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Case Report

On the right path? Exploring the experiences and opinions of clinicians involved in developing and implementing HealthPathways Barwon

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Abstract. The aims of this paper are to present the findings of a process evaluation exploring the experiences and opinions of clinicians who have been involved in the HealthPathways Barwon clinical workgroups and discuss implications for further development of the program, as well as regional health service initiatives more broadly. HealthPathways Barwon is a web-based program comprising locally agreed-upon evidence-based clinical pathways that assist with assessment, management and region-specific referral for various clinical conditions. Clinical workgroup members participated in focus groups. Coding and thematic analysis were performed and findings were compared with similar evaluations of HealthPathways in other jurisdictions. Five broad themes emerged from the focus group, each with several subthemes: (1) purpose of HealthPathways; (2) workgroup process; (3) barriers and facilitators to HealthPathways use; (4) impact of HealthPathways on clinical practice; and (5) measuring performance. Findings of particular interest were that the perceived drivers for implementation of HealthPathways Barwon are broad, HealthPathways Barwon is viewed positively by clinicians, the workgroup process itself has a positive impact on relationships between primary and secondary care clinicians, existing habits of clinicians are a major barrier to adoption of HealthPathways Barwon, the sustainability of HealthPathways Barwon is a concern and it is difficult to measure the outcomes of HealthPathways. Although HealthPathways Barwon is viewed positively by clinicians and is seen to have the potential to address many issues at the primary–secondary care interface, successful implementation and uptake will depend on buy-in from clinicians, as well as continuous evaluation to inform improved development and implementation. More broadly, health service initiatives like HealthPathways Barwon require longer-term certainty of funding and administration to become established and produce meaningful outcomes.

What is known about this topic? HealthPathways is a program that has been implemented in Canterbury, New Zealand, and several regions in Australia. Early evaluations in these jurisdictions have found that measuring the impact of the program is challenging, and there is little evidence of the program's influence on health system performance indicators such as waiting times. However they have found some evidence of improved collaboration between primary and secondary care clinicians and improved clinician experience in providing patient care.

What does the paper add? This case study outlines a potential method of evaluation of HealthPathways, as well as some early evidence regarding the experiences of those developing, implementing and using the program in the Barwon region in South-West Victoria.

What are the implications for practitioners? HealthPathways Barwon may impact positively on clinician-clinician relationships and confidence, however getting more clinicians to use the program may require identification of ways to better incorporate HealthPathways use into their existing clinical information sourcing and referral routines. Additionally, HealthPathways Barwon's future depends on recruitment of more clinicians to develop and update pathways.

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Introduction

The primary care reform agenda in Australia prioritises improving coordination of services, greater timeliness of referrals, minimising duplication and improving efficiency of organisational arrangements.[1] It has been argued that the current healthcare system in Australia often delivers fragmented care for patients and that greater collaboration between primary and secondary care sectors is needed.[2,3]

A needs analyses performed by the Barwon Medicare Local identified several issues regarding the primary and secondary care interface within the Barwon region in south-west Victoria (comprising the City of Greater Geelong, Surf Coast Shire, Golden Plains Shire (South East), Colac Otway Shire and the Borough of Queenscliff). These include inefficient referrals from primary to secondary care, long waiting lists for outpatient services, difficulty navigating local services and unnecessary follow-up visits with specialists.

HealthPathways is a low-cost web-based intervention developed in Canterbury, New Zealand.[4,5] It has been purchased by the Barwon Medicare Local (as well as by health services in other Australian regions[6,7]) and adapted to address Barwon region needs.[8] HealthPathways Barwon involves collaboration between Barwon Medicare Local (the primary funders of the program) and Barwon Health (the region's hospital and health service), local general practitioners (GPs), specialists, allied health professionals and nurses. Small groups of these stakeholders, known as 'HealthPathways workgroups', develop locally agreed-upon evidence-based clinical pathways that assist with assessment, management and region-specific referral for various clinical conditions. The clinical pathways are available to local clinicians via a password-protected web-based portal. Steps in development and implementation of HealthPathways, including the role of clinical workgroups, are summarised in Box 1. Proposed benefits include GP empowerment, easier navigation of the local health system for health professionals, better quality referrals, more efficient use of local resources, reduced waiting times, greater collaboration between clinicians and improved patient care.[2,6–8]

Research and evaluation based on the clinical quality audit cycle is integral to the development and implementation of HealthPathways Barwon (see Fig. 1).[9] HealthPathways Barwon went 'live' on 1 August 2013 with localised pathways in orthopaedics and paediatrics; localised pathways in other areas are continually being added (Appendix 1).

