

THE MISSING PIECE STORY



What We Found

THE KIDS RESEARCH INSTITUTE AUSTRALIA
WESFARMERS CENTRE OF VACCINES & INFECTIOUS DISEASES



Acknowledgements

We respectfully acknowledge Aboriginal ownership of the land, waters, and sky of Australia in continuity for more than 60,000 years. We sincerely acknowledge the wisdom and experience of the following contributors:

- i) all study participants and their families and caregivers who live on Yawuru and Warrwa lands in the Kimberley region of Western Australia;
- ii) all staff at participating schools, in particular the department, leadership teams, classroom teachers, and professional staff who facilitated regular health checks during class time;
- iii) the nurses and healthcare workers from Broome Regional Aboriginal Medical Service and Derby Aboriginal Health Service who provided support to weekly active surveillance,
- iv) the laboratory personnel and students who facilitated sample receipt, supportive academic collaborators, and
- v) all volunteers and support staff who helped with surveillance and logistical activities.

We acknowledge the students at St Mary's College who volunteered time, energy and enthusiasm to develop these storybooks, provided feedback on the messages and willingly demonstrated essential aspects of Strep A surveillance.

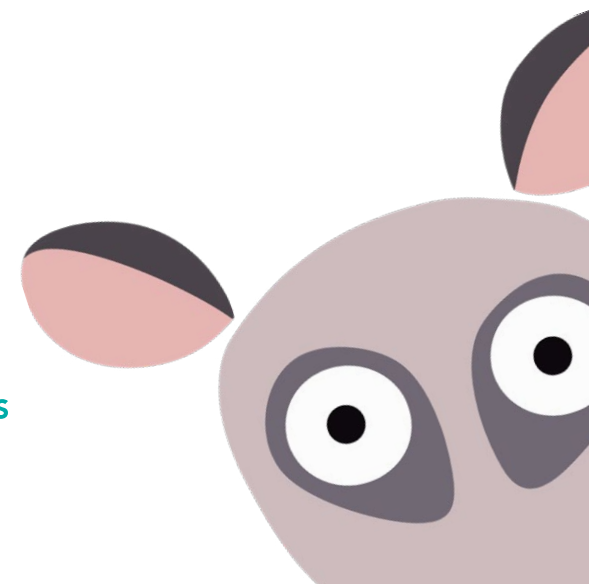


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This study helped scientists find out lots of new things about **Strep A**.



This included finding out how common **sore throats** and **skin sores** were among kids at school.

Some kids had **lots** of Strep A infections.



Some kids had **none** at all.



Sometimes kids felt really sick with Strep A including:

* Sore throat

* Tired

* Hot

* Finding it **hard** to drink, eat and talk



Other times kids felt like they:

* Were itchy

* Had sore skin

But just as often, when kids had Strep A on their bodies, they felt no bad things at all.



THIS WAS A SURPRISE!

