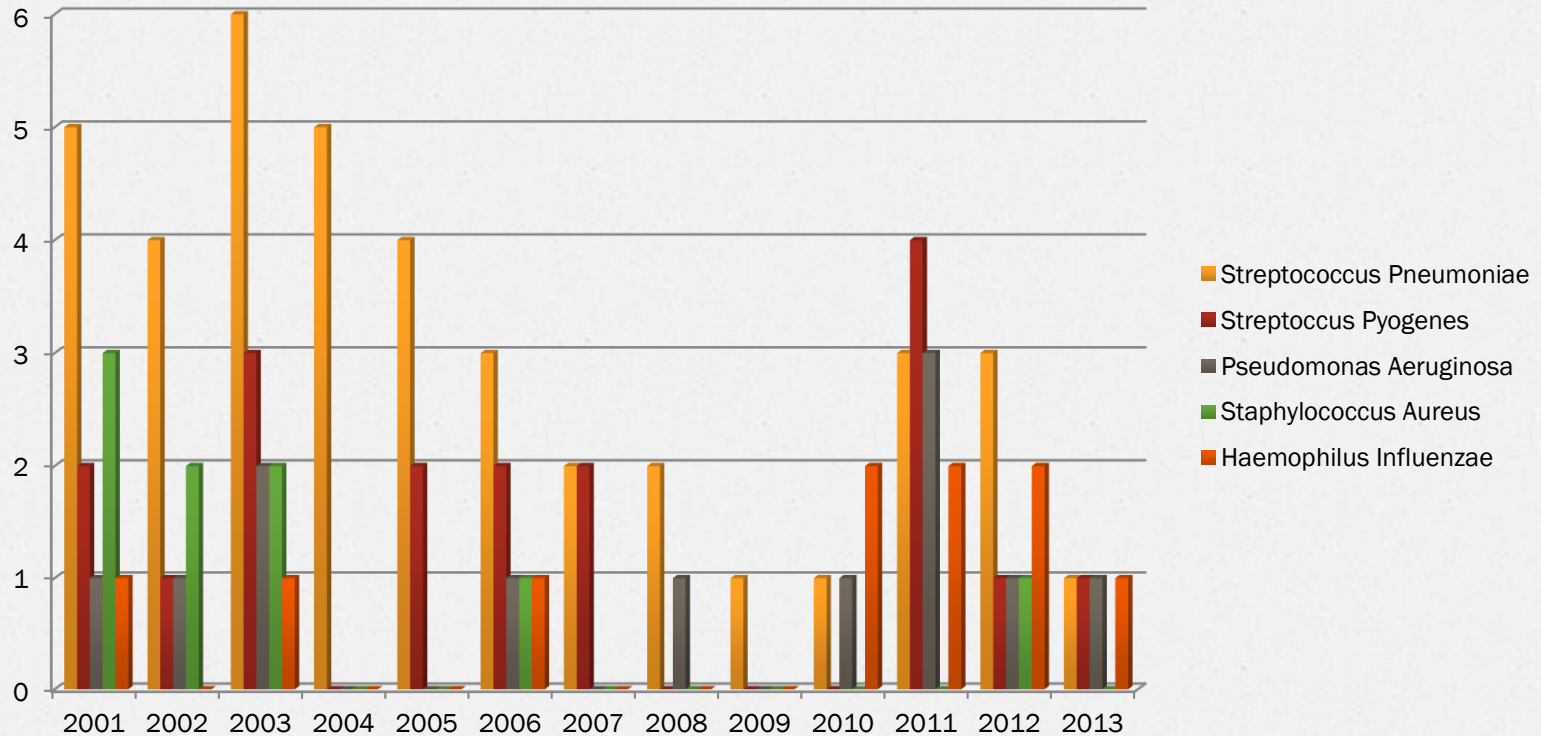


AOM Microbiology

Positive cultures for *Streptococcus pneumoniae*



Distribution of major pathogens in AOM



Acute Mastoiditis

Pre PCV

30 cases

Age: 1,63 ($\pm 2,38$)

- Male: 66,6%

- Female: 33,3%

63,3% with no antibiotics
prior to admission

(Penicillin favoured)

Stay: 4,33 ($\pm 2,78$)

