SYNERGIA

EVALUATION OF 3D HEALTHPATHWAYS

A process and outcome evaluation for the 3D HealthPathways Steering Group

Sarah Andrews

Dr Sarah Appleton-Dyer

Geraldine Henderson

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Synergia Ltd
P.O. Box 147 168
Ponsonby
Auckland 1144

www.synergia.co.nz

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Acknowledgements

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EXECUTIVE SUMMARY

HealthPathways: Evaluation overview

HealthPathways provide web based guidance for primary care clinicians and promote consistency in the local assessment, management and referrals of patients to secondary health care. ***Patients receive the right care, at the right time, from the right place.***

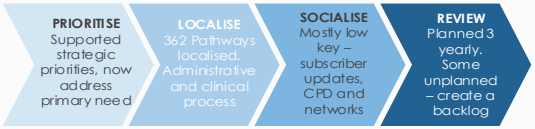
Evaluation approach

AIM: To understand if Health Pathways have been implemented as intended and achieved the expected outcomes.

METHODS

- Interviews (n=29)
- Google Analytics data for pathway use
- Documentary analysis
- CCDHB, HVDHB, WRDHB Outcome Data for pathway case studies

Development of HealthPathways



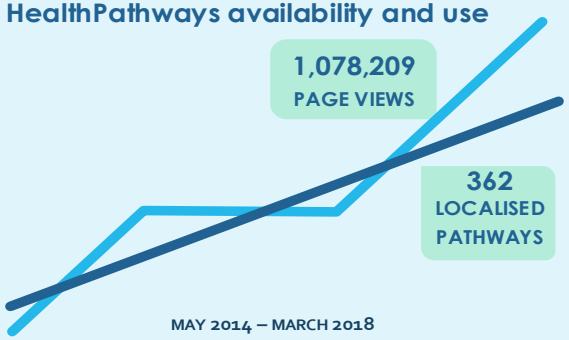
BARRIERS

- Challenge to localise across three DHBs
- Maintaining a GP Clinical Editor from Wairarapa in the Clinical Editor team
- Capacity to support localisation and reviews

ENABLERS

- High degree of support from DHBs and PHOs
- Established, capable, credible project team
- High level of sector engagement and support

HealthPathways availability and use



Clinician Engagement

The **use of HealthPathways is increasing each year**, and is supported by the perceived quality and integrity of information in the localised pathways. Use by GPs varies from a few times a month to most days.

Key ways in which clinicians use the pathways included:

- **Primary care assessment and management**
- **Supporting the interface with secondary care, including enhanced quality and appropriateness of referrals**
- **Learning and development, both for new and existing GP**

Clinicians less likely to used HealthPathways to identify community resources. Use is related to the health condition, with clinicians most likely to use it for the dementia pathway for example.

HealthPathways Case Studies

Cognitive impairment and Dementia

- **Most viewed pathway**: 10,378 page views
- Highly socialised
- Referrals to secondary care increased, but referrals are more appropriate
- More management and investigations are now in the community

Colorectal symptoms and Direct Access to Colonoscopy

- Highly viewed pathways, 5,357 page views combined
- Perceived need for pathway use varies between clinicians
- Wait time for first specialist appointment is reducing

Childhood asthma (acute and non acute)

- Relatively highly viewed
- Once confident with management, GPs less likely to access pathway
- Hospital outcomes unchanged, trend of shorter length of stay

Heavy Irregular menses

- Highly viewed pathway – 6,095 page views
- Use linked to funding for community radiology
- Patients being diagnosed earlier and referred to secondary services.
- Shorter wait times for specialists.
- Percentage of rejected referrals has decreased

Cellulitis

- Highly viewed pathway: 5,820 page views
- Pathway use strongly linked to POAC funded interventions
- Reduced burden on secondary services

Deep Vein Thrombosis

- Highly viewed pathway: 8,832 page views. Most searched for pathway
- Well established complementary use by primary and secondary care. Use enabled by funding for ultrasounds and anti coagulants
- People getting faster treatment in the community and there is reducing ED demand

Benefits of HealthPathways

Patients

- Get the right treatment, at the right time, closer to home
- Supports optimal health outcomes

Clinician

- Supports delivery of consistent, quality care
- Increases clinician confidence and knowledge
- Effective communication between clinicians

System

- Reduces demand on secondary services
- Enabler of wider integration programme
- Supports whole system efficiency

Summary and key considerations

By March 2018 there were 362 localised pathways and 2,712 users. The landmark of **one million-page views** was achieved in January 2018. HealthPathways are well established across the 3D region, are working largely as intended and producing, or contributing to, the benefits expected for people, clinicians and the wider health system.

- Review work program and KPIs to support balance between the localisation of new pathways and the review of existing. More localisations encourage more use and up to date information maintains the integrity of HealthPathways
- Develop a dashboard of simple high-level indicators that are reported in quarterly periods in a consistent manner to track ongoing performance
- Consider allocating additional resource to enable the programme team to expediate the localisation of pathways while addressing the review programme in this transitional phase
- Explore opportunities for ongoing enhancement

SYNERGIA

This summary was completed as part of the HealthPathways evaluation conducted by Sarah Andrews and Dr Sarah Appleton-Dyer from Synergia Ltd with the HealthPathways 3DHB project team in June 2018

1. INTRODUCTION

Wairarapa, Hutt Valley and Capital and Coast District Health Boards (DHBs) have implemented a 3D HealthPathways approach since 2014. This approach has aimed at supporting primary and secondary health providers to develop sustainable, clear, concise and localised pathways that reduce variation, increase provider performance and improve outcomes for people.

The Steering Group leading this work on behalf of the 3D region wanted to understand if these benefits were being realised and identify any opportunities for enhancement and improvement. Synergia submitted a quote for a process and outcome evaluation in December 2017. The work was completed between February and June 2018.

The evaluation adopted a mixed methods design, drawing on key stakeholder and user interviews, Google Analytics data, project documentation and relevant DHB trend data.

The evaluation has provided insight into the use and value of HealthPathways across the 3D region and presented some considerations to support its ongoing delivery. This report presents the findings of the evaluation.

1.1 Report structure

This introduction is followed by an overview of the background and context of HealthPathways and a summary of the evaluation approach and methods. The report then describes the process of localising HealthPathways, followed by a review of implementation that includes evidence from Google Analytics and clinician feedback relating to use.

The benefits of HealthPathways are presented, generally, and then as they relate to the six pathways selected as mini case studies. The report then reflects on opportunities for continued programme development.

The report concludes with a brief summary of the findings and presents considerations for ongoing development.

A data supplement containing the DHB outcome data used in this report in a less aggregated format, is available separately.

1.2 Background and context

HealthPathways was created by Canterbury District Health Board (CDHB) in 2008 to help clinicians make better decisions regarding assessment, management and referrals to secondary care. In 2014, 99% of surveyed CDHB GPs used it weekly[1] and there are now 40 local versions of Health Pathways across Australia and New Zealand with up to 800 pathways available to be localised.

