

A systematic review for national guideline development

The prevention, treatment and public health management of impetigo, scabies, crusted scabies and fungal infections in resource-limited settings



Dr Pippa May MBBS MPHTM MPhil App Epid
PhD Candidate, Telethon Kids Kimberley, Broome WA
Wesfarmers Centre of Vaccines and Infectious Diseases, Telethon Kids
Institute, The University of Western Australia

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

Outline

- Rationale for the national guidelines and systematic review (SR) to support it
- SR methodology
- Complexities
- Progress to date





Rationale for national guidelines

- Aboriginal populations are not bound by borders
- People presenting to any clinic should receive the same, evidence based management regardless
- Skin infections remain endemic
 - Broad, complex reasons
 - Social determinants of health
 - Constant re-exposure to infection
- Priority to update and adopt clinical management using the best available evidence across Australia
- Standardised set of recommendations is needed
- Gaps in current knowledge need identification



Rationale for the systematic review (SR)

- External validity of current SRs (Cochrane):
 - Mostly include studies from resource-rich populations, hospital outpatient settings
 - BUT populations predominantly affected are from resource- limited settings and may not access hospital services
- We need the best evidence for the populations we care for: studies applicable to the tropics, Aboriginal communities, resource-limited settings





SR Methods: Objective

To systematically assess the evidence for treatment and public health management of skin infections in endemic settings

Skin infections included:


- Impetigo;
- Scabies;
- Crusted scabies;
- Tinea capitis;
- Tinea corporis; and
- Tinea unguim.



SR Methods: Eligibility criteria




- Participants: Any age, sex or country of origin in resource-limited settings and diagnosed with impetigo, scabies or fungal skin infections
- Setting
 - Tropical regions
 - Remote Aboriginal and Torres Strait Islander communities
 - Resource-limited populations in OECD countries
 - Low, low-middle and middle income countries







SR Methods: Interventions

- Any clinical or public health interventions that aimed to reduce skin infections
 - Treatment interventions:
 - pharmaceutical
 - complementary medicines, including bush medicine
 - Public health interventions:
 - communicable disease control
 - primary health care service delivery
 - environmental health
 - health promotion
 - school education
 - community activities
- Any comparator (e.g. alternative treatment, placebo, no treatment)
- Any experimental or analytical study design

SR Methods: Outcomes

- Primary:
 - cure (individual level)
 - decrease in prevalence (population level)
- Secondary:
 - clearance of organism on microbiological testing
 - relief of symptoms
 - recurrence rate
 - adherence to treatment or management regimen
 - patient acceptability
 - adverse effects
 - proportion of contacts diagnosed with the condition within eight weeks of diagnosis of the index case



Search Strategy

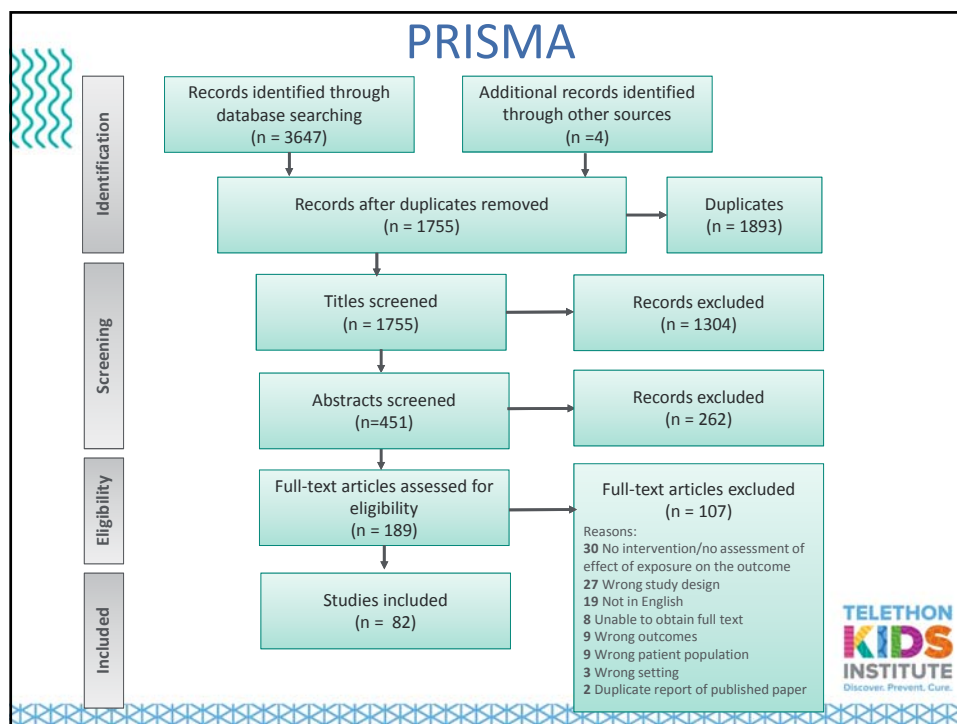
- Any study published since 1960 in English
- Peer reviewed literature databases:
 - PubMed, EMBASE, Global Health
- Grey literature:
 - AIHW, Oalster, Informit, IndigenousHealthInfoNet, WHO Website
- Clinical trials registries:
 - ClinicalTrials.gov, ANZ Clinical Trials Registry, WHO International Clinical Trials
- Reference lists



SR Methods: Data extraction


- Covidence
- 2 independent reviewers
- Data items:
 - Study Design & Participants
 - Intervention (type, frequency, dose, duration, co-interventions)
 - Outcomes (primary, secondary, effect estimates)
- Cochrane Risk of Bias Assessment







Issues

- Complex search strings
- Multiple different study designs, interventions, outcomes and conditions-complex extraction, complex comparison
- Gaps in research evident early- environmental health interventions, health promotion interventions, program evaluation missing



Next steps

- Finalise extraction (75% complete)
- Synthesise SR findings with GRADE evidence gradings
- Form Core Steering Group for National Guidelines:
 - SR Scientific Advisory Group & key representation from ACCHS, Environmental health
- Write chapters with content experts. Proposed:
 - Diagnosis
 - Impetigo treatment
 - Scabies treatment
 - Crusted scabies treatment
 - Fungal infections treatment
 - Social Determinants of Health
 - Evaluation
 - Skin programme implementation inc health promotion
- Publish online


Acknowledgements

Scientific Advisory Group	Review working group
• Ross Andrews (Menzies)	• Aleisha Anderson (PMH)
• Asha Bowen (Telethon Kids)	• Asha Bowen (Telethon Kids)
• Jonathan Carapetis (Telethon Kids)	• Ingrid Duff (Telethon Kids)
• Bart Currie (Menzies)	• Claire Ferguson (UWA)
• Sam Prince (1D)	• Myra Hardy (MCRI)
• Louis Schofield (JCU)	• Thérèse Kearns (Menzies)
• Andrew Steer (MCRI)	• Ella Meumann (RDH)
• Steve Tong (Menzies)	• Lauren Thomas (Flinders)
	• Georgia Walker (UWA)
	• Dan Yeoh (PMH)