





# Lessons from the Healthy Skin Programs

Presenters: Thérèse Kearns (TK)

Roslyn Gundjirryirr



discovery for a healthy tomorrow





## **Menzies Healthy Skin Programs**

- 1997 Scabies control program
- 2000 Scabies Drug Resistance
- 2004 East Arnhem Healthy Skin Program
- 2009 Skin Sore Trial
- 2010 Ivermectin MDA for scabies and strongyloidiasis
- 2015 5 year follow-up of scabies and strongyloidiasis







#### **EAHSP 2004-2007**

- ecological study of skin health in 5 communities
- over 2000 children seen aged 0-15 years

## MDA 2010-2012

- 2 annual population census & MDAs in 1 community
- over 1000 people seen at 2010 & 2011

OPEN & ACCESS Freely available online



A Regional Initiative to Reduce Skin Infections amongst Aboriginal Children Living in Remote Communities of the Northern Territory, Australia

Ross M. Andrews<sup>1</sup>\*, Therese Kearns<sup>1</sup>, Christine Connors<sup>2</sup>, Colin Parker<sup>3</sup>, Kylie Carville<sup>4</sup>, Bart J. Currie<sup>1</sup>, Jonathan R. Carapetis<sup>1</sup>

PLoS Negl Trop Dis. 2015 Oct 30;9(10):e0004151. doi: 10.1371/journal.pntd.0004151. eCollection 2015.

Impact of an Ivermectin Mass Drug Administration on Scabies Prevalence in a Remote Australian Aboriginal Community.

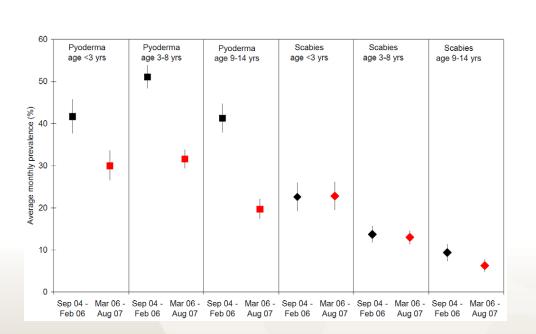






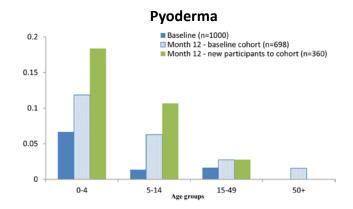
#### EAHSP 2004-2007

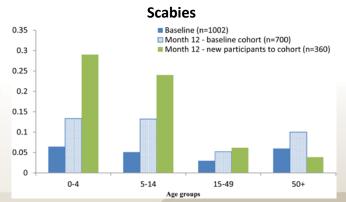
highest burden pyoderma age<15 yrs & scabies age <3 yrs</li>



### MDA 2010-2012

highest burden pyoderma age <5yrs</li>& scabies age <15 yrs</li>





Kearns, PLoS NTD 2015

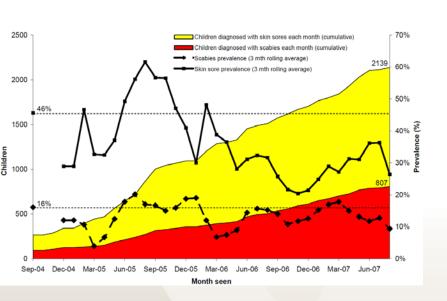






## **EAHSP 2004-2007**

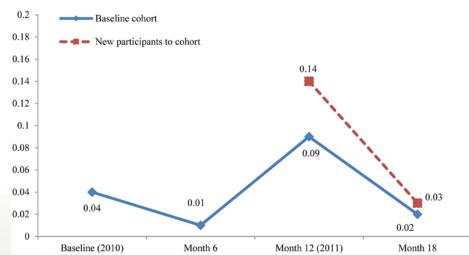
- pyoderma decreased from 47% to 32%
- scabies prevalence remained unchanged



### MDA 2010-2012

- pyoderma prevalence age <15 yrs increased from 10% to 15%
- scabies prevalence age <15 yrs increased from 2% to 18%

