A common vision: processes supporting regional eye care collaboration

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National Rural Health Conference - 28 April 2017
Acknowledgements

- Aboriginal Community Controlled Health Services in the Katherine Region of the NT: Sunrise Health Service, Katherine West Health Board, Wurli-Wurlinjang Health Service.
- Katherine District Hospital and the Royal Darwin Hospital (Top End Health Service) Ophthalmology Team.
- Vision Cooperative Research Centre (Vision CRC)
Context

- 337,000 square km
- Total Population = 26,000
- Aboriginal and Torres Strait Islander population = 16,000
- 1 Regional Hospital (Hub)
- 3 ACCHS (19 PHC Centres)
- Visiting Ophthalmology from Royal Darwin Hospital
- Visiting Optometry Services from the Brien Holden Vision Institute
- Higher prevalence of Diabetes
What we also know...

• Eye care is but one of the many specialist health care services provided within Aboriginal Community Controlled Health Services (ACCHS) and remote community health centres.

• Achieving positive eye care outcomes from these visiting services requires pro-active collaboration and two-way learning.

• Gaining and maintaining this stakeholder engagement can be challenging, but it is a fundamental aspect of health system strengthening.
Where things were...

- Limited communication between Ophthalmology and PHC services
- Challenges coordinating patient eye care
- Limited coordination of eye care services
- Long waiting lists (Outpatient and Surgery)

Relating to tertiary eye care only
## Where things were ...

<table>
<thead>
<tr>
<th></th>
<th>Coverage</th>
<th>Volume</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Optometry</strong></td>
<td>![Image] 100% (16/16 locations)</td>
<td>![Image] 31% days outreach (62/201)</td>
<td>![Image] Average <strong>13.2</strong> patients/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>![Image] 52% examinations (816/1556)</td>
<td>![Image] <strong>57%</strong> patients seen needed glasses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>![Image] 79% glasses (464/585)</td>
<td></td>
</tr>
<tr>
<td><strong>Ophthalmology</strong></td>
<td>![Image] 19% (3/16 locations)</td>
<td>![Image] 7% days outreach (7/49)</td>
<td>![Image] ~<strong>50%</strong> OPD ophthalmology appointments kept</td>
</tr>
<tr>
<td></td>
<td></td>
<td>![Image] NB: gaps in data</td>
<td>![Image] Wait-list issues (duplication, reviews, unnecessary referrals)</td>
</tr>
</tbody>
</table>
Collaboration

The Fred Hollows Foundation

Wurli-Wurlinjang Health Service

Katherine West Health Board

Sunrise Health Service

Rhce2

Rural Health Continuing Education Stream Two

Brien Holden Vision Institute

Information Innovation Ideas for remote Australia

Department of Health Katherine Hospital Main Entrance
Collaboration

- Key: local health services
- NGOs facilitating
- Regional collaboration: small population, shared resources for eye care
- Based on established trust and ongoing commitment
Current picture

- regional eye care service mapping
- eye care service delivery data (including file audits)
- eye care system “performance” assessment
- patient and community perspectives
- coordination workforce
- gap analysis: service and workforce
How was it done?

- Systems assessment
- Patient experience

Collaborative approach: range of perspectives

- Combined data & approaches
- Gaps & needs determined
- Priorities for collective action set

Local Organisati on

Regional State / National
How was it done?

Regional Planning for Eye Care

Population based calculations vs. service mapping

- Optometry
- Ophthalmology

- Coverage
- Volume
- Efficiency

Calculator for the delivery and coordination of eye care services

This calculator estimates for a given population of Aboriginal and Torres Strait Islander people the annual requirements for delivery and coordination of eye care services. The calculations are first order estimates based on condition prevalence rates from the National Indigenous Eye Health Survey (2009) and models of service delivery developed in The Roadmap to Close the Gap for Vision (2012). See www.iemu.unimelb.edu.au

Please enter the name of the community/region and the Aboriginal and Torres Strait Islander population for the community/region.