Case study

This case study outlines findings of a process evaluation assessing the experiences and opinions of clinicians who have been involved in the HealthPathways Barwon orthopaedic and paediatric workgroups. The implications of the findings for further development of the HealthPathways program and future evaluations are

Box 1. Development and implementation of HealthPathways

- Health service areas requiring system improvement are identified by regional strategic planning bodies
- Clinical workgroups related to these priority areas are created comprising around 8 to 10 members, including general practitioners (GPs), specialists and allied health
- Workgroups identify factors that impact on their ability to provide optimal patient care and possible mechanisms to address this, including development of HealthPathways
- Workgroups identify topics for HealthPathways development (e.g. 'hip osteoarthritis', 'constipation in children')
- 'Content experts' localise clinical pathways based on the topics identified by workgroups, using the original New Zealand Pathways[4] as a template
- Pathways are presented to the clinical workgroups for feedback and refining
- Finalised pathways are added to the HealthPathways Barwon web portal and updated regularly
- GPs are made aware of the program via practice visits and educational activities
- Research and evaluation regarding processes and outcomes of HealthPathway feed into the continuous quality improvement cycle

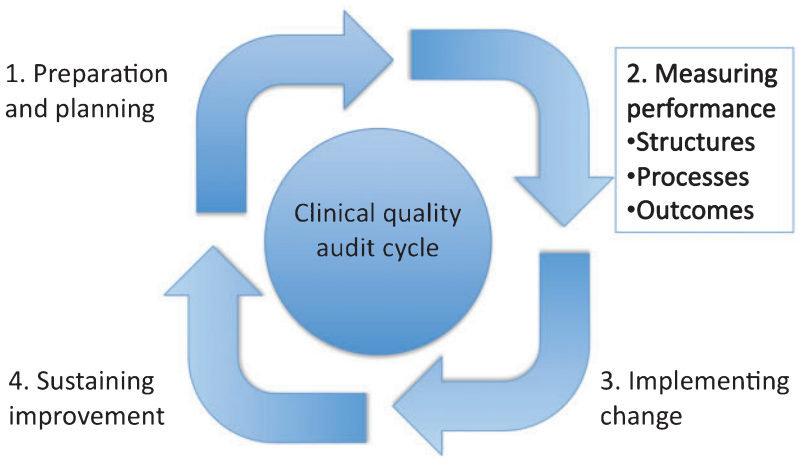

Fig. 1. Clinical quality audit cycle (adapted from Bullivant and Corbett-Nolan[9]).

presented, as well as lessons for those involved with regional health service programs more broadly.

Methods

Setting

The Barwon region, located in south-west Victoria, Australia, has a population of over 271 000. It is serviced by 358 GPs, 229 specialists, Barwon Health and Barwon Medicare Local.[10]

Participants

Two focus groups were conducted, comprising the members of the first two clinical workgroups for HealthPathways Barwon: orthopaedics and paediatrics. The orthopaedics workgroup was made up of two orthopaedic surgeons, six GPs and two HealthPathways administrative staff. Eight of these participated in the focus group session (two GPs were unable to attend). The paediatric workgroup had two paediatricians, a coordinator of local paediatric services, six GPs and a HealthPathways administrator. Seven participated in the focus group session (one paediatrician and two GPs were unable to attend).

Research team

The research team comprised a GP registrar (the primary investigator, SM) and an academic GP (GG) who were potential end-users of HealthPathways. In addition, there were two members of the HealthPathways Research and Evaluation Committee (FQ, KvT) (both academics and psychologists) who were not end-users of the program.

Methodology and sequence of events

In March 2014, members of the orthopaedic and paediatric workgroups were invited by email to take part in focus groups (participant contact details were obtained from the coordinator of the workgroups who was not a member of the research team). Participation was voluntary, and informed consent was obtained.

Broadly, the following research questions were addressed:

- What are participants' views about the HealthPathways concept and perceived reasons for implementation?
- What are participants' reflections on the HealthPathways workgroup process?
- What are the experiences of participants as end-users of HealthPathways?
- What do participants perceive to be the barriers and facilitators to use of HealthPathways for GPs in the Barwon region?
- What ideas do participants have about how to measure the outcomes of HealthPathways?

