

# Skin Infection Research in WA

Dr Tim Barnett

(on behalf of Dr Asha Bowen)



Proudly supported by the  
people of Western Australia  
through Channel 7's Telethon



# Acknowledgement of Country







(See, Treat, Prevent) Skin Sores and Scabies

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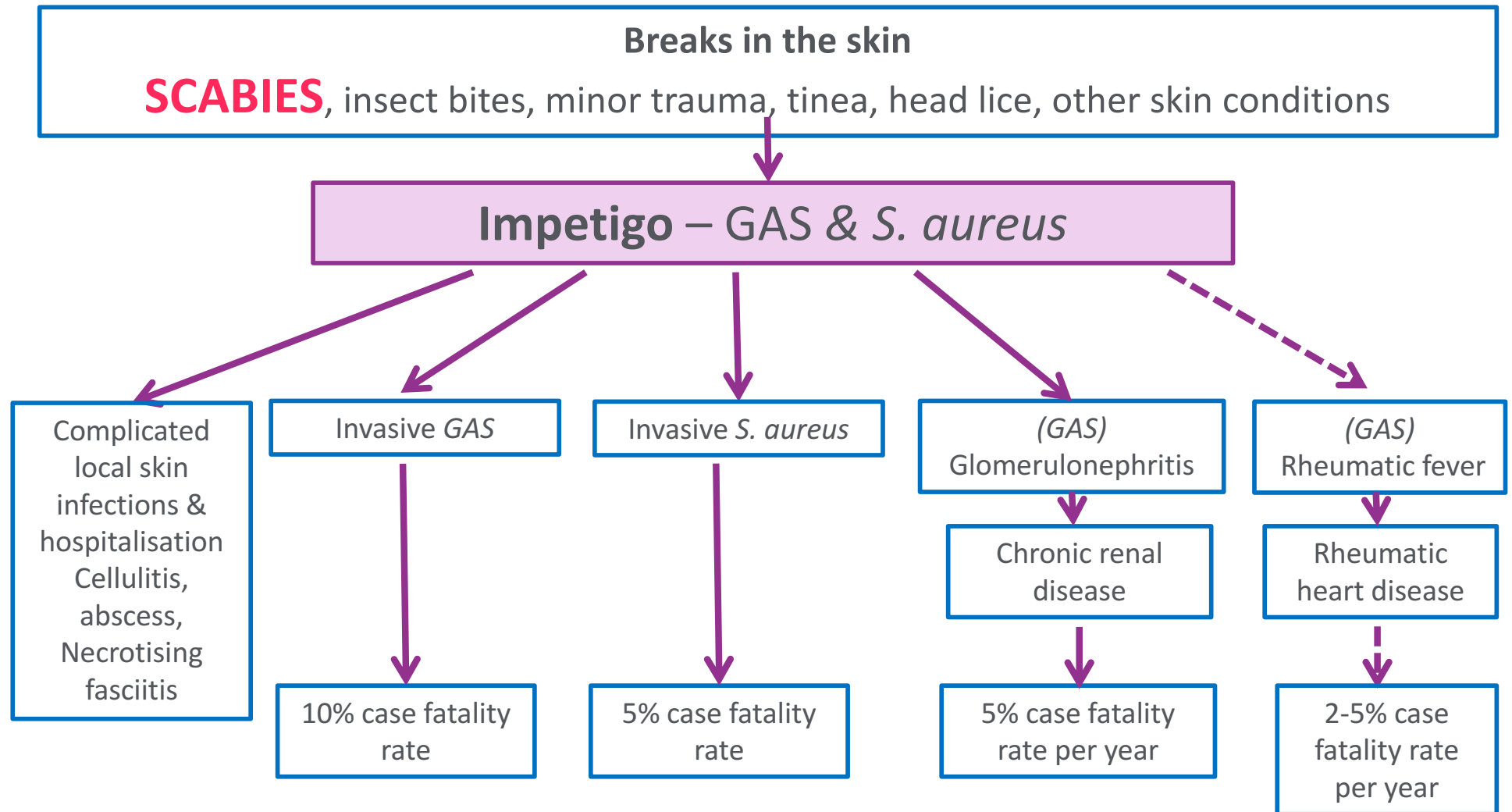


