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Primary prevention practice in public health: Two case studies

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		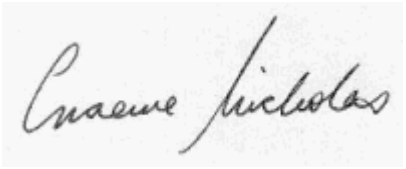
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EXECUTIVE SUMMARY

This is the third report of a two-year project on how public health personnel can influence decisions, made either by other agencies or individuals, that will reduce or prevent risks to public health. The key objectives of this study were to:

- Find and describe examples of good practice: namely, where public health units (PHUs) have influenced policy or the design of interventions in ways that were likely to prevent or reduce threats to public health
- Identify opportunities for PHUs for effective practice in influencing policy or intervention design
- Produce recommendations, guidelines or advice on how to improve public health outcomes through primary prevention collaborations involving PHUs.

The first report (Nicholas et al 2017) reviewed selected literature and presented findings from the first case study. The second report (Nicholas and Hide 2018) presented a summary of findings of two further case studies and a synthesis of findings from the project. The current report presents the detailed findings from the latter two case studies.

The first of these studies examines influences exerted by the Auckland Regional Public Health Service (ARPHS) to promote improved management of on-site waste-water management systems across the Auckland Council area. The case study focuses on a history of seeking improvements in OSWWM, culminating in the participation of ARPHS in the submission and hearing processes for the Provisional Auckland Unitary Plan (PAUP) and a subsequent working party.

The second study concerns the early initiatives made in the Bay of Plenty by Toi Te Ora Public Health (TTO) in drawing together the many local parties with health and wellbeing related housing interests to form a healthy housing forum.

In the case studies reported here, and in our previous case study (Nicholas et al 2017a), there could be no assumption of a shared perspective between agencies on the role of public health in policy and activity in the public sphere. The issue becomes one of collaboration between groups holding differing value sets and cultural reference systems (ways of understanding what is being dealt with or discussed). No one set of values or way of understanding could be taken for granted.

The case studies provide insights into working collaboratively across differing ‘worlds’.

We draw on (Cash et al. 2002) in suggesting that fit-for-purpose public health input into non-health decision-making needs to establish with relevant audiences its salience, credibility and legitimacy. We reference a model described in our earlier report (Nicholas and Hide 2018), that incorporates the above framework with insights from Ulrich (1994, 2003) and provides a basis to discuss and guide public health preventative practice.

This report highlights aspects of the current two case studies that speak of the importance of public health actors establishing salience, credibility and legitimacy.

1. INTRODUCTION

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1.1 METHODOLOGY

The project is an exploratory qualitative study using case studies (Eisenhardt and Graebner 2007; Stake 2005). That is, the project examines three case sites in which public health units have sought to improve public health outcomes through influencing 'non-health' decision makers[1]. The case study sites were chosen for their potential to yield useful insights for that task rather than for comparability. As an exploratory study, the project does not involve a strict comparison between cases, although it does enable the authors to generalise implications for practice from the aggregated findings of the three case studies[2].

As part of meeting the criterion above, potential to yield insights, the choice of the case-study sites relied on three factors:

- Preliminary evidence of a proactive public health intervention by PHU personnel that involved engagement with non-health decision-makers
- A co-operative relationship between ESR researchers and key personnel in the PHU concerned
- Agreement with the Ministry of Health as to the suitability of the case for the project purpose.

[1] In this report we use the term *non-health decision-makers* to refer to decision-makers for whom public health considerations are not central to their responsibility, even though they may include health outcomes along with other considerations.

[2] This distinction between exploratory and comparative case studies follows Stake: 1995. *The art of case study research*. Thousand Oaks: Sage; 2005. *The SAGE handbook of qualitative research*. Thousand Oaks: Sage; cited by Durepos and Mills: 2013. Sage Fundamentals of Applied Research. *Case Study Methods in Business Research*. Los Angeles: Sage.

Data for each of the case studies comprised documentary analysis and key informant interviews. For each of the case studies, we sought data to help explain the context, decisions and process of the respective interventions.

We developed an interview guide to serve as a prompt during interviews (see Appendix A). The guide was adapted slightly to fit each case study. It was not intended that all questions in the guide be posed, but that they enable exploration of the case from various angles. Interviewees were encouraged to talk around the issues covered in the interview guide, following an 'in-depth interview' approach (Johnson 2002). Interview durations ranged from 50-100 minutes. Interviewees gave informed consent (Appendix C) for participation in the project as described in the Information Sheet (Appendix B). All interviews were recorded and transcribed for later analysis. Interviews were analysed for themes to understand enablers and indicators of good primary prevention practice for public health officials.

1.2 LIMITATION

This report does not represent a full description or evaluation of the two case studies outlined below. The focus is only on what can be learned that could inform public health units and their personnel in practicing preventative public health through influencing non-health decision-makers. While some contextual information is presented, there is no attempt or claim to offer a comprehensive narrative or analysis of the initiatives studied.

1.3 THE CASES

The case study previously reported (Nicholas et al 2017b), concerned submissions made in response to an application for resource consent under the Resource Management Act (RMA) in the Tasman district.

The two cases presented here concern on-site waste-water management (OSWWM) in the Auckland Council area, and establishing a forum for healthy housing in the Bay of Plenty.

1.3.1 On-site waste-water management (Auckland region)

The first study examines influences exerted by the Auckland Regional Public Health Service (ARPHS) to promote improved management of on-site waste-water management systems across the Auckland Council area. The case study focuses on a history of seeking improvements in OSWWM, culminating in the participation of ARPHS in the submission and hearing processes for the Provisional Auckland Unitary Plan (PAUP) and a subsequent working party.

1.3.2 Establishing a forum for healthy housing (Bay of Plenty)

The second study concerns the early initiatives made in the Bay of Plenty by Toi Te Ora Public Health (TTO) in drawing together the many local parties with health and wellbeing related housing interests to form a healthy housing forum.

2. ON-SITE WASTE-WATER MANAGEMENT

2.1 DESCRIPTION

ARPHS has sought for several years to promote improved performance of on-site waste-water management systems across what is now the Auckland Council area.

Auckland Council became a unitary authority in November 2010 as a result of amalgamation of the functions of the previous regional council and seven city and district councils. The new entity is sometimes referred to as a 'super city'. It has a population of over 1.6 million.

There are an estimated 50-60,000 on-site effluent disposal installations within the Auckland Council area (Healthy Waters Department 2017). Some of the councils that subsequently amalgamated as Auckland Council had already adopted varied means of management, but these remained localised initiatives within the super city.

Failures in OSWWM systems can result from a variety of issues, and can contribute to poor water quality and risks to public health. Contributing factors include:

- Aged and poorly maintained OSWWM systems
- Geographic features (soil depth, texture and steep gradients)
- Changes to population numbers, property style, and property use of those living by beaches
- Higher density housing than expected at the time of early OSWWM systems' construction
- Inadequate understanding of the operation and efficacy of some OSWWM systems
- Sand banking on west coast beaches causing pooling of down-stream water flow.

Guidance on the management of on-site treatment and land disposal of sewage wastewater from domestic sources, is contained in a technical publication (TP58) (Ormiston and Floyd 2004) produced by the former Auckland Regional Council.

ARPHS' concerns about OSWWM system failures related to the potential impact upon recreational water, wild food sources (such as watercress and shellfish), and the quality of groundwater potentially used for drinking.

2.2 DATA COLLECTION

During data collection for the case study, it became apparent that there had been a long-running process of ARPHS working to improve OSWWM. The issue of poor water quality associated with OSWWM had been the subject of longstanding liaison between the ARPHS and various pre 'super-city' councils; this relationship continues with Auckland Council. However, the latest opportunity for influence occurred through the submission and hearing processes concerning 'Topic 049: Discharges, Stormwater and Wastewater' of the Provisional Auckland Unitary Plan (PAUP).

Investigating the longstanding processes (the context) and the recent opportunity for influence each required distinct approaches. These are considered separately.

2.2.1 The context for recent interventions

To investigate the historical context, we relied mainly on key informant interviews. Interviews were used as a means to capture experiences about:

- Longstanding OSWWM interventions in the Auckland area
- The PAUP submission process, and
- Subsequent involvement of ARPHS in a council led working party to better understand OSWWM issues across Auckland and devise a management framework to minimise risk.

The interview guide developed for the earlier case study (Nicholas et al. 2017) was adapted for this location and case study. Minor changes were made to some questions to be specific to the location and case study topic; the essence of the enquiry otherwise remained unchanged.

Data were collected from six interviewees representing both the Auckland Regional Public Health Service (ARPHS) and Auckland Council. This included two officers from Auckland Council and a policy analyst, health protection officer and medical officers of health from ARPHS. Some difficulties were experienced in recruiting participants from Auckland Council, given staff changes in recent years. Nevertheless, each participant had had prior involvement with ARPHS concerning OSWWM. All interviews, except one, were undertaken in person and were conducted at the interviewee's work premises; the remaining interview was undertaken by phone.

Information from interviewees gave a perspective covering many years of collaboration regarding OSWWM between ARPHS and the varied councils in the Auckland area. The councils subsequently amalgamated as Auckland Council that introduced the PAUP, and a unique setting for ARPHS to attempt further influence.

2.2.2 Recent interventions

To understand the role of ARPHS in contributing to the PAUP process, we relied mainly on documents, supported by insights gained through the key informant interviews.

An online search informed understanding of the consultation process for the PAUP. Relevant data were primarily held on the website for the Auckland Unitary Plan Independent Hearings Panel website (AUPIHP 2014). The site holds details of the hearing processes, introduces the panel for the hearings, and has the collated documents and data for each hearing. This resource was used to understand where on-site waste-water sat within the structure of the PAUP, the process of consultation, pre-mediation and mediation, and the uptake of the ARPHS submission.

Updates to the website were suspended following transfer of their recommendations to Auckland Council in July 2016, however the content remains accessible. Further and more recent details concerning plans and policies are available on the Auckland Council website.

2.3 FRAMEWORK FOR ANALYSIS

As a means to reflect the capabilities and conditions supporting public health influence in this case study, we adopted a framework of four headings for our findings:

(i) **External influences** – aspects largely independent of interviewees or their employers
(ii) **Organisational influences** – strategic aspects affecting operations of either agency
(iii) **Team techniques, processes and practices** – within teams and across different agencies
(iv) **Personal qualities** – concerning individual characteristics and expertise

2.4 FINDINGS – THE CONTEXT

Interviews were analysed using the framework above.

2.4.1 External influences

External influences are those that occur independently (or largely so) of the control of the interviewees or their employers. These are elements upon which they do not have the balance of control. External influences offered both constructive and challenging influences.

The amalgamation of councils across the Auckland area

From the perspective of the ARPHS, there were positive comments about interacting with the amalgamated entity, Auckland Council. One interviewee suggested that the best and most enthusiastic staff had been retained in key positions. Liaising directly, their responsibility for such a wide catchment area made for more efficient liaison for the ARPHS.

> *I think it was always extremely difficult to have seven councils to deal with … the more enthusiastic staff became more senior and so you were able to get more response and results from them … I think it made a big difference really having a super city, rather than all those smaller legacy councils ... you could see that all the efforts were going to be much more likely to be worthwhile because one scheme would be applied to the whole region,* [Interviewee F]

However, interviewees from both the council and ARPHS also described some difficulties associated with subsequent restructuring within the council. Difficulties included uncertainty about where responsibilities were held within the organisation, loss of continuity, and breakdown or loss of once close relationships between agencies.

> *… they keep changing, so it's often difficult to know who's dealing with what … they change organisation structure from time to time so … not quite on an annual basis but it does mean it's harder to …* [Interviewee B]

There was a sense too that, as a result of restructuring within council, new relationships regarding OSWWM were distributed differently, and were still being built within council.

With the restructure down in … consents and compliance, there's a new team allocated to that, so we've just started working with them [Interviewee C]

For ARPHS, Auckland Council was still not their only local authority. They also relate to Waikato and Hauraki district councils.

Auckland Unitary Plan as opportunity

ARPHS committed considerable time and expertise in a relatively short time-frame in order to draw up their submission. Whilst supportive of the PAUP provisions the ARPHS submission was seen by ARPHS as a mechanism to sort out a chronic sewage problem, by pushing for the additional inclusions concerning 'cumulative effects' and 'monitoring and certification'.