The specific focus group questions (available on request from the authors) were adapted from those used in a similar process evaluation undertaken by BMcD Consulting of Hunter and New England HealthPathways in New South Wales.[7] We elected to use these questions in order to enable comparison of outcomes across jurisdictions. Similarly, the methodology used in the present study (thematic analysis of focus group data) reflects that used by BMcD Consulting in their analysis.

In April 2014, two 60-min focus groups were conducted by two of the research team members: one of the academic psychologists (FQ) (with extensive qualitative research and facilitation experience) was the facilitator and audio recordings and field notes were taken by the primary investigator (SM). Recordings were transcribed and de-identified. Coding and thematic analysis were performed using Dedoose software (SocioCultural Research Consultants, LLC. Manhattan Beach, CA, USA), initially by the primary investigator, and repeated by another member of the HealthPathways Research and Evaluation Committee (who was not part of the research team) to improve qualitative rigour. A preliminary coding exercise was undertaken by the primary investigator, where every comment made by participants was applied a code indicating the theme of the content. Comments containing multiple themes were applied multiple codes. This was revised and refined several times by the initial coder, before providing the code lists to the other coder, who applied them to the same data to check for agreement. Coding was again revised in light of this. The final codes were considered our 'subthemes' (see Table 1). The subthemes were then grouped together under five major themes reflecting the five key research questions (see above).

Ethics approval for this study was obtained from the Barwon Health Human Research Ethics Committee (HREC) (14/25) and Deakin University HREC (2014077-141030).

Results

The five broad themes from the focus groups each had several subthemes (Table 1). For each of the major themes reflecting the five key research questions, selected subthemes of particular interest to the investigators are presented below.

Purpose of HealthPathways

Clinicians were able to identify a broad range of reasons for implementing HealthPathways, including perceived inefficiencies in the referral process, a need for a local health service directory, an opportunity for professional education and a need to improve local resource use. Some discussed the impact they believed it may have on the patient experience.

> It means different things for different patients. So it might be they didn't know where to go before hand and somebody has made a plan for them that actually makes sense. It might be that the condition has been explained to them. It might be that they have gone down a course of action that's actually saved them a lot of grief in the future because of the actions of the practitioner who sourced the HealthPathway and then sent them to the right person. (Specialist 2)

Workgroup process

Overall, participants reflected positively on their experience of the workgroups, their composition and the roles undertaken by specialists and GPs. Both groups identified sustainability as an issue with regard to keeping the pathways up to date. The orthopaedics group questioned the model of pathway writing, citing concerns about the workload on a small number of individual clinicians as the number of pathways grew.

> And it would fall on the same people to do it again and again and again and that becomes a bit difficult. And people get, you know you get a bit disengaged if you keep doing it. (Specialist 1)

Table 1. Themes, subthemes and frequency of subthemes from the HealthPathways clinical workgroups focus group study
GPs, general practitioners

Major themes	Subthemes (code frequency per 302 coded excerpts)
Purpose of HealthPathways	• Standardise care (4) • Improve patient experience (11) • Enhance collaboration between GPs and specialists (6) • Encourage appropriate use of resources (15) • Improve referral process (11) • Provide professional education (10) • Provide information relevant to the local GP context (6)
Workgroup process	• Scope of work groups (6) • Topic selection (11) • Facilitation (6) • GP vs specialist role (11) • Work group composition (20) • Sustainability (15) • Group dynamics and participant experience (22)
Barriers and facilitators to HealthPathways use	• Time (9) • Integration with other systems and resources (7) • Habit and motivation to change (9) • Accessibility and ease of use (14) • Usefulness of content (9) • Awareness (22) • Ownership and applicability to primary care context (6) • Environmental factors (5)
Impact of HealthPathways	• Relationship between GPs and specialists (10) • Patient confidence in GPs (6) • GP confidence and knowledge (5)
Measuring performance	• Difficulties with measurement (15) • Load on secondary and/or tertiary services (7) • Economic evaluation (1) • HealthPathways utilisation data (5) • Feedback from end-users (18)

At a macro level, there were concerns about the sustainability of the program following the abolition of Medicare Locals and establishment of the proposed Primary Health Networks.