Symptoms: 6,03 ($\pm 4,25$)

Post PCV

38 cases

Age: 1,84 ($\pm 2,38$)

- Male: 55,3%

- Female: 44,7%

57,9% with no antibiotics
prior to admission

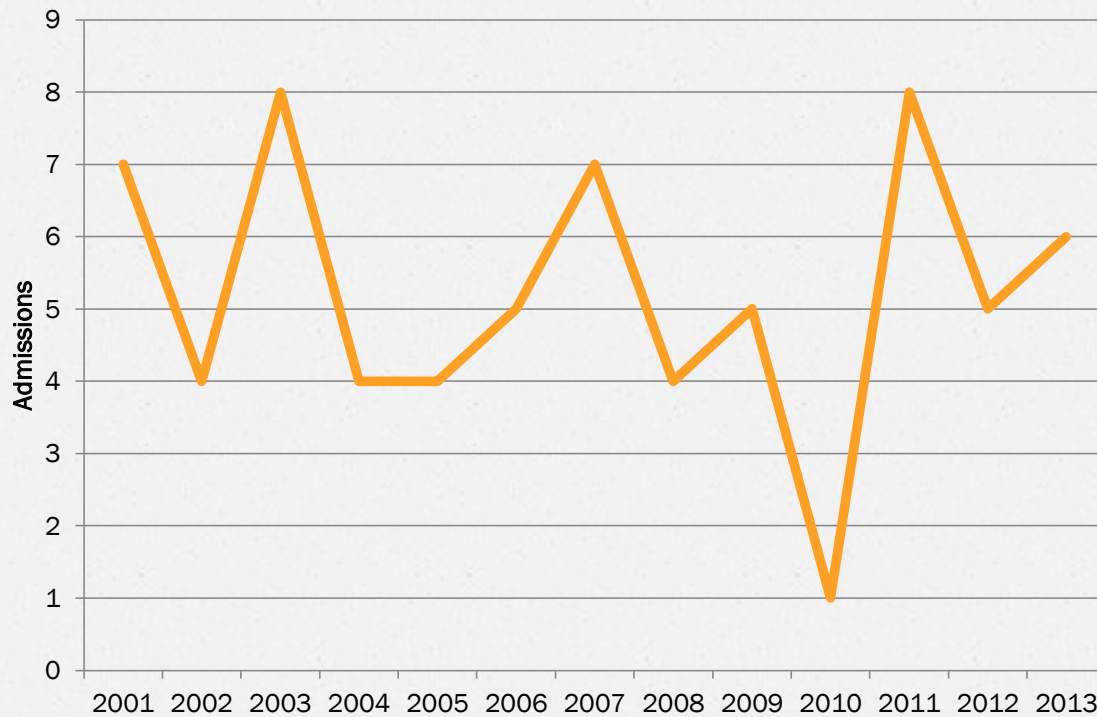
(Amoxicillin favoured)

Stay: 4 ($\pm 1,21$)