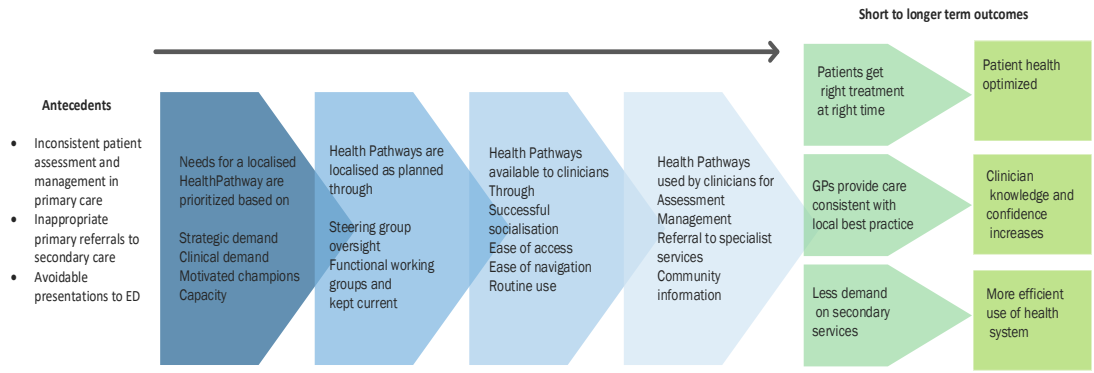
In 2013, the 3D DHBs recognised the need for clinical pathways to integrate information across services and decided to adopt HealthPathways. 3D HealthPathways went live in May 2014, with 26 localised pathways and over 600 clinical, resource, and request pathways from CDHB with Canterbury information. The intention was to localise the CDHB pathways at the rate of 100 per year to ensure the content was accepted best practice across the region and that the information regarding referral to secondary services aligned with agreed local process.

1.3 HealthPathways

HealthPathways provides web based guidance for primary care clinicians and promotes consistency in the local assessment, management and referrals of patients to secondary health care. It supports the vision of providing patients with the right care, at the right time, from the right place.

Figure 1 represents the process of delivering HealthPathways and how the intended changes support benefits for patients, clinicians and the health system.

Figure 1: HealthPathways development and implementation process, intended benefits and outcomes at 3D



[1] McGeoch, G; McGeoch, P; Shand, B (2015) Is HealthPathways effective? An online survey of hospital clinicians, general practitioners and practice nurses *NZMA Vol 128 No 1408 p36-46*

2. EVALUATION AIMS AND OBJECTIVES

The aim of the evaluation was to understand if HealthPathways have been implemented as intended and achieved the expected outcomes. Objectives developed with the Steering Group were to:

- Describe the development and implementation of HealthPathways across 3D
- Describe the ways clinicians engage with HealthPathways and barriers and enablers to engagement
- Understand the benefits of HealthPathways and the impact on patients, clinicians and the local health system from the clinician's perspective
- Identify ideas and considerations to support the ongoing development of HealthPathways.

2.1 Evaluation approach and methods

Synergia has conducted a process and outcomes evaluation, working collaboratively with the 3D HealthPathways Steering Group to deliver a mixed methods evaluation that has synthesised insights from newly collected and collated data, and existing DHB data. Six pathways were selected by the team as mini case studies to explore themes of use and value. Initial results and insights were shared with the team in a sense making session on 31 May 2018.

The Aotearoa New Zealand Evaluation Association Standards have guided the work.

2.1.1 Evaluation methods and sources

- Interviews with a range of stakeholders (Table 1)
- Google Analytics regarding pathway use up to 31 March 2018
- CCDHB, HVDHB and Wairarapa DHB data relating to health system outcomes associated with the six sample pathways (for example; procedures delivered in primary care, referrals and presentations to secondary services)
- Documentary analysis of project documentation to identify structures, process and delivery of the work programme.

Table 1: Interviewees by DHB and role type

DHB	Primary	Secondary	Community	Project	Total by DHB
CCDHB	9	3	3	5	15
HVDHB	9	1	2	5	12
WRDHB	2			1	2
Total by type	19	4	5	11	29

Note: some interviewees were represented in more than one category

2.1.2 Limitations

The following are noted as limitations to this evaluation.

- Consumer engagement was beyond the scope of the evaluation.
- Under representation of clinicians from Wairarapa in interview.
- Only a small number of secondary clinicians participated in an interview.

3. HEALTH PATHWAYS DEVELOPMENT

This section describes the people and processes involved in delivering HealthPathways and their reflections on the process of prioritizing, developing, socialising and reviewing HealthPathways. The section concludes with a summary of the barriers and enablers to this process.

3.1 Team roles and functions

HealthPathways is Governed by a group consisting of representatives from the Alliance Leadership Teams, Hospital services and Primary Health Organisations in the 3D region. A member of the Strategy Innovation & Performance team at CCDHB oversees the work plan and budget as part of their service development management role. The Steering Group is responsible for the delivery of HealthPathways. Alongside the manager, it includes the following roles and functions:

- Coordinator: co-ordinates pathway development, reviews and socialisation, and monitors and reports on their use. This is a full time dedicated role.
- Clinical Leads(0.2FTE): Provide clinical leadership and advice to the team, and engages with health organisations and clinicians.
- Clinical Editors (0.9 FTE for 2017/2018 financial year): work with workgroups of local clinicians to write and edit pathways, focusing on clinical content. These are specialty rather than geographically focused, and include practising GPs and an allied health practitioner.

The HealthPathways community is supported by Streamliners, who provide technical, publishing and administration support. The Coordinator is the team's day to day link with Streamliners.

3.2 Prioritizing pathways for development

Canterbury DHB now has around 800 HealthPathways that could potentially be localised. The Steering Group set itself a target of 100 localisations per year but must determine which ones to localise first. To date, preference has been given to pathways that support DHB strategic priorities. A revised prioritization process, with a greater focus on HealthPathways required by primary care user needs, was recently developed. This new process was approved by the Governance Group in March 2018.

"We now want to give more weight to the actual demand in primary care, even if it's not on the District Annual Plan" - Steering Group member

Steering and Working Group members reflected pragmatically on prioritisation and the need to consider the strength of support for pathway work, as well as general demand. This refers to the existence of a motivated group with capacity to work on a pathway and taking opportunities from initiatives or change programmes (such as the Faster Cancer Treatment Health Target).

The effort required to localise pathways can differ considerably. The simplest pathways involve few stakeholders and can be completed in a few weeks, while the more

complex involve many stakeholders, include a network of pathways within the broader pathway and can take over a year. Experience gained, processes streamlined and the vast network of relationships built over the past few years have helped make localisation easier and more efficient than in the early days. Scoping the annual work programme against resources is still challenging.

Prioritisation has evolved with a maturing programme and can make use of available data (such as search information) balanced with practical considerations (such as willing champions) to determine the best use of programme resources.

3.3 Developing a HealthPathway

Feedback from the Clinical Leads and Editors describes this process as working largely as intended. A "fluid and flexible" approach is required however, to respond to the diversity of clinical conditions, stakeholders and geography.

"It's OK when it's about evidenced based practice but it's a lot of work to localise them… blood, sweat and tears." - Steering Group member

Localisation involves clinical decision making and operational consensus. Small working groups have been found to be more efficient, but this must be balanced with the need to involve essential stakeholders in the process. Bigger workgroups involve multiple hospital departments and/or agencies; a process that delivers real, but less tangible benefits for the integration programme as demonstrated by the Cognitive Impairment and Dementia pathway. This large workgroup addressed a suite of older persons pathways and in the process developed a strong cross sector network of relationships and promoted awareness of the conditions as well as guiding response. This demonstrates the value of the approach in supporting engagement and uptake of a pathway.