Barriers and facilitators to HealthPathways use

The most common barrier to the use of HealthPathways was a lack of awareness about the program, and participants discussed different ways to better promote it.

> I think as yet though not everybody is aware of this project. I think there are practices out there who are not aware of this to the extent that, that it's been shown in the utilisation data. (Specialist 1)

In addition, existing habits of clinicians were identified as a barrier to adoption of HealthPathways. Five of the eight GP participants stated that they did not use HealthPathways often because it was not part of the suite of resources they thought to use when faced with questions in clinical practice, because it required accessing a separate web program that was not part of their usual routines or because they did not question their clinical habits.

> I haven't used it much I'll be honest. I just don't think to use it that much. The bits I've looked [at] I think have been good but it's just not something I think of to use. I've already got other resources I guess I'm used to using and it's just a matter of reminding myself that it's there. (GP2)

> . . .unless you actually wanted the change or think 'is this right?' and actually go and look at the pathways then you probably still look at going your old way. (GP1)

Impact of HealthPathways

Despite identifying barriers to implementation and use (including accessibility of the web portal, time and uncertainty surrounding the future of Medicare Locals), the clinicians in both groups reflected positively about the impact of HealthPathways on their confidence and knowledge.

> I think it gives me confidence when I'm referring patients, because I think, oh, I've done all this and I can confidently refer them. So, it actually gives me confidence in knowing that it was an appropriate referral. (GP7)

In addition, both groups stated that they felt relationships between members of the workgroups had benefited from working

together, improving their understanding of the issues faced by other health professionals and building personal connections.

> The actual process of the working groups has been a really important mechanism to bring parties that really don't have much to do face-to-face, together, and the subtlety of that is that it allows everyone to understand the other person's, or the other craft group's position. (GP5)

Measuring performance

Although both groups agreed that evaluation of HealthPathways was critical, particularly getting feedback from end-users, they acknowledged that measuring many outcomes of the program, such as the impact on waiting times, patient experience, referral quality and resource use, was problematic because of attribution issues and difficulty identifying appropriate methodologies.

> One of the criticisms with that though is. . .whether we have an outcome measure that will allow us to do anything other than subjectively say 'oh yeah I think it's been good', whatever that might mean. (Specialist 2)

> . . .it's harder for us, certainly at the hospital clinical end, to actually say yet whether the patients are being better referred or not so well referred. . .I think it's harder to measure that. (Specialist 3)

Discussion

Comparison with other jurisdictions

Similar evaluations have been undertaken and continue to take place at other Medicare Locals in Australia,[6,7] enabling comparisons. In particular, we structured our focus group questions around those used in the Hunter and New England HealthPathway program evaluation.[7] Comparing findings revealed the following.

- The perceived purpose of HealthPathways was similar. Focus groups identified that HealthPathways could deliver a range of benefits, such as shorter waiting times, more efficient referral processes, less duplication and better communication.
- Both evaluations found that the HealthPathways work group process itself had a positive effect on the relationship between GPs and specialists.
- In terms of factors that may influence its future success, the Barwon groups did not discuss leadership, which was a strong theme in the Hunter New England groups.[7] However, there were similar findings regarding the need for promotion, good pathway design and feedback from users.
- The issue of accessibility being limited by password protection came up in both regions, but the Hunter New England groups had substantially more discussion about e-referrals and integration with other software and systems.[7]

Lessons and future challenges

There are key lessons to be learned from the present case study for others implementing local health service initiatives. First, collaboration with other groups evaluating similar initiatives can provide ideas about what to evaluate and how, and yield useful comparative data. Second, health service initiatives like HealthPathways require longer-term predictability of funding, administration and jurisdictional boundaries in order to fully develop and yield meaningful outcomes. The impending abolition of Medicare Locals has created tremendous uncertainty. Without longer-term certainty, the incentive for future health service organisations to invest in such initiatives may be diminished.

Several future challenges for HealthPathways Barwon emerged from our evaluation. First, increased awareness was identified as essential to improving uptake of HealthPathways. A variety of mechanisms was proposed to support this. However, as seen in the responses of our focus group members, who were aware of HealthPathways, a significant number still did not use it because of habit. This is a commonly identified barrier in international studies of factors affecting GP use of guidelines.[11–13] Further exploration of this issue is required, but the findings of the present study suggest that mechanisms to incorporate HealthPathways into GPs' existing routines need to be developed. Arguably, at least part of the success of the Canterbury Initiative lies in the integration of HealthPathways with a local e-referral system; integration with technologies that Barwon GPs already routinely use could be one way to address the 'habit' barrier in the Barwon region.