## Research Partnership





# Public health importance of Impetigo



Adapted from Engelman *et al* PLoS NTD 2013





# Impetigo: Global Burden

- > 162 million children at any one time
- 45% of remote Aboriginal children

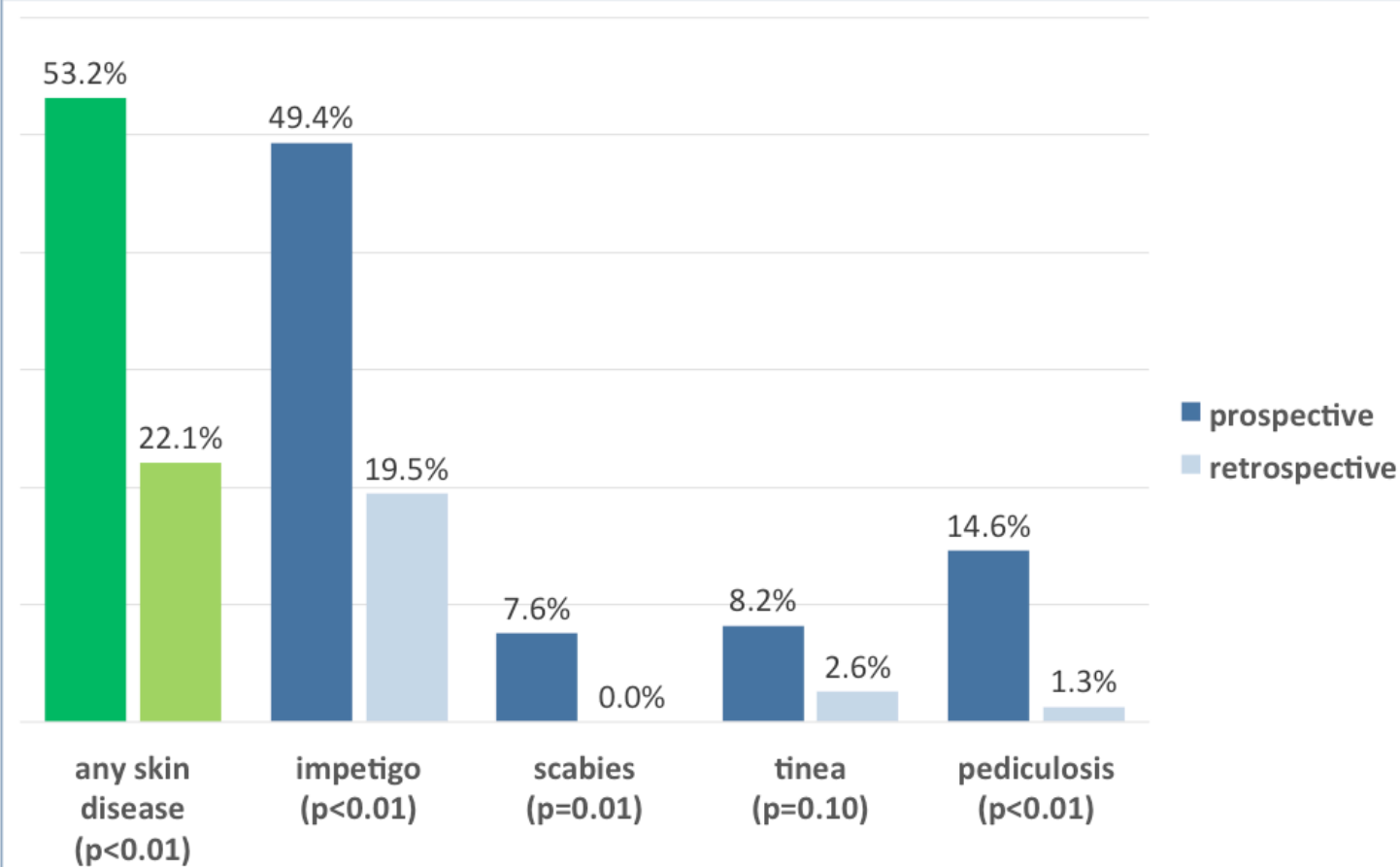


Bowen et al PloS One 2015

# Are scabies and impetigo “normalised”? A cross-sectional comparative study of hospitalised children in northern Australia assessing clinical recognition and treatment of skin infections

Daniel K. Yeoh<sup>1,2,3\*</sup>, Aleisha Anderson<sup>1,3,4</sup>, Gavin Cleland<sup>2,3</sup>, Asha C. Bowen<sup>1,2,5,6</sup>