A report will be displayed providing estimates of optometry, ophthalmology and hospital surgery services and the workforce to support delivery of these services. This report can then be printed or downloaded as a pdf file or within an excel spreadsheet.

Region Name

Region Population

SUBMIT
Regional Planning for Eye Care

► First step: identify ‘the gap’
► Availability and accessibility
► For eye care, various components/levels:
  - **Primary**: at primary health care level
  - **Secondary**: visiting eye practitioners
  - **Tertiary**: hospital ophthalmology procedures

Map availability & access across all levels
How was it done?

Supporting systems and processes, including:

- PHC systems
- Regional systems
- Coordination
Collaborative action

Supporting Regional Collaboration for Eye Care

Key part: setting clear goals

Regional Eye Care Stakeholders
Goals and Work Plan 2014

Goals:
1. 60% of patients with diabetes have an annual retinal check by December 2014
2. Improved communication between all regional eye care stakeholders
3. Improved eye care system coordination
4. Increased eye care workforce and services
5. Clear referral pathways (between primary>secondary and secondary>tertiary)
6. Review of the Hospital outpatient ophthalmology waiting list
7. Increased number of patients receiving end care/treatment for diagnosed eye conditions
8. Establish mechanisms to collect and share data to assist with monitoring regional goals (focus on ensuring patient care)

Collective regional eye care action plan developed

Need to establish ways to share & apply regional data in an ongoing process
Collaborative action
Supporting Regional Collaboration for Eye Care

Katherine Regional Eye Care Stakeholders – Goals and Workplan 2014-2015

Goals:
1. 60% of patients with diabetes have an annual retinal check by December 2014
2. Improved communication between all regional eye care stakeholders
3. Improved eye care system coordination
4. Increased eye care workforce and services
5. Clear referral pathways (between primary>secondary and secondary>tertiary)
6. Review of the Katherine Hospital outpatient ophthalmology waiting list
7. Increased number of patients receiving end care/treatment for diagnosed eye conditions
8. Establish mechanisms to collect and share data to assist with monitoring regional goals (focus on ensuring patient care)
Collaborative action

Supporting Regional Collaboration for Eye Care

Example **Goal 1**: 60% of patients with diabetes have an annual retinal check by December 2014

- **Primary**: recalls/referrals, target patients, maximise access to visiting eye care services, retinal photoscreening
- **Secondary**: increase outreach optometry services, work closely with PHC clinics to target patients overdue.
- **Tertiary**: referral pathway clarified, retinal photoscreening, review of hospital waitlist

**Progress so far ...**
% patients with diabetes having an annual retinal check (Katherine Region):
- 2012: 38%
- 2014: 61% ✓
What happened?

- increased eye care service to start to meet population needs
- addressing workforce gaps (eye services + coordination)
- continuous quality improvement (service + system)
- Regional eye care work plan
- training for primary health care teams in eye care checks and referral pathways
What happened?

- Impact measured by comparing pre with post-implementation data, including:
  - Clinical file audit data
  - Regional eye care mapping data
  - Regional eye care ‘systems assessment’ information

Characteristics of audited samples of adult (40+) patients with diabetes (Indigenous patients only; missing data excluded)

<table>
<thead>
<tr>
<th></th>
<th>Katherine Region n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2012</td>
</tr>
<tr>
<td>Health centres</td>
<td>13</td>
</tr>
<tr>
<td>Sample size</td>
<td>403</td>
</tr>
<tr>
<td>Indigenous sample</td>
<td>387 (96%)</td>
</tr>
<tr>
<td>Mean age (yrs)</td>
<td>54</td>
</tr>
<tr>
<td>Females</td>
<td>240 (62%)</td>
</tr>
<tr>
<td>Hba1c &gt;7</td>
<td>236 (68%)</td>
</tr>
</tbody>
</table>
What happened?