Scientists call this

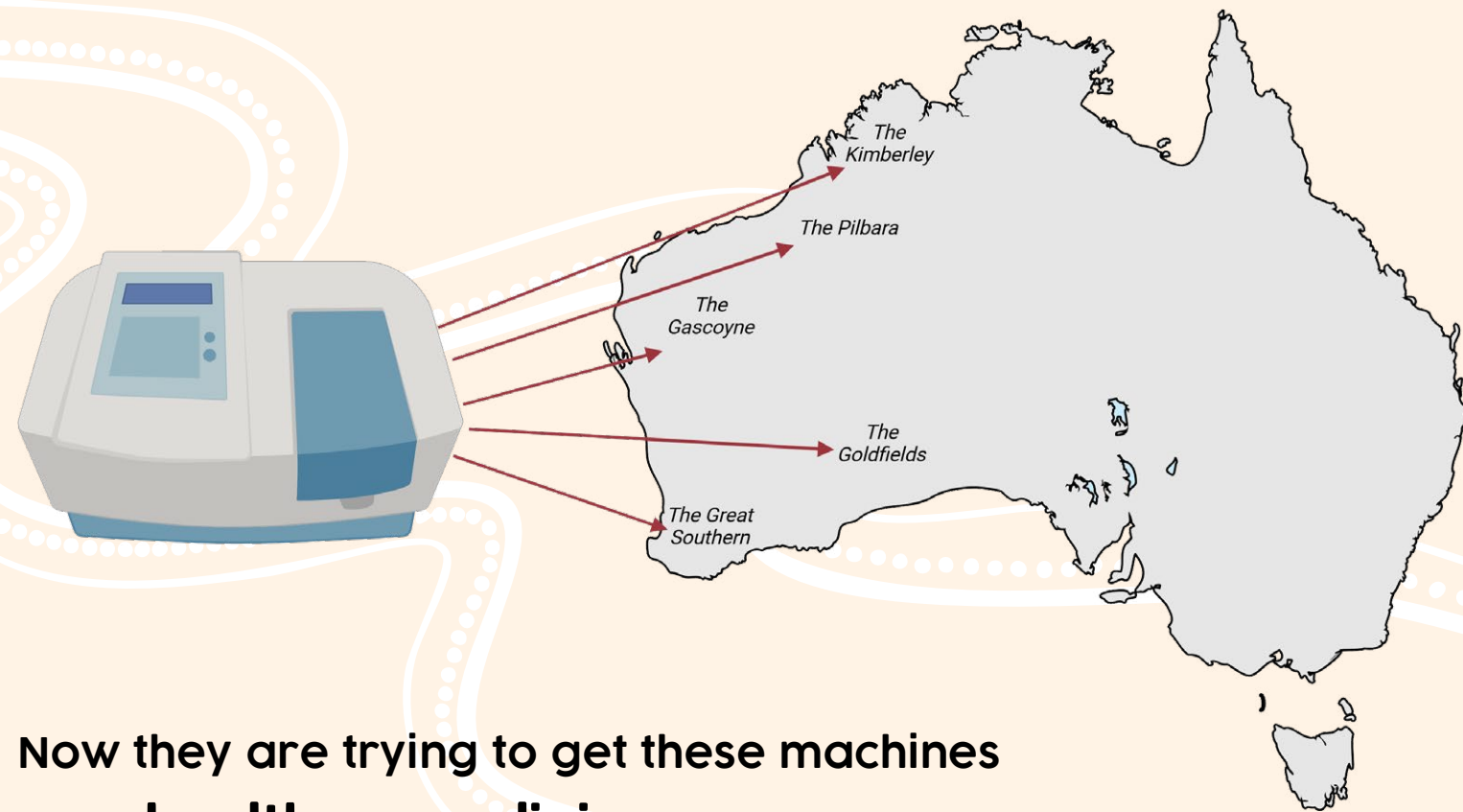
ASYMPTOMATIC INFECTION

meaning with 'no symptoms!'

Scientists found out that **new machines** could find Strep A really quickly...



Not only were they **super fast**, but they were also **MUCH** better at finding Strep A than the normal laboratory ways.



Now they are trying to get these machines to all **health care clinics** so they can work their quick magic for kids in the Kimberley and around Australia.



START STREP A PROJECT

Scientists found Strep A infections in the Missing Piece Study were caused by many **different types** of Strep A.

The Strep A types found in **throats**...



were mostly the same as the Strep A types found on **skin**.



We found a little bit of Strep A in **classrooms** and these were the same types to those causing infections in kids.

The **blood samples** told scientists lots about our Strep A infections, including:

That all the kids had many Strep A infections in the **past**.

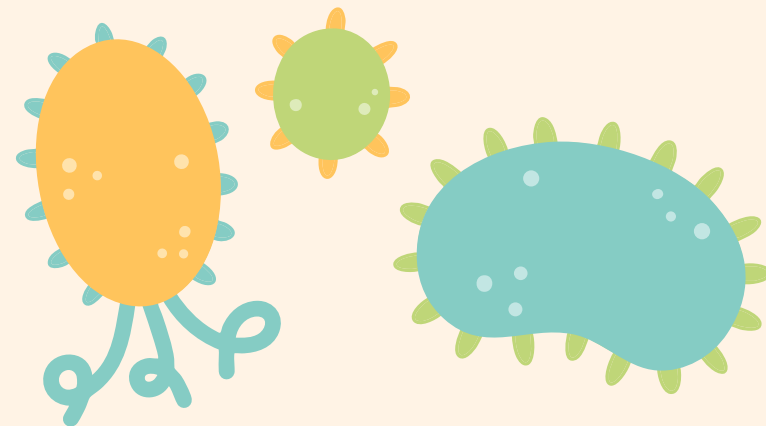


And that the **antibody levels** in the blood were high from age 5 years. We only tested kids aged 5 years and older, so we will have to do more studies to find out when antibodies start rising.

In the future, scientists will keep working to find new ways to **prevent** strep A.



The first step is getting the magic tests into clinics so that kids and families can get quick **results** and **antibiotics** when they need them.