Figure B. Prevalence of Skin Disease in Prospective vs Retrospective Case Review







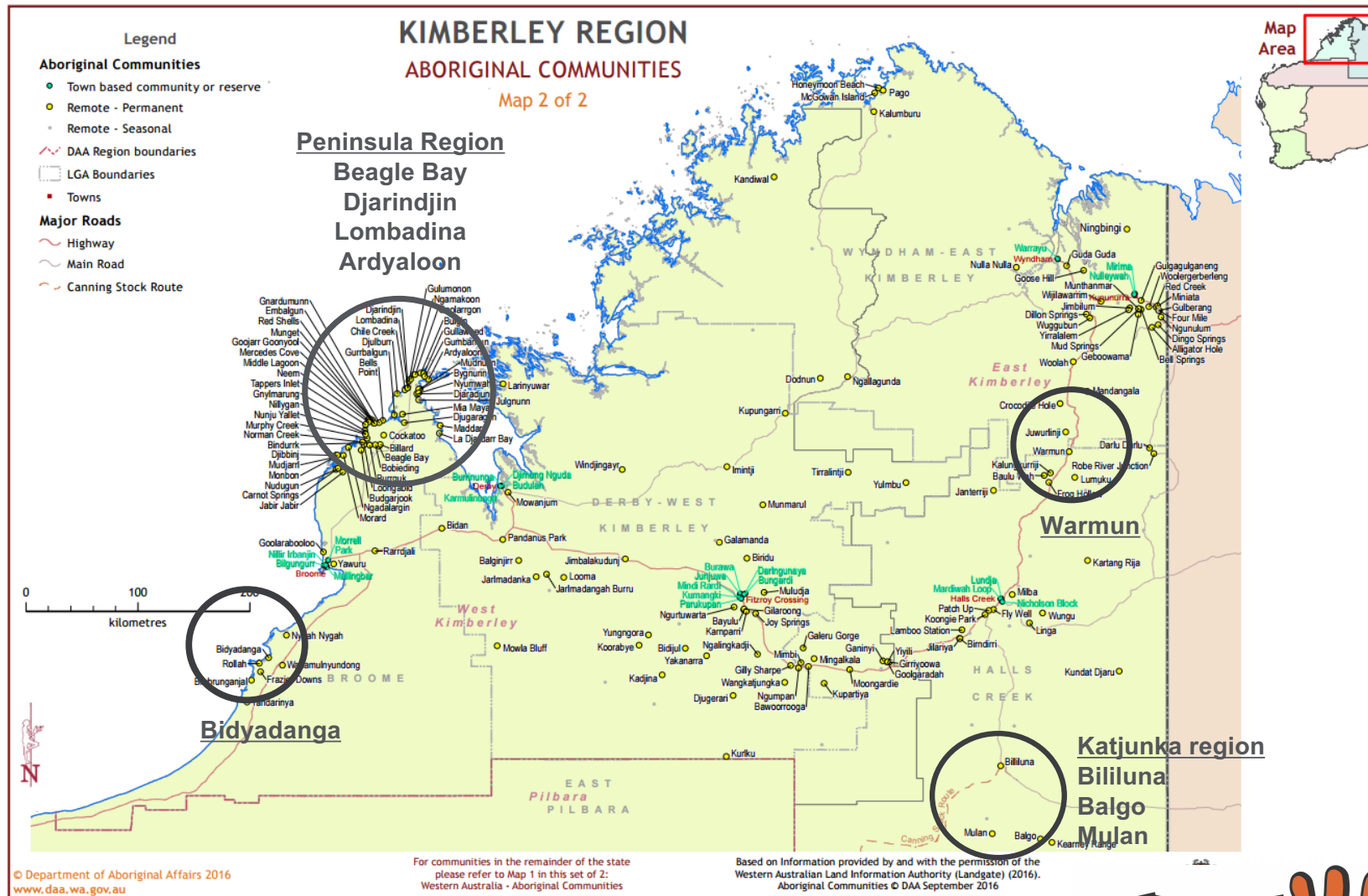
Hip Hop Skin video can be accessed here:  
<https://www.youtube.com/watch?v=bhLU5Qnf0n8>