#### **Population prevalence at Scabies**







## Methodology



- Darwin based team visited every month
- Local community workers went house to house



### **MDA**

- Local and interstate researchers lived in community for 2 yrs
- Research team went house to house







## Methodology

### **EAHSP**

- Delivered research story, obtained informed consent and provided 5% permethrin to households with scabies



## **MDA**

 Delivered research story, obtained informed consent and provided MDA regardless of disease status to all consenting household members









## Methodology



### **EAHSP**

- Referred children with skin sores and tinea to clinic for treatment
- Followed up scabies participants



### **MDA**

- Referred children with skin sores and tinea to clinic for treatment
- Followed up participants with scabies and/or strongyloidiasis









- Effective engagement with community to have ownership of the project improved implementation and uptake of the project
- Community members liked home visits











 Providing the health information in local language improved engagement with families and their

understanding of the project













• Employment and training of local workers to implement the project built capacity and provided skills for future employment















- Regular support from Darwin based team reinforced the importance of the project and the efforts of the local researchers
- Local workers and researchers valued being supported by the clinic with office space and transport where necessary



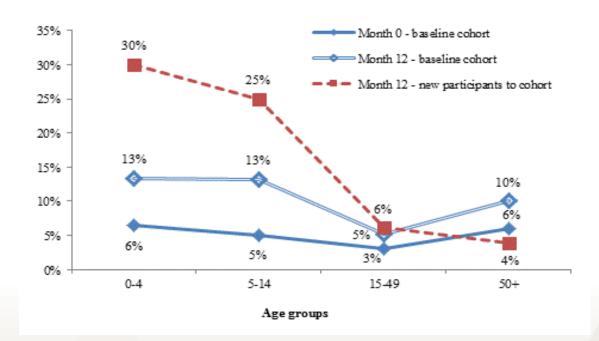








 Crusted scabies cases can have a big impact on community prevalence







# Issues encountered

- Children didn't like injections
- 'Normal problem' was sometimes difficulty locating the children for follow-up
- Some people didn't want us to visit them at home
- Attendance at cultural ceremonies
- Delivering projects that are culturally appropriate poison cousin
- Not all family members would use the cream

OPEN & ACCESS Freely available online



Community Management of Endemic Scabies in Remote Aboriginal Communities of Northern Australia: Low Treatment Uptake and High Ongoing Acquisition

Sophie La Vincente<sup>1,2\*</sup>, Therese Kearns<sup>3</sup>, Christine Connors<sup>4</sup>, Scott Cameron<sup>2</sup>, Jonathan Carapetis<sup>3</sup>, Ross Andrews<sup>3</sup>

discovery for a healthy tomorrow





# Key learnings Y EAHSP

- Significant improvement in skin sores
- Significant improvement in scabies for school age kids
- Limited impact on scabies in little kids
- High levels of tinea with no change
- Role of outreach and community workers
- Confusion of health staff and scabies
   diagnosis (infected scabies often referred to as crusted scabies)





# Key learnings MDA

- MDA can lower scabies & pyoderma prevalence
- Ivermectin acceptable (96% receiving at least 1 dose)
- Ivermectin labour intensive (everyone must be weighed and females pregnancy tested)
- Definition of scabies ie. itching and lesions (not very sensitive with children in our study)
- Local community workers essential for educating and engaging community members



# Public health Public health In the Public health Public he

 Changes to CARPA for treatment of pyoderma and scabies

 Changes to CARPA to include crusted scabies as a chronic condition

 Changes to ivermectin product information to include use for crusted scabies and scabies that is not responding to first line treatment





Employment and training of community based workers



 Community monitoring now easier with use of electronic health reports

OPEN ACCESS Freely available online



Clinic Attendances during the First 12 Months of Life for Aboriginal Children in Five Remote Communities of Northern Australia

Thérèse Kearns<sup>1</sup>\*, Danielle Clucas<sup>2</sup>, Christine Connors<sup>3</sup>, Bart J. Currie<sup>1,3</sup>, Jonathan R. Carapetis<sup>4</sup>, Ross M. Andrews<sup>1</sup>

