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Implementing HealthPathways across Queensland: a case study

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Glossary

CED	Clinical Excellence Division of Queensland Health, responsible for delivering CPC
CPC	Clinical Prioritisation Criteria for referral to specialist outpatient services
GP	General Practitioner
HHS	Hospital and Health Service organisations
PHN	Primary Health Networks

Executive summary

Background

HealthPathways is a platform that provides tailored, locally relevant guidance to general practitioners on the management of conditions in the community and referral to specialist hospital services. HealthPathways is intended to increase the consistency of referral patterns, avoiding unnecessary referrals where patients can be managed in primary care, and freeing up resource to increase access to specialist care for those patients who need it.

This case study aims to describe the implementation of HealthPathways in the Australian state of Queensland. Queensland presents an interesting case because HealthPathways was implemented within a policy context of addressing equity of access to care, within the wider context of a state Outpatient Strategy and Clinical Prioritisation Criteria. HealthPathways in Queensland were, uniquely, developed in a collaborative manner across the state, with Queensland Health taking a central role in funding the HealthPathways license and providing facilitation and support for localities.

Inappropriate variation in referral to specialist services is a problem for health services around the world. HealthPathways was designed to address variation by providing relevant localised information for managing patient conditions that is written by local clinicians, that conforms to best practice guidelines and is backed-up by continual feedback, three-yearly reviews, and where necessary clinical audit. Rather than being a traditional guideline, each pathway is therefore an agreement between primary and specialist services on how patients with particular conditions will be managed in the local context, in light of clinical evidence and realistically available health care resources.

The Queensland Specialist Outpatient Strategy was released in 2016. One of the main elements of the strategy was to develop consistent referral practices and standards across the state, which led to the development of Clinical Prioritisation Criteria (CPC) by a series of Queensland wide Clinical Advisory Groups. HealthPathways was selected as a tool to support the implementation of CPC in local areas. Implementation began with four proof of concept areas, covering two metropolitan and two regional sites. Further rollout took place in 2018, with mentoring from the proof of concept sites. Since then all but two localities across Queensland have implemented HealthPathways to some degree.

The case study was conducted through interviews with stakeholders at the proof of concept sites and in Queensland Health, including clinicians, management and central agency staff. Further information was provided by Queensland Health and two proof of concept sites.

Findings

Main themes identified from interviews included:

1. HealthPathways appears to have served a key role both in implementing CPC in an effective manner, and in taking CPC to GPs who might in other circumstances have rejected prioritisation criteria as a narrow demand management exercise;
2. There was extensive, resource intensive, engagement with general practitioners, and this was essential to the success of the programme;

3. The process of developing pathways represented a mechanism for Hospital and Health Services (HHSs) and newly formed Primary Health Networks (PHNs) to develop constructive working relationships with a common goal. This relationship building applies both at the level of clinician to clinician liaison, and at the executive level of the organisations. Statewide relationships, including a regular meeting of coordinators, provide for sharing experiences and diffusing approaches;
4. Different localities vary in their approach to clinical editing of pathways, but there is also a degree of sharing experience and learning from other localities;
5. Consistent statewide CPC are most successfully implemented when local needs and configuration of services are taken into account;
6. Queensland Health has struck a successful balance between central leadership, giving a mandate for change and funding HealthPathways licences, while not intruding upon local implementation;
7. While quantitative data on impacts are still sparse, there are early indications in some localities that HealthPathways is increasing the proportion of outpatient referrals that are consistent with CPC, and moderating the overall increase in referrals.

Conclusions

In the implementation of HealthPathways across Queensland to date, HealthPathways has played an important role in delivering CPC across a number of diverse localities, achieving the support of front line clinicians for a change that could, in other circumstances, have been confronting and controversial. It has provided a basis for developing working relationships across the historically siloed primary/secondary divide, both among clinicians and across organisations. The platform of improved relationships and local engagement in a change process provides a basis for further service development and change programmes.

This success has been achieved because of the significant effort and resource devoted to front line clinical engagement, particularly with general practitioners. This front line resource has been committed in the context of clear central leadership and a mandate from Queensland Health, but in a permissive local environment for implementation. Queensland Health's decision to fund the licence fee and to mandate HealthPathways for the state as a whole provided direction for local primary and secondary care organisations to work together to achieve a shared goal of reducing variation and improving the quality of referrals.

There are four key lessons from the Queensland experience for other health jurisdictions:

- The importance of achieving local engagement and trust with front line clinicians in order to deliver upon a large scale policy goal;
- The level of resource needed to achieve successful local engagement;
- Statewide leadership and mechanisms for sharing local experience, combined with a permissive approach to local implementation is likely to maximise the value achieved from implementing HealthPathways;
- Sharing the burden of the resource needed for implementation at state and locality levels produces a strong incentive to make HealthPathways work as effectively and efficiently as possible.

The Queensland case provides an example of managing the perennial challenge of achieving consistency in health services, while allowing for local variation where appropriate. To some extent this is a microcosm of the wider challenge for the growing HealthPathways community, which increasingly has to balance variation in approach in each HealthPathways locality with efficient sharing and coordination across localities. The emerging experience in Queensland provides a useful basis for developing HealthPathways more widely.

1. Background and approach

1.1 Aims

This case study aims to describe the implementation of HealthPathways in the Australian state of Queensland. HealthPathways has been implemented in a number of jurisdictions in New Zealand, Australia and the United Kingdom, but there were several specific aspects of the Queensland implementation that are potentially interesting for other states and countries.

Firstly, the policy context in Queensland had an explicit focus on issues of equity of access to care, and HealthPathways was chosen as one of a number of tools to support a wider strategy for improving access to specialist outpatient services. The explicit policy goals in Queensland mean that the expectations of HealthPathways as it was implemented were particularly clear, representing a chance to assess implementation against those goals.

Secondly, the state specifically encouraged its local regions to implement HealthPathways in a collaborative manner, rather than in a piecemeal and potentially competitive way. This is an important difference from other implementations of HealthPathways. Before implementation stakeholders saw both strengths and risks to this approach. This study is an opportunity to assess those prior views about large scale implementation, to find out whether and how risks were managed, and to identify the challenges of large scale implementation and how they were addressed.

Thirdly, the Queensland example is widely considered to be a successful implementation of HealthPathways. Since HealthPathways is not always successfully adapted to new localities, this appeared to be an opportunity to identify aspects of implementation that are likely to be associated with success.

This project is a descriptive case study of an implementation of HealthPathways. It is intended to describe the process of implementation, to identify issues and establish how they were addressed. It records the views of a wide range of stakeholders about the impact of implementing HealthPathways, but does not undertake any original analysis of quantitative data on impacts. The issues and impressions recorded in this case study are complementary to other evaluation activities across Queensland, many of which are engaged in collecting and analysing service data to establish quantitative impacts. However the themes identified in this case study may serve to define specific research questions for other evaluations of HealthPathways in Queensland and elsewhere.

1.2 The challenges of variation and access to services

Unexplained variation in the delivery of health care is a pervasive challenge for health systems around the world. Unexplained variation arises where differences exist in health services between individual patients, or across whole geographic areas, and where those differences cannot be explained by patient preference, patterns of need, or clinical evidence. The existence of variation challenges the assumption that the utilisation of health care is

determined by medical science and health need, and therefore presents a stark challenge to health planners (Wennberg 2016).

Variation raises difficult questions about the consistency of quality of care, equitable access to care, and efficient use of health care resources. These issues are central challenges for health services in all countries. The challenge of providing care equitably and efficiently, with consistent levels of quality, underpins the central goal of many health systems. This means that mechanisms to identify and reduce variation are widely pursued by health planners. These issues are a challenge in Australia as much as in most other health systems (Buchan et al. 2016).