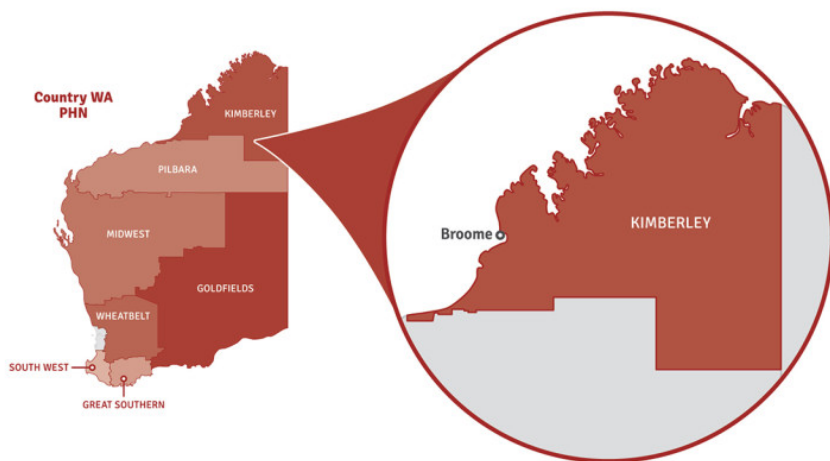


1. Reduce skin sores in school kids by 50%
  2. Improve overall health of Aboriginal children
  3. Monitor antimicrobial resistance
  4. Economic evaluation
- **Measurement:** school based skin surveillance of 5 – 9yo three times / year









Study Visit	1	2	3	4	5	6	7	8	9	Maintenance
Time	Sep 2017	Feb 2018	Jun 2018	Nov 2018	Feb 2019	Jun 2019	Nov 2019	Feb 2020	Nov 2020	2021
Study phase	Baseline		Step 1			Step 2			Follow-up	Maintenance
Community 1										
Community 2										
Community 3										
Community 4										

- Pre-trial when communities will receive standard care through the clinic and school-based surveillance programs will establish baseline prevalence
- The whole community transitions to the intervention
- The period outside the school year when higher mobility occurs with individuals having a mix of standard care outside the community or trial within the community
- The trial will continue into the follow-up phase for all communities and will conclude with the final school surveillance at the end of 2020
- Post-trial measurements will occur

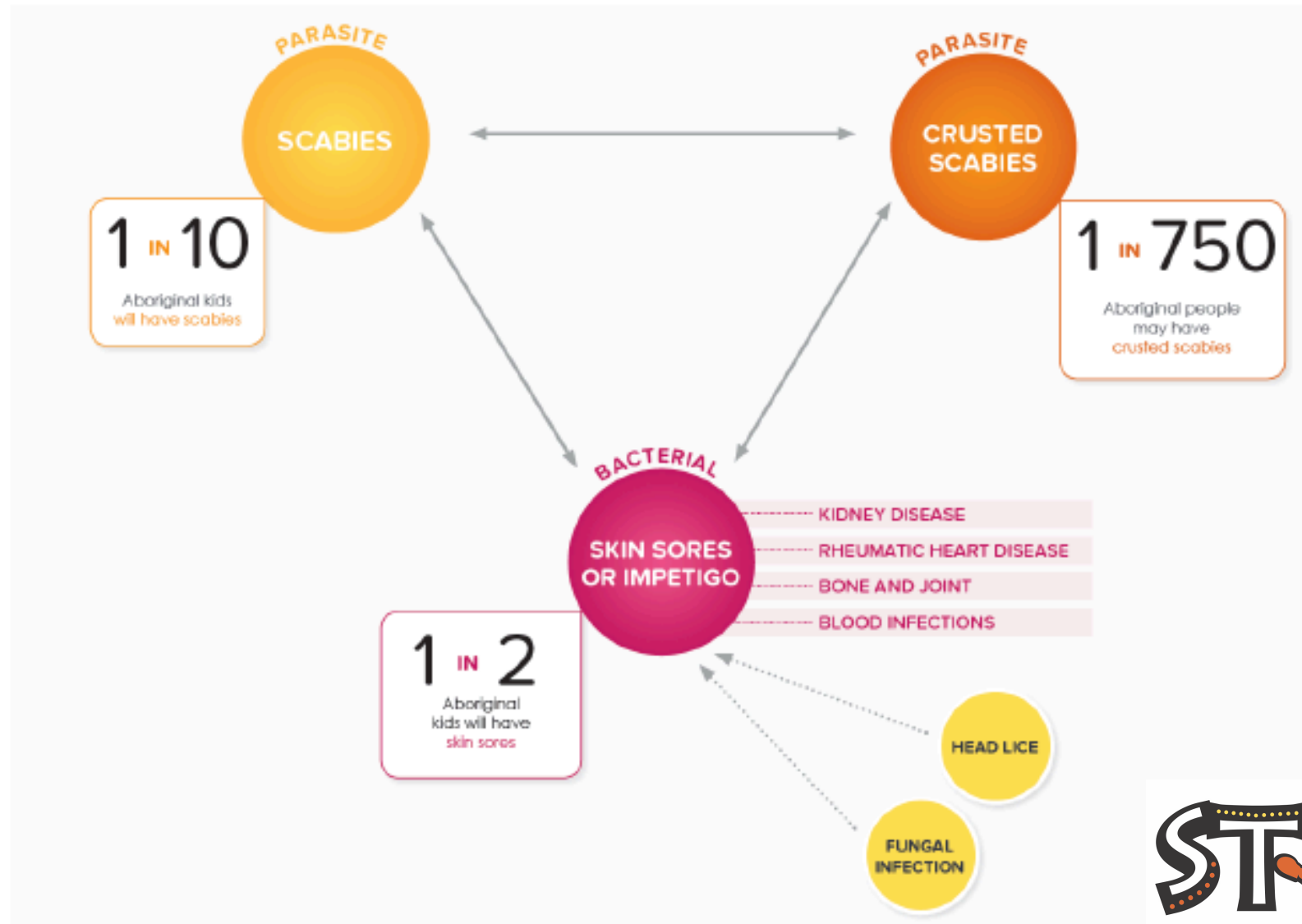
# See, Treat, Prevent – skin sores & scabies