It established a mechanism for sorting out a problem that's remained unsorted for decades … separating people from sewage is so important [Interviewee D]

However, using the mechanism of submitting to the PAUP required a commitment by ARPHS to an external process.

In addition to preparing the written submission, there was the need to participate in hearings. That participation was to ensure that the ARPHS perspective could be offered should there be any attempt to remove elements of the PAUP important to public health.

The Unitary Plan was such a big thing scale-wise that you never knew who was going to pop out of the woodwork and have a differing opinion to you and that's why we were all so involved because we supported what was already there so part of it was just going along and making sure that it wasn't stripped by someone else who had an opposing opinion [Interviewee A]

Features associated with developing the successful submission were: regular ARPHS meetings to discuss submission opportunities, capitalising on the range of skills and experience within the multi-disciplinary team, drawing together supporting evidence and detailing how the proposed intervention might work at a council operation, canvassing opinion from other specialists, and ensuring informedness and support through the hierarchy of the organisation. As one ARPHS interviewee described the process:

The way we address submission opportunities is that we tend to have a policy meeting once a week, depending on what's available to be discussed, and we go through a scoring process to decide whether we should or perhaps we shouldn't submit on something. Once it's been decided that an issue is of significance that warrants a submission, then we figure out who is [and] what section of our service is most appropriate to contribute to that. Then we figure out someone who is the most appropriate person or persons within that part of our service to review the document and come up with ideas [Interviewee D]

Typically, an experienced health protection officer wrote comments for review,

and those comments will then go through the system, the medical officer of health will have a chance to have a look at them and they are then polished and refined into a submission format. Then they go past … the general manager, and I think quite often they go past … the clinical director … during that process the hierarchy becomes aware of what we're submitting on and why. The hierarchy has a chance to look at any conflicts … that an issue has with other issues that are perhaps not in the public arena [Interviewee D]

ARPHS appreciated the approach adopted by the commissioners and council running the PAUP process. Although all topics had to be raised by each submitter at the outset, the process was open to incorporating alternative perspectives, and that provided opportunities for the constructive development of PAUP provisions.

… because the way provisions have been drafted it's possible that if council agree or you identified something that they also agreed with, that they may not have been aware of, there's a possibility that you could get changes to these provisions; because there [were] always ongoing changes being made to the provisions as issues were discussed [Interviewee A]

Access to national guidance and resources

Concern was voiced about a lack of provision of position statements and policy from the Ministry of Health. As a result, PHUs depended on their own staff to generate new initiatives.

The way it worked originally was position statements and policy originated from the Ministry and were then passed out to the regions on a consistent basis. The way we're set up at the moment, a lot depends on initiatives taken by the people within those public health units, to some extent, independently of Wellington. I think there's an argument for Wellington to do a lot of this type of work. Like on this issue it's not just us. I said earlier it's a national issue. I would have liked to have seen the Ministry do some fundamental work on onsite effluent disposal and produce a document that then the public health units could take the same document to all their local councils and say, "This is guidance from above. We'd like to encourage you to do this and we'll support you to get this sort of thing through the system" [Interviewee D]

It was suggested that, due to the size and resources, ARPHS might be able to generate position statements that could be available for use nationally and enable a more consistent approach across all PHU's.

A further opportunity to provide leadership had been lost through perceived inaction following a Ministry for the Environment study published in 2009. A 'Proposed National Environmental Standard for On-site Wastewater Systems' which mooted that property owners be required to hold a 'Warrant of Fitness' for their system, with a three-yearly renewal period (Johnson and Feise-Preston 2009). The reasons for lack of action on the proposal was not known by interviewees.

Industry and inspector capability

Interview data revealed concern about the lack of quality OSWWM design information demonstrating achievement of the permitted activity status for TP58. This was attributed to failures by consultants, a high building inspector turnover, and the lack of specialist waste-water building inspectors.

> *A frustration is, the industry is not well informed. So we're getting really crap, inadequate quality applications … a big thing that's slowing us down is that they write very little on a design information for waste-water to justify it being permitted activity status; to justify that it meets TP58 … the building inspectors have such a turn over and they don't have specialist building inspectors on waste-water any more. They're all supposed to be quite broad … so if a consultant tells them it complies with TP58, they tick it* [Interviewee E]

Public, political and geographical influences

A number of interviewees indicated that the extent and progress of generating OSWWM system interventions was subject to influence from general public, political and geographic perspectives. From the perspective of ARPHS, these appeared to be more negative, than supporting forces.

Concerns from the general public included the cost implications of OSWWM system requirements, especially given disparities between older systems and the sophistication and high costs of some newer systems. Some members of the public objected to a perceived subsidy for those with poorer systems, especially if their own system was relatively new and sophisticated. Furthermore, there could be general resistance to being told what to do, and to the time demands of any public consultation.

Interviewees expressed concern that time-scales for public health outcomes could be incompatible with those of councillors' objectives. Councillors may wish to achieve results in their terms of office, in order to win favour with potential voters. It was acknowledged too, that councillors may favour solutions that are politically more acceptable but are unknown to the agencies involved.

> *We have a three-year political cycle here and the politicians want to see payback in a much shorter timeframe so that they can make claims of success and encourage people to vote for them next time round. That's the reality of it. But public health is longer term and it's about prevention rather than cure* [Interviewee D]

> *… The councillors have all got a vested interest in being re-elected. That's where the politics comes into it. There might be a mechanism which is more palatable politically than another, which we don't know about* [Interviewee D]

Public health alongside therapeutic health

ARPHS, as are other PHUs, is located within a district health board structure. As one interviewee pointed out: this can be challenging, as the health emphasises are primarily different, as are the timeframes.

If you think about the air we breathe and the water we drink, those are things that people don't have choices about. It's all about prevention whereas the district health boards we work for are mainly about cure and response to events. I think the shame about investment in public health is that quite often the payback period is measured in decades or sometimes generations … public health is longer term and it's about prevention rather than cure [Interviewee D]

2.4.2 Organisational initiatives

Organisational initiatives are those of a strategic nature affecting operations of an agency. These incorporate management, policy, and planning that enable the work of those charged with effecting the objectives of their employer. The efficacy of these organisational initiatives will impact operational performance.

Council initiatives to promote OSWWM

Interviewees described varied Council initiatives to promote better waste-water management. Initiatives included, restructuring teams (eg, blending rural water quality and urban storm-water to form the Healthy Waters Department); attribution of departmental 'ownership' of the management of OSWWM problems, ensuring staff were charged with dedicated problem solving roles; revision of TP58; and varied initiatives with stakeholders outside Council.

Concerns, however, were voiced about loss of continuity that might arise through changes in the personnel dealing with particular issues.

ARPHS initiatives to promote OSWWM management

Within ARPHS, key attributes that enabled promotion of better waste-water management included: the importance of competence, experience, understanding the systems, being empowered to propose initiatives, teamwork, and working with a common voice at all levels of the organisation.

To complement this, different knowledge holders adopted different responsibilities as part of their team collaboration.

The distinction of responsibilities by role enabled further advantage. Within ARPHS, those of the medical officer of health appeared to focus upon taking the lead when there were acute or high profile events. These included preparation for and representing ARPHS at a hearing, or managing a public health 'crisis' that had potential to escalate to a major disaster. Resulting communication was directed largely at those with existing understanding of technical issues

Complementing this the lead HPO, appeared to focus more upon ongoing operations; these included being 'up to date on the current technologies, the current land use issues, development issues' [Interviewee B], managing and responding to enquiries, presenting at conferences, driving new initiatives and representing ARPHS through the working party (see 2.5.7).

The medical officer of health noted that they were unable to be involved in such day to day issues due to workload, but voiced considerable faith and trust in the HPO to carry the mantle (for example in representing ARPHS in the working party).

However, each noted their good communication and that they would discuss issues at hand, as needed.

2.4.3 Team techniques, processes and practices

The means of operating and interacting, both within teams and between teams across different agencies offering perspective on strengths and weaknesses that might influence efficacy and performance.

Collaboration and engagement

There was a strong element of ARPHS collaboration, demonstrated through the strength of combined skills (HPO, medical officer of health and policy advice) in working together to form a robust submission. There was a sense that being steadfast and confident in presenting the ARPHS submission demonstrated expertise and reflected the ability of the team to work with authority.

> *... we went to a hearing of the plan in front of three commissioners and we said why we wanted to see a process to manage these onsite effluent disposal systems so that they worked as well as they could in the circumstances. This is probably going … to take a decade before it's maybe even showing tangible results. But there are clear public health issues here; and they obviously accepted that* [Interviewee D]

There were varied examples of different situations under which collaboration occurred between ARPHS and Auckland Council; this appeared to affect the way that relationships were built and maintained.

We found evidence of a useful working relationship between ARPHS and Auckland Council. For example, the medical officers of health apparently could attend and contribute to council committee meetings.

> *So if there is an issue that comes up then there's a little extra push to get through council then we have an opportunity to do that* [Interviewee A]

ARPHS showed a readiness to be prepared and able to offer something of value to council processes.

> *I guess trying to look for avenues to be able to comment on issues, whether that be through formal consultation process or informal bringing up early. I mean it's always been a goal here to try and be a bit more at the frontend and proactive but … I've always maintained you need to have something to bring to the table and a good idea* [Interviewee A]

There appeared to be a sense that the ARPHS considered themselves ‘on the same page’ as council staff at ‘officer’ level, and that that support was a two-way process. This was illustrated by reports of working together in a conciliatory way, understanding each other’s perspective. For example, in reference to a PAUP related meeting:

> *… the gist of the meeting was that what we were saying was endorsed by council officers, informed council officers, and I got the impression that the officers were 100% behind us in what we were saying because they had*

probably been the saying the same thing without being heard[3] *… my impression that the officers were very enthusiastic about what we were saying and they were not disputing what we were saying* [Interviewee D]

Some credit was attributed to longstanding personal knowledge:

[xxxx] has been there so long so understands the angle of our questions and things [Interviewee E]

Interviewees noted the importance of building and maintaining relationships through a regular programme of meetings, and formal understanding of the nature of relationships between agencies.

I think you can get a lot more if you had a long ongoing relationship with them and meet with them regularly, at least quarterly or bi-monthly or something like that. So, everyone gets to know each other and we all hear about each other's problems because people are generally wanting to help out their colleagues in organisations. Just the fact of meeting them regularly, that things get done, that if you'd never met them, you'd never -- it would never get off the ground … we can talk about issues of common interest because there always will be, particularly the environmental part of a Public Health Unit's work [Interviewee F]

There has been a history of meetings between the agencies.

I think we used to have … quarterly meetings, sometimes a bit more than that and … and we could just discuss issues that we've put forward, was a concern to us and then put it to them. And just the fact that we had a good relationship with them meant that we could get alongside them and then ask when we wanted to press for something that we felt was important.

….

… it's really about having good relationships, getting alongside, getting them to like us and respect us and trust us, so that they would tell us things that we did and usefully do that would help us, both us and them [Interviewee F]

Such regular meetings and interaction were seen as being pivotal in influencing decision-making, especially given the divided responsibilities faced by council staff.

It was hard to gauge the council perspective concerning such collaboration, but there was a sense that some close links had faltered (having once been strong), either as a result of less PHU involvement due to changes to the RMA, or as a result of relationship attrition arising from the restructuring process. For some consent issues at least, council were finding it more difficult now to get information from the PHU resulting in a desire for better relationships with them on practical / operational consent matters.

[3] NB: There was indication too that the Council, in an early (~2012) draft in PAUP preparation, had themselves mooted a certification scheme, but that this section had however been removed at the point of PAUP release for consultation.

There was also concern about how to deal with risk, even in instances of apparent compliance with guidelines.

> *So where we have something we think is controversial, we're finding it hard to debate with an applicant that there's a risk, but we believe there's a risk but it's in theory compliant with guidelines, like the situation at a school. We've got an effluent field right next to a play field. We're seeing or perceiving a potential public health risk if there's seepage down on to the playing field we sort of need some leverage from a health perspective.*
>
> *That's where in the past we would have asked the applicant to go and consult with Public Health Services but now their angle is they will only have direct input where an application is notified for them, I guess assuming that we're going to be notifying the more controversial or high risk …*
>
> *Public notification. That's when they get involved. But, you know, we're not, then there's the change to the RMA to minimise and minimise the extent of consultation required let alone the need for public notification. So very few, I'd say no less than 1 per cent of our applications are notified* [Interviewee E]

We heard that differing parts of council had different views on how council should respond to risks:

> *… you got the sense the operational guys knew it was an issue and were up for anything that would help address the issue; then you had the planners who were like, "I don't want to put provisions in a plan that hamstrings or requires or commits the council to something that … does it have the funding?* [Interviewee A]

We also heard a desire for re-introducing regular meetings.