One common approach is to explore variation data and make unexplained variation more transparent, both to patients and to clinicians, motivating efforts to reduce variation (Westert 2018). Wennberg's original Dartmouth Atlas of Variation has spawned a number of variation atlases around the world, including examples in Australia¹ and New Zealand.²

Another frequent approach to addressing issues of variation, is to introduce standardised guidelines or templates, constraining clinical decisions to conform to more standard patterns. Developing and implementing guidelines has become a major activity in many health systems, although guideline implementation is often difficult. A recent review of guideline implementation literature noted a range of barriers to the uptake of guidelines (Fischer 2016). Important factors included:

- Personal factors, such as physician's knowledge and attitudes, learning culture, self-efficacy and awareness;
- Guideline related factors, such as lack of evidence and plausibility, poor layout, lack of applicability (especially to complex patients), lack of access to guidelines; and
- External factors, such as organisational and time constraints, lack of collaboration and the existence of local clinical and social norms.

These barriers are complex and multifactorial. Addressing the uptake of clinical guidance therefore requires a coherent effort on several fronts at once: to work with clinicians on aspects of how they think of and use clinical evidence, to ensure that guidelines are plausible and are relevant to clinicians' decision making, to make guidelines well laid out and accessible, and to ensure that all the clinicians involved in the care of a patient have the time, resources and interdisciplinary connections to use the guideline information effectively. Doing all these things effectively is a very complex task that requires dedicated resource, the close involvement of clinicians, and technical expertise in information management.

1.3 HealthPathways

HealthPathways was originally developed in Canterbury, New Zealand in 2008 in a collaboration between Canterbury District Health Board (CDHB) and Streamliners, a firm with a high level of expertise in technical writing and document management. The original

¹ <https://acsqhc.maps.arcgis.com/home/index.html>

² <https://www.hqsc.govt.nz/our-programmes/health-quality-evaluation/projects/atlas-of-healthcare-variation/>

goal of HealthPathways was to provide guidance to general practitioners on referral to specialist hospital services, increasing the consistency of referral patterns, avoiding unnecessary referrals where patients can be managed in primary care, and freeing up resource to increase access to specialist care for those patients who need it. The approach is both to reduce variation in referral and to provide advice for general practitioners to manage conditions in the community that might otherwise have been referred for specialist assessment, reducing variation in the management of conditions in the community.

HealthPathways was designed to address barriers to the use of guidelines by providing relevant localised information written by local clinicians, that conformed to best practice guidelines and was backed-up by continual feedback, three-yearly reviews, and where necessary clinical audit. Rather than being traditional guidelines, each pathway is therefore an agreement between primary and specialist services on how patients with particular conditions will be managed in the local context, in light of clinical evidence and realistically available health care resources.³ This means that the development process for each pathway involves a multidisciplinary group of general practitioners, specialists and other professionals as appropriate, who can debate and refine advice. This process is key to ensuring that pathways are locally relevant, and that the development process for the pathway is transparent to local colleagues.

In Canterbury the original implementation of HealthPathways has reached a high level of usage, with 99% of general practitioners accessing pathways on a weekly basis, and 70% accessing them on a daily basis. When surveyed, 71% of hospital clinicians agreed that HealthPathways has increased general practice management prior to referral, and 69% of hospital clinicians agreed that it had improved the quality of referrals (McGeoch 2015).

HealthPathways has been actively used in Canterbury to support the management of conditions in the community rather than in secondary care. Examples include a sleep assessment service (Epton 2017), skin cancer management (McGeoch, Sycamore et al 2015), postmenopausal bleeding (Stravens 2016) and respiratory conditions (Epton 2015). Safe and effective implementation of these initiatives depends upon the discipline of consistent referral criteria, and the provision of reliable clinical information for primary care clinicians.

Following the original CDHB implementation, HealthPathways has been adopted by District Health Boards across New Zealand, as well as a number of health jurisdictions in Australia and the United Kingdom. There are now over 40 instances of HealthPathways influencing the care and treatment of over 25 million people. In each case primary care and hospital care organisations have formed partnerships to jointly localise HealthPathways, involving local clinicians in tailoring best practice advice to local circumstances. These organisations form a HealthPathways Community, that enables them to share knowledge, processes, pathways, and infrastructure.

While the clinical development process for HealthPathways is heavily reliant upon local clinical involvement and strong local relationships, the main infrastructure for HealthPathways is managed in a tightly disciplined and well structured central system. All members of the HealthPathways Community share a common platform provided by

³ <https://www.healthpathwayscommunity.org/About.aspx>

Streamliners. The common platform enables the efficient sharing of pathways between members, and cost effective technical writing, publishing, and system administration services. In effect, when local clinicians, led by a clinical editor, agree upon content for a pathway, they request a technical writer at Streamliners to add the information to the implementation of HealthPathways for their area. This means that information in HealthPathways is consistently structured and set out, and that the careful design of each pathway, to make it most accessible to a busy general practitioner, is maintained consistently across all pathways. Streamliners manage the web-based instances of all HealthPathways, wherever in the world the local health system may be. This also facilitates robust version control as pathways change and are updated.

The HealthPathways approach embodies a carefully designed balance between, on the one hand local engagement with clinicians, to ensure relevance, transparency and confidence in the content, and on the other hand a robust, consistent, centralised process that brings discipline and in turn also generates confidence and trust in the material delivered to individual clinicians. This combination of local and centralised elements is a key aspect of HealthPathways, and is considered by the original developers of the system as crucial to its success.

Not all implementations of HealthPathways meet their goals. An analysis of the implementation of HealthPathways in a New Zealand District Health Board found that while the standard centralised web presentation of pathways was seen by some users as a good product, the process of pathway localisation was not performed well. Pathways originally developed for CDHB were rebadged locally without substantive conversation among clinicians about what should be changed and tailored to local circumstances, and with generally poor clinical engagement in the pathway development process. This failure to undertake effective localisation took place in an atmosphere of distrust between general practitioners and the DHB, lack of familiarity between primary and secondary care clinicians, lack of resource to support implementation, and a lack of managerial support (Stokes et al. 2018).

Implementing any one instance of HealthPathways successfully is not an automatic proposition. A case study that can illustrate aspects of a successful implementation has the potential to support future implementations, and to inform the future approach of Streamliners as it continuously develops its support for the expanding HealthPathways Community.

2. Queensland context

2.1 Health system and policy settings

Australia's health system has a complex structure. The Australian Government at national level has responsibility for primary care, funding General Practice on a largely fee for service bases through the Medicare Benefit Schedule. Individual states and territories are responsible for managing and jointly funding public hospitals, preventive services and community health services.

Primary care has seen considerable change in organisation in recent years, as different approaches have been taken to developing mid-level structures to coordinate general practice. Divisions of General Practice gave way in 2010 to 61 Medicare Locals across Australia, intended to give a stronger focus to population health, planning and local accountability (Robinson et al. 2015). Medicare Locals were in turn replaced by 31 Primary Health Networks in 2015, which were charged with “increase the efficiency and effectiveness of medical services for patients, particularly those at risk of poor health outcomes, and to improve coordination of care to ensure patients receive the right care in the right place at the right time”.⁴ There are six PHNs in Queensland.

At the state level Queensland Health is organised as the Department of Health, and 16 Hospital and Health Services (HHSs), each of which is a governed by its own board and managed by a health service Chief Executive. The HHSs are geographically defined, with the exception of the state wide children's health service.

A Queensland Specialist Outpatient Strategy was released in 2016. The main elements of the strategy were:

1. Developing consistent referral practices and standards across the state.
2. A service directory identifying services for GPs.
3. Electronic referral management systems.
4. New models of care.
5. More specialist outpatient services.
6. More telehealth specialist services.
7. Online booking tools.
8. Timely elective surgery will be provided.
9. Following elective surgery, clinically appropriate specialist follow-up care will be available.