Second, the sustainability of pathway writing, editing and updating was an important issue for our groups, and the workload will need to be fairly distributed as the number of pathways grows. This will require expansion of the clinician group involved.

As identified by the groups in the present study and anticipated by those evaluating HealthPathways in other regions, measuring the performance of HealthPathways is challenging, partly because of attribution difficulties. Although usage data can give some indication about uptake of HealthPathways (eg number of page views, number of new computers accessing HealthPathways) and feedback from users can provide some indication of its utility, measuring its effect on relationships, the local health system and patients is much more challenging.

Future research may include repeating the focus group process in other clinical work groups in both the Barwon region and other Medicare Locals. We are currently developing and undertaking several other process and outcome evaluations (findings yet to be published).

Limitations

The present study had several limitations. The number of focus group participants was small and the focus of the study was very context specific, limiting the generalisability of the findings. The range of topics explored was broad and covered in a short time, limiting depth of discussion. Interpretation of the findings by the primary investigator may have been influenced by their personal experiences of using HealthPathways, and more generally by their biases as a doctor. To counter this, independent investigators who were familiar with HealthPathways but not doctors or users of the program also undertook coding, but they too may have brought their own biases to the interpretation. Because of time and resource limitations, it was not possible to undertake further rounds of code refinement, which may have improved the rigour of the findings.

Conclusion

HealthPathways Barwon is a simple low-cost intervention that may address several health system challenges at the interface between primary and secondary care in the Barwon region. Through the present early evaluation, we identified that although clinicians view HealthPathways positively, its development and implementation relies heavily on human resources and its ultimate impact depends on use by GPs. The findings suggest that lack of GP awareness and incorporating HealthPathways use into their clinical routines are important challenges. Ongoing evaluation is important to identify the best ways of ensuring sustainability and uptake of the program, identify outcomes related to the effect on patient care and provide lessons for other regional health service interventions.

Competing interests

None declared.

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Appendix 1. HealthPathways clinical streams and localised pathways (as of 19 December 2014)

GORD, gastro-oesophageal reflux disease; UTI, urinary tract infection; CAP, community-acquired pneumonia; EVD, Ebola virus disease; OA, osteoarthritis; AC, acromioclavicular; ACL, anterior cruciate ligament; DDH, developmental dysplasia of the hip; THR, total hip replacement

Clinical stream	Localised pathways
Allied and community health	• Refugee health • Wound care referrals • Weight management in obese adults
Child health	• Asthma in children • Audiology referrals • Behavioural concerns in children • Child neurophysiology referrals • Community child health clinic • Constipation in children • Croup • Developmental concerns in children • Early childhood intervention and counselling (private providers) • Enuresis in children • Eczema in children • Food hypersensitivity • Gastroenteritis in children • Heart murmurs in children • Immunisation (childhood) • Developmental milestones • Reflux and GORD • Unsettled infant • UTI in children
Medical	• Absolute cardiovascular disease risk assessment • Cellulitis • CAP in adults • EVD • OA
Mental health	• Child and youth mental health assessment • Eating disorders • Managing alprazolam-dependent patients • Pregnancy and post partum mental health • Mental health support services • Opioid dependence • Suicide and self harm
Older person's health	• Older people with behavioural disorders
Orthopaedics	• AC joint disease (OA) • AC joint injury • ACL injury • Clavicle fracture in adults • Collateral ligament injuries • Child with a limp • DDH • distal radius fractures in adults • fracture management • frozen shoulder • isolated proximal radius fractures in adults • low back pain • hip and knee joint replacement • Hip OA • Knee OA • Meniscal tear • Patella injuries • Perthes disease • Potential problems following THR • Proximal humeral fractures • Rotator cuff disorders • Shaft forearm fractures in adults • Shoulder dislocation • Shoulder instability (chronic) • Shoulder (glenohumeral) OA • Shoulder joint replacement • Shoulder pain • Slipped upper femoral epiphysis
Our health system	• Return to work
Surgical	• Painful scrotum • Painless scrotal lumps in adults • Urinary incontinence in women • Continence specialist services
Women's health	• Gynaecology assessment

(*continued next column*)

Appendix 1. (*continued*)