They might look at **healthy bugs** from our throat to see if they can be used as weapons against Strep A.



They might look at the **blood** from kids in this study who did not get sick to work out if they have

PROTECTIVE IMMUNITY

How do we say "protective immunity"?

**PRO-TECK-TIVE
EEE-MOOO-NIII-TEEE**

Knowing protective immunity to Strep A helps with new ways to **prevent infection**.



From this study, we also **learnt** that kids know best!
They recognised their own **infections**.



They knew ways to keep themselves **safe** from infections.
They knew the best **words** to use in these books!



So here is a big
THANK YOU!!!
to all the participants from St Marys Broome.

A SPECIAL THANKS TO THE COMMUNITIES OF
ST MARY'S COLLEGE, BROOME AND HOLY ROSARY SCHOOL, DERBY
FOR THEIR HELP IN CREATING THESE BOOKS.



THE ARTWORK

The artwork throughout this storybook, by Nyikina-Yawuru artist Kelli Savietto, is a tribute to the Missing Piece Story.

The possum, known for its adaptability and protective care of young ones, embodies the resilience and nurturing spirit at the heart of this work. Its tail displays The Kids First Nations 'Community' pattern, representing collaborative research efforts, while its chest bears the 'Forest' pattern of countless leaves and grass blades, each symbolising a child this research aims to protect.

The main illustration (right) depicts the research journey unfolding across the ancient landscapes of Yawuru (Broome) and Warrwa (Derby) in the Kimberley. Country is celebrated through imagery of land, waters, and sky, while traditional patterns weave throughout, embodying the enduring bonds of community connection.

A winding road travels from north to south, mapping the significant journey of samples collected from children's throats, skin, blood, and schools as they make their way to Boorloo (Perth). Along this road, possum tracks mark the presence of every person contributing to this vital Strep A research—from study participants and their families to educators, health professionals, laboratory teams, and dedicated volunteers.

Above all, the sun radiates hope and determination across the scene, illuminating the path toward positive outcomes and the promise of healthier futures for Aboriginal youth.

The puzzle piece artwork (back cover) completes the narrative, representing the discovery of 'the missing piece' itself—where patterns symbolise the careful gathering and analysis of data by scientists working toward a breakthrough discovery.



Contributors

We acknowledge the photography by Michael from Jalaru Photography, the production by Clements + Co Studio and the graphic design and illustrations by Kelli Savietto.



These storybooks were conceived by Missing Piece Surveillance study team, namely Dr Janessa Pickering and Professor Asha Bowen. We acknowledge the following contributors who developed, curated and assisted in the publication of story books including the entire Missing Piece Surveillance study team, the Kimberley Kulunga team (Liam Bedford and Slade Sibosado), Cassandra Fernando, Dr Ann Grand, Dr Heather Bray, Rebecca Dalton, Bonnie Hyatt, Bernadette Wong and Tammy Gibbs.

We acknowledge parents and community members who reviewed and developed the story books including Epsy Devanbu, Sharon Swaney and Courtney King.

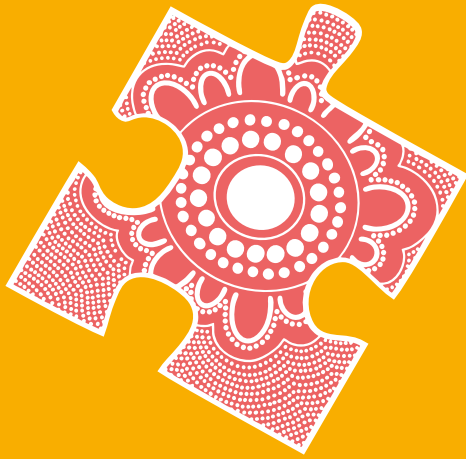
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We acknowledge the START Strep A Project is an exciting new collaboration with NACCHO, Flinders University and The Kirby Institute at University of New South Wales.



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Story Book #3: What We Found (2025). Broome, Australia.





STORYBOOK
#3
OF THREE

This is book 3 of 3 in a series of books that tells stories about sore throats and skin sores in the Kimberley, Western Australia. In the Missing Piece Surveillance Study, school students in Broome and Derby helped scientists work out lots of new things about Strep A, a nasty bug that causes infections and can damage the heart. In this book, students and scientists explain how the study was performed, and what information was collected.

Pssstt, read books 1 and 2 to find out why and how they did the study!

IN THIS SERIES

What's Missing
Looking for the Missing Pieces
What We Found