⁴ <http://www.health.gov.au/internet/main/publishing.nsf/Content/PHN-Background>

10. GPs will be able to look at patient hospital information
11. Performance measures that are transparent and regularly reported

The strategy was a response to a widespread perception that specialist outpatient services were in crisis with over 200,000 patients on waiting lists, substantial variation in incidence of referral, and great variability in the quality of referrals.

One of the main pillars of the outpatient strategy was the development of Clinical Prioritisation Criteria (CPC). These are transparent minimum referral criteria, applied state-wide, to support equitable and appropriate prioritisation of access to public specialist outpatient services. CPC were intended to reduce the number of referrals accepted with insufficient clinical information, and to improve the standardisation of the triage practices and patient categorisation. CPC were developed by Clinical Advisory Groups, drawing upon expert clinicians to debate the issues of access and referral in light of their knowledge of clinical evidence. Membership of Clinical Advisory Groups was through an expression of interest process, and involved over 600 clinicians across more than 20 specialties. CPC are published on the Queensland Health website.⁵

Clinical Excellence Queensland is the division of Queensland Health charged with implementing the Outpatient Strategy. This division is broadly responsible for clinical engagement, service development and service improvement across Queensland. It has an active front line presence with HHSs across Queensland, working at the level of policy development as well as on ground level implementation of service change.

2.2 Early adoption of HealthPathways and other tools

HealthPathways has been implemented in individual areas in different parts of Australia for some years, with early examples in Hunter New England and Western Sydney. HealthPathways was therefore known to some health planners in Queensland, and there were several interactions between HealthPathways and Queensland health services before the statewide adoption of HealthPathways.

The first contact between HealthPathways and a Queensland health system was when the Brisbane North Medicare Local approached Streamliners in 2013. After exploration of HealthPathways, it was mutually decided that the requirements being made of HealthPathways were not a good fit at the time, and a decision was made by Brisbane North to adopt Map of Medicine.

The first HealthPathways implementation in Queensland was in Townsville, where the Medicare Local, which had had contact with CDHB, worked with the HHS to develop local pathways. This led, via word of mouth and personal connections, to the adoption of HealthPathways in Mackay in 2013. These two early implementations provided a starting point for the subsequent adoption of HealthPathways more widely in Queensland.

⁵ <https://cpc.health.qld.gov.au/>

Clinicians and managers from Mackay and Townsville were able to point to their experience in developing local pathways that clinicians would actually use, and some of the individuals involved in these implementations were influential in sharing knowledge about HealthPathways more widely in the state.

2.3 Statewide adoption of HealthPathways

Queensland Health found itself in 2015 with the challenge of implementing the outpatient strategy, and with a number of developed CPCs that had to be disseminated in a way that would influence clinical practice.

At a policy level there was a recognition that primary and secondary care integration was going to be important in achieving an improved outpatient service, and that Queensland Health had traditionally had little influence or leverage over general practice. The new PHNs were seen as an opportunity to improve this state of affairs, since they had been charged with promoting integration, so Queensland Health was able to work with them in order to achieve its strategic aims while assisting the PHNs to be successful within their own mandate. Essentially, PHNs had been charged with working with hospitals, and Queensland Health was in a position to help them do that, for its own strategic purposes.

Within Queensland Health the approach to implementing CPCs was informed by theory of planned behaviour. It was recognised that it would be important to be clear to front line general practitioners that CPCs were there to help them, and to explain on their terms why the tool would be better for them and for their patients. But it was rapidly clear to several key officials that CPCs, at the time, existed only in the form of a PDF document, and that this was unlikely to be readily accessible and acceptable to a GP in mid consultation.

The exposure that some officials had already received to HealthPathways, and the emergence of early champions of HealthPathways from existing implementations, meant that key individuals within Queensland Health were able to see that HealthPathways could be a means to implement CPC in a way that accorded with the needs of general practice. The decision to licence HealthPathways on a statewide basis was therefore, in large part, made within the context of the wider Outpatient Strategy and CPC development. HealthPathways represented an existing mechanism and process that was well aligned with the strategic direction and the implementation needs of health services in Queensland in 2015, and already had several champions who argued for its wider use.

When Queensland Health expressed interest in licencing HealthPathways on a statewide basis, Streamliners considered the feasibility of this. There were two key issues: whether the infrastructure could be scaled rapidly enough for such a rapid expansion, and whether such large scale implementation, in the context of statewide CPC would undermine the local multidisciplinary clinical engagement that is so central to the success of HealthPathways in other jurisdictions. Streamliners engaged in discussion with Queensland Health, setting out minimum requirements for implementing with clinical engagement and localisation processes.

The final approach involved a statewide one off joining fee to enter the HealthPathways Community, and ongoing licence fees for those areas within Queensland that took up HealthPathways. While the state funded the overall membership of HealthPathways, local areas, based upon HHS and PHNs, would be responsible for providing clinical editing and

liaison staff, and for funding their own technical writing requirements, when they asked Streamliners to make changes to their local versions.

Implementation began with four proof of concept areas, covering two metropolitan and two regional sites. The proof of concept sites were:

- Sunshine Coast
- Brisbane: Metropolitan North
- Brisbane: Metropolitan South
- Mackay, based on the existing development work

Development of the proof of concepts began in 2016. Further rollout took place in 2018, with mentoring from the proof of concept sites. Since then all but one area across Queensland have implemented HealthPathways to some degree.

This case study largely focuses on the developments that occurred in the proof of concept sites, since these are the most mature examples of HealthPathways, while still presenting a range of different issues and approaches for implementation.

3. Themes and findings

Key themes and findings were made from detailed notes of interviews, and from background material supplied by Queensland Health.

3.1 Part of wider system change programme

Interviewees frequently expressed their understanding that HealthPathways was part of a wider system change programme. The Outpatient Strategy and CPC set out clear goals, and HealthPathways emerged as an effective enabling mechanism for those goals, that made them effective at the level of front line services. This meant that HealthPathways had a clear context, and that the need for a mechanism such as HealthPathways was easy to articulate. In turn, HealthPathways became a mechanism for implementing system change in a way that made sense to front line clinicians:

There is something about the concurrent implementation of HealthPathways and CPC that created something that was in it for the GPs more than the CPC alone. Something about the HealthPathways allowed the local engagement that then allowed them to own it and customise it and create their own relationships locally. [Queensland Health]

When asked whether HealthPathways would have worked as well in Queensland in the absence of CPC, one stakeholder suggested that it wouldn't have had the same impact. Equally, another interviewee was very clear that:

Having CPC beforehand was a basis for HealthPathways to quite quickly achieve its potential [Queensland Health]

There was also widespread perception at the HHS level that HealthPathways was part of a broader change process in the way that services are delivered, and should be approached as such. For example, one HealthPathways coordinator explained that HealthPathways were managed as part of the HHS engagement unit, rather than residing in an operational service division:

We're grateful to the manager who said, when CPC were launched, that the task went to the engagement team, not the primary care unit. And it didn't fall to the hub [the referral management centre]. We could have logically put it there, but luckily we saw it was a huge change piece of work that placed it in engagement. It's not a clinical risk or clinical guidelines project. The primary care partnership is a quite operationally focussed unit, and isn't right for a big change like this. [HealthPathways Coordinator, HHS]

The synergy between CPC and HealthPathways has worked in both directions. While CPC were seen as a significant change, and provided a context for HealthPathways to demonstrate its value, a number of interviewees felt that CPC would not have worked effectively without

the engagement process and systematic management of information provided by HealthPathways:

A lot of work had gone into developing CPCs – we had become a CPC production factory, but the goal was actually to have them used. [Queensland Health]

GP response to CPC was initially negative “this is the HHS telling us what to do, and making it more difficult for our patients to be seen”. The engagement strategy was then to provide something useful to the GPs – how to make this useful for them as well. [GP Liaison, HHS]