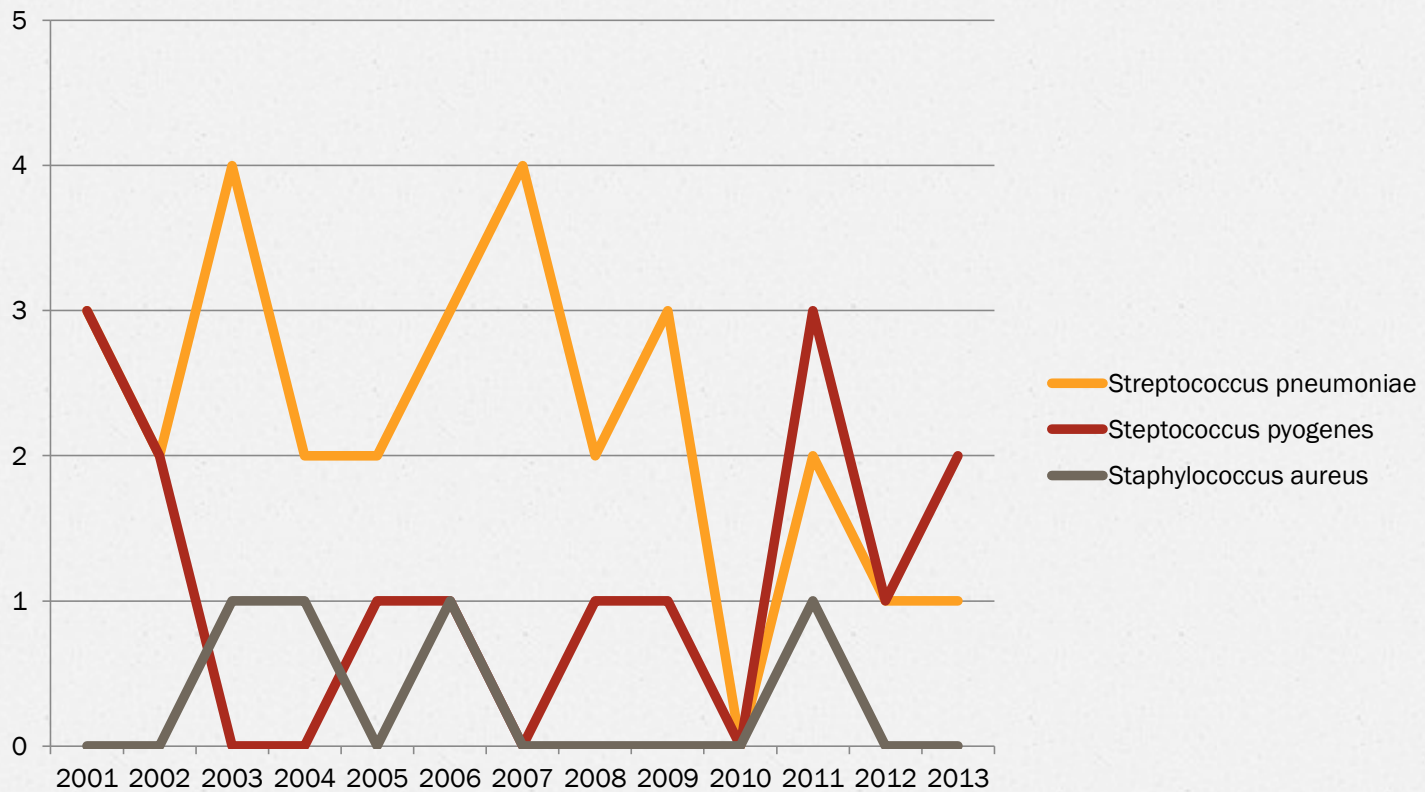
Symptoms: 9,57 ($\pm 9,23$)