The shift towards more varied working groups was reflected on positively, this refers to the inclusion of allied health and a range of community organisation representatives. Such an approach reflects a multi-disciplinary and whole of system approach to care, that will position the programme well for the next phase of localisations. Likewise, the work underway to incorporate Māori and Pacifica approaches to health and relevant resources, has potential to add to the value of HealthPathways that guide support in the community.

Localisation work programmes often get delayed, most commonly because the work required has been underestimated or due to the lack of available clinicians (especially secondary clinicians). Limitations in the coordination capacity (as evidenced through interviews and progress reports) are also reasons for delay.

The smaller size and relative remoteness of Wairarapa DHB has limited the involvement of this DHB in the localisation process. Keeping a GP Clinical Editor from Wairarapa in the HealthPathways team has been a particular challenge. Technology (email or teleconference) replaces some face to face communication. Sometimes a compromise about Wairarapa's involvement is made, such as the decision to launch a pathway with less detailed information about Wairarapa referral processes than the other two DHBs.

At 31 March 2018, 362 pathways have been localised. Once localisation is completed going live is authorised by the Clinical Editor and subject matter expert

3.4 Socialising HealthPathways

Most newly localised HealthPathways are socialised in a very "low key" manner though emails to HealthPathways subscribers and PHO communications. HealthPathways appear to be a regular part of PHO Continuing Professional Development, though efforts to "squeeze them in" were sometimes required. The people involved in HealthPathways – from Governance to Working Group members - are often leaders in their field or organisation, and use their influence to support socialisation through their organisations, networks and individual relationships.

"I can't imagine there is a GP out there who isn't aware of Health Pathways." - PHO lead

Roadshows, in particular the one that promoted the Cognitive Impairment and Dementia pathway, appear to have been well received by clinicians. This may be an effective form of socialisation, but is resource intensive. Short videos about cancer pathways (related to Faster Cancer Treatment) have been developed recently. This may be an effective and sustainable approach to socialisation going forward. Information about the reach and impact of this new approach would inform this decision.

The sheer volume of communication and information received by clinicians was cited as a challenge to communicating HealthPathways. Despite this, HealthPathways is well known, well established and clinicians spoken to were using HealthPathways regularly.

Those in secondary care noted there was no systematic socialisation of HealthPathways. HealthPathways are seen as a tool for primary care clinicians but they often have a clinical and operational role to play in the interface between primary and secondary care. Systematic socialisation in secondary services (particularly at triage and discharge points) and alignment with hospital processes would support the aim of consistency of response.

3.5 Review of Health Pathways

The Steering Group postponed the systematic review of localised HealthPathways from two to three years since launch, in line with other DHBs. The challenge continues to be the increased number of reviews that need to be completed.

"If [currency of information] were allowed to lapse we should still reduce variation but not in a good way. They need to be continually updated" - Governance Group member

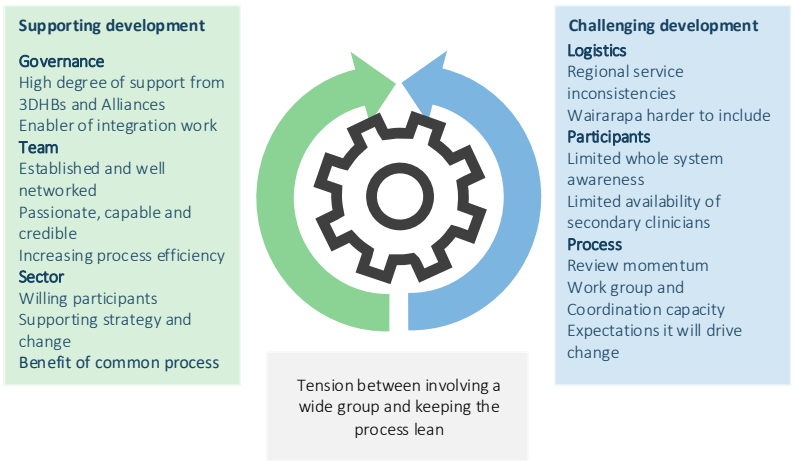
Existing resources are insufficient to support ongoing localisation at a rate of 100 pathways per year while keeping up with the review of existing HealthPathways as they become due. The pragmatic approach to concentrate on high use or high-risk pathways would potentially leave other pathways with out of date information. Users of HealthPathways valued them for their local and up to date information. Users indicated that out of date information would reduce the credibility of the HealthPathways programme and make them less likely to trust the programme.

Prioritising and scoping up the work required to review pathways is something the Steering Group now face. Frequency of use and degree of risk were suggested as prioritisation guides. Opportunities to mitigate the risks to pathway credibility from information that may no longer be current should be explored. This may include a notification that review is overdue/underway (and encourage feedback) as well as increasing capacity in the team to complete reviews.

3.6 Delivering Health Pathways: Barriers and enablers

The process of developing localised HealthPathways works largely as intended. There is huge passion and significant capability driving this work and the enablers of the work have propelled the programme forward. The barriers are mostly systemic and reflect the complex context of the work. Figure 2 summarises the key barriers and enablers to the development of Health Pathways.

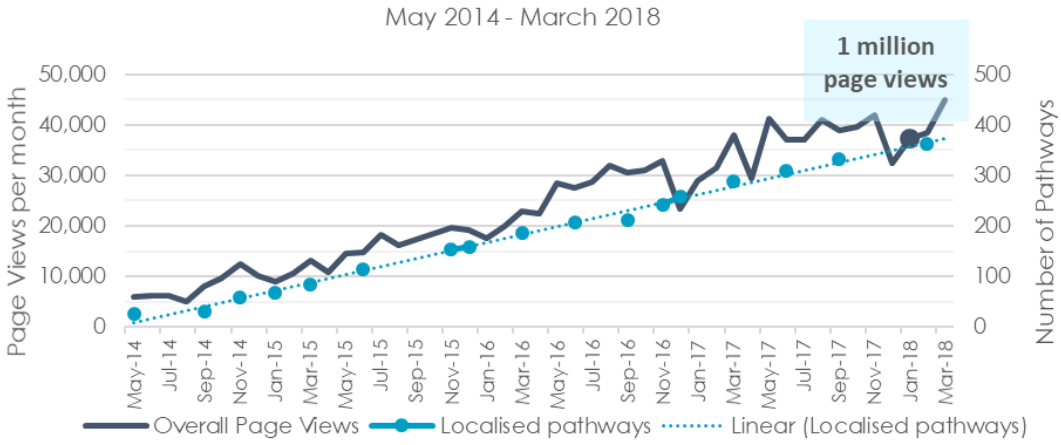
Figure 2: An overview of the barriers and enablers to HealthPathway development



4. HEALTHPATHWAYS IMPLEMENTATION

This section explores the implementation and use of HealthPathways. First, Google Analytics data identifies patterns of use, and this is followed by clinicians' descriptions of their use and the factors that influence use.