CPC can be seen as a threat – HealthPathways has helped CPC be accepted. CPC can be seen as an obstacle to getting patients in... ..some CPCs can be seen as unrealistic. Acceptance would have been even better if all CPC were more realistic from a GP point of view from the beginning. For example, BMI is required in many pathways where it isn't actually essential. [GP Liaison, HHS]

The CPC experience with HealthPathways here is unique in that in the engagement with GPs we had to be quite careful in how we approached and spoke about it. We had to create a consistent script – even though they contained criteria which a lot of GPs didn't like (for example tests that have to be done before referral) – there was a perception from GPs of cost shifting from hospital care. We explained that poor quality of referrals is an issue for access to outpatient clinics. HealthPathways is there as a tool for service redesign and improving patient access. [GP Liaison, PHN]

Without the information management and process of engagement provided by HealthPathways, CPC implementation would have been very challenging:

We had been engaged directly by the CED to do a pilot phase for CPC [before HealthPathways]. We recruited 48 practices, with 250 GPs, and over a six week period we trialled GPs sending in CPC referrals. It was difficult because we put a hard copy PDF document on desk top that had all of the CPC (for three specialities in the pilot). But there were some exemptions within each specialty, so it was hard for each GP to remember which referral to send with CPC and which not. They had three different sources of information. [PHN Manager]

The next step for implementing elements of the Outpatient Strategy is an electronic referral mechanism. A number of interviewees noted that this will build upon the basis that has been developed by HealthPathways, and that compatibility with HealthPathways is a prerequisite for any new referral system. Some felt that integrated electronic referral would further improve the acceptability of HealthPathways to GPs, by streamlining the mechanics of the referral process.

Next year the focus will be more on electronic referrals. This will be linked to HealthPathways – HealthPathways is really important because of that [PHN Manager]

We will always struggle with GPs being time pressured. To open another page and look at a health pathway is a pain. In the future linking to the smart referral project will help. [HHS GP Liaison Officer]

HealthPathways therefore appears to have served a key role both in implementing CPCs in an effective manner, and in taking CPC to front line GPs who might in other circumstances have rejected prioritisation criteria as a narrow demand management exercise.

3.2 Engagement with general practitioners

All areas visited emphasised the centrality of direct, person to person, engagement with general practitioners in a way that had not been undertaken before. This is part of the underlying process of HealthPathways implementation, and was widely seen as crucial for the acceptance of CPC, and in building trust among GPs.

It takes many visits per practice, because GPs don't all work the same days. HealthPathways has been really well accepted by GPs – they are mostly a sceptical lot, but I've been surprised by how well accepted we are. This is largely because we went and sat in their rooms as peers. I said I'm a GP, I know what it's like, and I acknowledge what's not perfect. I'm not selling it to them as an outsider, but coming to them as peer. [GP Liaison, HHS]

GP engagement requires a significant amount of dedicated resource:

We could always do more GP engagement. Three of me would be great. It makes a difference going in and talking about the product and system change with a group of GPs. [GP Liaison PHN]

In hindsight, when we first started, it was a two person show with supportive sponsors. We didn't have to be encouraged to be involved, we were both passionate and worked more hours than paid. In some respects this sort of inhibited the team, because people could see we had been running on the smell of an oily rag. We burnt ourselves out a bit. [GP Liaison Officer HHS]

The magnitude of the GP engagement work was substantial, requiring a significant investment in time, and recruitment of people with the right balance of skills and experience to be credible to GPs:

This can work, but it's critical to have the right people to create the engagement. The right person who is passionate, and with the right clinical skills and knowledge... ... The fact

that [A] and [B] can go into any GP surgery with a welcome is a testimony [HHS Research Director]

The depth of the engagement has had a broader effect than the takeup of HealthPathways and CPC. In many cases it has provided a basis for PHNs, still relatively new organisations within Australia's health sector to build the relationship with general practice that they need to be effective in their role:

We wrap a package of support about HealthPathways. We never go in and just talk about HealthPathways. We talk about HealthPathways can enhance GP knowledge, efficient processes, support integration, the right patient care at the right time, all these things... ...we have visited 1200 GPs, but how do you keep it up? ...GPs want to talk about it. It has strengthened our relationship with them. [PHN]

My team love visiting for HealthPathways. It's one of the main things along with referral quality that has been really meaningful for GPs. GPs want to talk about it. It has strengthened our relationship with them. [PHN manager]

After three years the process of engagement has, in some areas, moved past the initial phase, and relationships with individual GPs have been developed. But the ongoing pattern of engagement varies from area to area”

There is still a lot of face to face work. [HealthPathways coordinator]

Now we tend to do visits more as follow up on issues rather than going to everyone. But with smart referrals we will be back to everyone. [GP Liaison]

However ongoing, substantive engagement is important with a mobile workforce. A PHN manager also noted the importance of HealthPathways given the level of turnover among GPs:

HealthPathways lends itself to GPs new to an area. The overseas trained doctors get a lot of value out of it, since it's the one source of truth. We have a high number of these, and a lot of GPs that move around a lot, a lot of turnover in practices. There are also a lot of registrars, so we have movement all the time. [PHN manager]

3.3 Relationship between HHS and PHN

The second relationship that HealthPathways has a strong impact on is that between HHSs and the newly established PHNs. Implementing CPC, and developing HealthPathways in collaboration, provided a common goal for HHSs and PHNs to work towards. Both kinds

of organisation had to contribute resources (eg. for GP liaison or clinical editing), and both had an interest in achieving an effective improvement in the quality of GP referrals.

We started with a good relationship here, but HealthPathways and CPC is a vehicle for improving those relationships. If you have to work on them, the GPs and specialists have to talk, and there is an opportunity to build further. We now meet with the PHN fortnightly, working on teledermatology pathways. [GP Liaison Officer, HHS]

Some interviewees gave concrete examples of the way that the local HHS and PHN would work together when circumstances required it:

We had to partner, and had to be genuine between the newly fledged PHN and the HHS. We were one team and made sure we always represented ourselves as one team. What was most surprising was how quickly people adapted, and how quickly people let us leverage off existing resource to do what we wanted to do. For example, our hospital comms team worked with PHN comms so when new page went live they changed outward facing websites to reflect that.... ...People within HHS were aware of it, and understood what was happening outside... ...This was surprising to me too. [CPC Manager, HHS]

In a few cases interviewees suggested that greater organisational commitment could have facilitated the work.

Early on we could have had a little bit more sponsorship through heads of departments at hospitals, so they were talking to their teams right from the beginning and telling people that HealthPathways is coming, and please respond to it. Instead we as outsiders have had to build relationships with the hospital clinicians. It's a big piece of work. [GP Liaison, PHN]

While HealthPathways has, at least in some cases, served as a common activity to build relationships between the primary and secondary care organisations within Queensland's health system, there are cases in which the underlying PHN/HHS relationship is less effective, although this has rarely been a complete blockage to HealthPathways implementation.

While relationships may have developed over the past three years, interviewees also recognised that further work is often needed in order to continue to make progress:

In [HHS] we don't exploit the referral opportunities of HealthPathways yet. That's coming. We're still at a point where we're building the relationship with primary care. We're writing information on assessment and management that primary care can use to change their practice with a patient. [HealthPathways Coordinator HHS]

HealthPathways can therefore serve as an effective basis for building the primary/secondary care relationship at the organisational level, it does require at least a minimum level of effective relationship in the first place. Without at least some degree of functioning

relationship, it is difficult to make the significant commitment necessary for effective HealthPathways implementation.

The effect on relationships can also work at the level of clinicians, as well as organisations and executive staff. A number of interviewees described improved mutual awareness among both GPs and hospital clinicians:

I was surprised by the silos – the HHS had their own world, and GPs had their own little silo. We have really broken down the communication barriers between the two. GPs feel they're being listened to. [HealthPathways Coordinator, PHN]

It's not just GPs using [HealthPathways], but the specialists who have got involved and realised the benefits of it. Some specialists have been very helpful and gone above and beyond to make it work, getting involved with education, keen to help. [GP Liaison, PHN].