> *I would not be contrary and I very much doubt my team would be to something in the order of a six monthly meeting to work out what we could sound off each other. It may turn out to being needed only once a year, or it may turn into being needed, you know, for really controversial large-scale applications but effectively we have no relationship on those until something's publically notified.* [Interviewee E]

The unique PHU position of a work remit directed solely at health issues was seen as both a strength and a weakness. Being unencumbered with budgetary or political concerns to effect an intervention was viewed as a PHU advantage; however, PHUs are highly dependent on their persuasiveness in order to effect or "push" change.

> *… it just helps [to have] another group whose only remit is health. And we don't have to worry about any other thing. Like the councils have to worry about budgets and have to worry about priorities in their organisation, they have to worry about the elected representatives. We don't have to worry about any of those things, we can just keep banging on the same drum and that's quite important and quite effective, I think, to keep doing that* [Interviewee F]

> *And sometimes people who work in councils can't get things done that they would like to get done and it's actually very helpful to them if the Public Health Unit then takes on the cause for them … we can easily meet with mayors and the new executives and write letters and emails and pressure other parts of the council to do things that they can't actually get done themselves because of the internal politics*. [Interviewee F]

However, such reliance on having to persuade others might also be considered a weakness, given the limited alternative avenues to effect change.

> *… the thing about the environmental part of Public Health Units [is] it's actually quite hard to make changes [by] yourself. You really have to try and work with sister organisations like councils, Regional Councils, MPI, Ministers for the Environment, that's the way we can get our biggest wins because we can persuade other people to make those changes that will improve public health that we don't have that much power to do* [Interviewee F]

There was also an impression of stalemate where 'persuasion' did not work. This raises the question as to what further information, guidance, setting or scenarios are needed to tip the balance in decision-making. In the case of OSWWM, there were evolving problems over a 20-year period that required the power of the PAUP process to authorise change.

> *I think it could have been done sooner… I don't think there's been any doubt for probably a decade or even two decades that failing septic tanks were a problem. So, we could have probably started pressing much sooner but, to be honest … it's an issue that we knew about and brought up regularly at meetings with council and also Water Care, … But its time wasn't probably quite right, … you got to sometimes stay in for the long game and wait for the right moment* [Interviewee F]

Notably, the emphasis is upon the PHU having to 'push' or 'sell' public health, rather than any onus on other parties to seek public health input.

Becoming aware of opportunities for intervention

PHU interviewees described various means by which they became aware of public health hazards or issues warranting further attention. These included direct complaints and many third party sources, such as council environmental health officers, data through monitoring for other initiatives (eg, SafeSwim), media attention, public health signage erected at hazardous water spots, and through prior knowledge of known water quality issues (eg, from previous council employment).

Consent applications also served as an avenue to become aware of potential issues. But, we gathered, PHU awareness of such applications had diminished following changes to the RMA.

Furthermore, it was reported that ARPHS had undertaken assessments for an earlier initiative, the 'Sanitary Works Subsidy Scheme' (Ministry of Health 2003). This was established (in the 2000's) to help poorer rural communities to fund new or upgraded sewage collection, treatment and disposal systems to reduce public health risks.

Although it was reported that this programme was now finished, it demonstrates circumstances where the PHU had direct practical involvement and opportunity to become aware of issues as part of their own work.

Communication

The importance of good communication between different disciplines both in-house and across agencies were highlighted by interviewees.

There was indication that there are opportunities to enhance knowledge between the agencies, in order to provide more efficient responses.

> *I always try to tell people around here, "If you keep us in the loop of what's going on, we are probably going to be more useful to you because we can keep an eye out for things or see potential opportunities"* [Interviewee A]

It was apparent too that ARPHS relied on communication of information through the RMA process and from the council in order to effect their role.

> *… there's also like a lot of public health technical issues … where people in the industry and councils are generally better informed about them than we are. So we're always a little bit behind on the sort of being up to date. We're depending on people like them to actually, you know, let us know what's happening process-wise or events-wise and then we can respond to it and be involved* [Interviewee B]

> *… it depends on what gets notified and/or aspects of a development get notified … we wouldn't otherwise know necessarily because … there's no other real way of finding out that we've got unless they go through their RMA process.* [Interviewee B]

Additionally, initiatives (such as collaboration through health promotion initiatives, such as SafeSwim or Healthy Auckland Together) also offered opportunities to promote Council and ARPHS working relationships.

Although it appeared that there might also be times when guidance would be welcomed (and enhanced through liaison among those with existing relationships), there was an indication that the ARPHS was not perceived as resourced for such enquiries; that their focus was primarily upon acute events or issues and it was about these that council would expect to be informed and for the PHU to be active.

> *… they're not really funded at all if that's the right word, resourced, for random inquiries on one-off situations … of course if there was a breakout or if there was an immediate risk then I'm sure they'd be very proactive … they're not at the forefront of that proactive work … you just see how little resourcing they do have it's not surprising* [Interviewee E]

But a good ARPHS/Auckland Council working relationship appeared to facilitate direct engagement:

> *I've had enough experience to be able to … directly email [xxxx] and get a really good response whereas I presume if he had random emails from*

people he'd never heard of in Council he'd be a bit wary about how much time he could put into [it] [Interviewee E]

The perception of ARPHS by officers at the council as resourced mainly for managing disease outbreaks contrasts with the perception of ARPHS of high levels of co-working and collaboration on preventative initiatives. It is possible that lack of distinction in information concerning collaboration for problem solving and for 'persuasion' has blurred actual practice. Further data are needed to understand the council experience of ARPHS collaboration and communication.

2.4.4 Personal capabilities

Personal capabilities concern the expertise, skills, abilities and characteristics of key actors that impacted their performance.

Interviewees gave many examples of relevant capabilities. Key strengths identified included domain or discipline specific knowledge, breadth of experience, and knowledge of the skills and abilities of both co-workers and those with whom they collaborate.

Interviewees noted advantages in being generalists, and being able to transfer skills to a range of situations.

> *I don't know how, somehow I got charged with running through the Unitary Plan work … So we initially just had a meeting between council and us where we just had an opportunity where we … could just sit down and talk about the issues* [Interviewee A]

> *… my job is more a Jack of all trades. Like, we've got the environmental health team. We've got the health promoters. I cross the whole lot so one week I could be working on something that's environmental health based. Other weeks I would be helping something around alcohol or smoke free, so I guess I'm a generalist* [Interviewee A]

However, concerns were also raised about the lack of opportunities to train where cross-disciplinary knowledge would enhance work capabilities.

Furthermore, ARPHS staff skills were enhanced through experience from previous employment. There were some reports of staff having worked within councils, bringing the benefits of greater awareness of the issues councils face, understanding of their systems, and having residual professional contacts.

One interviewee referred to such a colleague:

> *He used to work with the council, so that helps the cause as well. Somebody who actually worked for a council, so he knows exactly how a council works and knows what buttons to press at the right time to get the changes we want* [Interviewee F]

Another interviewee spoke of the value of their own previous experience:

> *I used to work in the Waikato and* [OSWW] *are problematic all up and down the whole region … and I'd do some contract work for what was*

Rodney District Council looking at some of the potential public health aspects of some of the west coast beach communities [Interviewee B]

Such capability can also be valuable in new employees:

… we've got a new health protection manager … from the Auckland Council. He's also worked for public health service and elsewhere in the country … so he's fairly familiar with how that process works. That's going to be probably a big boost for the relations, you know, connections with council so it's a bit of a score that. [Interviewee B]

While PHUs have access to advice from the Ministry of Health, ESR and other sources, other professional networks were also counted as an important resource.

I have national contacts through people I've met on Ministry courses but I think it actually works the other way around. I more frequently get calls from someone else who have listened to something I've said at a presentation or who know I've got a personal interest in legionella, for example, or who has asked someone about something and they've said, "Oh, well, ring up [xxxx] and see what he thinks about it" [Interviewee D]

2.5 FINDINGS – RECENT INTERVENTIONS

2.5.1 Evolution of the Auckland Unitary Plan

The formation of Auckland Council in 2010 set in motion the process of developing consistent planning rules across the whole region previously represented by separate councils. This process included the development of a 'Proposed Auckland Unitary Plan' (PAUP) which, in 2013, was put out for public consultation. Following public meetings, a submission period and any related mediation, hearings were held between September 2014 and May 2016. In July 2016 the government appointed Independent Hearings Panel presented its recommendations to the council. Recommendations concerned changes the panel felt should be made to the Unitary Plan to help it deal with 'challenges of the next 10 years and beyond' (Auckland Council 2018). Following deliberation, in July 2016, the council made available its decisions on the panel's recommendations. A further period for appeals was provided before the Unitary Plan became operative 'in part' from November 2016.

2.5.2 Hearing Topic 049: Discharges, Stormwater and Wastewater

The main body of the PAUP included 'Objectives and Policies', and 'Rules' for the newly defined region. Each of these had a section that focused upon on-site waste-water (Figure 1). As a hearing theme, waste-water was amalgamated with discharges and stormwater into a combined "Hearing Topic 049" (AUPIHP 2015a).

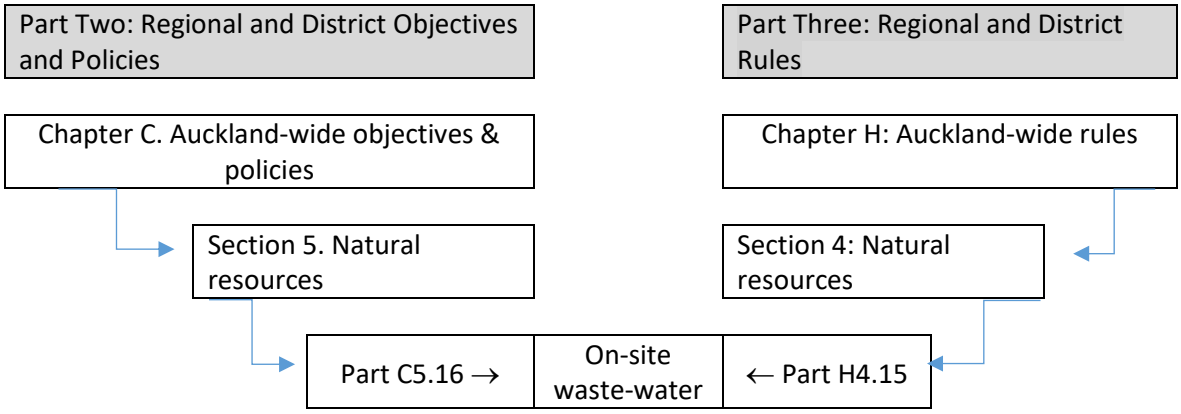

Figure 1: 'On-site waste-water' in the Regional and District objectives, policies and rules

Attention to Hearing Topic: 049 spanned a four-month period, from pre-hearing meetings in May 2015 to the hearing in August 2015 (Table 1). Whilst the topic as a whole incorporated waste-water network management, discharges of contaminants, stormwater management and on-site waste-water management, each had its own focus.

Table 1: The pathway for Hearing Topic 049: Discharges, Stormwater and Wastewater

Stages of hearing pathway	Date
Pre-Hearing Meeting	4 May 2015
Pre-Hearing Meeting Report	7 May 2015
Expert conference	To be part of mediation
Mediation	2-5 June 2015 and 15-17 June 2015
Mediation Joint Statement	Various
Expert Witnesses Joint Statement	Various
Hearing evidence – Auckland Council	7 July 2015
Hearing evidence – all submitters	21 July 2015
Rebuttal evidence	4 August 2015
Hearing	12-14 August 2015

(AUPIHP 2015a)

Issues relevant to the ARPHS' and Auckland Council's positions concerning on-site waste-water management have been collated for this report from the websites of both the Auckland Unitary Plan Independent Hearings Panel and Auckland Council. Auckland Council's position concerning ARPHS' concerns is apparent in documents detailing:

- The outcomes of mediation
- ARPHS and Auckland Council hearing evidence
- Auckland Councils (post hearing) closing remarks
- Hearing outcome

2.5.3 Mediation for Hearing Topic 049: on-site waste-water

Mediation for 'on-site waste-water' took place on June 17th 2015 and included (among other submitters) representation in person by Auckland Council and the Auckland Regional Public Health Service.

