The Final Presentation:
A Guide

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Overview of final presentation

- Final class (October 23)
- PPT okay, not required
  - Title slide
  - Research question
  - Search strategy / methods
  - Findings
- 3 minutes each + 1 minute for questions / feedback
Staphylococcus aureus Nasal Colonization and Asthma in Adults: Systematic Review and Meta-Analysis

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What is already known about this topic? Staphylococcus aureus is a frequent colonizer in the skin and nasal mucosa, and staphylococcal superantigen-specific IgE sensitization has been positively associated with asthma in adult populations.

What does this article add to our knowledge? The present systematic review found modest but significant relationships between nasal S. aureus colonization and asthma in adults.

How does this study impact current management guidelines? Nasal S. aureus colonization needs to be considered as a potential risk factor for asthma in adults.
“In the present study, we conducted a systematic literature review to identify studies that produced data relevant to the following research question:

“Is nasal SA colonization related to asthma prevalence or disease activity?”

We examined this question in 2 population samples: (1) a general population and (2) patients with CRS, with the consideration that the first population sample would be appropriate to estimate the degree of the association with more generalizability than clinical samples, and the second population may facilitate testing of the hypothesis that the relationship between SA colonization and asthma might differ by nasal polyp comorbidity.” – Kim et al.
Search strategy

FIGURE 1. Flowchart of the search strategy and study selection. MRSA, Methicillin-resistant Staphylococcus aureus.

Kim et al.
Findings

<table>
<thead>
<tr>
<th>Study</th>
<th>Study population</th>
<th>Age (mean ± SD, y)</th>
<th>Participant enrolment</th>
<th>SA detection</th>
<th>Asthma definition and measurement</th>
<th>Asthma prevalence (%)</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td>In SA (+)</td>
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<tr>
<td>Bischoff et al, 2004</td>
<td>n = 450, medical students and undergraduate students from Wake Forest Medical School and the Wake Forest University, USA</td>
<td>22.1 ± 5.7</td>
<td>Volunteer sample</td>
<td>Anterior nares swab and culture</td>
<td>Questionnaire-based medical history of asthma*</td>
<td>0.8% (1/131)</td>
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<tr>
<td>Halalbah et al, 2010</td>
<td>n = 500, students and employees in the cities of Beirut and Sidon, Lebanon</td>
<td>Range: 6-65</td>
<td>Volunteer sample</td>
<td>Anterior nares swab and culture</td>
<td>Questionnaire-based medical history of asthma†</td>
<td>4.7% (9/192)</td>
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<tr>
<td>Davis et al, 2015</td>
<td>n = 16,234, a nationally representative population from NHANES 2001-2004 survey, USA</td>
<td>34.6 ± 23.3 (range: 6-85)</td>
<td>Stratified, multistage probability sample</td>
<td>Anterior nares swab and culture</td>
<td>Questionnaire-based physician diagnosis history of asthma (asthma diagnosis ever)‡</td>
<td>12.9%§</td>
</tr>
<tr>
<td>Sorensen et al, 2016</td>
<td>n = 868, high school students in Tromsø and Balsfjord, Norway</td>
<td>18.6 ± 1.5 (range: 18-19)</td>
<td>Volunteer sample</td>
<td>Anterior nares swab and culture</td>
<td>Questionnaire-based physician diagnosis history of asthma (ever asthma)¶</td>
<td>12.9% (55/425)</td>
</tr>
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<td>Kock et al, 2016</td>
<td>n = 1,878, adult volunteers recruited from general population in Germany</td>
<td>45.1 ± 15.0 (range: 7-97)</td>
<td>Volunteer sample</td>
<td>Anterior nares swab and culture</td>
<td>Questionnaire-based medical history of asthma#</td>
<td>7.4% (57/768)</td>
</tr>
</tbody>
</table>

**NHANES**: National Health and Nutrition Examination Survey; SA: *Staphylococcus aureus*; SD: standard deviation.

*Self-administered questionnaire to collect medical history including asthma.
†Interview using questionnaires to collect medical history including “suffering from asthma.”
‡Interview using standardized questionnaires to collect history of medical conditions including asthma: “asthma diagnosis ever” was defined using the question “Has a doctor or other health professional ever told you that you have asthma?”
§Population-standardized prevalence rates.
¶Web-based questionnaire survey including standardized items on history of asthma: “ever asthma” was defined by either of current asthma (at least 2 of the following 3 criteria: self-reported doctor-diagnosed asthma ever, any indicative symptom in the last 12 mo [wheezing, shortness of breath, dry cough at night], and use of asthma medication in the past 12 mo) or self-reported doctor-diagnosed asthma ever.
#Interview using questionnaires to collect history of medical conditions including asthma.
Critique of Literature

Editorial

Growing Concerns with *Staphylococcus aureus* and Asthma: New Territory for an Old Foe?

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