Evaluation of Hunter & New England HealthPathways
Each day in the Hunter ML region:

- People attend an emergency department: 665
- People visit a GP: 8,586
- People die: 16

- 1 in 15:
  - People are admitted into hospital
  - Admissions is a potentially preventable hospitalisation

- 50%:
  - Annual cycles of care for patients with diabetes mellitus are completed

- 199:
  - GP mental health care plans are commenced

- 31:
  - Of potentially preventable hospitalisations are due to chronic disease (COPD the number one condition)

- 25:
  - Babies are born 2 are of low birth weight

- 1 in 6:
  - Deaths are tobacco, high body weight or alcohol related

- 5:
  - People die prematurely (<75 years old)

- 2:
  - Are potentially preventable deaths
General Practice & Ambulatory Care Activity

**General Practice**

MBS data: In 2013 there were 3.3 million patient attendances to 730 GPs in the HML region, a 5.6% increase on 2012, compared to a 2.8% increase across Australia.

BEACH data suggests that in the HML region each year:
- GPs manage around 5.1 million problems, with 36% of these for chronic disease;
- There would be around 290,000 referrals to medical specialists and 155,000 referrals to Allied Health professionals.
- Each GP would make around 400 new referrals to specialists.

**Example: John Hunter Hospital Ambulatory Care Centre**

- Average of 150 referrals a day
- 760+ sessions run daily
- 45+ different specialties
- 250+ different clinicians
The three phase approach to H&NE HealthPathways evaluation

<table>
<thead>
<tr>
<th>2013: Phase 1 Process Evaluation</th>
<th>2014: Phase 2 Impact Evaluation</th>
<th>Phase 3 Outcome Evaluation (TBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishement:</td>
<td></td>
<td>Outcomes:</td>
</tr>
<tr>
<td>• Partnership</td>
<td></td>
<td>Health Outcomes</td>
</tr>
<tr>
<td>• Relationships</td>
<td></td>
<td>Patient Experience</td>
</tr>
<tr>
<td>• Processes</td>
<td></td>
<td>Health Care Costs</td>
</tr>
<tr>
<td>• Technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop pathway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathway “live”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP aware</td>
<td>GPs access pathway</td>
<td></td>
</tr>
<tr>
<td>Specialist team aware</td>
<td>Specialist team access pathway</td>
<td></td>
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<tr>
<td></td>
<td>Specialist team apply pathway</td>
<td></td>
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<tr>
<td></td>
<td>Specialist team accept referral</td>
<td></td>
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</tbody>
</table>
Phase 1 HealthPathways Evaluation: Partnerships

1) Phase 1 examined the initial development and implementation processes of HealthPathways, stakeholder perceptions of the formation of partnerships, and early indications of clinical pathways utilization.

2) Found that the collaborative development process of HealthPathways improved partnerships between primary care and specialist clinicians.

Phase 2: Aims

Phase 2 Evaluation

- To describe the impact of HealthPathways on patient referrals and access to specialist care
- To describe the implementation of associated clinical redesign initiatives
- To describe the change over time in HealthPathways usage
Phase 2: Methods

- Mixed methods descriptive approach
  - Case studies – 3 clinical pathways: Routine Antenatal Care, Persistent Non-cancer Pain, Suicide Risk
  - Patient referral audit (quality of referral information, 3 pathways as above)
  - Analysis of HNE service data relating to case study pathways (timeliness of patient accessing specialist care, 3 pathways as above)
  - Document reviews and stakeholder interviews to describe pathway implementation and associated clinical redesign initiatives
  - Analysis of webpage utilisation data (Google analytics)
  - Telephone survey of general practices in region re reported use of pathways
Phase 2: Key Findings

There were indications that:

1) Overall use of the H&NE HealthPathways site by the target audience of general practice increased
2) Quality of referrals improved
3) Patient access to specialist care increased
4) Clinical redesign initiatives accompanied pathway development
Quality of referrals improved

- 40% of the random sample of referrals to JHH Maternity services utilised the Antenatal pathway’s referral form following its implementation.

- Recording items of clinical information improved

- Naming of a specialist on referrals improved in all three case studies:

<table>
<thead>
<tr>
<th>Service</th>
<th>Pre HealthPathways</th>
<th>Post HealthPathways</th>
</tr>
</thead>
<tbody>
<tr>
<td>JHH Antenatal Services</td>
<td>54%</td>
<td>78% (95% for those using the specific HealthPathways referral form)</td>
</tr>
<tr>
<td>Hunter Integrated Pain Service</td>
<td>52%</td>
<td>94%</td>
</tr>
<tr>
<td>HNE Mental Health</td>
<td>18%</td>
<td>62%</td>
</tr>
</tbody>
</table>
From a small sample of referrals to JHH Maternity, it was found that:

- 80% of women referred using the pathway referral form were assessed within the target timeframe, compared to 57% who were referred using other types of referral forms.
- 92% of women were seen by the maternity services by 25 weeks gestation post implementation of the pathway compared to 74% prior to implementation. The objective of increasing the provision of shared antenatal care was not achieved.
- The median patient waiting time to first contact with HIPS reduced from 56 days to 41 days.
Clinical redesign initiatives accompanied pathway development