During this process updates (annotated using the Word document function 'track changes' and published with the 'Mediation Joint Statement') were made to versions of the C5.16 and H4.14 (see Figure 1, above) documents (AUPIHP 2015b). In drawing together matters outstanding at the end of the session the mediator summarised two items that had specific reference to the ARPHS submission (Table 2).

Table 2: Matters outstanding after mediation relating to on-site waste-water

Summary point	Reasons
Auckland Regional Public Health Service sought to explicitly include reference to adverse cumulative effects in a number of provisions.	Council not persuaded, as this is implicit in the definition of "effect" and risks the prospect of unanticipated implications.
Auckland Regional Public Health Service seeking a new policy requiring Council to adopt a more through-going inspectorate and reporting function.	Council does not consider this appropriate.

(AUPIHP 2015b)

2.5.4 ARPHS Statement of Evidence for Hearing Topic 049: on-site waste-water

The Auckland Regional Public Health Service (ARPHS) submitted their 'Statement of Evidence' (uploaded to the AUPIHP website 22 July 2015), with specific reference to on-site waste-water provisions in sections C5.15 (objectives and policies) and H4.15 (rules) of the PAUP (ARPHS 2015). The key recommendations within their submission included:

- That council should adopt an inspection and certification programme for on-site waste-water systems. Council should also hold a register of all on-site waste-water systems. H4.15 should be amended accordingly
- That there should be explicit reference to the 'cumulative effect' of a large number of small discharges within the onsite waste-water provisions (to ensure consideration of combined discharges within a community)

In their supporting evidence ARPHS gave examples of initiatives undertaken at different locations nationally (Kawakawa Bay, Bay of Plenty, and Waitākere), with reference to their means of management, costs, and impact upon 'safe for swimming' status. A number of benefits of an inspection and certification programme were noted. ARPHS noted that maintenance requirements stipulated in H4.15 (section 2.1.1.3) should meet those defined in TP58 (Ormiston and Floyd 2004), but that these fell short of ongoing reporting of compliance to the council. To redress this, alternative wording to H4.15 was proposed. They noted too, that a number of points concerning maintenance and reporting had been proposed by Water New Zealand in their submission, which ARPHS considered supportive of their own submission points.

2.5.5 Auckland Council Statement of Evidence for Hearing Topic 049: on-site waste-water

The representative engaged by Auckland Council to review and revise provision for on-site waste-water in the PAUP (I. Mayhew), provided evidence (7 July 2015) concerning sections C5.16 On-site waste-water (objectives and policies) and H 4.15 On-site waste-water (rules). Within his 'Statement of Evidence' he described a number of issues relevant to ARPHS' submission (Mayhew 2015). Shortcomings in the contemporariness of TP58 (Ormiston and Floyd 2004) had already been acknowledged and the document was being reviewed. He felt it should remain until new guidelines became available. He also felt that TP58 is part of the 'rules' (rather than guidance to the rules) and, as such, a plan change will be necessary when the revision is ready). Regarding C5.16 (On-site waste-water objectives and policies) he stated:

> "While I do not consider that specific provisions are required to address potential effects on aquaculture, the issue of cumulative effects was discussed at mediation with resulting changes to the objectives to highlight that cumulative effects are an issue of particular significance in areas where on-site/small scale waste-water treatment and disposal is the primary means of managing waste-water" (Mayhew 2015)(section 6.7).

Mayhew later added that specific reference to cumulative effects should be included in Objective 2 of C5.16 (section 6.24, pp 16).

> "I note the submission of the Auckland Regional Public Health Service and its request for a compulsory inspection and certification programme. This was discussed at some length in mediation and while I understand the intent of the submission, I do not consider that this is able to be provided for in the policy and rules. Such a programme would require wider Council comment and processes and programmes that are outside the scope of these provisions. However, amendments have been proposed to the rules to clarify and improve maintenance obligations." (section 6.11, pp 13)

Thus, the council statement of evidence shows the successful influence by the ARPHS concerning the need to make reference to 'cumulative effects', but that the Council representative felt that any compulsory inspection and certification programme was outside the scope of both the H4.15 and C5.16. There would be implications for council processes and programmes and, as such, wider consultation would be required.

2.5.6 Closing remarks on behalf of Auckland Council: Hearing Topic 049

Following the Hearing, Auckland Council filed 'closing remarks' in response to matters raised during the hearing. They made specific reference to the ARPHS proposal for on-site waste-water device maintenance requirements (noting similarities to those of Waiheke Island and of the former Waitākere District Council) (see Box below).

15. WHETHER MAINTENANCE REQUIREMENTS FOR ON-SITE WASTEWATER DEVICES SHOULD BE INCLUDED IN THE PERMITTED ACTIVITY RULE - H4.15

15.1 The submission by Public Health sought that the waste-water provisions include, as part of the permitted activity standard, requirements for maintenance of on-site waste-water devices (similar to those that apply on Waiheke Island and in the former Waitakere City Council).

15.2 That proposal is acceptable to the Council, as is the requirement that the Council be notified of such maintenance.

15.3 That would still leave the Council with a monitoring and enforcement role, which the RMA provides for, and with a discretion as to how enforcement might occur. The Council advises that it intends to review its existing on-site waste-water bylaws following the Plan becoming operative, and assess how this may augment the Plan requirements to ensure the effective operation of on-site systems across the region.

15.4 The Council has current programmes to address bacterial contamination issues at the West Coast beach lagoons (Piha, Bethells and Karekare) which have assessed a range of sources including on-site waste-water management systems, and is currently implementing actions such as education, enforcement and upgrading of the Council's own systems. Council officers are considering options to improve the management of on-site waste-water systems, including wider implementation of programmes similar to those in the legacy Waitakere City Council area and on Waiheke Island, although there is currently no provision in the Long Term Plan for wider implementation of these programmes.

(Lanning et al 2015)

This response indicates agreement with the principle of the second recommendation by the ARPHS in ‘notifying Council of such maintenance’ (15.1 and 15.2), but whether this is tantamount to ‘certification of OSWWM systems’ was not clear. They also noted that the Council were in the process of exploring the means to improve management of OSWWM systems and address enforcement issues. Relevant bylaws and programmes similar to those already operational on Waiheke Island in in Waitakere will be reviewed as part of this process.

It is understood that these are the issues that underpin the establishment of the stakeholder working party (see below).

2.5.7 Formation of a working party

A key initiative for OSWWM system management, was the formation of a working party to develop the necessary knowledge base and set out a management framework. The working party was the innovative means to manage the outcomes of the OSWWM hearing and to take forward previously attempted and unsuccessful initiatives. A “targeted engagement” process adopted by Healthy Waters Department ensured that stakeholders both within and beyond the organisation had an opportunity to work on developing the proposed standard (Healthy Waters Department 2017).

The consultation, time and partnership that underpinned the working party process was seen (illustrated below by comment from interviewee C) as fundamental for the

iterative development that built up arguments and enabled development of a way forward that had all stakeholders on board.

> *… anyone that was involved in any way with onsite waste-water, because you can't create a regulatory vehicle without knowing what the limitations are for implementation and who best to give that advice than the people on the ground. But the general consensus across all of them is that the proactive compliance scheme, like a water fitness scheme, was the best way forward* [Interviewee C]
>
> *We had a way forward of where we were thinking of what could be done, but through those workshops that changed a lot, and so the final input is actually very different from what we initially put forward* [Interviewee C]

ARPHS has been represented in the working party.

2.5.8 Hearing outcome: on-site waste-water

Following the hearings for all hearing topics, the panel made their reports to the Auckland Council on 22 July 2016. The overview report identified that the objectives and policies relating to on-site waste-water had been relocated to Section 046: Water quality and quantity (AUPIHP 2016).

The report proposed varied means of re-distributing information in the plan. As a result, objectives and policies (formerly 5.16) and rules (formerly 4.15) were addressed in two sections of Chapter E: Auckland-wide:

- E1: Water quality and integrated management (objectives and policies), with paragraphs 23-25 dedicated to ‘on-site and small scale waste-water treatment and disposal)
- E5 On-site and small scale waste-water treatment and disposal

The two sections do not stipulate a certification scheme. However, it is noted that the remit of the working party, as presented in their review (Healthy Waters Department 2017) was to:

- Provide a better picture of the extent of the OSWWM issue across Auckland, and
- Set out actions for implementing a consistent cross-council management framework aimed at minimising risks from OSWWM.

There are also plans in place to update TP58.

2.6 CASE STUDY CONCLUSION

The case study focuses on one, albeit perennial and important, public health concern: the reducing health risks resulting from OSWWM systems in the Auckland Council area. The case study demonstrates several dimensions of preventative public health:

- The importance of public health units committing resources and expertise over extended periods to influence policy and practice affecting a major risk to public health

- The significance of professional experience, networks and expertise in bringing influence that is credible in the eyes of non-health decision-makers
- The challenge for public health personnel in participating in formal and informal processes that have timeframes, agenda and accountabilities other than public health
- The role of semi-specialisation within a team of public health generalists
- The precariousness of public health input into planning, policy and land use decisions, given the lack of legislative requirement for PHUs to be involved, the perception that PHUs are only resourced for response to disease outbreaks, and the public and political pressures to streamline policies, procedures and land use decisions.

As to assessing whether the public health initiatives in the case study had tangible results; as one interviewee commented:

> *… it's hard to know how much influence we had but I like to think that we did continue to … actually getting this on the agenda, getting some sort of programme for the region, the whole region. … there should be something looked at that covers the whole region's septic tanks* [Interviewee F]

3. ESTABLISHING A HEALTHY HOUSING FORUM

3.1 DESCRIPTION

This case study concerns initiatives made in the Bay of Plenty by Toi Te Ora Public Health, the regional PHU, in drawing together the many local parties with health and wellbeing related housing interests to address housing quality. In the first instance, in June 2016, Toi Te Ora (TTO) hosted a one-day seminar in Rotorua which welcomed approximately 80 attendees. Subsequently TTO initiating a housing forum. The forum has since held a one-day workshop to pool ideas for best practice and serve as a foundation for ongoing forum discussion.

In the preceding (approximately) 15 years the DHB and PHU had been working on initiatives to address rheumatic fever. The influence of the state of housing upon the prevalence and incidence of the disease was a strong focus of interest.

In 2013, whilst considering what direction their next TTO annual plan might take, the 'burden of ill health' arising from housing in the region was targeted as an area of concern. As a means to explore the extent of the problem, a range of information needs were identified. These included data requirements such as the distribution and quality of housing stock, associated demographics, and understanding the experiences of residents in challenging living situations. A further component was to identify the nature of locally based initiatives already in place across the region.

Having raised housing as an issue warranting deeper exploration, an internal 'housing group' was formed, comprising interested parties from the PHU (representing skills in health promotion, protection, improvement, and intelligence) along with the DHB 'Planning and Funding' lead. Intended to inform planning, its brief was to discuss and scope PHU intentions concerning housing and housing stock. This initiative was directly related to the first goal of the TTO strategic plan: to reduce childhood infections linked to hospital admissions through rheumatic fever, acute respiratory infections and skin infections (Toi Te Ora Public Health, 2018).

The housing group devised a framework for action, and established the data requirements needed to inform and underpin further steps. Qualitative data was captured from interviews with 29 householders, gaining their perspectives on the impact of housing on their health and wellbeing. Quantitative data were largely derived from the national census, a BRANZ[4] housing report, and resources concerning overcrowding released by the University of Otago. Findings were included in an internal 'Housing in the Bay of Plenty' document.

At that stage there was a surge of external interest in housing, including a more visible political emphasis, a drive from the Ministry of Health, and public concerns about the effects of escalating house prices.

The early search for information had identified some instances of disconnected or overlapping regional services. A seminar was initiated by the PHU, the essence of

[4] BRANZ is an independent research, testing and consulting organisation on building and construction.

which was to affirm understanding of the varied initiatives in the area, share experiences and information, try to establish where efficiencies or streamlining might be possible, and canvass interest in creating a forum. The seminar comprised a number of presentations and provided the opportunity for discussion among participants. The day served as a platform for both national and local speakers and as a means to present the data compiled by TTO. There were some 80 attendees, representing the inter-agency and inter-sectoral nature of housing.