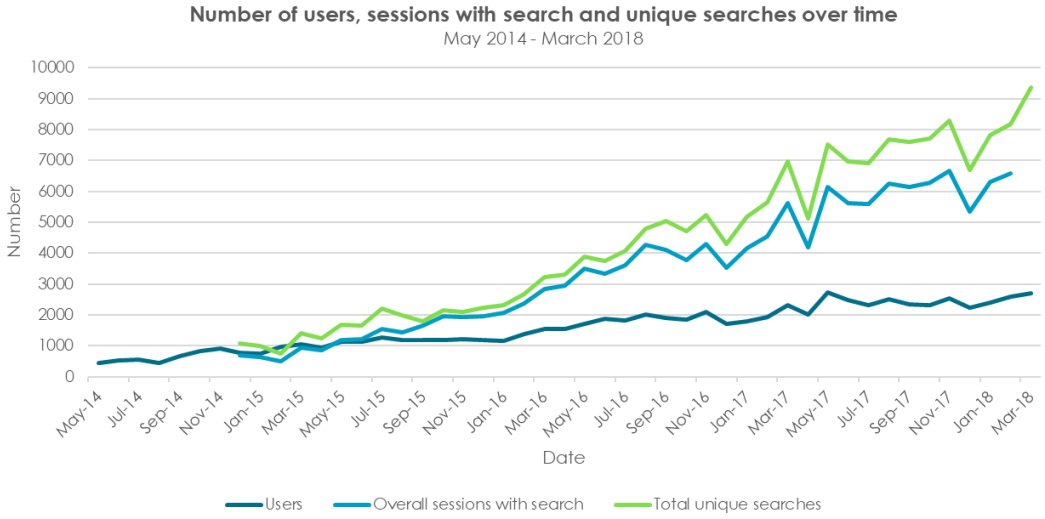
4.1 Localised HealthPathways and page views



By March 2018, 362 pathways had been localised. Since the first 3D HealthPathways were released, use (in terms of page views) has kept pace with the increasing number of localised HealthPathways available. On the 3rd January 2018, the milestone of one million-page views had been reached. In May 2014, there were 6,000 page views of 3D HealthPathways. In March 2018, this had increased to 45,000 views.

The annual cost per page view has fallen by 78% from $5.84 in the 2014/2015 financial year, to $1.27 per page view for 2017/2018 (up to March 31). This is calculated on programme actual costs, minus Health Navigator costs.

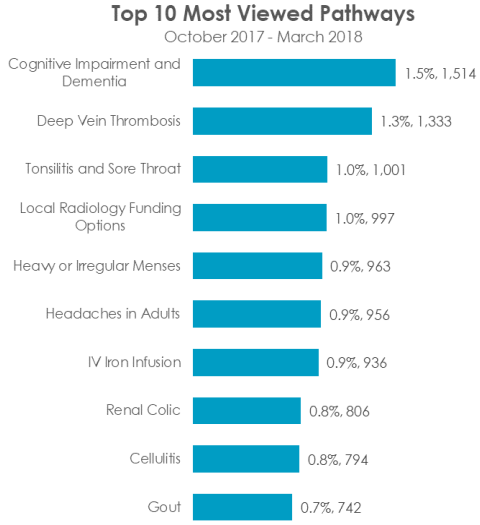
4.2 Patterns of use through Google Analytics

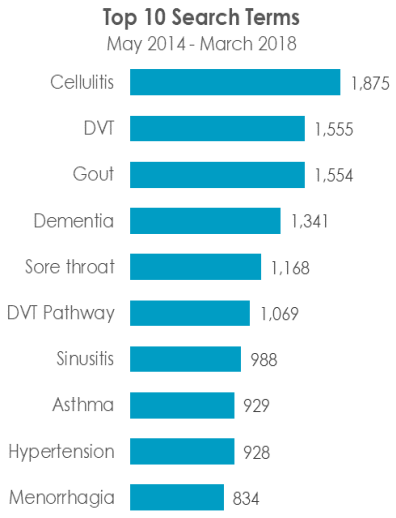


The number of users for 3D HealthPathways has consistently increased over time. Since March 2017, there has been over 2000 monthly users each month and in March 2018, there were 2,712 users who looked at an average of 4.89 pages per session. Since May 2014, there have been 46,625 users access 3D HealthPathways.

The search function has been used more over time. In March 2015, there were 1.32 searches per user, and in March 2018 there were 3.46 searches per user. This is a 160% increase in the number of searches per user.

Search is the main way that users navigate the site, with 237,434-search driven page views since 3D HealthPathways went live, which is equivalent to 90% of the 265,196-page views for the Home page. In comparison, the 3D Localised Pathways page, another possible key way to navigate the site, only had 23,504-page views.





Hypertension is the 9th most searched for pathway, the only one of the top ten searched pathways that isn't localised.

Data on the number of users cannot be contextualised as access is available quite freely and the number of primary care clinicians with access or the source of access is not available through Google Analytics.

4.3 Interface experience

HealthPathways are easily accessible to clinicians - a click away on their patient management system, and simple to navigate. The one-page standard structure for information is appreciated and clinicians understand how to navigate the broad and shallow information on each page, using the drop-down menus to hone in on more detailed information.

Interface experiences were positive, but there were several people who said it can be hard to find things from the menu as it's not clear what section to start with. That may partially explain why the majority of uses begins with a search query.

The ability to make e-referrals directly from HealthPathways was a required improvement identified by many. This functionality is in development and is likely to encourage the use of HealthPathways, provide a greater insight into HealthPathway use across the sector and contribute to system efficiency.

"We really want e-referrals. Not only would they reinforce minimum standards and integration but would save time for GPs and hospital services" – PHO lead

5. CLINICIANS' USE OF HEALTHPATHWAYS

During interviews, clinicians were asked how they use HealthPathways. They were often used as a tool to support assessment and management in primary care, as well as guiding appropriate and successful referral to secondary care. The use of HealthPathways as a tool to support ongoing learning and development was also a common theme. Though discussed separately, these uses are interlinked.

The primary care clinicians we spoke with used the pathways from a few times a month to "most days". Support for HealthPathways was overwhelmingly positive.

"HealthPathways is the most significant aid to GPs in the last 30 years" (PHO representative and GP)

HealthPathways are designed to provide self-management information to patients and information on relevant community resources. This aspect was referred to by only a few of those interviewed, with the exception of those talking about the Cognitive Impairment and Dementia pathway, who identified community resources, such as Dementia Wellington and information for patients and their families. Monitoring of Health Navigator views from HealthPathways would provide broader insight into this aspect, but such data was not available for the evaluation.

Some GPs noted the existence of some of the sample pathways that form our mini case studies and said they didn't need to use them, but would if necessary. Whether this indicates competence, a knowledge of the content or ignorance of the content is not clear.

5.1 Assessment and management

The GPs we spoke to were motivated to provide quality care that aligned with best practice, in terms of clinical evidence and locally accepted practice. This was a key driver for use. HealthPathways supported the GPs to work at the top of their scope, guided by credible, current protocols for assessment and management of patients, including conditions that had historically been referred to secondary services.

"Health Pathways is almost always my first place to go" (GP)

Low prevalence or high complexity of a condition (or the response required to manage it) were factors that GPs described as key reasons to use HealthPathways. They simply could not retain all the information required to safely support a patient without guidance.

