Dashboard reporting for the SToP trial: See, Treat, Prevent Skin Sores and Scabies

Lucy Davidson
Rural Clinical School UWA
Community clusters

Kimberley Region
Aboriginal Communities

Map 2 of 2

Legend
Aboriginal Communities
- Town based community or reserve
- Remote - Permanent
- Remote - Seasonal

LGA Region boundaries
- Towns

Major Roads
- Highway
- Main Road
- Canning Stock Route

© Department of Aboriginal Affairs 2016
www.daa.wa.gov.au

For communities in the remainder of the state please refer to Map 1 in this set of 2.
Western Australia - Aboriginal Communities

Based on information provided by and with the permission of the Western Australian Land Information Authority (Landgate) (2016).
Aboriginal Communities © DAA September 2016
Aims

1. Describe the **epidemiology** (prevalence and severity) of impetigo and scabies in 5-9 year-old children in the West Kimberley remote community clusters at study baseline

2. Validate a **dashboard reporting** tool
Dashboard reporting

School prevalence 40%

School prevalence 80%
S: Presented today with mum for infected mosquito bites present 2-3 days, not healing

O:
obs WNL, afebrile
5 sores on shin, exudate ++

Plan:
LAB
given supply of dressings

Progress Notes

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Notes of type</th>
<th>User</th>
</tr>
</thead>
<tbody>
<tr>
<td>21/05/2018 11:12:06 AM</td>
<td>Skin sores</td>
<td>Ms Lucy Davidson (Beagle Bay) Medical Student</td>
</tr>
<tr>
<td>7/04/2018 1:13:59 PM</td>
<td>scabies 1: scabies 2</td>
<td>Ms Lucy Davidson (Beagle Bay) Medical Student</td>
</tr>
<tr>
<td>19/03/2018 8:38:56 AM</td>
<td></td>
<td>Dr Robert Shepherd (BRAMS)GP</td>
</tr>
<tr>
<td>1/12/2016 12:57:03 PM</td>
<td></td>
<td>Mr Daniel Bowtell (BRAMS) Pharmacist</td>
</tr>
<tr>
<td>18/05/2016 9:22:34 AM</td>
<td>tackling smoking consult</td>
<td>Mr Dale Bin Sulaiman (BRAMS) TIS</td>
</tr>
<tr>
<td>11/08/2015 2:28:34 PM</td>
<td>NEEDS TO HAVE CXR DONE</td>
<td>Dr Sarah Woodland (DAHS) GP</td>
</tr>
</tbody>
</table>

Progress Note

Date/Time: 21/05/2018 12:00:00 AM Ms Lucy Davidson (Beagle Bay) Medical Student
Last edit on: 22/05/2018 9:35:48 AM

Skin sores

S: Presented today with mum for infected mosquito bites present 2-3 days, not healing

O:
obs WNL, afebrile
5 sores on shin, exudate ++

Plan:
LAB
given supply of dressings
TCI if not healing well in 5 days
Data analysis steps

Extract data report from MMEX
- De-identify data

Data cleaning
- Remove duplicate notes for single visit
- Remove duplicate reviews for single episode

Count number of skin-related presentations
- a) Via presenting concern/reason for contact
- b) Via medications dispensed that for that presentation

Validate automated extraction against manual record review
1. Randomly select sample to validate
2. Log into MMEX and read full Progress Note for selected visits
3. Calculate sensitivity of automated tool
## Limitations

<table>
<thead>
<tr>
<th>Limitation</th>
<th>Possible solution</th>
</tr>
</thead>
</table>
| Chosen marker is poorly representative of sample (e.g. reason for contact/presenting complaint does not indicate skin infection, even though skin infection in body of progress note) | • Include dispensed medications for the consult in the spreadsheet  
  • Ask clinic staff to use specific keywords in Reason for Contact/Presenting Complaint when reporting skin sores |
| Duplicate entries for one person’s visit – person sees AHW, RAN and GP = 3 entries as well as admin notes entered as Progress Notes | • Use Excel function to delete duplicates  
  • Ask clinic staff to help by classifying admin notes correctly as such |
| Duplicate attendance for same episode of skin infection                   | • Define a time frame for single episode: i.e. one week                           |
| Practicability of applying this analysis to large volumes of data – monthly for several years over several communities | • Create clear flowchart and script of instructions  
  • Use excel functions to automate search |
| Skin sores not recorded in note at all                                    | • Discussion with clinic staff                                                   |
| School prevalence and clinic attendance not related or confounding factors | • Opportunity to re-validate at each study visit to communities throughout the StoP trial |
| Accuracy compromised by change in care-seeking behaviour                 | • Measuring care-seeking for sores is a study outcome: will be measured throughout trial |
Conclusion

• Sources of uncertainty are frustrating
• Pragmatic approach with real-world data – not perfect, but can validate
• Continuous quality improvement tools are useful across many areas
• Real time responses to outbreaks of infectious disease