The success of the seminar provided a foundation for an inter-disciplinary forum of 'main players', and a means to move forward collectively. The Lakes and Bay of Plenty Healthy Housing Forum was established, and continues to be led by TTO. It has a dedicated website[5] that includes its terms of reference and meeting minutes. An extract of the introductory details from the website is provided below:

> The role of the Lakes and Bay of Plenty Healthy Housing Forum is to provide leadership and coordination for healthy housing work, in order to improve the health of vulnerable communities and families/whanau in the region, and reduce health care costs.
>
> The Forum is a regionally-driven group, focused on providing insulation and other healthy homes interventions to both privately-owned and rented houses of whanau and families in BOP and Lakes.
>
> Objectives of the Forum
>
> - Proactively seeking sustainable funding for Healthy Homes initiatives in the medium term across all potential funders to address housing needs in prioritised communities.
> - To explore efficiencies within community-based projects, so that costs can be reduced and more homes can be improved across the wider Bay of Plenty.
> - Ensuring good practice in the implementing of community-based healthy housing programmes that provide scale, quality and community engagement.
>
> https://www.ttophs.govt.nz/healthy_homes_housing_forum (downloaded May 2018)

Following the first four meetings of the forum, a separate workshop was held, in November 2017, with a core group of forum members (Exult 2017). Facilitated with funding from a philanthropic community trust, its task was: "to build the capability and resources to enable communities to solve their healthy housing issues themselves" (Exult 2017) by drawing together generic best practice guidance as a resource for future initiatives.

At the time of our case study interviews, any actions arising from this workshop were yet to be fed-back to the remainder of the forum for their consultation.

The region is considered to be challenged by social inequality, and has Māori and retirement populations larger than the national average (Yong et al 2017).

[5] https://www.toiteora.govt.nz/healthy_homes_housing_forum

The researchers, in consultation with the Ministry, selected formation of the housing forum as a case study based on the potential that the intervention and experiences of those that have contributed to its evolution would serve to inform public health practice.

3.1.1 Caveat

The focus of the case study was on the PHU-initiated seminar and the forum and workshop that followed that event. Although there have been an extensive range of housing initiatives within the Lakes and Bay of Plenty region, these will not be reported upon *per se*. Those initiatives did, however, serve as valuable precursors for knowledge development and relationship building for interviewees; examples of their contribution to the PHU initiated work are included, where appropriate.

3.2 DATA COLLECTION

Data were collected from seven interviewees representing Toi Te Ora Public Health (including an analyst, a public health nurse and a medical officer), Western Bay District Council (a policy analyst), a co-ordinator of an organisation working locally across government agencies, and a representative of a community trust. All interviews, excepting two, were undertaken in person and were conducted at varied Tauranga work premises; the remaining interviews were undertaken by phone.

3.3 FRAMEWORK FOR ANALYSIS

We present our findings from the study under the following four headings:

(i) **External influences** – aspects largely independent of interviewees or their employers
(ii) **Organisational influences** – strategic aspects affecting operations of either agency
(iii) **Team techniques, processes and practices** – within teams and across different agencies
(iv) **Personal qualities** – concerning individual characteristics and expertise

Interviews were analysed for themes to understand enablers and indicators of good primary prevention practice for public health officials. Findings were generalised across the seven interviewees, unless otherwise specified.

3.4 INTERVIEW FINDINGS

3.4.1 External influences

External influences are those that occur independently (or largely so) of control by the interviewees or their employers. These are elements over which these actors do not have the balance of control. External influences offered both constructive and challenging influences for the PHU initiative.

Existing networks and programmes

As initiatives, the PHU seminar and forum sat alongside established housing improvement interventions in the region; these included their own, and those being undertaken elsewhere in the target locations. Furthermore, there was a pre-existing agency that facilitates networking of government agencies (CoBOP, see below) that proved of value to the PHU initiatives; and, oversight of housing quality had been

raised as a concern both by the government agency network and the Bay of Plenty Community Trust Incorporated (BayTrust)[6].

The agency networking government organisations is Collaboration Bay of Plenty (CoBOP) which formed in 2005. CoBOP represents 26 central, regional and local government agencies. Its focus is on working together for community outcomes based on the four well-beings: social, economic, cultural and environmental issues[7].

Interviewees recognised CoBOP as an effective networking instrument already well established and serving as a valuable foundation for the subsequent housing forum.

> *[CoBOP] has brought together the central, regional and local government agencies into one sort of organisation and … that's had a social subgroup, social cluster group as part of that. So the social agencies have sort of met and worked together on things for quite some considerable time. A little bit more of a networking group rather than developing projects as such; but even so, just with that networking, you always knew who the right person was to go to* [Interviewee B]

A review of the CoBOP network was undertaken in 2016. It identified the presence of multiple local forums and, whilst the value in networking was identified, the time demands on participants was raised as a concern. It was mooted that this might influence the seniority (and hence decision-making abilities) of those nominated to attend forums.

> *… for people that, especially regional managers etc, government agencies, they cover two regions, … they're not time rich, you know. So, to be on a network or to be on a forum, they have to decide, "Is it me or is it my 2IC or is it another manager within my organisation who is devolved decision-making responsibility that I can say, 'Go to this forum'?"* [Interviewee E]

Nevertheless, that associated government agencies had already fostered effective community engagement programmes was seen as advantageous for the housing forum.

Interviewees applauded the number of locally based community initiatives, especially in deprived areas. A 'whole community' approach had been adopted through input from NGO agencies, iwi, trusts and community representative groups. The ones particularly mentioned were at Murupara, Maketū, and Kaharoa.

> *… we work with local iwi, the local government, the District Council of that area, local iwi providers and housing providers and work together on helping housing solutions within a particular community, so taking a whole community approach, some of the other approaches like Healthy*

[6] Established upon deregulation of the Trust Bank and one of 12 Community Trusts in New Zealand. It was introduced as an entity with a separate piece of legislation and with their own minister. The sale proceeds amounted to $90 million and, with investment, these have grown to over $200 million. The role of this particular trust is to "benefit the Bay of Plenty people and the Bay of Plenty".

[7] CoBOP's remit includes a much wider range of participants and areas of application than were included for this study. CoBOP is a network set up following the Local Government Act 2002. It has a part-time co-ordinator who has facilitated cluster meetings for each of the four wellbeing's. As the network has evolved, and through awareness of what different agencies are working on, CoBOP has enabled "partnership brokering" to link interests in common.

Housing Initiative which is a house by house approach scattered across the Bay of Plenty [Interviewee B]

A further determinant of progressing interventions was through community readiness and having a social infrastructure able to take leadership. The importance of council, iwi and rūnanga involvement was noted. The varied descriptions of initiatives in each location reflected the bespoke range of measures and relationships for each.

The CoBOP review had identified housing as a priority area and, fortuitously, this coincided with initiation of the seminar by TTO. This may have served to get the various government agencies engaged with the housing forum. The community trust had also flagged housing as an area warranting more efficient measures; they were keen to join the initiative to help achieve this.

Toi Te Ora had already kicked off in what they were doing and they already had a process going so CoBOP said, "Right, we don't want to reinvent the wheel. Let's just connect with that because it's already happening" and probably a good 90% of members that are part of the housing and the health forum are -- their agencies are CoBOP members … it was really nice actually to be able to say to the agencies after the review, "This is already happening". My recommendation is that we just get alongside and we support it from the top down … [Interviewee E]

This was unexpected by TTO, but welcome. Support for the forum was broader than from just TTO and the DHB.

Working with multiple authorities

One of the challenges for TTO in working across the region on housing issues was the sheer number of councils and iwi with whom to engage.

We're only 300,000 people but yet we're seven councils. So, we need to somehow combine resources to be more effective, I think. I mean, Auckland has got over 1 million people as one council and yet we're 300,000 and … seven authorities and one regional council so eight, nine if you include Waikato … it's a reasonable population but we've actually got so many different authorities and regions that I think that is a bit limiting as well [Interviewee C]

… as long as I've worked in the Bay of Plenty, people have a will to work together … It's not a small region by any means, you know … we've got, obviously, seven councils to work with and a multitude of iwi as well. So, it's not simple [Interviewee E]

Balance between regional and national initiatives

Interviewees perceived DHB initiatives, with their backing from the Ministry of Health, as a beneficial means to promote housing improvements and to fund contractors to work on properties. Central government thinking could also function to encourage those working on local initiatives to join the forum.

Despite the value of the regional initiative, interviewees saw the scale of the challenge to improve “housing stock across the whole spectrum [as] … too big … to tackle at a regional level”. It was seen as a national issue [Interviewee D].

However, central government efforts span the remits of various ministries. Efficient and effective communication and collaboration across ministries was seen as important, albeit that each should have their own focus.

> *… that would be an awesome support, you know, for us to actually know that, in Wellington, ministries are talking across ministr[ies] rather than just having a ministry portfolio … because [it] makes it really hard to do collaborative work on the ground when you've got a ministry portfolio that goes, "We've got these outcomes" but it's not linked to education or it's not linked to some of the MSD staff where, you know, on the ground we're talking about a person or a whānau or a community that engage with all of those things. You know, if you've got a healthy house, then you're more likely to go to school etc.* [Interviewee E]

Interviewees largely supported approaches with national backing, but the need for local control was also affirmed.

> *… the regions of the communities are best placed to deal with their own issues, … because the solutions here are always going to be different than solutions in other parts of New Zealand. But the central government in New Zealand have a view, quite often, that one program across all New Zealand works; so, hopefully, [the new government] might change that a little bit and start empowering communities a bit more to make their own solutions* [Interviewee A]

Data sources and use

Early stages of the PHU needs-assessment process used 2006 census data.

Other data sources used, included a BRANZ survey report on the state of housing stock, and database information from townships with existing housing initiatives. The required information was compiled from a range of disparate resources. A qualitative survey undertaken by TTO helped provide meaning to the varied quantitative data.

Changes to the housing related questions in the (then) forthcoming 2018 census were strongly anticipated. However, there was disappointment in the prohibitive costs involved to access Quotable Value data that might have formed a valuable part of the PHU analysis.

> *… the information that we'd like to get hold of is information that's publicly gathered, and the councils have it, [from] Quotable Value, QV. And we looked into getting an extract from their database, because they just suck all this information off the councils. [But it was too expensive] … you'd know when every single home or house in the Bay of Plenty was constructed. You'd know what material. There would be a whole bunch of things that you would know* [Interviewee C]

Whilst the quality of PHU data analysis was applauded, the data available to the PHU were seen by some as insufficiently detailed to justify remedial measures (at least concerning the local situation); they were thought to lack the detail available in other resources.

> *… [xxxx] assessed his data and there's various other data that's available. It never really gives you a complete picture. You know what's been done but you don't know really what still needs to be done. It's hard to measure that. It would certainly be much easier if we did have a total picture and we knew exactly what we were looking at* [Interviewee B]

> *[TTO has] done as much as [they] can do with the data that [xxxx] can access and it's really good but it's not going to be sufficient, I don't think, to get those other agencies to go, "Yes, that's a number that we would run with" and go, "Okay". Regionally we've got 9,000 homes that need work done on them. None of those agencies are going to accept that as a figure at the moment because there's not enough to back that up* [Interviewee F]

The availability of alternative information sources regarding local housing were described by interviewees, including evaluation for the Healthy Homes Initiative for the Ministry of Health (still awaited at the time of interview) and a local housing needs-analysis report.

Funding

A longstanding funding source has been the DHB, which has funded house insulation and contracted an insulation company in the area.

There is also other funding from outside of health, particularly charitable trusts and other local funding entities. It appears that central government agencies are increasingly inclined to collaborate with trusts as funders, and that the trusts welcome this.

Trusts had their own parameters: avoiding primary healthcare, aspects that are the responsibility of central or local governments, and initiatives that build personal wealth. Furthermore, while trusts had directed funding towards insulation, there did not appear to be comparable resources to target maintenance and repair.

> *I think the insulation is the easy part to some extent, and so there's more government support for that … The more difficult part is the stuff around maintenance and repairs, … because there's very little funding for that* [Interviewee B]

The trusts themselves were forging and funding new initiatives, and inviting government agencies, such as the Ministry for Social Development, the Ministry of Education, and DHBs, to participate. However, it appeared that there had been no prior relationship with the PHU until the housing forum was instigated.