"Microscopic haematuria – I often refer to it as it's hard to remember what to do for the different age groups" - GP

Recently changed protocols were also another reason GPs would use HealthPathways for assessment and management. This may be due to a change in recent clinical evidence affecting treatment protocols, or a change in local protocols for treatment, particularly those linked to funded interventions, such as community radiology or Primary Options for Acute Care (POAC).

HealthPathways were mostly used during consultations. Clinicians would refer to HealthPathways outside consultations, when they needed to concentrate, or read more extensively than they could with a patient present.

Use has also enabled nurses, GPs and others in primary care to work effectively as a team, sharing patient care.

"[HealthPathways] gives us a common language…. you have more credibility in discussions with doctors"- Community Nurse

Clinicians also referred to other resources they would use to support assessment and management of patients. This included advice from colleagues as well as online resources (such as the Best Practice Advisory Service or the Mayo Clinic). The demise of the New Zealand Guidelines Group was noted as another reason GPs would use HealthPathways, as even non-localised pathways had current assessment and management information relevant to New Zealand available.

5.2 Referral to secondary care

Primary care clinicians used HealthPathways to ensure they had followed due process and were referring to secondary services appropriately, with sufficient information to meet the criteria required and ensure referrals would be received.

Some GPs also explained the pathway/referral to secondary care to their patients to justify the management of their condition in primary care, or explain why they weren't eligible for secondary services.

Many of the GPs said they referred to the use of HealthPathways on their referral to specialist services, confident this would expediate the triage process. The secondary service clinicians we spoke to referred to using HealthPathways in their triage process. Consultants said they still used their discretion when accepting referrals; their discretion broadened rather than narrowed the criteria for acceptance.

Consultants use HealthPathways to triage referrals and to teach their registrars to triage referrals and, in some cases, develop discharge plans to align with the treatment protocols for community management. Consultants would refer GPs back to the appropriate HealthPathway, leaving them confident in their triage decision so that the patient would get the right care. We heard from one GP who had received laboratory tests back that referred him to HealthPathways.

5.3 Learning and development

HealthPathways were used for learning and development separately from being used for a specific patient. Newer GPs, and those still in training, valued the site. Examples were shared of HealthPathways used by individuals as well as training cohorts, for example, supporting long term conditions management. More experienced GPs said they used HealthPathways to keep their knowledge current. Only a few GPs said they used it to broaden their knowledge about what resources were available in the community.

"Yesterday new pathways were added. It's a good reminder to think about things. I'll go do a refresher on what's required at a first antenatal visit" - GP

GPs use of pathways for learning or refreshing was frequently prompted by communications about newly localised or updated pathways.

5.4 Improvements identified by users

When asked about any required improvements to HealthPathways the responses were predominantly about having more localised pathways and keeping them up to date.

Interface experience will be improved for users when there is e-referral functionality directly from HealthPathways. Pathway design was generally well regarded (with exceptions relating to pathways with too many levels to drill down or navigation to other sites that required a sign in process). Users also identified some inconsistencies between pathway information and other procedures, such as community radiology access, and felt these should be aligned.

Many users were aware of the feedback function on the site and had used this, with some getting an acknowledgement and others not, suggesting a potential opportunity for improvement here.

5.5 Barriers and enablers

The number of users of Health Pathways has increased each year, and the use of HealthPathways has also increased. The critical mass of HealthPathways combined with its credibility has seen the resource become established as an essential primary care tool.

The following diagram summarises the factors that enable or act as barriers to use. There are many mediating/moderating factors that affect how it is used, but there are few actionable barriers to the use of HealthPathways.

6. SUMMARY OF BENEFITS

The process of developing and using HealthPathways across 3D is working largely as intended. This section presents a summary of interview and DHB trend data to explore the intended and other, benefits experienced locally. These are further explored for the six mini-case study pathways that follow.

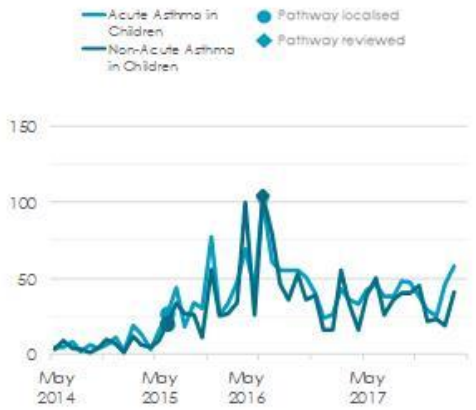
PATIENT BENEFITS 	**Supporting patients to get the right treatment at the right time** Clinicians confirm use supports care closer to home and more efficient referral to specialist services when required. **Supporting optimal health outcomes** Clinicians agree this is a logical consequence of following best practice and local protocols.
CLINICIAN BENEFITS 	**Supporting delivery of consistent, quality care** Adherence to best practice and locally agreed protocols was a key motivating factor for their use in primary care and its interface with secondary care. Use can support consistent, quality care from individuals and across primary care teams. **Increasing clinician confidence and integration** Primary clinicians with a range of experience feel more confident in their practice. This is especially true with low prevalence, high complexity conditions, and conditions where there has been a change in treatment protocols. Secondary care clinicians have confidence that patients can be well manged in primary care, where appropriate, and there is a better understanding of each other's responsibilities.
SYSTEM BENEFITS 	**Reducing the demand on secondary services** Primary care clinicians cited this as a key benefit of HealthPathways. The DHB data also provides some evidence to support this notion, but not consistently. Indicators of demand on secondary services are whole of system indicators, influenced by a multitude of factors from health determinants and shifts in funding (such as POAC) right down to capacity in individual hospital departments. The evidence presented here however, provides positive indicators of the contribution of HealthPathways to the wider system. The implementation of e-referrals functionality from HealthPathways will provide an opportunity to further develop this evidence base. In the meantime, proximal indicators (such as fewer rejected referrals) can continue to be monitored to determine impact. **Supporting whole system efficiency** Interviewees suggested that HealthPathways improved management in primary care, improved quality and timeliness of referrals and reduced inappropriate demand on secondary services. HealthPathways are a key enabler of the wider integration programme.

7. SUMMARY: ASTHMA IN CHILDREN (ACUTE AND NON-ACUTE)

Antecedents

- Ambulatory Sensitive Hospitalisation.
- High rates of ED presentation and admission.
- Māori and Pacific Islanders over represented.

Use: Monthly page views



15th
2,953 page views

8th
929 searches

MOST CLICKED ON
1 Asthma = 684
2 Asthma in children = 369
3 Asthma action plan = 128
4 Bronchiolitis = 75
5 Wheeze = 24

Clinician feedback

"I don't use it, don't need to but I'd probably use the Starship guidelines; I use them for a lot of paed information" - GP

"My gut feeling is that referrals for asthma in children have improved… the general management of asthma has improved" - Consultant Paediatrician

"Acute admissions are often appropriate – they have been managed in primary and have been given steroids" - Consultant Paediatrician

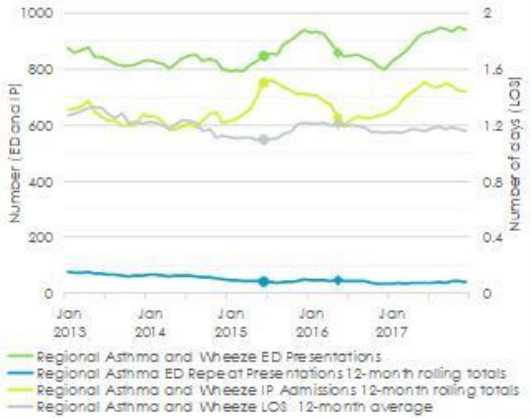
Benefits associated with use

PATIENTS
- Clinicians say the condition well managed and high pathway use likely to support this.