One interviewee gave concrete examples of the way that specialists and GPs worked together to develop pathways they saw as priorities:

I pushed urticaria, because I wanted to provide information out to GPs... Anaphylaxis and oedema were driven from general practice. GPs have lots of anxiety about these issues. Anaphylaxis is a clearly definable education process. [Immunologist, HHS]

Hospital specialists have, in at least some cases, a heightened perception of the GP perspective, and what decisions within a hospital may look like from the community:

We have two people triaging for the department. There is a little bit of variation, but we keep an eye on it. The HealthPathways don't work without consistency, so we have to apply very consistent triage processes. The reason we reject 30% is because we're being consistent, and so the GPs don't get mixed messages. [Cardiologist, HHS]

This mutual confidence in HealthPathways among specialists and GPs then has the potential to support changes in practice both in the community and in hospital, supporting the management of conditions in the community rather than in the hospital:

Hospital specialist staff are more and more realising that we don't have the resources to manage everybody. In outpatients we are the crazy cat ladies of the health world: we take everything, but we're not really looking after our patients well. There has been a change in culture, a slow shift in understanding that we should be asking our GPs to manage patients in primary care prior to referring them. Having HealthPathways has been good in having the conversation with our Medical Officers. They can send a patient back to their GP and point to HealthPathways, without just taking them because they think the GP can't manage. [Nursing Director, HHS]

Chronic disease – picking chronic disease out of the hospital and putting it in a community setting with a hub and spoke model. Not pooh poohing GPs for not providing care,

supporting GPs to deliver the care and do capability building in primary care. HP gives us the platform to do that. [HHS Engagement Director]

The next bit is about rapid access to specialist information so we can manage people in the community better. [Director, Queensland Health]

Overall, HealthPathways has made an important contribution to building relationships between primary and secondary services. The gap between these services is sometimes stark, in the Australian context, with fragmentation between State and Commonwealth components of the health system. HealthPathways is not a panacea for creating relationships where none exist, but in the Queensland context it has provided a basis for a number of organisations to work together across the health system. Further, HealthPathways can in at least some cases be the basis for building relationships between individual clinicians, supporting the development of better coordinated services.

3.4 Clinical editing

The clinical editing process lies at the heart of HealthPathways, and represents the point at which nationally developed CPC are implemented in a local system. The process for clinical editing is therefore crucial in developing effective localised material, and treads the fine line between national consistency (as embodied in CPC as minimum levels of access to a service), and local service configuration and the realities of service availability.

Where pathways have not been subject to a local clinical editing process, there is often information on the clinical subject taken from the base set of HealthPathways from Canterbury. This can provide clinical information, even if local information such as referral mechanisms are not applicable. Having enough resource to provide a comprehensive set of local pathways is important to GPs, who may be reluctant to use an information source if it isn't reliably useful and complete:

I would have liked to have had more localised pages ready for the go live. There was limited time. We went live with about 70 localised pages. The feedback from GPs was that it was frustrating when they go to a page and it's not localised... .. this is a bit of a double edged sword, because it gave us an opportunity to say "give us the information": mapping what's out there in the community is the difficult part. People responded to that, because they could see it would be useful. In a perfect world it would be nice to go live with the 100 most common conditions [CPC Implementation Manager, HHS]

Clinical editing also provides some of the relationship building activity between GPs and hospital specialists:

Clinical editing all happens at the PHN side, then they contact us to get the names of hospital subject matter experts to send the pathway to [for comment]. It's a stable and fairly efficient process. When it's somebody who's never been exposed to HealthPathways before, it can be quite confusing for the expert. We have to remind them that it's the GP view, not the hospital view, and that they need to think about the specialty view, not just a

personal view. If we engage with experts earlier that would help - we have started this a bit. But a lot of our doctors have now been involved, and are now pretty quick at reviewing and commenting. [Nursing director, HHS].

There are different local approaches to clinical editing. Some PHNs try to involve a wide variety of local GPs, meaning that there is a large base of GPs who have had direct involvement in the process. Participants then have to be carefully briefed in order to deliver an edited pathway that will fit well into the overall set of pathways, with minimal further technical alteration. This can be a good mechanism for engagement, but may also have down sides:

A lot of sites come to us for advice about implementation and efficiency. We run on an oily rag and we're very efficient: we manage pages very efficiently. When we get a clinical editor in we make our expectations clear, so we don't then get stung by Streamliners for technical writing time... ...We pay well for clinical editing time. Some are just there for the money, and abuse it, so we don't ask them back. [HealthPathways coordinator, PHN]

Other localities may prefer to have a single person responsible for the clinical editing role, building up expertise and experience:

Our clinical editor is sometimes critical of other pathways and how they're written. It's more expedient for us to write ourselves rather than get slowed down by other people. For example, [HHS] take the lead on heaps of pathways, then delivery takes months and months. We can turn them round much more quickly - depending on the subject matter experts we can get them written in a week. We have kept our consultation process limited - we issue an invitation to make comment, but we will go ahead and publish if people don't make comment. It's better off out there, than finding GPs sent to a New Zealand guideline or pathways that are still under construction. [GP Liaison, PHN]

HealthPathways internationally has generally been fairly flexible about clinical editing approaches at the local level, reflecting the philosophy of bottom up implementation, and the importance of founding the clinical advice in a pathway in a locally acceptable manner. Some interviewees felt that there was sometimes waste and duplication in the localisation process, and that resources were sometimes used addressing matters of style, rather than of substance:

Despite the amount of synchronicity we talk about, from site to site the variance on what is essentially a statewide pathway still fascinates me (and costs me money). I'm employing GPs who like things to be written their own particular way. The governance of that is still really difficult. It's not a clinical safety issue, but personal preferences, constantly tweaking things. My GP Editors find issues when they look at others' work. I'm not suggesting we should have a hard and fast statewide template. But we haven't quite worked out yet how to be more and more efficient. [HealthPathways Coordinator, HHS]

This is a wider issue for the development of HealthPathways across many jurisdictions. Streamliners have responded by appointing Regional Clinical Advisors in order to provide more structure for the clinical editing role.

Each region has been asked to select a senior clinical ed. My role is to liaise with these senior clinical editors on the groups and develop their leadership potential. We are only six months in, so we're still working out how it's going to work. [Queensland Regional Clinical Advisor]

3.5 Consistency and variation

The clinical editing process is where the complex issue of the balance between consistency of clinical advice and local variation in service delivery is worked out. This is a central issue to the overall implementation of HealthPathways in Queensland: a key policy goal of the Outpatient Strategy was to reduce variation in referral and improve transparency of access to services. Before the implementation of the Outpatient Strategy Queensland Health was aware of dramatic variation in referral processes, and when Streamliners staff first came to Queensland the level of variation in services was clearly apparent.

The level of variation in care across Queensland is astonishing... ..in some places the hospital services are very run down. GPs tend to bypass them and send patients to Brisbane... ..there is a high level of inequity of service provision, which we have been able to reveal very well. We can encourage GPs to refer locally to maintain a service. [HealthPathways Chief Clinical Editor]

The CPC are clearly the core of the approach to statewide consistency, mandating minimum levels of service, but allowing for additional levels of service, or specific local variation in light the services actually available:

So long as we have the minimum criteria from the CPC, we have autonomy. And Streamliners insert those minimum criteria as part of their brief. [Manager, PHN]

The implementation of HealthPathways has provided a structured process to implement CPC in light of local conditions. One interviewee provided a vivid example of the development of a pathway in neurology, in which the process of localising the national criteria involved specialist doctors, who then supported the finally developed criteria:

Neurology became a CPC. The specialists from our HHS weren't on board with the way the CPC delineated those conditions and criteria for referrals. So we did consultation after they were live (engagement with specialists). They were then able to resolve this, but they altered the CPC from a statewide level, but for clinically relevant reasons. Our directors of neurology then became supporters and advocates of the revised CPC, reviewed internal processes and maximised efficiency. Then they came back to using HP as a solid engagement tool with GPs to improve the quality of referrals required by CPC, clarifying alternative treatment options, and empowering GPs. [HealthPathways Coordinator, HHS]

While CPC, as the state mandated referral criteria, are the most prominent example of the tension between local variation and state consistency, the issue applies to some extent more broadly across all pathways.