In contrast to the trusts, the PHU was unable to contribute funding, but was able to supply expertise, information, and communicate between parties. This was recognised by other parties, but their lack of financial contribution, nevertheless, served as a source of frustration for some non-PHU participants.

Impact from social and political influences

Interviewees reported, that in recent years there had been a number of social and political influences that have energised interest in housing initiatives; these were the context in which forum participants operated. A key interest has been the impacts of poverty, house price rises, and the social impacts of insecurity associated with lack of home ownership.

> *the rise in house prices started to lead to problems with rental housing and homelessness and it all became very much in the public domain and therefore quite political* [Interviewee D]

A further influence from the government was in providing direction to the DHBs to act on rheumatic fever prevention.

> *And housing … gradually became part of that and some of the work that they wanted the District Health Boards to do, not necessarily Public Health Units, we wanted District Health Boards to start getting interested in housing and referral of children and their families who'd had rheumatic fever into housing initiatives* [Interviewee D]

Changes to the Residential Tenancies Act were also mentioned. The changes require landlords to meet certain house quality criteria by July 2019. However, it was reported that there was, as yet, little interest among those likely to be affected. Some suggested that the possible introduction of a 'Healthy Homes Guarantee Bill' by the new government (at the time of interviews) may mean that landlords were waiting to see other requirements.

Finally, in relation to key external influences, is the political cycle. Trying to demonstrate results of any initiative within the three-year political term can be difficult; and a longer-term process would be more advantageous.

3.4.2 Organisational Influences

Organisational initiatives are those of a strategic nature, affecting the operations of agencies involved. These include the management, policy and planning that enable the work of those charged with effecting the objectives of their agency. The efficacy of these organisational initiatives will impact operational performance.

The Lakes and Bay of Plenty region has a strong history of diverse housing related initiatives, with those of the DHBs and PHU focused upon the promotion of healthy housing through home improvements. There had been DHB led housing interventions for the preceding 15 years.

> … *we started doing rheumatic fever work before the government got onboard and we also have been doing housing work, home insulations, since, I don't know, 15 years ago. So it's sort of been a long established program of work. Most of our work in health until recently has been focussed around that home insulation side of things and other home improvements to prevent respiratory disease* [Interviewee B]

In years prior to the housing forum initiative, the PHU had provided a resource 'calendar' for agencies undertaking home visits; to work through a topic with a household depending on the time of year. However, the PHU felt that this possibly

added to their workload. When these agencies were invited to partake in a review of the calendar there were no volunteers; this was taken as a signal that the resource was not useful and it was repealed.

An important feature of the DHB housing group (and the later development of the seminar and forum) was the longstanding support and funding supplied by the DHB for rheumatic fever initiatives. DHB backing was seen as a means to strengthen the PHU status in running the seminar.

DHB personnel were able to advise on other initiatives nationally; similar initiatives occurring in Northland, Hawkes Bay and Wellington.

The goals of TTO provided direction and focus for their initiative: working towards these outcomes helped validate the direction that was being taken.

> *We had set up a possibly a year before, Toi Te Ora Public Health Services, and you can see it on our website, three goals and these are supposed to [be] big hairy audacious goals … and that's one of the ways that you could focus the efforts of your teams … the analysis of how to reach these goals, that housing was related to all of them and, therefore, looking at housing would help with the achievement of a goal we'd already set ourselves* [Interviewee D]

A 'health needs assessment' served as a systematic means to identify opportunities for intervention and advocacy. The structured approach provided an opportunity to flesh-out and understand the initial questions the PHU asked of themselves at the early stages of developing the annual plan. Both quantitative and qualitative data were used to understand the issues.

Further assurance was gained through the process of developing the TTO annual plan. Initially generated through brainstorming a series of 'need to know' questions (developed by the medical officer of health), the process of populating the necessary detail led to the formation of the internal housing group. This was short-term tactical work and the combined work of the housing group led to the development of a strategy to answer those questions.

Findings were compiled in a Housing in Lakes and Bay of Plenty document (Toi Te Ora 2014) and this was used to develop a framework for action.

> *We gathered the data about housing in the Bay of Plenty and put it together into a Housing in the Bay of Plenty document. We developed a bit of a framework about how we might organise our internal activities on housing and we based that on the different strands for action* [Interviewee D]

Adopting a partnership model for the forum

Whilst the PHU team had had prior experience in establishing and running a forum (for their previous rheumatic fever work), guidance on contemporary forum processes was provided by the cross-government agency co-ordinator. This strategy was based on a partnership model of staged processes that underpin the building of optimum collaboration – the Twyford Model[8]. It appears that government

[8] https://twyfords.com.au/collaboration/

departments in the Bay of Plenty region had previously received training in this approach.

The approach was seen to represent a transition from a ‘service provision’ model to one of ‘collective impact and partnership’. The adoption of such an ethos for the housing forum was a matter of pride to participants.

Managing responsibilities, workload, and succession planning

Although the housing seminar and forum was primarily initiated by the medical officer of health, the lead operational role (including activities such as setting up the seminar and running the forum) was taken up by a PHU analyst. The medical officer of health, however, continued to chair the forum meetings. The workload of the medical officer of health was a determinant of his level of involvement; nevertheless, his continued prominent role was considered as a means to convey the importance with which the housing forum was being promoted by the PHU.

> *I quite deliberately took, not a back seat, but I certainly wasn't not quite front seat in pulling all these things together. [xxxx] and [xxxx] had a lot to do with this and I was quite happy for others to do the work because there's only one of me* [Medical Officer for Health]

> *… it sends a signal that this an issue which they're trying to take really seriously, … and we think it's a serious issue that we've made the effort to present this idea to our two DHBs and got their seal of approval, I guess. And then we consider that these meetings are important enough to make sure there's a [medical officer of health], that the [medical officer of health] is there.... maybe it reassures people that we're serious* [Interviewee C]

Some concerns were raised, however, about PHU staff having the time and capacity to able to fulfil the ongoing networking with individual members that was considered necessary to maintain momentum.

Workload and managing responsibilities were also salient for the council interviewee, who holds responsibilities for service provision under the Building Act.

There were concerns too about succession when leading parties changed their positons or retired and their replacements have different areas of expertise, interest and capacity to step in to their predecessor’s shoes.

> *[xxxx] was really good, but he's gone now so that's going to leave quite a big gap because he had contacts everywhere, everyone. So, I don't know how we're going to fill …* [Interviewee C]

3.4.3 Team techniques, processes and practices

The means of operating and interacting, both within teams and between teams across different agencies, provided perspective on strengths and weaknesses that might influence efficacy and performance.

Establishing the forum

TTO had identified a wide range of existing regional initiatives on housing. With this background, the focus of the seminar was: the creation of a climate for a more structured approach amongst providers; identifying where there might be potential to

upscale initiatives; and identifying what conditions might be needed to create a movement to raise awareness.

> *… knowing that there's a lot of individual things happening that are actually cohesively brought together and that was the main driver really for it. Was that we wanted to put some sort of structure and organisation behind the word* [Interviewee B]

> *… what has come out of the discussions … is that what we are really trying to do is not set up a strategy or a government programme. We're actually starting to spark off a bit of a movement because these things are so big it'll take a movement to shift them. So we were wanting this issue to be owned by a wide group of people* [Interviewee D]

The intentions of TTO were that leadership of the forum, although being done by them in the short to medium term, would not be a long-term responsibility. Experience with the rheumatic fever forum had shown that it would be difficult to maintain ongoing momentum.

The qualities of TTO as a leader of the housing initiative were widely valued, however. Value was perceived in their neutral position, ability to facilitate the process and skills to evaluate and monitor the initiative as it progresses

> *…Toi te Ora have done a really good job of just facilitating those meetings and they put in the resources into doing that because that alone, organising the meetings, doing the minutes on the website is time and … they've been excellent at doing that* [Interviewee F]

The details of how and when leadership would be transferred were not discussed by interviewees. Nevertheless, there was a sense, perhaps, of differing expectations of leadership (with some reference to 'facilitation').

> *[Leadership is] a step up from facilitating the forum and so they need to be in a position to take that step … I think that it fits with what their purpose is and that housing is a public health issue, is one of their key priorities now identified* [Interviewee F]

It wasn't clear how much TTO had emphasised their long-term plans to attendees – whether non-PHU interviewees were aware that the leadership is expected to evolve over time.

With some 80 participants at the outset, it was apparent that the entities involved in this new relationship spanned from governmental, iwi and NGO organisations through to single operators in varied fieldwork roles. Capitalising on existing long-standing relationships was an important component of this. As the process progressed, baseline needs were fulfilled, such as gauging interest in the forum and collating foundational data from which to build a way forward. Then, in order to turn it in to practice, forum participants were identified. This however raised issues relating to their empowerment, autonomy, ongoing participation, and the practicalities and experiences of those working in partnership in the forum and workshop. There were strengths in working from such a sound base, but concerns too about how the forum might evolve and realise its intended remit.

Capitalising on existing networks and good relationships was valued, underpinning a common will and capacity to ‘think outside the box’ to improve things.

> *… there's a genuine will to work together. There's a genuine will to have best outcomes for people and I think maybe it's that regional way of thinking … the will to collaborate* [Interviewee E]

The seminar served a range of interests. It was an opportunity to define the remit (housing quality rather than affordability), and it provided a platform for both national and local speakers to present their work and reflect on their experiences and areas of expertise. The process offered the opportunity to identify common ground among participants and served as a baseline or foundation upon which to move forward. A key component of this was conveying to the audience the scale of the problem, and gauging interest in ongoing collective ways of working.

> *… housing had started to become quite a publically discussed issue, but it was mainly about housing affordability. We were really still quite clear we were talking about housing quality and the internal environment of housing. We were actually saying that we were going to keep out of the whole issue of affordability and availability of housing because that's already being addressed and it was too big. But we wanted to look at the houses we already had and whether we could do better with what we already have as a housing stock. And I think that the housing forum started off quite well* [Interviewee D]

> *I think what we were trying to talk about was a different scale. No one was suggesting any of these projects were not doing some good in their community. What we had started off by pointing out was how bad things were across the whole area. How big this problem was and that really, the project that we had and have are kind of really only scratching at the surface of it. I think … no one had any objections to that. We were trying to get across that this was a bigger issue* [Interviewee D]

> *We invited everyone to the symposium and had some really good speakers: a combination of national and local, and we introduced the idea of the forum there and sought some feedback about it. So … just to see if there actually was interest for something like that* [Interviewee C]

Attendance numbers at the seminar were encouraging.

> *I think it went pretty well … there was really good attendance, as you know. A wide range of people. We had the kind of people we'd have expected to turn up, people from the councils and the DHBs and so on. But we had people from the housing industry and some of the funders and some government agencies. The national agencies turned up as well and lots of people who were working in projects around the place* [Interviewee D]

A lack of precedent inevitably provided learning for the convenors. Some ‘after the fact’ observations indicated that there was a delicate balance in presenting enough information to encourage buy-in, whilst providing sufficient time for participant interaction.

I thought that we probably had too many examples of local initiatives. Just trying to get across the flavour of some of the ones that worked but there was a feeling that we did have to try and get a wide buy-in so I could see where they were coming from [Interviewee D]

[about the forum] … what did people think? Do people think this would be a good idea, this wide group of people? And we ran out of time. So there wasn't a lot of discussion about it and I think that was one of the weaknesses of the day. But no one said they didn't think it was a good idea, which was obviously helpful [Interviewee D]

The dominant response in interviewee feedback confirmed it as a successful day.

The process of identifying forum members, focused on those considered to have most influence and/or those willing and able to be further involved.

We sort of looked at who were the organisations that can have the most influence … it was important that we had councils represented [Interviewee C]

… you've got to be inclusive but you've also got to have things that happen. You've got to be pragmatic. I think we probably pretty much went to the agencies that we thought needed to be there, to the chief executive to send someone [Interviewee D]

Some issues concerning 'authority to act' were noted, given the wide range of spending power and autonomy among participants.

I think that if there's an understanding around the different processes, and I guess it's the same with the government agencies too is that they have to make sure that they've got in their plans for the year that staff can actually come to the forum meetings to start with and that there's going to be some outcomes for them, and maybe they would want to set aside from funding, and they've got to go back to Wellington to secure that in the future [Interviewee E]

The participation of council representatives was especially welcomed, albeit that there were difficulties getting one of the district councils and regional councils to sustain involvement. Our case study interviews did not capture any first hand perspectives on why some councils were less involved, but the reasons offered by interviewees included workload and not considering such an initiative as being within a council brief.