## A cluster randomised trial with stepped wedge design





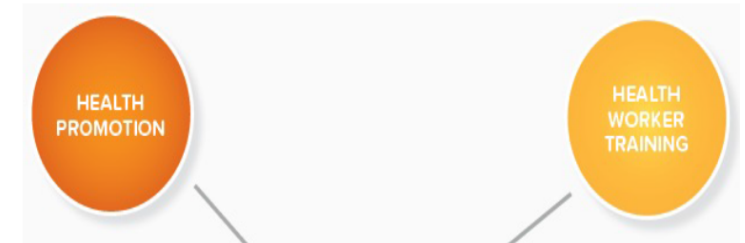
# See: How common?





See

Sores



Scabies



Crusted Scabies



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## TREATMENT AS PREVENTION



Crusted Scabies  
case  
management

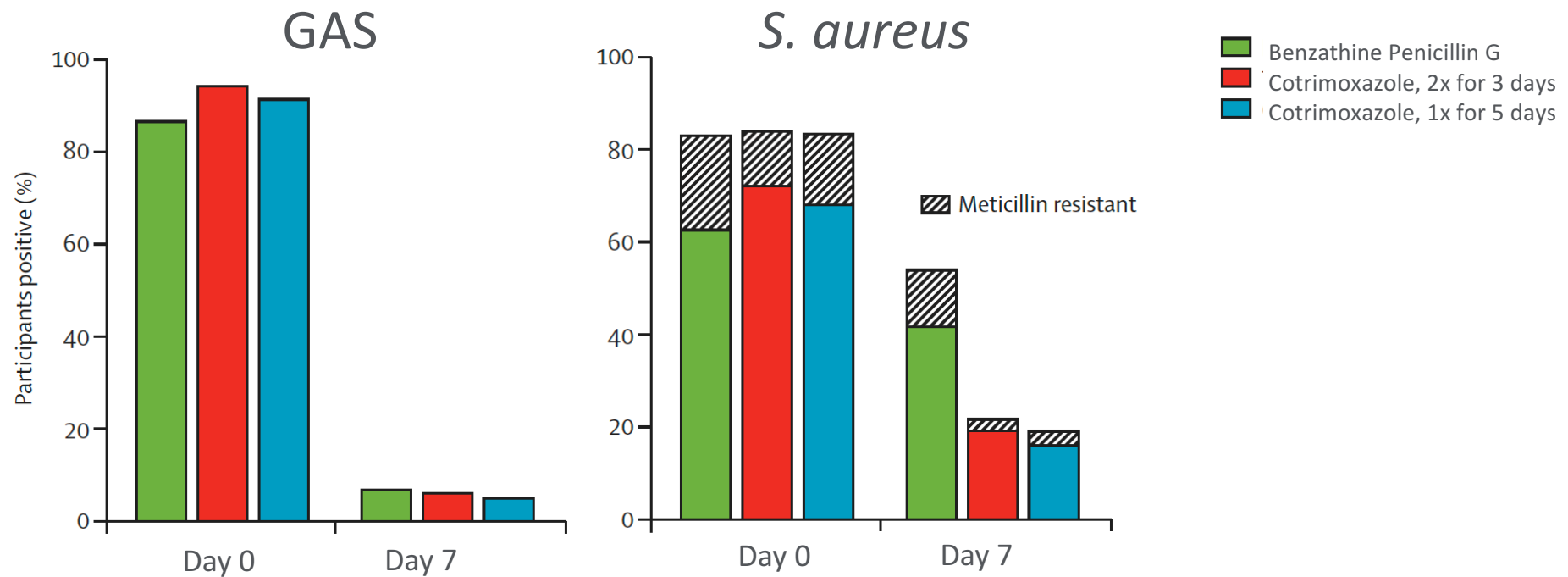


# Treat Impetigo





# Skin Sore trial



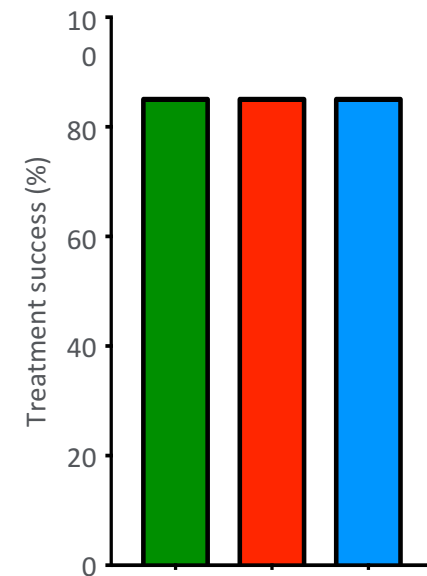
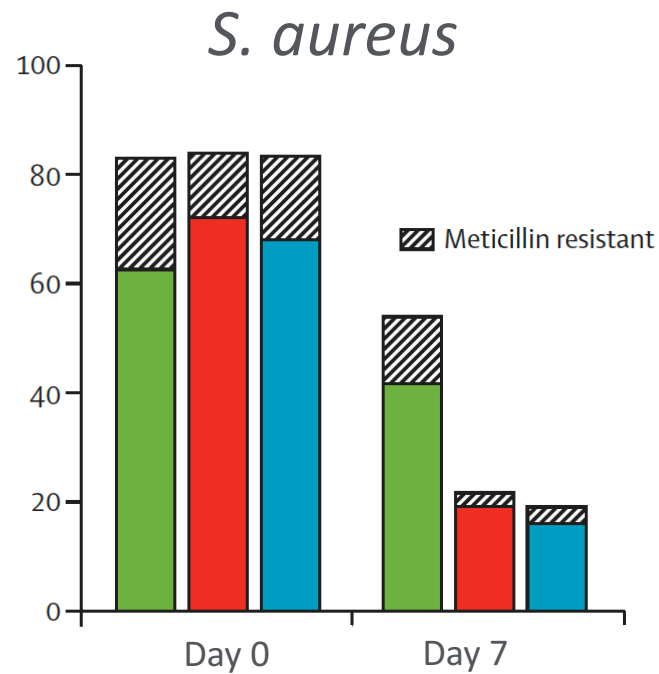
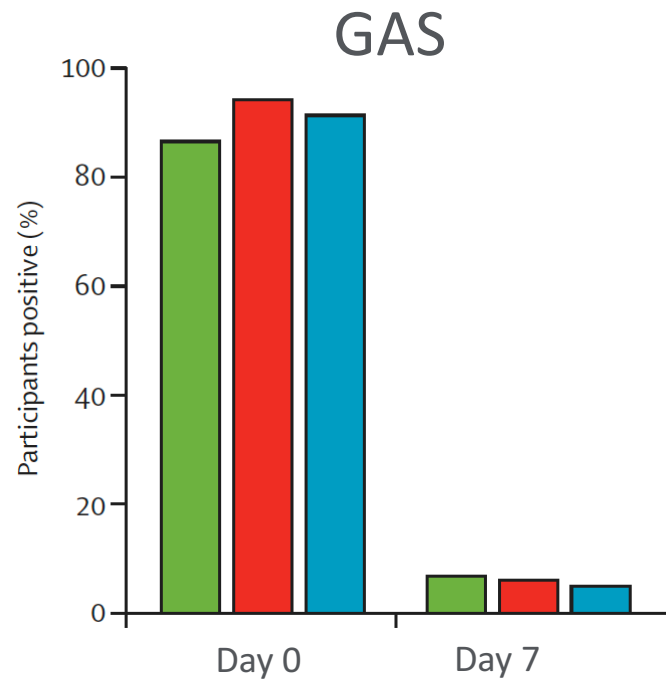
Bowen *et al.* 2014. Lancet