1 Child Health Division, Menzies School of Health Research, Charles Darwin University, Darwin, Northern Territory, Australia, 2 Department of Paediatrics, The University of Melbourne, Melbourne, Victoria, Australia, 3 Preventable Chronic Conditions, Northern Territory Department of Health and Families, Darwin, Northern Territory, Australia, 4 Telethon Institute for Child Health Research, Centre for Child Health Research, University of Western, Perth, Western Australia, Australia





## Questions?



## Disease burden and health-care clinic attendances for young children in remote Aboriginal communities of northern Australia

Danielle B Clucas, a Kylie S Carville, Christine Connors, Bart J Currie, Jonathan R Carapetis & Ross M Andrews



#### Pediatric Clinics of North America

Volume 56, Issue 6, December 2009, Pages 1421-1440

Health Issues in Indigenous Children: An Evidence Based Approach for the General Pediatrician





#### A Regional Initiative to Reduce Skin Infections amongst Aboriginal Children Living in Remote Communities of the Northern Territory, Australia

Ross M. Andrews<sup>1</sup>\*, Therese Kearns<sup>1</sup>, Christine Connors<sup>2</sup>, Colin Parker<sup>3</sup>, Kylie Carville<sup>4</sup>, Bart J. Currie<sup>1</sup>, Jonathan R. Carapetis<sup>1</sup>



Ross M. Andrews, PhD, M App Epid, MPH, Dip App Sci (Env Hlth)<sup>a.</sup> ♣ M, James McCarthy, MD, FRACP<sup>b.c.</sup>, Jonathan R. Carapetis, MBBS, B Med Sc, PhD, FRACP, FAFPHM<sup>a</sup>, Bart J. Currie, FRACP, FAFPHM, DTM+H<sup>a</sup>

- a Menzies School of Health Research, Charles Darwin University, PO Box 41096, Darwin, Northern Territory 0811, Australia
- Dueensland Institute of Medical Research, Herston Road, Herston, Brisbane, Queensland 4029, Australia
- <sup>c</sup> School of Medicine, University of Queensland, Herston Road, Herston, Brisbane, Queensland 4029, Australia

OPEN @ ACCESS Freely available online



Australasian Journal of Dermatology (2011) 52, 270–275

doi: 10.1111/j.1440-0960.2011.00806.x

#### Community Management of Endemic Scabies in Remote Aboriginal Communities of Northern Australia: Low Treatment Uptake and High Ongoing Acquisition

Sophie La Vincente<sup>1,2</sup>\*, Therese Kearns<sup>3</sup>, Christine Connors<sup>4</sup>, Scott Cameron<sup>2</sup>, Jonathan Carapetis<sup>3</sup>, Ross Andrews<sup>3</sup>

#### ORIGINAL RESEARCH

## Skin disease in the first two years of life in Aboriginal children in East Arnhem Land

Erin McMeniman,<sup>1,2</sup> Libby Holden,<sup>2</sup> Therese Kearns,<sup>4</sup> Danielle B Clucas,<sup>5</sup> Jonathan R Carapetis,<sup>4,5</sup> Bart J Currie,<sup>4,5</sup> Christine Connors<sup>5</sup> and Ross M Andrews<sup>4</sup>

<sup>1</sup>Department of Dermatology, Princess Alexandra Hospital, <sup>2</sup>School of Medicine, Griffith University, Brisbane, Queensland, <sup>5</sup>Department of Paediatrics, The University of Melbourne, Melbourne, Victoria, <sup>4</sup>Menzies School of Health Research, Charles Darwin University, <sup>5</sup>NT Department of Health, Darwin, Northern Territory, Australia

PLoS Negl Trop Dis. 2015 Oct 30;9(10):e0004151. doi: 10.1371/journal.pntd.0004151. eCollection 2015.

Impact of an Ivermectin Mass Drug Administration on Scabies Prevalence in a Remote Australian Aboriginal Community.

Kearns TM¹, Speare R², Cheng AC³, McCarthy J⁴, Carapetis JR⁵, Holt DC¹, Currie BJ¹, Page W⁵, Shield J⁻, Gundjirryirr R¹, Bundhala L¹, Mulholland E⁶, Chatfield M¹, Andrews RM¹.