Mastoiditis Admissions

Mastoiditis



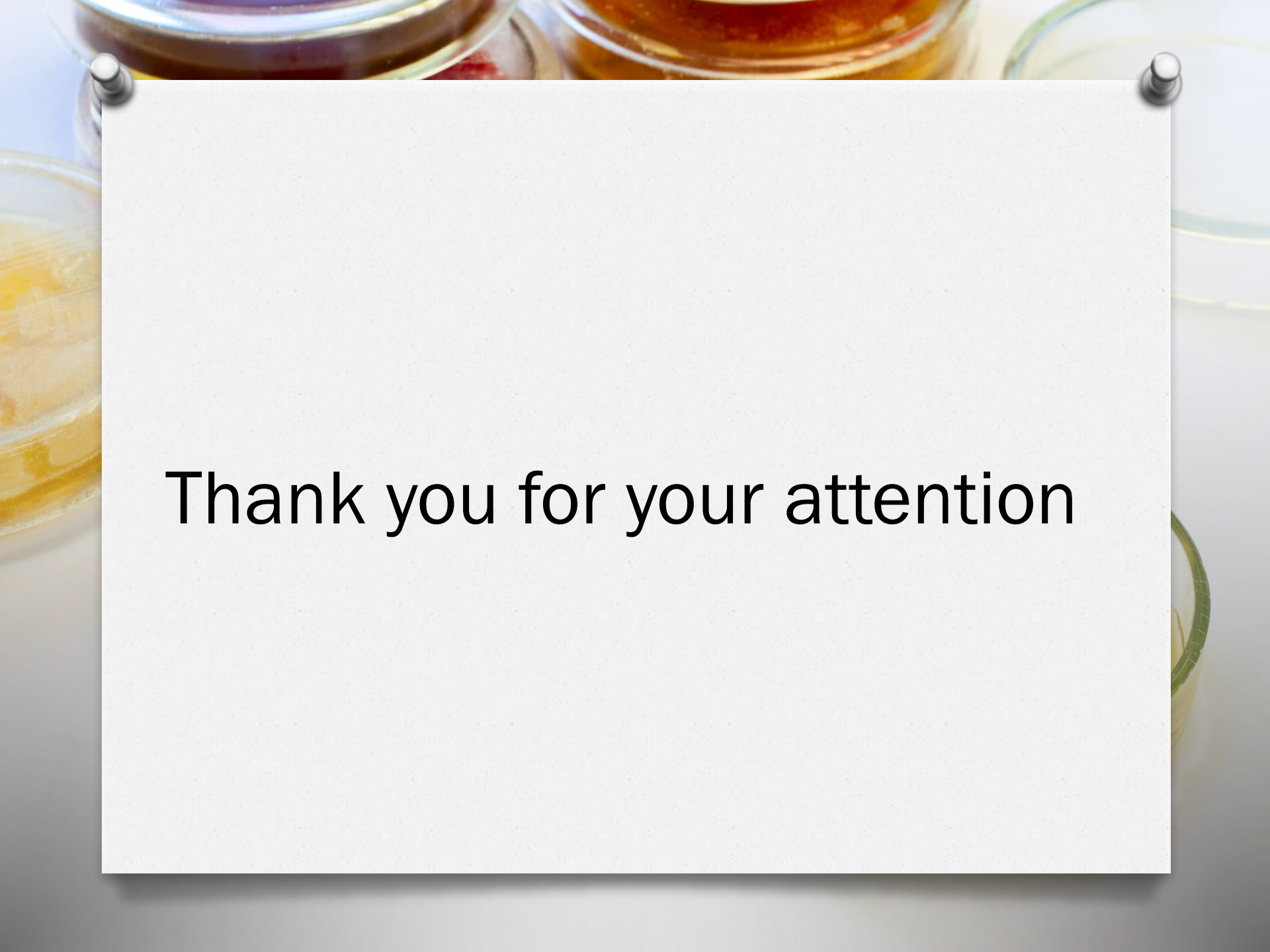
Mastoiditis Microbiology



Conclusion

PCV7 and PCV13 do not change the incidence or demographics of AOM or acute mastoiditis.

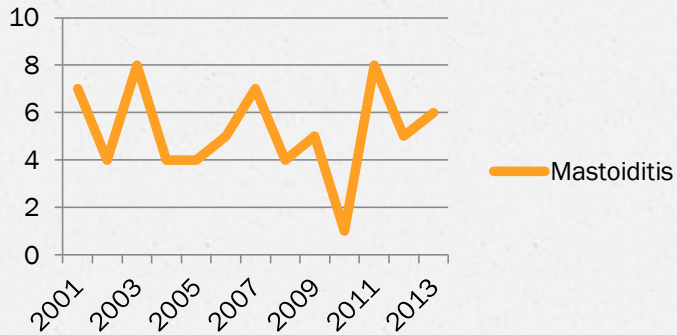
Despite the vaccine, *Streptococcus pneumoniae* is still a major pathogen in AOM, but it seems that the microbiology in acute mastoiditis could be changing.



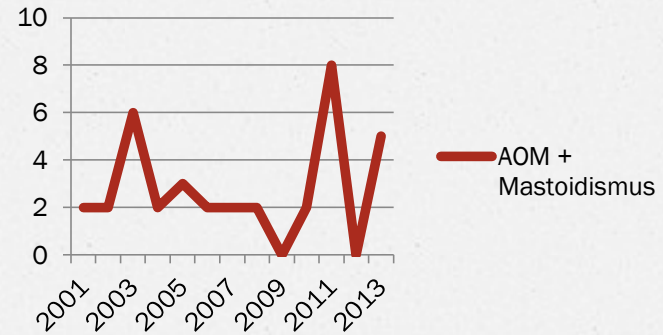
Thank you for your attention

Mastoiditis diagnostic challenges

Mastoiditis



AOM + Mastoidismus



TOTAL