CLINICIANS
- Supports clinician confidence where this is required and builds knowledge. Doesn't need to be used repeatedly as asthma as high prevalence.

SYSTEMS
- Contribution though supporting clinicians who need it with managing the condition in the community.

Whole of system indicators



- Asthma and wheeze related ED Presentations for 0-15 year olds have been increasing overall since localisation. Repeat presentations have decreased.
- The number of inpatient admissions decreased after localisation, but has been increasing since the review.
- The average length of stay was decreasing prior to localisation, and since localisation has consistently been around 1.20 days.
- Also, the proportion of Māori being admitted to hospital has been increasing, though actual numbers are low.
- Appears that few GPs are making referrals to Well Homes, but could be encouraging self referrals
- POAC funding for extended primary care consultation is available.

Summary

Asthma is a frequently searched for topic, and these two pathways are in a group of asthma pathways with relatively high use. Once confident with management, GPs are less likely to use this pathway. Hospital outcomes have no observable trend since localisation, though length of stay has decreased.

8. SUMMARY: CELLULITIS

Antecedents

- Large number of ED admissions.
- Ambulatory sensitive hospitalisations.
- Over representation of some ethnic groups in ED.
- No funding for GPs to administer IV antibiotics in primary care.
- Specialists concerned about over administration of IV antibiotics if it were funded in primary care.
- HVDHB and WRDHB had pre-existing pathway.

Use: Monthly page views

5th — 5,820 page views

2nd — 1,875 searches

MOST CLICKED ON
1 Cellulitis = 1,715
2 POAC = 35
3 POAC primary options for acute care = 32
4 Abscess = 27
5 Periorbital cellulitis = 26

Clinician feedback

"Before, we used to send them to hospital for IV antibiotics and of course, that's what they got, so it was a bit of a self fulfilling prophecy" - GP

"I've used it several times because of POAC and antibiotics – I get the nurse to print all the forms off" - GP

"I got pretty flustered as I haven't done an IV for 30 years, then the chemist was out of stock, so we had to send them to the after hours clinic" - GP

Benefits associated with use

PATIENTS
- Best quality of care.
- More closer to home timely care through delivery of antibiotics by GP or after hours clinics instead of going to ED.

CLINICIANS
- Primary care confident in best practice process to manage condition they previously referred to secondary services.
- More efficient interface with secondary care.

SYSTEMS
- Efficiencies for secondary services with reducing ED and inpatient admissions.
- Supports capability in primary care as part of wider integration programme.

Whole of system indicators

Regional ED presentations 12-month rolling totals
Regional IP Admissions 12-month rolling totals
Regional POAC Claims 12-month rolling totals
Regional Length of Stay 12-month rolling average

- ED Presentations have been slowly decreasing since localisation in September 2014.
- Inpatient admissions have remained constant, while the average length of stay has been slowly decreasing.
- The number of POAC claims has been steadily increasing.
- CCDHB ethnicity data shows small fluctuations in number and proportion of Pacifica and Māori presenting at ED or being admitted.

Summary

This pathway is highly viewed and also searched for frequently. Pathway use is strongly linked to POAC funded interventions. There has been a reduced burden on ED and inpatient services since localisation.

9. SUMMARY: COGNITIVE IMPAIRMENT AND DEMENTIA

Antecedents

- GPs were referring simple and complex dementia patients to secondary services, and weren't referring complex cases early enough.
- GPs not referring patients to Alzhemiers services.
- GPs could not request head CTs for dementia.

Use: Monthly page views

1st
10,378 page views

4th
929 searches

MOST CLICKED ON
1 Dementia = 1,840
2 MOCA = 186
3 Cognitive Impairment = 101
4 Cognitive Assessment = 79
5 Dementia Services = 63

Clinician feedback

"It's changed what I do – I used to refer to local gerontology. I might eventually do that but I'm much more likely to make the diagnosis and support them myself" - GP

"It's long, but actually really helpful" - Student GP

" I find referrals are more appropriate and the right tests and investigations have been done. I wouldn't send referrals back if [the pathway] hadn't been followed because these patients are complex" - Geriatrician

"Referrals have increased [to Dementia Wellington] since the pathway" - Community worker

Benefits associated with use

PATIENTS
- Getting tests and early diagnosis by their GP. Earlier diagnosis, family preparation and connection with community resources supports care planning.

CLINICIANS
- Better awareness of conditions and more confident about diagnosis and management.
- Clear when to refer to secondary services and how range of services can be drawn on for support.

SYSTEMS
- Appropriate quality referrals received by secondary services supports efficiency.
- Supports capability in primary care.
- Supports integration/ change programme and quality improvement.

Whole of system indicators

- Referrals for dementia, decreased cognition and cognitive assessments have been increasing over time.
- The wait time between referral and FSA has been increasing since May 2017 in HVDHB, when there has been reduced staff capacity.
- No data for WRDHB.

Summary

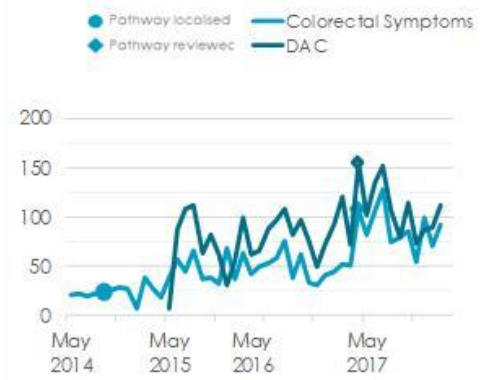
This pathway is the most viewed pathway. Its development involved a large working group with sector representation, and was socialised through a road show. Referrals to secondary services have increased, but clinician feedback indicates that these are more appropriate referrals and the pathway has heightened awareness of the conditions.

10. SUMMARY: BOWEL CANCER AND DIRECT ACCESS TO COLONOSCOPY

Antecedents

- Symptomatic patients needed FSA in order to be referred for Colonoscopy.
- FSA waiting time up to 4 months.
- Extra waiting for colonoscopy.
- Late diagnosis and treatment of bowel cancer resulting in poor outcomes.