At the moment we're looking at encouraging localisation, but discouraging variation. This is the message to new regions: you're localising from a common base, but not going off on a new tangent. We have a couple of teams that are a bit different to the others... ... we will bring the senior clinical editors together, select pathways where there has been variation, discuss whether it's necessary, and if appropriate agree on a common basis for Queensland. Variation then becomes part of research, it becomes a diffusion of innovation mechanism... ...there is generally quite a lot of acceptance of trying to standardise. Most of the variation comes in because there are 100 different ways you could write the same information. You can spend a lot of time, effort and money in making changes that don't achieve much – just writing in a different way. In future we will be a lot more intentional about variation. Management of headache is a good example of this. There are lots of different ways, but we don't know who has the best pathway. [Clinical Editor]

This approach suggests an evolving role for HealthPathways in Queensland. From being initially viewed as an implementation tool for access criteria, it becomes a wider mechanism for improving the quality of services across the whole state, and for disseminating evidence and expertise in a consistent manner across Queensland.

Several interviewees noted an example in which a strong expectation of statewide consistency had undermined the implementation of pathways. Queensland has one specialist paediatric HHS, and many smaller or rural hospitals may not have a paediatrician to help develop a pathway. This led to the specialist paediatric HHS (Children's Health Queensland) working with a PHN to develop pathways that were then provided to local HealthPathways sites, with an expectation that they would not be further modified. The expectation of no further modification then presented difficulties when pathways did not reflect the local reality of service provision, and when there had been no local process of clinical engagement in pathway development:

One of the learnings was from Children's Health Queensland (CHQ). Some of the smaller HealthPathways sites had said they didn't have a paediatrician to write pathways for children, so CHQ wrote draft pathways for other areas to pick up. But relationships between CHQ and HHSs were sometimes difficult – CHQ expected the pathways to be taken up unchanged, and may have seen HealthPathways as a demand management tool. [Queensland Health]

There are challenges from a clinical editing perspective. Consensus from a large group of people is always tricky. When developing pathways in a metropolitan region you're not necessarily going to meet the needs of every place. People were a bit naïve that they could just pick up statewide content without doing too much to it – you still need your own local process. The clinical editor did an amazing job with his task. The difficulty arose because of the immaturity from the other Queensland sites. [Research Director, HHS]

Paediatric pathways are now being prepared again, with local input. The case provides an example of less successful implementation when the process of engagement has been short circuited and there is an expectation, whether locally or on a state basis, that pathways can work without local input. In this case clear communication ultimately mitigated the situation.

However there appears to be a trend towards increased acceptance of statewide consistency in at least some respects. This was attributed by some interviewees to the build up of trust that has arisen from the local engagement processes in the initial phase of HealthPathways implementation. From a starting point of suspicion about CPCs, and reluctance in some cases to accept imposed statewide pathways, there is a recognition in at least some quarters of the benefits of standardisation:

With CPC we had a template to work on, though it needed a bit of finessing. We're now seeing the benefits of that being done centrally. Queensland are now reviewing some of their early CPCs, and we're able to translate those changes rapidly across all those sites. Each region doesn't have to do that work all over again. [Clinical Editor]

If we can continue to develop this sense that HealthPathways is integral to effective integrated care systems, does there come a point in the growth of trust with clinicians, a tipping point in which you can do more centrally, because trust has developed? Until you have a period of time over which people feel that PHNs, HHS, nationally and federally are on the same page, and there's trust, then can you shift the line a bit? [Streamliners]

The balance between the imperatives for local engagement and statewide consistency is not a fixed quantity, and it may be evolving as the background of clinical and organisational relationships develops across Queensland. If this trend continues, then the Outpatient Strategy, and in particular the implementation of CPC and HealthPathways, are contributing to a wider cultural change in Queensland's health service, and the development of more integrated and transparent services for the public of Queensland.

3.6 The role of Queensland Health

The implementation of HealthPathways was unusual in Queensland in that a central state government agency took an active role in deciding upon HealthPathways as a mechanism for implementing a change programme. This is a contrast with many HealthPathways implementations that are adopted by a single local health system.

The impact of Queensland Health as a central agency plays out in several ways. In part, the active adoption of HealthPathways by a state agency, in a jurisdiction in which primary care has predominantly been a Commonwealth function, means that Queensland Health is sending a message to stakeholders across the health system about the importance of coordination across the primary/secondary care boundary. This sends a message to state HHSs that the time has come to work more closely with primary care in the interest of the health system overall:

It would have been much harder to put a case forward without the Queensland Health leadership, because we're primarily HHS driven rather than by the PHN... ...Queensland Health has made the hospital side understand that they have to take the primary care side seriously. [GP Liaison, HHS]

The fact that we are able to talk about these as statewide, this has added a lot of validity for our HHS clinicians, and also in primary care. It's not seen as just something this HHS is doing to us (from the GP point of view) – tension arises when GPs see the HHS pushing cost shifting on to the GP. But the statewide process has made it seem much more like supporting primary care to manage the patients that they should, and to provide enough info for safe handover. [Nursing Director, HHS]

Most interviewees saw that the success in implementing HealthPathways across most of Queensland has arisen from two aspects of Queensland Health's approach. The first is the ability as a central agency to set a policy direction, give the tools to local health systems, and then allow the process to be driven locally, but with centrally provided support and facilitation as necessary. Queensland Health interviewees themselves recognised that stepping away from excessive local direction was key to success:

I was around when Map of Medicine happened. I was curious about whether the methodology was robust enough. I inherited the CPC work... ...it was good work, but top down policy: "thou shalt do". I was able to make it bottom up. [Queensland Health]

We changed from medicare locals to PHNs. With the introduction of PHNs, we did this project with them. In the past we never would have trusted anybody. We gave the money to the PHNs, who had the incentive to build the relationship and do things locally. Our role was facilitation and coordination, not "the department is going to do this to you". We bought the licence and promoted it on the grand scale, but we're still adhering to the SL philosophy of local implementation. [Queensland Health]

The experience of implementing HealthPathways has resulted in changes in Queensland Health's approach:

We now do nothing without having GP representation – we have come a long way in a couple of years. [Queensland Health].

While local clinicians in some cases noted that CPC And HealthPathways had seen a change in approach:

Queensland Health definitely has not had a great culture in terms of allowing clinical innovation and leadership to flourish. The CPC has been an exception to this. [GP Liaison, PHN]

The funding provided by Queensland Health for HealthPathways licensing has had two impacts. In part it was a demonstration of commitment from Queensland Health: the act of providing funding and then allowing PHNs to make decisions about how to use HealthPathways locally (within broad limits) was an act of faith that showed a willingness to work with PHNs.

Queensland Health are good at giving people money and stepping back. That's a really empowering way to fund something. If you start to put too many rules around something you don't find what works in the region – though obviously there has to be accountability and feedback. [GP Liaison Officer, PHN]

The second impact was on providing resource for PHNs to take on their task, meaning that PHN funding could be spread further. With licensing costs covered by Queensland Health, this allowed PHNs to focus on the resources needed for effective clinical editing, leaving the incentive for efficient editing at the local level.