# Skin Sore trial



**GAS clearance predicts treatment success (OR 5.2)**





Day 0  
(pre-Rx)



Day 2  
(2 doses SXT)



Day 7  
(5 doses SXT)



# Treat Scabies



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# The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812

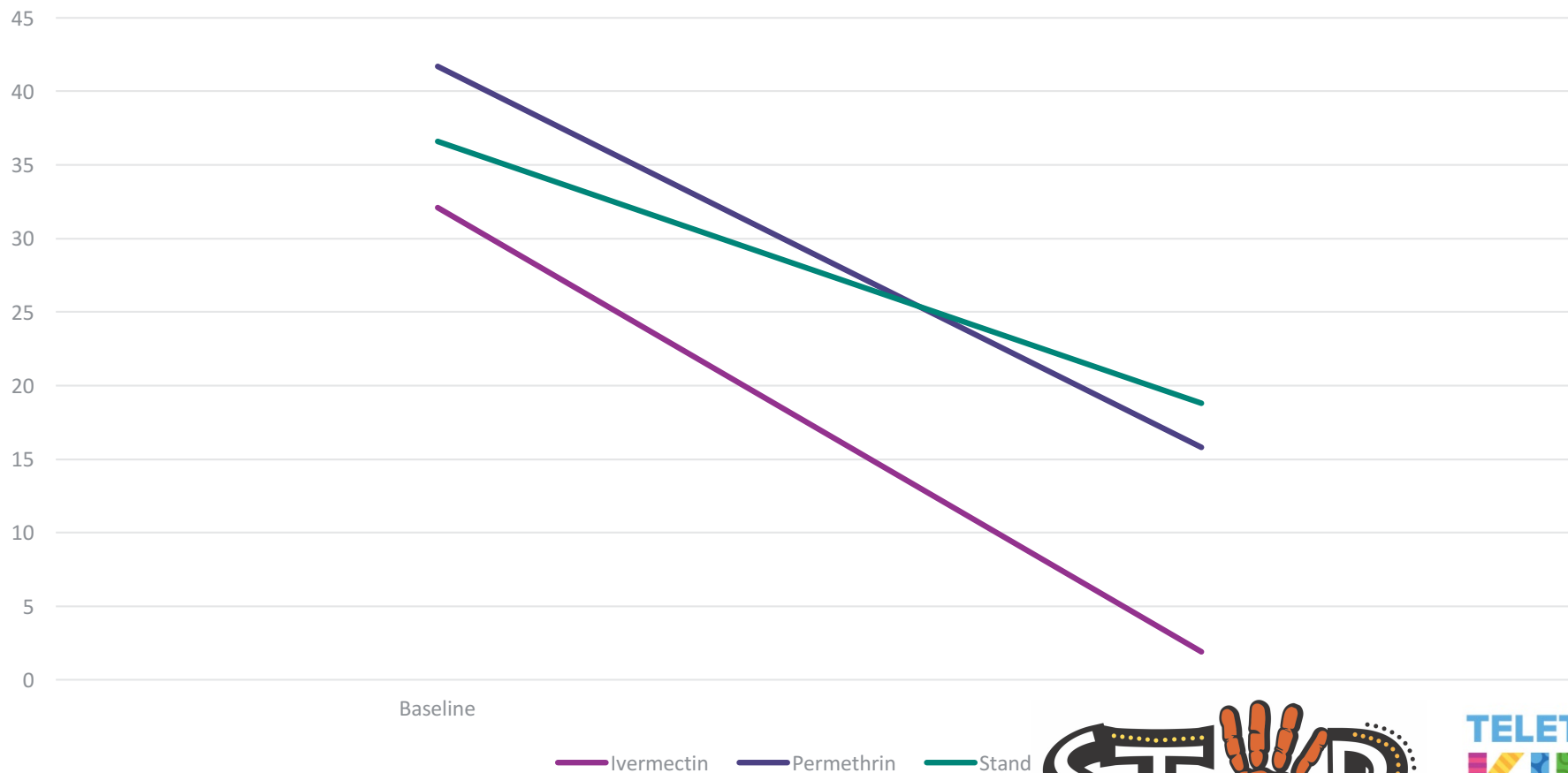
DECEMBER 10, 2015

VOL. 373 NO. 24

## Mass Drug Administration for Scabies Control in a Population with Endemic Disease

Lucia Romani, M.Soc.Dev., Margot J. Whitfield, M.B., B.S., Josefa Koroivuetu, M.B., B.S., Mike Kama, M.B., B.S.,  
Handan Wand, Ph.D., Lisi Tikoduadua, M.B., B.S., Meciusela Tuicakau, M.B., B.S., Aminiasi Koroi, B.A.,  
Ross Andrews, Ph.D., John M. Kaldor, Ph.D., and Andrew C. Steer, Ph.D.

### Change in Scabies prevalence



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## Treat: crusted scabies care

- Crusted scabies as driver of scabies burden
- Chronic disease model of care
  - See
  - Treat
  - Prevent

**ONE  
DISEASE  
AT A TIME**



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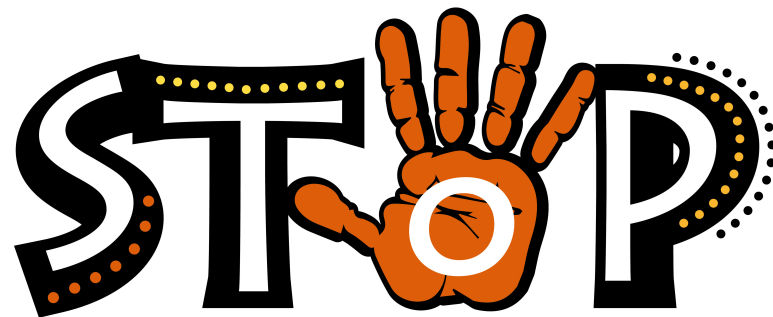


# Prevent through Partnerships



Engagement  
Education  
Empowerment





# Recognising & Treating Skin Infections

Skin sores, scabies & other common skin conditions  
found in the Kimberley, Western Australia

2018 Edition (Clinic Version)