There's a couple of organisations that I think should be there that are not. [xxxx] Council are not there which is because they have seen that as a public health issue and so that's a little bit disappointing … they've said, "That's a public health and we're not about public health" … Some of the regional councils are no longer there, they've pulled out and that was very disappointing [Interviewee F]

… regional councils were a bit puzzled as to what it had to do with them [Interviewee D]

There was disappointment that regional councils had not aligned with the forum. Nevertheless, it was understood that a non-participating regional council had, in any case, independently progressed a housing initiative, in order to meet national emission standards. The regional councils were also seen as well funded, and that too would have been welcomed.

An important component of implementing a partnership model was in trying to accommodate and balance the varying needs, backgrounds and expectations of participants, such as: to address aspects such as the establishment of relationships and trust; the evolution of expectations of what the forum might achieve; to try and align with participants own policies, plans, timeframes, budget allowances, culture and reporting responsibilities; and progress at a rate that is comfortable for the varied participant entities.

> *… it happens at a lot of interagency and collaborative meetings - the expectations change and it's so interesting when they're together. It's that when you first come along, everybody is very … very unsure. You know, the trust is like, "Okay, we need to just get to know each other a little bit here" and the time taken to do that is just … really, really necessary and I think at times during that first year for the forum, I could see a bit of frustration, you know, because you've got your doers and you've got your thinkers and you've got your planners and you've got your people that just go, "We'll just do what everyone else is doing*". *That process was a really good process and I don't think it's finished. I think we're still understanding ... each other* [Interviewee E]

> *Ministries, they move slowly. There is a whole bunch of red tape and, you know, on the other hand, you've got the philanthropics [sic] that if they present a good case to their board and a lot of the philanthropics are looking at co-investment models as well and if they know that somebody else is going to put some funding in the pie and that it's going to have a good community outcome, then they can move very, very quickly* [Interviewee E]

Additionally, it was acknowledged that relationship building was not just amongst forum participants, but through working with the Ministry of Health to develop practical solutions for fieldworkers too.

> *… one of the tricky things … for the forum is that they're working at all sorts of level. So they're working at a practical level as agencies, "How does it drop down into our operational staff being able to get in there and actually assist with the process of getting that house insulated?" for instance, … one of the things that popped up out of the November workshop is making the eligibility criteria for Healthy Homes and funding for Healthy Homes just simpler, easier. "How do we do that?" you know, which is really strategic stuff. That's working with the Ministry of Health on that in terms of coming up with some solutions. Not just say, "Hey, it's working for us" or, "It's hitting this many people when it could hit this many people" but actually being able to come up with some varied solutions that will work, I guess, for the region but also for the communities involved as well in terms of some of their decision-making* [Interviewee E]

Interviewees described their experiences and perceptions of the direction and momentum of the forum. These were generally indicating that TTO had done a good job engaging participants and organising the forum.

> *… they're [PHU] really used to working with the community at a community level. Yeah, so, their way of working, I think, really fit really nicely with initiating the forum* [Interviewee E]

> *In terms of the information, providing the facilities, taking the minutes, being in the meetings, all of that, they've done a really good job and I think they're a really good organisation to do that. I thought it was really good that the DHB's mandate got them to do it* [Interviewee F]

> *… they're still getting good attendances -- they've had four meetings, there's been good attendances from what I've seen in those meetings so there's definitely willingness there. I think they've got all of the right people, all the right organisations round the table. They're all organisations who … already have some level of involvement in healthy housing so that's great* [Interviewee F]

A further outcome was that the forum enabled (i) the creation of new working relationships for participants, and (ii) provided an opportunity for providers to make known the range of initiatives and locations they supported.

> *I've worked with [xxxx] on a whole bunch of other different things and it's actually, it's always helpful that she, now I've known her through the forum, it's a lot easier to work on these other things with her as well. So, it's good from a networking perspective* [Interviewee A]

> *… we had a lot of those existing relationships anyway because we cover the whole Bay of Plenty already. We fund a lot of these kind of groups in the communities. We already work with their councils anyway so, I think some of the other people in the forum might not have known that breadth that we had to cover anyway, as we sort of cross all the different areas and communities and stuff like that anyway* [Interviewee A]

However, while there was strong support and respect for the TTO initiative, there was resigned acceptance and underlying concern about (i) the pace of progress, (ii) whether there was sufficient commitment and trust among all parties, (iii) whether all, yet, perceived value in participation, and (iv) what the forum would eventually do.

> *Trying to get that, I guess, that wholesome trust between the agencies as well is tricky in terms [in] that takes more than four meetings* [Interviewee F]

> *… the reality is that takes a lot of time to get to the point where you can have any action because you've got to get everyone committed* [Interviewee F]

> *… the next stage is where they're starting to get a little bit more serious because now we've got all of this information and we've had this big workshop and we've pulled everyone together and said, "Come to this full*

day workshop" and then if nothing comes out of that then some people might feel like they wasted their time a little bit [Interviewee F]

I think possibly just understanding that once you decide to, and commit to a collaborative process, it is frustrating because it does take time, and mind-sets have to shift and that is a whole process within itself [Interviewee E]

There was a suggestion that the forum's slow pace might be due to lack of resources. Whatever the underlying reasons, the rate of progress was considered important for keeping participants engaged.

… if they put more, like, get a dedicated resource involved in that, that the timeframes could have been condensed from 18 months to more like 6-8 months or something like that to get to where we are today and that you're following on from that initial workshop. … if you don't resource things up sufficiently, it just takes longer than it needs to [Interviewee A]

if we don't publish what we're going to do in the next couple of months it just loses traction and people lose trust and confidence as well [Interviewee A]

The workshop, held in November 2017, provided the opportunity to pool ideas and to draw together material that might be considered best practice for discussion at the following forum meeting (which had not taken place at the time of interviews). The workshop was set up and organised by one of the council forum participants and its facilitation was funded by the community trust. It was said to be a well-run and efficient process.

The workshop was described by a participant:

There were 35 participants at that workshop so it was right across the full range. It was the organisations that are working and communities at the moment already developing delivering healthy homes initiatives. They went from Kawarau, the group from Maketū, there was 20 all round, there was DHBs, the insulation providers, the agencies like WINZ, MSD, Te Puni Kōkiri and then there were some private landlords represented as well [Interviewee F]

Others commented:

… it was an ideas generation workshop as much as anything [Interviewee B]

… getting those key people together is actually just synthesising what's really good about those projects and how they work and why they work [Interviewee G]

There was indication too that the workshop was timely and provided a sense of purpose and momentum for the forum.

…out of this workshop, what we're hoping to - you know, there's six or seven clear actions there and they'll - they should turn into workstreams that you can say, "Yes, actually we have started achieving some things" [Interviewee A]

As with the forum, interviewees voiced their thoughts about both positive features and concerns relating to the workshop.

> *… [the workshop is] the first thing that the forum has really delivered to … inform back the sort of action plan framework they've got in place. Now it's a question of how is the forum going to pick up that and take it forward* [Interviewee F]

At the time of interview, the workshop findings had not been presented to the remainder of the forum, but underlying concerns mirrored those for the forum overall, in terms of resources, time and commitment.

There was a sense of differing opinions of what constitutes 'commitment' and how this might be interpreted as the forum progresses.

Furthermore, there was a sense that the level of influence or ability to lead and 'deliver' was commensurate with the funding that could be committed to the initiative. This is notable, as the role adopted by TTO in 'starting a movement' or looking for opportunities to streamline interventions, appeared to have lost traction; that their initiative had served as a chrysalis and enabler of the forum seemed to have been over-shadowed by their lack of financial backing.

> *… [TTO] have no funding that they can put towards any of these initiatives. They have … set it up with the mandate from the DHB but they have no ability to lead anything because they have no funding. So, they essentially have no skin in the game. That makes it really difficult for them to bring others in and try and get others to commit when they have no seed funding, they have no ability to leverage anything in this space* [Interviewee F]

Another observation was that dedicated time, facilitator experience and resources would be needed for forum efficacy. The inconsistency was noted but not explored further.

> *If we're going to be serious about this, we need a dedicated resource or a 20-hours a week dedicated resource with some other kind of budget to do this properly. Otherwise, if everyone's just trying to do it as part of their … roles, it always just ends up disintegrating in the future. So, again, … that's probably an action in the future if you would be serious about something like this and it does take a dedicated resource [Interviewee A]*

There was perhaps a level of confusion here, as another interviewee indicated that seed funding from CoBOP would be available for a region-wide initiative following the workshop.

Among interviewees, the post-workshop forum meeting was seen as the point at which the proposed actions would be discussed; that in itself would help establish resource requirements for the forum.

Despite the concerns about problems faced by the forum, a strength was seen in its ability to adopt an advocacy role; to say collectively what individual organisations may not feel sufficiently empowered to say in isolation.

> *… we need to increase advocacy … That, actually, is a clear role of the forum because it's hard for us, due to our political kind of nature, to really advocate strongly for this.* [Interviewee A]

At the outset there was anticipation among TTO personnel that efforts from all parties might be directed towards what might be considered a 'demonstration project', focusing on one (or targeted) communities as an initial project. However, having to juggle the differing expectations and capacity to contribute made this unfeasible. It was understood that it would be hard for some participants to justify the dedication of resources outside their specific geographic area of responsibility.

> *.. at the start we were too focused on trying to get everyone to focus on an individual project in a specific geographic area. … with hindsight, it's quite clear that was never going to work because of the various interests of the different parties involved* [Interviewee C]

Inability to progress this idea created some early uncertainty about what direction the forum might then take, and what might be achievable.

> *… it was a bit disappointing and demoralising because we sort of think, well, we've got these people together. Is this just going to be a come and talk fest thing?* [Interviewee C]

Further ideas mooted as possible outcomes from the forum included: the creation of a region-wide 'one stop shop'; that the forum might operate as a 'collective impact group'; that it might explore how to 'scale up' initiatives; that it might focus on the elderly; that it might enable buying powers from providers; that it might serve as a model to be adopted by government; and that it might serve as a conduit to inform the region of what is happening nationally.

> *… as a public health service they're not going to build healthy homes, that's not their role. Their role is to have that clear understanding of the public health risks of poor quality housing which they do and they've brought that through really well from all of the research that's been done down at the University of Otago. But then being able to get some scaling up to address that issue is where they need to take that next step. I do think that they're in a good position, I think they're a good organisation to do that* [Interviewee F]

Whilst the TTO team were confident in the material that they presented, they also brought in other speakers to reinforce the message, allowing them to speak first in order to reinforce the impact of their message.

> *We kind of got other people in and that was quite deliberate because we wanted it, I think we almost wanted to show people that it wasn't just us that thought this was a problem. That other experts, national experts, think there's a problem, too* [Interviewee D]

At the early stages of forum and seminar the core material served to enable all to see the position relating to housing; especially for those that were unsure if they could address the problems.

> *So for example, if you're talking about things like better heating in housing, and insulation and better use of fuels and things, the regional council can then start to say, "Yes, well that does affect things like air quality and global warming" and some of those bigger connections I think were made even though they maybe then still couldn't quite see what they could do about it. Often the answer to that would be maybe you just give some money into it* [Interviewee D]

Being able to convey the message and importance of the issue, across the board, was seen by the medical officer of health as a marker for success.

> *I think the successes have been answering the questions that I as medical officer of health had about housing in a way that I think was robust enough for us to be able to paint that picture for people and be really quite confident about the picture we're painting* [Medical officer of health]

That TTO had also ensured their visibility through a number of high profile options available to them was also considered important.

> *I think it sends a signal that this [is] an issue which they're trying to take really seriously, … and we think it's a serious issue that we've made the effort to present this idea to our two DHBs and got their seal of approval, I guess.* [Interviewee C]

Communication

The ongoing face to face meetings appeared to have been the most efficient means of communication (judged by attendance). Efforts to hold a teleconference before Christmas had been unsuccessful (albeit, it is not known whether this was due to the time pressures leading up to the break, or the alternative means of communication proposed).

As a means to make available core information to a wider range of interested parties the PHU have explored alternative means to condense and use graphical material to convey key messages. At the time of interviews, they were considering developing an “if the world were a village of 100 people” style graphic which would show demographic and social proportions per 100 people for a particular Bay of Plenty town /area.