Data

Optometry: improvements for all components

- access
- referrals
- refractive correction

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Smaller impact for primary eye care checks
- other variables
- Adult Health Check only

Annual diabetes retinal exams: notable increase
- Consider national average (~25%)
Increased numbers and completion of specialist eye care pathways:

- **Cataract**
- **Diabetes eye care**

### Katherine Region (%)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2012 (n = 387)</th>
<th>2014 (n = 419)</th>
<th>change (2012 - 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referred to ophthalmologist for cataract in past 2 years:</td>
<td>6</td>
<td>12</td>
<td>+ 6</td>
</tr>
<tr>
<td>Of those referred to ophthalmologist:</td>
<td>(n = 23)</td>
<td>(n = 49)</td>
<td></td>
</tr>
<tr>
<td>- saw ophthalmologist</td>
<td>35</td>
<td>45</td>
<td>+ 10</td>
</tr>
<tr>
<td>- required surgery</td>
<td>26</td>
<td>39</td>
<td>+ 13</td>
</tr>
<tr>
<td>- received surgery</td>
<td>4</td>
<td>20</td>
<td>+ 16</td>
</tr>
</tbody>
</table>

**Cataract referral pathways**

[Graph showing referral pathways]
What happened?

Eye care service provision in the Katherine region, for three consecutive years (2012, 2013, 2014) and shown as a proportion (%) of the projected needs calculated for the Indigenous population of 8,282.

<table>
<thead>
<tr>
<th>Services</th>
<th>Projected Need</th>
<th>2012 (% need)</th>
<th>2013 (% need)</th>
<th>2014 (% need)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OPTOMETRY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optometry days</td>
<td>176</td>
<td>58 (33)</td>
<td>108 (61)</td>
<td>130 (74)</td>
</tr>
<tr>
<td>Optometry examinations</td>
<td>1,408</td>
<td>712 (51)</td>
<td>1124 (80)</td>
<td>1363 (97)</td>
</tr>
<tr>
<td>Diabetes retinal exams (40+)</td>
<td>797</td>
<td>321 (40)</td>
<td>470 (59)</td>
<td>571 (72)</td>
</tr>
<tr>
<td>People needing glasses (40+)</td>
<td>530</td>
<td>349 (66)</td>
<td>645 (122)</td>
<td>751 (142)</td>
</tr>
<tr>
<td><strong>OPHTHALMOLOGY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cataract referrals</td>
<td>79</td>
<td>51* (65)</td>
<td>78* (99)</td>
<td>83* (105)</td>
</tr>
<tr>
<td>Trichiasis referrals</td>
<td>30</td>
<td>5* (17)</td>
<td>4* (13)</td>
<td>10* (33)</td>
</tr>
<tr>
<td>Diabetic retinopathy referrals</td>
<td>92</td>
<td>39* (42)</td>
<td>42* (46)</td>
<td>42* (46)</td>
</tr>
<tr>
<td>Ophthalmology days</td>
<td>61</td>
<td>17 (28)</td>
<td>15 (25)</td>
<td>57 (93)</td>
</tr>
<tr>
<td>Ophthalmology consultations</td>
<td>201</td>
<td>98 (49)</td>
<td>266 (132)</td>
<td>548 (273)</td>
</tr>
<tr>
<td>Hospital treatments</td>
<td>109</td>
<td></td>
<td></td>
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</tbody>
</table>

* only data available was referrals from optometry, so does not include referrals from GPs.
What happened?

Pre- and Post- training self-rated confidence

- Identifying common vision and eye related symptoms
- Measuring distance VA
- Measuring pinhole VA
- Measuring near VA
- Advising how often people with diabetes need to have an eye exam
- Deciding when an eye care referral is urgent or not
- Knowing when to refer to an optometrist
- Knowing when to refer to an ophthalmologist

[Graph showing comparison between 2012 and 2014 for each task]
What happened?

Eye care system

Organisation of the Regional Eye Care Delivery System.

Integration with Primary Health Care

Community and Patient Linkages.

Clinical Information Systems.

Referral pathways and continuity of care

2013 (N = 12)  
2015 (N = 13)
So what?

- commitment
- collective
- participatory
- trust
- strengths-based