# 1. Skin sores “impetigo”

- Bacterial skin infection, very common in children
- Skin sores & scabies often occur at the same time
- Must treat as can lead to serious health problems

## *Look for:*

- **Yellow-brown crusted sores**
- **Sores with pus in them**
- **Treat scabies at the same time if present**







## 10. Maintaining Healthy Skin



### Clean

- Bathe/wash children every day
- Clean hands with soap & water
- Wash towels, clothes & bedding & dry in the sun

### Check

- If skin is not improving after a day or two, speak to your health clinic



### Care



- Moisturise dry, cracked skin
- Cover skin sores from dirt or being scratched
- Apply Bush Medicines

### Home

- Make an Environmental Health referral to help check house



Happy, healthy skin



# SToP Trial: Timeline

2017

- **CONSULTATION:** communities, clinics, schools, leadership, ethics & governance, SASA, agreements

2018/2020

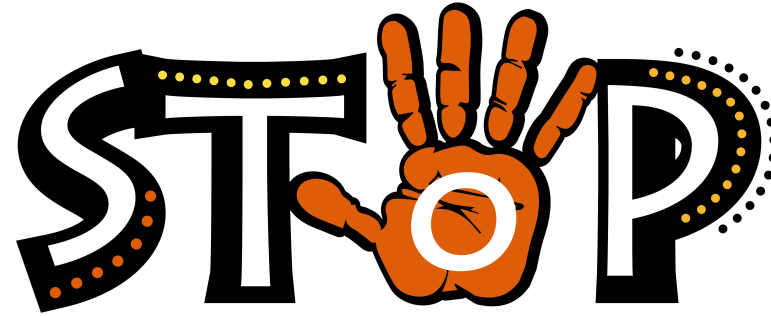
- **StoP Trial:** School based surveillance, health promotion, environmental health, Standardised Rx in the clinic

2021/2022

- **MAINTENANCE:** Business as usual with enhanced infrastructure for skin infection prevention



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## Contact Details

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