Use: Monthly page views



4th — 5,357 page views

13th — 777 searches

MOST CLICKED ON
1 Colonoscopy = 993
2 Rectal bleeding = 190
3 PR Bleeding = 163
4 Diverticular Disease = 162
5 Bowel Cancer = 87

Clinician feedback

"Really useful for risk stratification and I use to check referral criteria" - Student GP

"I'm aware of it, I looked at it when released and would definitely use if required - it's getting harder to get into gastro" - GP

"We use it for triage, I make the new registrars aware of it" - Gastroenterologist

"It's not reduced the number of referrals and procedures here - I'm quite liberal with what I allow"- Gastroenterologist

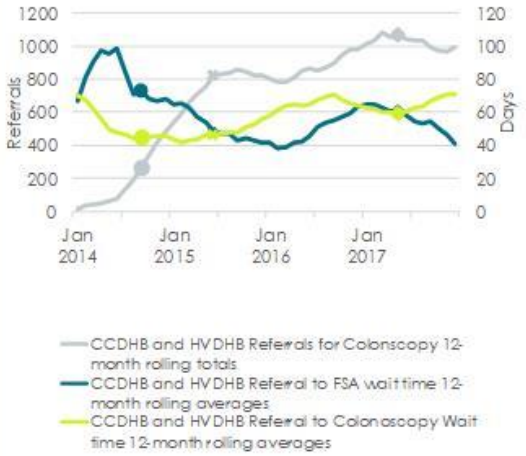
Benefits associated with use

PATIENTS
- Receive best quality of care including direct referral for colonoscopy by GP if indicated.
- Shorter wait times if they do need to see a specialist.

CLINICIANS
- Confidence from following best practice and use colonoscopy diagnostics to determine need for referral.

SYSTEMS
- Improved efficiency in secondary services (time to FSA).
- Supports capability in primary care to identify bowel cancer indicators and refer to specialist services effectively.

Whole of System Indicators



- The 12-month rolling total number of referrals for colonoscopy been increasing until early 2017, and has been decreasing since then.
- The average wait time from referral to colonoscopy has increased since localisation.
- The 12 month rolling average wait time from referral to FSA has varied significantly since 2014, but has been decreasing overall

Summary

These two pathways combined are highly viewed. The perceived need and usefulness of the pathway varies amongst clinicians due to prevalence of condition. Referral numbers have increased over time. There are many initiatives linked to this pathway, including Faster Cancer Treatment Health Target, Bowel Cancer Screening, and funding for community radiology.

11. SUMMARY: DEEP VEIN THROMBOSIS

Antecedents

- Inequitable access to ultrasounds for DVT via community radiology (HVDHB).
- Increased ED admissions.
- No funding for GPs for Clexane administration and education.

Use: Monthly page views

2nd 8,832 page views

1st 2,624 searches

MOST CLICKED ON
1 DVT = 2,294
2 DVT Diagnosis = 639
3 DVT Pathway = 562
4 Thrombophlebitis = 188
5 Deep Vein Thrombosis = 83

Clinician Feedback

"The secondary clinicians have bought in – they refer people back for Clexane" - GP

"I'd definitely use if presented with it as I'm aware things have changed and I would use it for clinical guidance" - GP

"I will refer GPs to the pathway, it helps reduce referral numbers but also reduces the number of calls I get asking for advice. That gives me more time for those that do need specialist input" - Consultant Haematologist

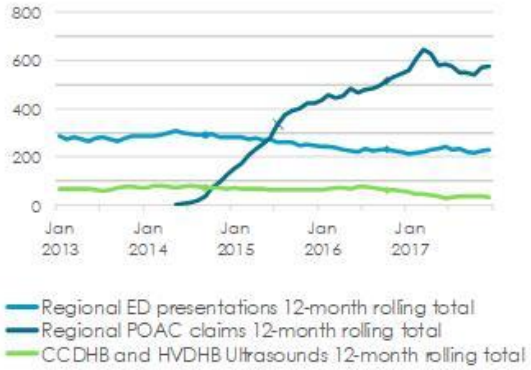
Benefits associated with use

PATIENTS
- Receive timely diagnosis of DVT and effective treatment in the community, rather than ED.

CLINICIANS
- Confident in diagnosis using ultrasound and treatment with anticoagulant. Integration with POAC funding.

SYSTEMS
- More DVT managed in the community, and capacity of primary care increased.
- Reduced demand on ED and specialist services.

Whole of system indicators



- The number of ED presentations has been decreasing since the pathway was localised.
- POAC claims have steadily increased since their introduction with a yearly average of 577 by March 2017 across the 3D region.
- The number of ultrasounds in CCDHB and HVDHB were consistent until late 2016, when they started to slowly decrease.

Summary

DVT is the most frequently searched for pathway and the second most viewed pathway. Its use by primary care is well established and reinforced by secondary care. Funding for ultrasounds and anticoagulants through POAC also supports use. Patients are now getting faster treatment in the community and there is reducing demand on ED.

12. SUMMARY: HEAVY OR IRREGULAR MENSES

Antecedents

- Inequitable access to pelvis ultrasounds to exclude/diagnosis serious causes via community radiology.
- Patient required FSA for ultrasounds and there was a wait up to 4 months.
- CCDHB had pre-existing pathway.

Use: Monthly page views

3rd 6,095 page views

10th 834 searches

MOST CLICKED ON
1 Menorrhagia = 1,253
2 Irregular bleeding = 178
3 Heavy menstrual bleeding = 132
4 Irregular periods = 132
5 Heavy bleeding = 131

Clinician Feedback

"It's an exemplary HealthPathways example – good practical steps not overloaded with information and linked to funding" - student GP

"I haven't used it but would consider it. I have other algorithms from other gynaes but HealthPathways are always useful" - GP

"I haven't used it. I wouldn't need to" - GP

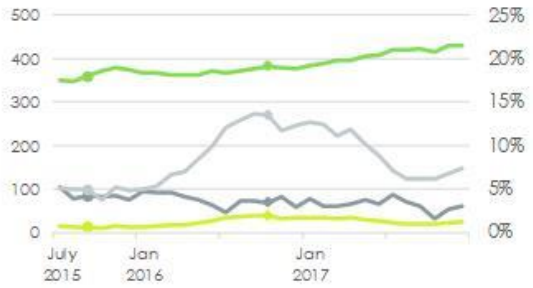
Benefits associated with use

PATIENTS
- Receive best practice care, including ultrasound for earlier diagnosis, in the community. Those needing a specialist appointment are seen sooner.

CLINICIANS
- Gynae pathways are well respected and used. GPs are confident that they are providing the best care, including ultrasound where indicated, and only referring to secondary services when necessary.

SYSTEMS
- Supports appropriate and timely referrals to secondary care.

Whole of system indicators



Regional Referrals 12-month rolling totals
CCDHB and HVDHB Referral to FSA Wait time 12-month rolling averages
CCDHB and HVDHB Rejected Referrals 12-month rolling totals
CCDHB and HVDHB % Referrals rejected - 12 month rolling totals

- The number of referrals for heavy or irregular menses has been increasing since localisation.
- Rejected referrals have always been low in numbers but the percentage rejected reduced from 14% to 7% between the pathway review and December 2017.
- The average wait time for first specialist appointment has been decreasing since September 2015.