The Queensland Health contribution means we have the money to publish pathways. We have a target of 200 pathways this year, which will be 250 after 2 years... ..that funding released everything the PHN were previously throwing at the contract [to fund] the clinical editor and other stuff, so it was of huge value. It also speaks volumes to the partners... this is where the Queensland Health contribution is helpful as a statement of commitment. It's harder for the PHNs to walk away. [HealthPathways Coordinator, HHS]

Queensland Health have been very important in terms of funding. They have funded the coordinator role. It would have been a lot harder for us to pull all this together without it. Also funding for the coordinator at the PHN who organised the meetings for us. Their funding isn't needed forever – at some stage it should become business as usual. [GP Liaison Officer, PHN]

Several interviewees noted the increasing tendency to share experience across the state. The establishment of a regular meeting among CPC leads was reported to be an effective mechanism for sharing information, and a novel experience for most involved.

The State wide stuff was a surprise, seeing all of Queensland coming together and working collaboratively. ... Experience [in the past] has been that if you develop something good you don't share it. [HHS Research Director]

There is a collegial approach to the whole of the Queensland health service that we didn't have before. The fortnightly meeting of CPC leads began when we started CPC. We began sharing. It's really nice, a really satisfying growing statewide thing. All of us in my CPC role feel the same way. Eg [HHS] have a zero waitlist. We ask how they're doing that. [CPC coordinator]

Statewide aspects therefore have a significant role to play in the successful implementation of CPC. There is a strong suggestion that these aspects help Queensland to achieve the most value from the investment in HealthPathways. This arises because of constructive local sharing of developments, while the statewide mandate and commitment sends a strong message to local services about making effective use of HealthPathways as the tool that has been made available. Finally, taking the cost of the licence away from local PHNs, but not that cost of clinical editing, means that they still have a strong incentive to undertake clinical editing efficiently, and over time to share approaches in the interests of avoiding costly duplication.

3.7 Quantitative evidence

Relatively little quantitative data is so far available to complement the qualitative information gathered from interviewees. In some cases other health system changes also make data hard to interpret, for example the shift of Sunshine Coast HHS to a tertiary hospital facility.

Some information on usage is available, however. Sunshine Coast reported 25,801 page views of HealthPathways in the first six months, suggesting a high level of uptake among referrers, and had 127 pathways fully live in that time period. Sunshine Coast audit data found that there had been an upward trend in the referrals that meet CPC criteria, with nearly half of referrals compliant with CPC in only four months from going live.

Mackay is the locality that has the most complete data available. The Australian Centre for Health Services Innovation has produced an analysis of the impacts of HealthPathways and CPC. This analysis largely looked at key specialties with different levels of HealthPathways implementation: full implementation for diabetes care, partial for cardiology and respiratory specialties, and none for urology, treated as a control group. Comparing between 2015 and 2017, the analysis found that following implementation there had been reductions in diabetes and cardiology referrals from both primary care and specialist referral sources. The analysis found that the percentage of referrals for diabetes that were appropriate had increased significantly following the introduction of HealthPathways, while the appropriateness for the other specialties had declined, but not by enough to be statistically significant. The report cautiously concluded that given the difference in patterns between diabetes and urology referrals, there was early evidence for the effectiveness of HealthPathways in Mackay, and that it was likely that HealthPathways was generating cost savings for the health system.

4. Discussion

4.1 Effects of HealthPathways in Queensland

In the Queensland context the implementation of HealthPathways appears to have had four main effects. These include the successful implementation of the Clinical Priority Criteria, the increased transparency of service access, breaking down barriers within the health system, and providing a basis for further system change.

The CPC are a major component of the Queensland Government's Outpatient Strategy, bringing more consistent triage across the whole state, and revealing discrepancies in access to health services. HealthPathways had several important roles in the implementation of CPC:

- In the absence of HealthPathways there was no well implemented mechanism for disseminating CPC to referrers. Several interviewees mention the state of CPC as raw PDF documents, and the corresponding inconvenience for clinicians of accessing the information in a timely manner. While mechanisms other than HealthPathways could have been found for this task, it is clear that HealthPathways provides an effective mechanism for delivering CPC to referrers, as evidenced in the regular conversations GP Liaison staff have with referrers.
- CPC had the potential to be highly controversial, particularly if there had been a widespread perception that it was focussed on demand management rather than the reduction of variation and increased consistency of care. The HealthPathways implementation process, with its extensive engagement with front line clinicians both in general practice and hospitals, provided a means to involve clinicians and provide reassurance that clinical views and experience were being taken into account, over and above the original Clinical Advisory Group process for the CPC.
- The local organisation of HealthPathways meant that CPC could be applied appropriately and transparently where necessary, increasing the acceptance and relevance at the local level. This led to a set of pathways that were wider than the original CPC, on the basis of what local clinicians saw as relevant priorities. It also meant that CPC could be picked up and owned by local clinicians, rather than be an externally imposed programme.

Transparency of service access has played out in several ways. Where hospitals are applying strict triage criteria and rejecting referrals that lack information or fall outside the agreed pathway, feedback is generated for referrers, and the support of GP Liaison staff can also help to bring clarity to the local referral process. More broadly, transparency is enhanced when the process of localising a pathway reveals differences. The situation with Children's Health Queensland, in which an expectation that statewide guidelines would not change at local level, in turn made explicit some of the varied circumstances in which local health systems have to manage paediatric services.

A further aspect of transparency lies in the speed with which a pathway can be edited and disseminated. Several interviewees mentioned the recent example of a change in termination regulations for the state, and the speed with which a new pathway could be developed.

One of the most important effects of HealthPathways in Queensland has been as a basis for building relationships in a health system that is notoriously fragmented. The divide in Australian health care between Commonwealth administered primary health care and State administered hospital services has historically presented a significant barrier to the integration of services. While outpatient referrals are only one component of service integration, they are an important point at which coordination between primary and secondary care can make a difference both to quality of care and to the effective use of resources.

Interviewees reported relationship development both at the level of individual clinicians across the hospital/community divide, and among organisations, with HHSs and PHNs both having a strong incentive to make CPC work as effectively as possible for their clinicians. Specifically, PHNs had been charged at their establishment with improving coordination with hospital services, and HealthPathways provided a means for them to do so. At a clinical level this is evidenced by requests from both hospital clinicians and general practitioners to develop pathways, and to involve each other in pathway development.

Equally, HHSs at an organisational level recognised the need to work with primary care in order to improve the effectiveness of their clinical resources. This improvement in relationships appears to have arisen from the intensive local work that has been completed, building on the clinical engagement, but also seeking buy in from executive level staff across the health system. The need for this level of organisational commitment can in some circumstances be a barrier, if it doesn't pre-exist, but it is arguable that without the ability to make such a commitment, the threshold for achieving successful implementation of clinical criteria or pathways has not been met, whether in the form of HealthPathways or another mechanism. It is worth noting that some interviewees noted a lack of clear executive level mandate in the early stages as an aspect of HealthPathways implementation that could have been improved.

The other aspect of relationship that appeared to have improved was between Queensland Health and sector stakeholders. This is supported by the significantly increased level at which Queensland Health involves general practice in its decisions, and was noted by the GP interviewee who recalled that Queensland Health had a poor history of clinical engagement, but that this had changed.

Clinical and organisational relationships in Queensland Health services appear to have improved over the duration of HealthPathways implementation. It seems unlikely that this would have happened in the absence of HealthPathways, given the strong emphasis upon clinical engagement reported throughout the process. Similarly, the localisation process provides a shared goal at the level of individual organisations, with gains for the patients that services are there to benefit in the form of reduced waiting times and better support to manage conditions in the community. This case study is not equipped to understand the specific drivers of the relationship improvements in detail, but the importance of local engagement and localisation of the pathways may be explanations for relationship development as HealthPathways implementation progressed.

