The Missing Piece Study: Do skin sores, sore throats or both lead to acute rheumatic fever?

Student: Sarah Pearce  
Supervisor: Dr Asha Bowen
The Missing Piece Study

• A Kimberley study aiming to determine the:
  – Incidence of sore throat and Strep A pharyngitis
  – Incidence of skin sores and Strep A impetigo
  – Prevalence of pharyngeal strep A, C, & G colonisation

• Rationale
  – To contribute to the understanding of skin sores’ role in ARF
  – Contribute to ARF primary prevention
The Missing Piece Study: Do skin sores, sore throats or both lead to acute rheumatic fever?

Sarah Pearce (UWA medical student)
Supervisor: Dr Asha Bowen (TKI)
Rheumatic Fever

STREP A

Orthopedic issues

Cardiac issues
Rheumatic Heart Disease

- A sick heart makes it harder to live life to the full
- It needs ongoing health care, many medications, regular heart scans, and even surgery
Who gets rheumatic fever and rheumatic heart disease?

NEARLY 100% of all recorded new or recurrent cases of ARF are AMONG INDIGENOUS PEOPLE.
Sore throat, skins sores, or both?

Strep A Skin Sores

? Rheumatic Fever

Strep A Sore Throat

Rheumatic Heart Disease
Study Aim

To find out how common skin sores and sore throats are in Kimberley children aged 5-9.
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The Study

- **Who**: Aboriginal children aged 5-9 at primary school
- **Where**: Primary schools in towns and remote communities
- **How**: Gain consent from parents
  - Part 1: Initial assessment
  - Part 2: Weekly screening
- **When**: Planned to take one year
# Part 1: Initial Assessment

<table>
<thead>
<tr>
<th></th>
<th>Consult</th>
<th>Photographs</th>
<th>Strep A Tests</th>
<th>Immune Response Test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sore Throats</strong></td>
<td>Checklist of symptoms + looking at throat</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
<tr>
<td><strong>Skin Sores</strong></td>
<td>Checklist of symptoms + looking sores</td>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
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</tbody>
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Part 2: Weekly Screening

- Trained nurse or health worker will check for new skin sores or sore throats each week
- Sore Throat and Skin Sore checklist

4.1 Sore Throat History – Symptom Checklist

Does the participant have any of the following symptoms today?

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Y / N / Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard to swallow</td>
<td>Y / N / Unknown</td>
</tr>
<tr>
<td>Throat pain / sore throat</td>
<td>Y / N / Unknown</td>
</tr>
<tr>
<td>Not eating</td>
<td>Y / N / Unknown</td>
</tr>
<tr>
<td>Not drinking</td>
<td>Y / N / Unknown</td>
</tr>
<tr>
<td>Croaky voice</td>
<td>Y / N / Unknown</td>
</tr>
<tr>
<td>Fever/Felling hot or cold</td>
<td>Y / N / Unknown</td>
</tr>
</tbody>
</table>
How will this study help Aboriginal Children?

• Finding out how often sore throats and skin sores occur in Aboriginal children in the Kimberley will help us to:
  – Improve our understanding of rheumatic fever and how to prevent it
  – Provide clear guidelines for doctors to treat sore throats and skin sores
  – Reduce the rates of rheumatic fever and rheumatic heart disease in Aboriginal children
How will this study benefit your community?

- **Employment opportunity**: where possible staff for the study will be recruited from your community

- **Education**: we will teach the children about rheumatic fever and how to prevent it during the initial assessment days

- **Health**:
  - Any child found to be sick will be referred to the clinic for care and treatment
  - Better guidelines for treating skin sores and sore throats for health workers, nurses, and doctors working in your community
Questions or feedback?