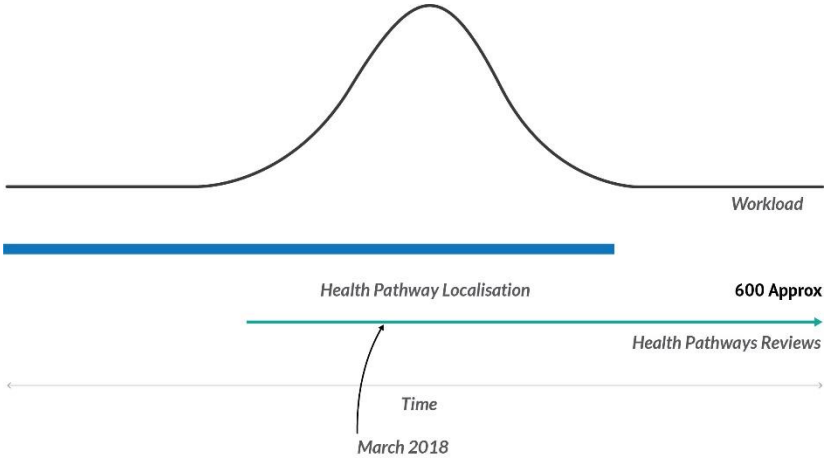
Summary

This is a highly used pathway, with use increasing over time. Use is linked to the funding for community radiology. Patients are being diagnosed earlier, referred to gynaecology as needed and have shorter wait times to see the specialist. The percentage of rejected referrals has halved since review but these numbers are small.

13. ONGOING PROGRAMME DEVELOPMENT

The process of localising pathways has been working well but is challenged by the next phase of work and the need to balance the tension between continuing to localise new pathways and the need to review those that are already due, or overdue, for review. Feedback from users conveys the real risk that out of date information will severely impact on the credibility the programme has built over the past four years.

The programme is also entering a new phase in terms of its focus on primary care's needs, and has an amended prioritisation process to support this. Balancing reviews with the continued benefits that can be anticipated through further localisations is the programme's key challenge over the next couple of years and requires the team to develop and communicate a strategy to support this phase of work, illustrated in the diagram below.



Work plan priorities and resourcing

An increase in resource, in the short term, would support the team to maintain and maximise the value and benefits of HealthPathways across the 3D region by continuing localisations and managing the review schedule. The programme has a history of managing within its resources and any increase in funding could be reviewed once this transition is completed, and the work programme ahead will be predominantly ongoing reviews.

Some of the additional resource is likely to include administration support but a work programme review would identify where capacity was most beneficial. Additional resource for administration could release the coordinator of routine administration tasks, support continuity for the programme and could contribute to longer-term succession planning.

Reviews

During this next phase, it is likely the process of planning and conducting reviews will be improved, as the team has experienced with pathway development. This will see the

team test, reflect and adapt the process of assigning reviews to administrative, low or high input workstreams that could begin as a desk top exercise. Unscheduled reviews are required when clinical or service changes affecting the pathway are made and there should be capacity in the work programme to respond to these requests. This will be an intense period for learning about managing reviews effectively and brings the opportunity to develop a triage and work process that stands the programme in good stead for its longer-term future.

Keeping on track

More regular and consistent quarterly monitoring of the work programme outputs, HealthPathways use and specific KPIs would help the team, and its Governance Group understand and account for ongoing progress. The most direct indicator of success is an increasing number of users and the increasing use of those users. A dashboard of simple high-level indicators that are reported in quarterly periods in a consistent manner will help track performance over this new phase. These should include

- Work programme indicators relating to the quarter as well as year to date
- Health Pathways utilisation indicators, such as user and page view growth.
- Efficiency indicators, such as cost per page view.

In addition to whole programme monitoring there can be pathway specific metrics to consider. Where pathways are developed to support specific changes (such as decrease in referrals to a specialist service) an audit framework that determines the feasibility and baseline measures of these indicators of success can be incorporated into annual monitoring and/or part of the review process. This will help demonstrate value from the use of HealthPathways and highlight areas for exploration where change has not occurred.

14. SUMMARY AND CONSIDERATIONS

By March 2018 there were 362 localised pathways and 2,712 users. The landmark of one million-page views was achieved in January 2018. HealthPathways are well established across the 3D region, working largely as intended and producing, or contributing to, the benefits expected for people, clinicians and the wider health system.

"It started off as something that was desirable. Now it's essential." (GP)

Development and implementation is working largely as intended.

HealthPathways development can be complex as it needs to reflect local protocols of three DHBs and the integration of a range of primary, secondary and community services. Learning from experience has enabled the process to become more efficient over time. The critical mass of localised pathways has created momentum that has led to more users and more use (160% increase in searches per user in the last three years and monthly page views increasing from 6,000 a month in May 2014 to 45,000 in March 2018), which has positioned HealthPathways as an important, if not essential, resource for primary care across 3D.

Used and valued for best practice guidance and local protocol information.

Clinicians value HealthPathways especially for their guidance in assessment, management and referral to secondary services and feel confident and supported in their clinical and treatment pathway decisions. Users regard HealthPathways as a highly credible source of information. The clarity provided by local protocols supports and improves communication between primary and secondary services.

Provides benefits to patients, clinicians and contributes to heath system outcomes.

The evaluation has highlighted HealthPathways role in facilitating care closer to home for patients, enabling clinicians to confidently provide best practice care, promoting an integrated approach across sectors and supporting system change.

HealthPathways are contributors to many whole of system indicators, such as ED presentations and wait time for first specialist appointments; the evaluation has demonstrated how these contributions are made. Attributing whole of system indicator change (or not) to the existence of a HealthPathways is misleading, simplistic and can shift the focus away from the value that pathway development and use adds. This reinforces the value of a mixed methods approach to understanding HealthPathways.

New programme phase will see ongoing development

The programme is entering a new phase with a focus on primary care needs and an amended prioritisation process to support this. Feedback from users conveys the real risk that out of date information will severely impact on the credibility of the programme that has built over the past four years. Balancing reviews with the continued benefits that can be anticipated through further localisations is the programmes key challenge over the

next couple of years. An increase in resource, in the short term, would enable the team to maintain and maximise the value and benefits of HealthPathways across the 3D region.

14.1 Considerations

The following considerations are presented as opportunities to consolidate and extend the benefits of HealthPathways for 3D.

Review work programme and KPIs

- Revise localisation goals as the requirements of the review programme (overdue, scheduled and unscheduled reviews) are understood.
- Initially prioritise overdue reviews based on use (to maintain credibly) and risk.
- Agree programme priorities and develop a two to three-year work programme.
- Focus KPIs around use and growing use. Use creates change and this should continue to increase in line (or better) with the number of localised pathways.

Resourcing for maximum efficiency

Additional resource for the programme will enable the Steering Group to expediate the localisation of pathways while addressing the review programme in this transitional phase.

Monitoring and reporting

A dashboard of simple high-level indicators that are reported in quarterly periods in a consistent manner will help track performance over this new phase. These should include:

- Work programme indicators relating to the quarter as well as year to date
- Health Pathways utilisation indicators, such as user and page view growth
- Efficiency indicators, such as cost per page view.

Other opportunities for enhancement

- Maximise opportunities for congruence with secondary care by involving service management and/or quality teams as well as clinicians in the process of localising and reviewing HealthPathways.
- Socialisation across the secondary care interface with primary care will help to further embed and align common processes.
- Once developed, review the uptake of culturally specific HealthPathway information, consider additional socialisation requirements and seek opportunities to routinely link other HealthPathway information to this resource.
- Identify mandatory aspects of pathways to differentiate from guidance.