

Supplementary Information - SToP Trial Evaluation Framework

A pre-specified evaluation framework was developed for the SToP trial using program theory (the logic model – see Table).^{1,2} Using this model, five evaluation measures^{3,4} will be used to assess each of the activities to improve recognition (see), treatment (treat) and decrease incidence (prevent) of skin sores based on the research objective to reduce the burden of skin sores in children aged 5-9 years of age. The evaluation measures are:

- (1) *Efficiency* – To what extent did the activity impact recognition, treatment or prevention of skin sores?
- (2) *Effectiveness* – To what extent did the intervention improve skin health awareness/alter behaviour?
- (3) *Impact and relevance* – Did the intervention result in a change in skin health?
- (4) *Sustainability* – Which activities were maintained during the evaluation phase of the trial?
- (5) *Fidelity and performance* – What was the acceptability and uptake of the activity/intervention? What were the barriers and enablers? What were the factors that had success at changing seeing, treating or preventing behaviours?

These questions will allow us to determine whether outcomes arise as a result of the activity and what elements of the intervention contribute to its success or failure. A mixed methods approach with both qualitative and quantitative data will be used to compare the baseline, randomisation phase and follow-up/evaluation phase of the trial. Quantitative data sources will be collected using case report forms from school surveillance, regional level data from the electronic health record and laboratory testing of skin swabs. Qualitative data will be derived from project officer reports, semi-structured interviews, staff reflection logs, and Knowledge-Attitude-and-Practice (KAP) Surveys. For qualitative analysis, codes will be developed de novo from the data without pre-specified questions or assumptions. QSR International's NVivo 10 software will be used to organise qualitative data.⁴

References

1. Markiewicz A, Patrick I. *Developing Monitoring and Evaluation Frameworks*. Thousand Oaks, CA: SAGE Publications; 2016.
2. McCawley P. *The Logic Model for Program Planning and Evaluation*. 2001. <http://www.uiweb.uidaho.edu/extension/LogicModel.pdf>. Accessed 10 December 2018.
3. Ralph AP, Read C, Johnston V, et al. Improving delivery of secondary prophylaxis for rheumatic heart disease in remote Indigenous communities: study protocol for a stepped-wedge randomised trial. *Trials*. 2016;17:51. <https://trialsjournal.biomedcentral.com/articles/10.1186/s13063-016-1166-y> (Accessed Dec 12 2018)
4. Read C, Mitchell AG, de Dassel JL, et al. Qualitative Evaluation of a Complex Intervention to Improve Rheumatic Heart Disease Secondary Prophylaxis. *J Am Heart Assoc*. 2018;7(14). pii: e009376. doi: 10.1161/JAHA.118.009376.

The SToP trial evaluation framework				
INPUTS		OUTPUTS		OUTCOMES
Strategies <i>How to implement?</i>	Implementation <i>Mediated by: community culture, organisational culture, relationships, resources</i>	Activities: <i>See Treat Prevent</i>	Impacts <i>How does the implementation produce change?</i>	Outcomes <i>Acceptability and change</i>
<ul style="list-style-type: none"> • Use and strengthen existing frameworks (environmental health, primary health care) • Education of key individuals in primary health care (de-normalisation, treatment) • Community level health promotion (de-normalisation, prevention) • Community level surveillance of skin health • Regional data monitoring (skin health indicators, microbiology) 	<ul style="list-style-type: none"> • Partnerships between stakeholders • Community engagement • Staff expertise and training (SToP team) • Local resources in health • Funding sources 	<p>See:</p> <ul style="list-style-type: none"> • School based surveillance program • Training clinic, school and environmental health staff • Community-driven health promotion activities • Regional level incidence monitoring <p>Treat:</p> <ul style="list-style-type: none"> • Training clinic staff • Streamlined, latest treatment regimens including ivermectin for first line treatment of scabies <p>Prevent:</p> <ul style="list-style-type: none"> • Community-driven health promotion activities (skin and environmental health) 	<ul style="list-style-type: none"> • Increased awareness of skin health importance, identification, treatment and prevention of skin infections through education – healthcare workers, school staff and community • Community behavioural changes: de-normalisation, prevention, treatment seeking • Clinic behavioural changes: de-normalisation, increased prioritisation treatment • Strengthened relationships between service providers; increased referrals 	<ul style="list-style-type: none"> • Sustained reduction in impetigo • Sustained reduction in scabies • Diagnosis and treatment of people with crusted scabies • Possible recommendation for new treatment guideline • Sustained increase in environmental health referrals from primary health care providers • Economic evaluation of the impact of diagnosis, treatment and prevention of skin sores and scabies • Cotrimoxazole resistance monitoring
ASSUMPTIONS:				
<p>Preconditions</p> <ul style="list-style-type: none"> • Families and communities are able send their children to school • Families can seek treatment at the clinic if referred during school surveillance • Key stakeholders have capacity and resources required to deliver the program 		<p>Connections:</p> <ul style="list-style-type: none"> • Provision of education and training will positively influence knowledge and behaviour • Most children attending school will be consented to participate in skin surveillance • Improved recognition, treatment and prevention of skin infections will result in an overall reduction in incidence 		