Finally, HealthPathways has left Queensland with a basis for further, integrated, service development. The platform of improved relationships, as well as the specific infrastructure of information sharing represented by the pathways, provide an opportunity to implement service change and to develop new service configurations on the basis of robust and effective clinical input. Already there have been moves to use HealthPathways for a wider

scope of referral, including education system input into some referrals, and to include corrections services.

4.2 Why HealthPathways has been successful

There are several reasons for the reported success of HealthPathways implementation in Queensland. These include the strength of the localised approach, the strong mandate from Queensland Health, and the statewide approach to licensing the system.

The strength of local engagement has already been described. This approach has been developed by Streamliners in other implementations of HealthPathways, and was brought to Queensland as part of the HealthPathways package. The basis of trust that this brings has clearly been embraced in the organisations visited for this case study, and some interviewees contrasted this state of affairs with prior approaches to implementing change.

Local engagement comes at a significant cost – it requires a substantial commitment in personnel to provide the feet on the ground. The level of work involved in maintaining engagement, particularly with general practitioners, was noted in every area visited for this case study. HealthPathways is not a panacea, since it requires additional local resources in order to be effective, but it provides a framework for directing those resources and for getting the most out of them. This approach has been based upon experience of working across a large number of health jurisdictions in three countries, bringing considerable expertise in effective clinical engagement.

The second aspect of successful implementation appears to have been the clear statewide mandate from Queensland Health. The implementation of HealthPathways as part of CPC, and therefore within the context of the government's overall priorities with the Outpatient Strategy meant that Queensland Health had a high level of commitment to successful implementation, and provided resources at several levels to help make that happen. When interviewed, senior officials at Queensland Health's Clinical Excellence Division (the division charged with developing the CPC) emphasised the high level of priority given to the project, and the importance that government attached to its success. Moreover, Queensland Health's mandate appears to be widely recognised among stakeholders. A number of interviewees noted the work of the Clinical Excellence Division, and commented positively on the leadership it provided.

Apart from expressions of policy, Queensland Health's commitment takes two more concrete forms: the provision of personnel within a project team to facilitate development across local areas, and the funding of the statewide licence fee for HealthPathways. These tangible forms of statewide commitment are very visible to local organisations, and also have direct consequences.

The decision to fund the licence fee for use of HealthPathways on a statewide basis has several effects. It reduces the barrier to entry for taking up HealthPathways, and it means that local organisations can use their share of the overall implementation resources for engagement and clinical editing, the functions over which they have the most control. This means that the incentive remains with PHNs and HHSs to undertake the clinical editing and engagement as efficiently as possible, while the funding of the statewide licence is an incentive for Queensland Health to ensure that the implementation of HealthPathways is successful, and achieves the greatest possible value from the investment. This incentive is

partly realised by the active support of project staff from the Clinical Excellence Division, who work with local HHSs and PHNs – support that is consistently viewed as constructive without being dictatorial. Moreover, the support for a statewide forum of coordinators has provided a mechanism for sharing experience and building upon diverse approaches.

4.3 Lessons for other health systems

One major lesson for other health systems from the Queensland experience to date has been that local engagement and trust are prerequisites for delivering on policy, even if on a large scale. The solid basis of local buy in allowed Queensland Health to implement a major change to the way that services are managed across the significant organisational and funding barrier between primary and secondary care. This change is still under way, and progress is not uniform across the whole state, but it is clearly taking place on a large scale. This delivers on a key element of the state's Outpatient Strategy, and has done so in a way that has largely avoided controversy and push back from the clinical front line. This is a considerable achievement.

HealthPathways has been an important means for creating the change that Queensland Health wanted to achieve. The value of HealthPathways lies both in the platform – the mechanism for distributing information efficiently to clinicians in a form that is easy to use and clinically relevant – and in the process that HealthPathways uses to develop clinical consensus around that information. That process is intensive, and requires the investment of substantial resources if it is to be successful. So a second point to learn from in the Queensland experience is the need to be clear about how much resource is necessary to support change management, and to be clear about delivering that resource. The value of the extensive time and personnel involved in clinical engagement was emphasised by nearly all interviewees, and the ability to deliver that level of support was essential to the overall delivery of the result.

To a high degree the ability to dedicate resources to a change project depends upon the balance of central leadership and local buy in. In the Queensland case the leadership shown at state level, which appears to be well recognised by local stakeholders, meant that local PHNs and HHSs were prepared to respond by making their own investments in the coordination, clinical engagement and editing needed for successful implementation. The investment made at state level in licensing for the whole system demonstrated the commitment and priority that Queensland Health placed upon the implementation of CPC and HealthPathways. Moreover, the state level focus has resulted in systematic sharing of local experience, and now in state level coordination of clinical editing. In these respects it may be that effective state level leadership has generated greater value from HealthPathways implementation, by contrast with single locality implementations that have less opportunity to share experiences, less central commitment to respond to, and carry the full burden of costs locally.

4.4 Conclusions and future directions

HealthPathways is based upon a platform and process for developing relationships, local agreement and trust. The evidence from the implementation in Queensland is that in the right circumstances, the emergence of trusting relationships can also occur at a higher level across multiple regions and with a central agency. Similarly, the intended outcomes of

reduced variation and improved patient management in the community can apply across multiple regions, as well as within a single region.

The systematic approach taken in Queensland, in the context of introducing CPC, appears to have maximised the potential for HealthPathways to create change at every level, from the local to the state. This capability to reduce variation and provide resources for improved patient management, in a systematic way, is a significant achievement and reflects a key goal of health policymakers in systems around the world.

HealthPathways is itself in a state of continuous development. As experience accumulates from different jurisdictions, and as a greater number of localities make use of HealthPathways, there is a need to seize the opportunity for efficiencies through working together. The significant resource involved in successful implementation of HealthPathways in a single locality is potentially a lighter burden, and better value, if individual health jurisdictions work together to develop pathways, rather than do so in isolation. This is the state that Queensland has got to in a period of two years, with state wide cooperation for pathway development and a range of formal and informal mechanisms for sharing experience. Facilitating and coordinating collaboration across HealthPathways localities will therefore be essential in the future if individual localities are to get the most out of their HealthPathways investment. This is a central lesson from the Queensland experience.

Queensland Health and Streamliners have made a number of commitments to support the continued collaboration over HealthPathways. On its side, Queensland Health has agreed to a continued central service agreement for another three years, and will continue to support existing state-wide meetings and collaboration, while taking a leadership role in aligning clinical pathways, electronic referral implementation and a health services directory across the state, as progress continues to be made with elements of the Outpatient Strategy. Queensland Health is sharing its experience in interjurisdictional meetings with other Australian health agencies, and has agreed to co-host the 2020 HealthPathways international conference in Brisbane.

Streamliners continues to invest in a number of areas of activity that build upon existing HealthPathways experience. These include:

- Regular facilitated regional forums and regional clinical advisors to support increased state level collaboration between local regions;
- Continued development of tools within the HealthPathways platform to increase the alignment of pathways where appropriate. This includes Base HealthPathways, an optimised set of pathways that will be constantly updated and refined by gathering and refining the best updates from the over 40 regions now using HealthPathways;
- Developing a scalable version of Hospital HealthPathways, which has been operating in Canterbury, and will be offered for implementation across all HealthPathways sites in 2020. This tool completes the integration of pathways between primary and secondary care.

As well as these initiatives, Streamliners are consulting on a framework for improved sharing of pathways that, when fully adopted, will support reduced variation at local, state and country levels, while allowing for appropriate variation when necessary. This will be important in the continued work of engaging with state and national departments of health to support higher levels of collaboration and reductions in variation.

In planning terms the trajectory signalled by Streamliners is clearly one of stepped up coordination at several different scales, in order to extract the greatest value from the platform that has been developed, and to continue to develop an effective, efficient platform and process. Queensland currently represents one of the most advanced implementations of HealthPathways in this respect, and therefore points out the direction in which the wider HealthPathways community is likely to develop in the future.

5. References

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