- Clinical redesign
  - Routine antenatal care: development of explicit triage categories, referral criteria & level of risk; introduction of new electronic referral management system
  - Pain: redesign of clinical processes, discharge letters, pain Mx plans; review of triage criteria and estimated waiting times; patient questionnaire & assessment procedures modified to reduce delay in accessing specialist care; changes made to approach to opioid management
  - Suicide: no redesign

- Implementation of pathways
  - Routine antenatal care: most extensively supported, promoted and reinforced
  - Suicide: not supported nor systematically promoted or reinforced.
Clinical redesign initiatives accompanied pathway development

<table>
<thead>
<tr>
<th>Factor</th>
<th>Routine Antenatal Care</th>
<th>Persistent Non Cancer Pain</th>
<th>Suicide Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
</tr>
<tr>
<td><strong>Design</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interrelated suite of pathways</td>
<td></td>
<td>Single pathway</td>
<td>Single pathway</td>
</tr>
<tr>
<td><strong>Support from Senior Management</strong></td>
<td>✓ ✓</td>
<td>✓ ✓</td>
<td>✓</td>
</tr>
<tr>
<td>Continued post publication</td>
<td></td>
<td>Continued post publication</td>
<td>Not continued in HNE post publication</td>
</tr>
<tr>
<td><strong>Senior, clinical leaders initiated &amp; led implementation</strong></td>
<td>✓ ✓</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>Engagement of clinicians</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
<td>✓</td>
</tr>
<tr>
<td>HealthPathways process</td>
<td>✓ ✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Relevant clinical pathway that added value for users</td>
<td>✓ ✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Marketing and communication</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
</tr>
<tr>
<td>Communication and feedback to GPs by medical specialists</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓</td>
<td>X</td>
</tr>
</tbody>
</table>
General Practice use of HealthPathways increased

- A phone survey of use in general practice showed that:
  - 63% of all practices and 83% of large practices in the HML region reported that they used HealthPathways;
  - Compared to a similar survey in 2013, use of HealthPathways by medium and large practices increased by 74% (from 37% to 65%),

- Google analytics data indicated that from 100 General Practices in the region, HealthPathways was accessed more than 1,000 times in the three month period Jan-March 2014
Key Learnings

HealthPathways:

- provides an excellent foundation for achieving the goal of improving patient access to the right care at the right time in the right place, and to better integrate primary and specialist systems of care;
- is being increasingly used by general practice with 83% of large practices in the Hunter region reporting that they use HealthPathways;
- can help improve the quality of referrals to specialist services and patient access to specialist care;
- supports redesign initiatives.

Pathways associated with clinical redesign initiatives and involving a comprehensive approach to pathway development and implementation were more likely to result in increases in access to specialist care and greater website usage.
Other measures
(i) Paediatric Orthopaedics – Developmental Dysplasia of the Hip

Impact on service delivery:
- Over the period 1 Jan 2014 to 28 Feb 2015 there have been an average of 25 pageviews per month of the Developmental Dysplasia of the Hip (DDH) HealthPathways
- 16% reduction in patients on waitlist (currently 563pts as of March 11 2015)
- New appointments available to more urgent patients
- Clinics no longer double booked improving patient safety and clinic wait times
  Increased capacity of 134 new appointments each year
- $20,100 saved in avoidable cost of Orthopaedic Surgeon time ($150/hr for Orthopaedic surgeon at 20 min appointments for patients who are seen up to three times)

Valuation methodology:
- Increased capacity of 134 new appointments each year
- $20,100 saved in avoidable cost of Orthopaedic Surgeon time ($150/hr for Orthopaedic surgeon at 20 min appointments for patients who are seen up to three times)
- Cost to implement = within existing resources
Other measures

(ii) Surgery / Gastroenterology - +ve FOBT

Impact on service delivery:

- To date, the Positive Faecal Occult Blood Test (FOBT) HealthPathway had an average of 59 pageviews per month since going live on 1 July 2014.

- Gastroenterologists and General Surgeons reduced need to see patients for assessment prior to colonoscopy has freed up time to see other patients in clinics.

Valuation methodology:

- Pilot data results: Median waiting time for GP referral to colonoscopy reduced from 82 days to 42 days.

- Avoidable number of clinic visits to Gastroenterologists and General Surgeons patient visits being measured.

- Cost of Service = Colorectal Coordinator.
Other measures

(iii) Automated Google analytics reports - usage
Acknowledgements

Hunter & New England Evaluation Steering Committee:

• Dr John Wiggers (Chair) (Director Population Health, HNE LHD)
• Mr Ian O’Dea (HealthPathways Program Manager, Hunter Medicare Local)
• Ms Jane Gray (Director Research, Innovation and Partnerships, HNE LHD)
• Dr Margaret Lynch (GP, Clinical Lead - Hunter Medicare Local / HNE LHD)
• Dr Tracey Tay (Clinical Lead, HNE LHD / Agency for Clinical Innovation)
• Ms Liz Hay (Manager, Health Economics and Evaluation Team, Agency for Clinical Innovation)
• Ms Marika Mackenzie (Program Manager, Hunter Medicare Local)
• Ms Karen Harrison (Program Manager, HNE LHD)
• Ms Judith Swan (Knowledge Manager, HNE LHD)