The adoption of similar principles to present the workshop findings was also promoted.

> *… it needs to be put into a form that community groups can then use. At the moment it's just all of the information is there. So somebody needs to provide the funding and the resources to turn that into a tool that communities can use. So that's there, that's a great -- really good starting point to have that* [Interviewee F]

3.4.4 Personal capabilities

Personal capabilities concern the expertise, skills, abilities and characteristics of key actors that impacted their performance.

Interviewees gave many examples of using their expertise. Their strengths were in their domain-specific knowledge; breadth of experience; and knowledge of the skills and abilities of both co-workers and those with whom they collaborate.

The combined skills of the TTP team contributed towards method development and collation of the robust data upon which the needs assessment was based. Complementary research skills within the team included abilities to analyse, interpret and triangulate findings gathered through both qualitative and quantitative methods.

The value of compiling qualitative data to enhance the meaning of the quantitative data was seen as a particular strength of the PHU research.

> *…most people actually prefer a story … Yeah, you can say that, you know, 10% of the population lives in crowded homes, but what does it actually mean? The idea of the qualitative work was we can now put a story to that 10% … it's quite helpful to be able to bring the hard numbers back to a story or, you know, make it a bit more personal. I think you need both* [Interviewee C]

Furthermore, complementary strengths and expertise of personnel external to the PHU were also valued. For example, an experienced interviewer collected the qualitative data and a representative from the DHB and others worked on associated national initiatives.

A range of supportive activities were also undertaken by TTO staff, even if not directly involved in the forum, such as developing the website and communications plan, or being part of the internal housing group.

TTO staff skills were enhanced through experience, such as a previous working group concerning acute rheumatic fever and the influence of housing upon recovery. Furthermore, the medical officer of health had sat on the policy committee of the New Zealand College of Public Health Medicine, which had developed a health position statement around housing.

> *The rest of it I think over the intervening years was just gradually working our way through the list of tasks that we'd set ourselves in late 2013 early 2014. And then moving towards this housing forum … I think there were a few things that came together, and although we were internally talking about housing … the college that I'm a member of produced this housing statement and that went to the media and Toi Te Ora finally got around to producing our position statement on housing; which was kind of quite convoluted, because a lot of the thinking that went into the college one was because we'd been working on housing for a bit of time so we fed some of that in there* [Medical officer of health]

These strong skills, education and varied experiences in working alongside or for other agencies were reflected in the backgrounds of all interviewees.

As a resource, the research of the University of Otago, (including that of Philippa Howden-Chapman and Jane Oliver) served to inform evidence practice amongst the PHU interviewees. They had also set up Google alerts for rheumatic fever, housing and health and skin infections.

> *… we've generally relied on the work that Phillipa Howden-Chapman has done through the University of Otago, Wellington School, the He Kainga Oranga programme in there and she, Phillipa Howden-Chapman, has led a team of workers that have done a number of studies around housing and housing and insulation and the benefits to health that comes from that* [Interviewee B]

There was a sense of a change of perceptions about the range of aspects that fall within the PHU remit for 'housing'. On the one hand, expertise in the health perspective; on the other, identification of a wider remit relating to housing than had been adopted previously for the rheumatic fever work. It is not clear if this represents a step change, from an earlier understanding of role to something that offers the potential of a wider approach to a problem, now possible through collaboration with other agencies.

3.5 CASE STUDY CONCLUSION

This case study focused on a particular strand of activity by a PHU to improve health outcomes by addressing the quality of housing in the Bay of Plenty and Lakes region. The main interventions were a seminar for stakeholders, establishing a forum, and holding a workshop. The PHU interventions are set in a rich context of initiatives by other agencies and a history of concern and influence to improve housing in the region.

The case study demonstrates several dimensions of preventative public health:

- The PHU was able to capitalise on existing networks and housing initiatives within the region. That they were able to identify and bring on board such a wide range of interested parties strengthened and endorsed their approach. Their own history of housing related (rheumatic fever prevention) interventions contributed salience, legitimacy and credibility to the intervention.
- The PHU adopted a systematic and collaborative approach to address one of their three high level goals.
- The programme of intervention led by the PHU demonstrates use of a range of capabilities, skills and experience among the team as a whole.
- Having central government and cross-ministry collaboration to support such an initiative added support and motivation.
- The forum required the creation of new inter-agency relationships and these highlighted challenges of working with a variety of expectations and experiences concerning commitment, authority to act, leadership, pace of progress, and outputs.
- While the PHU's independence, skills and unique position amongst forum members were highly valued, the fact that the PHU was acting in a co-ordinating and advisory role rather than making a financial contribution to ongoing initiatives, led to some other agencies questioning the significance of PHU involvement.

4. CONCLUSION

As we have commented in our report summarising our project findings (Nicholas and Hide 2018):

> "The case studies raise important issues of how public health preventative initiatives have influence on decisions and decision-makers in situations that are not obviously about health. There is little question about the relevance and legitimacy of a public health role when there is a disease outbreak. The role is expected and legitimated by legislation and convention. The credibility of health advice on such occasions is rarely questioned. But when it comes to preventative activity, public health is in the role of attempting to influence policies, plans and practices that, typically, are not primarily about health. Resource consents, council long-term plans and ubiquitous social issues such as housing quality are all opportunities for public health input, but they are processes owned by others, health is only one dimension, and often health is quite marginal to the main agenda of decision-makers."

A critical issue for such public health preventative practice is developing a stance that is considered salient, legitimate and credible to those they seek to influence.

In the case studies reported here, and in our previous case study (Nicholas et al 2017a), there could be no assumption of a shared perspective between agencies on the role of public health in policy and activity in the public sphere. The issue becomes one of collaboration between groups holding differing value sets and cultural reference systems (ways of understanding what is being dealt with or discussed). No one set of values or way of understanding could be taken for granted.

As an alternative to public health trying to simply impose its values and meaning, or meekly accepting marginalisation, the case studies provide insights into working collaboratively across differing 'worlds'.

In our summary report (Nicholas and Hide 2018), we draw on (Cash et al. 2002) in suggesting that fit-for-purpose public health input into non-health decision-making needs to establish with relevant audiences its salience, credibility and legitimacy. We offer a model that incorporates with that framework, insights from Ulrich (1994, 2003) and provides a basis to discuss and guide public health preventative practice.

Here we simply highlight aspects of the two case studies in this report that speak of the importance of public health actors establishing salience, credibility and legitimacy. We use questions arising from the model in Nicholas and Hide (2018).

4.1 SALIENCE

4.1.1 Why does this matter to us?

This question is about establishing the motivation to be involved in a matter that is not explicitly required of public health personnel.

Each of the case studies show that the PHU was clear that the topic was relevant to their public health imperative, and found connection to what mattered to the other relevant agencies.

For OSWWM there had been a history of attempts by the ARPHS and varied precursor Councils to address failing systems. A small number of initiatives had been adopted and continued to function, in isolation, for those specific locations. However, the profile of Auckland life had evolved (especially demographic and housing density changes) and the lack of common practice across the unitary authority was a concern. Furthermore, public concern regarding water quality for recreational, wild food and drinking water was heightened. The Council was also promoting related water quality initiatives, for example, 'Safeswim', that could indirectly lead to concern regarding OSWWM.

For the Bay of Plenty region, the existing diverse range of housing related interventions and sources of investment in remedial measures were testament to the level of concern across the region. Many agencies and entities were already involved, albeit not necessarily collaboratively, and there was heightened concern about escalating housing related wellbeing and health issues.

4.1.2 Who else might it matter to?

When the key decision-makers are neither health orientated nor obliged to consider public health input, the question becomes, how might the health implications of a decision matter to the other parties?

It was clear that, in each region, there was a shared concern for the topic in question. In Auckland this was reflected by the many attempts over the years to try and address OSWWM problems. In the Bay of Plenty there was already a strong foundation and range of concerned parties, each attempting in varied ways to address housing quality issues.

Interests across each case were heightened by further factors, such as bad publicity (eg, contaminated water at swimming beaches or people living in their cars) and government drives (such as those directed at housing provision for low-income families). Further attention has also been highlighted from the reports concerning difficulties experienced by those that provide ancillary services (eg, those tasked with trying to repair sub-standard housing or design OSWWM systems).

4.1.3 How to communicate risks and roles?

Public health personnel cannot assume that their assessment of risk and of their role is shared or recognised by others involved in the situation. Nor can they assume that they adequately appreciate the risks and roles identified by other players

Each case study demonstrated a distinctive approach to risk communication. In the case of OSWWM the PAUP process provided a unique opportunity for ARPHS to put forward their case during 'Hearing Topic 049'. The independent panel provided a platform for the PHU to present its proposals and rationale. Their persistence and perseverance seems pivotal in the council representative progressively retracting council objections to the ARPHS position.

The seminar initiated by TTO directly addressed risk communication – providing an opportunity for them to present findings from their research into the scale of issues with regional housing quality. It also served as an opportunity to bring in external speakers to reinforce the message and provide a perspective of how important housing quality is to health and wellbeing nationally.

4.2 CREDIBILITY

4.2.1 In what world would this advice make sense?

Questions around credibility focus on why those with responsibility for decisions should respect the viewpoint and expertise of others (in this case, public health personnel). Public health personnel need to consider how the world looks from the perspective of the decision-makers.

Concerning OSWWM there was a sense that the underlying reasons for the ARPHS PAUP recommendations were appreciated by the Council representative at the PAUP hearing. However, objections voiced indicated that they did not have a natural fit with their existing practices and boundaries of interpretation (regarding the scope of the 'Objectives and Policies' and 'Rules'). This concerned the proposed terminology 'cumulative' and due processes that would need to be adopted in effecting change (relating to inspection and reporting).

Ultimately, as reported in their post-hearing closing remarks, council identified that an acceptable way forward had been identified.

In relation to the Lakes and Bay of Plenty case, there was a challenge to credibility because the PHU was working alongside agencies that perceived its lack of 'skin in the game' (financial contribution) as meaning that public health was not a practical player.

4.2.2 Knowing our place?

Expertise is not universally credible, it makes sense within certain communities and within certain ways of seeing the world. In other words, expertise can be seen as the ability to answer or respond to particular questions, and if a question falls outside the set of relevant questions, that expertise is not seen as a credible response.

In each case, PHU expertise was inevitably limited to particular dimensions of the problem at hand. A humility is required to appreciate that (eg, in the Auckland case) the world of planning and rules must take account of other dimensions than those championed by public health; or, in the case of the Bay of Plenty, it was necessary to place the health outcomes associated with poor housing alongside motivations and agendas of others.

4.3 LEGITIMACY

4.3.1 Being a guest

In situations in which legislation or regulation does not provide the right to be 'at the table', public health personnel need to come to the table on some other basis. The metaphor of the table suggests other ways of being present. Public health could be legitimately at the table as an invited guest rather than as the host or authority figure.

ARPHS were a valued guest on the council run working group (albeit that they felt that they had already exerted their desired influence at that stage). TTO sought to move from convening and hosting a housing forum to being a participant in a process led by others. In practice, TTO could have been seen by others as coming late to the housing issue. Other agencies were already on the case. However, the TTO case shows that it is possible to respect that multi-stranded history of commitment by others, and come to the table as a guest among others.

4.3.2 There is more than one currency being used

When it comes to deciding who and what has relevance or value, actors from different worlds can appear to be playing with different ‘currencies’. In other words, a particular actor can assume or act as though their line of reasoning has more power or influence than that put forward by others.

In the process of establishing a new unitary plan for Auckland, the prevailing currency for council may have been submissions that could be incorporated into the planning and rules based framework operated by councils. For other interested parties it may have been their potential contribution to regional and national prosperity with minimum cost or interference. For the PHU it was the threat of disease.

For some in the Lakes and Bay of Plenty housing forum, the most powerful currency was financial, supported by the ability to make decisions to apply finance to solutions. For others, including the PHU, the most powerful currency was data and needs-assessment.

4.4 IN SUMMARY

In developing usable insights from this and our previous case study we have, in our companion report, “A place to stand: Primary prevention practice in Public Health” (Nicholas and Hide 2018), argued that public health actors need to attend to how their expertise can be represented as salient, credible and legitimate in situations where those qualities are not able to be taken for granted. The current report provides two examples of practice that highlight both how PHUs have implicitly or explicitly dealt with such representation, or how challenging it is to do so.

GLOSSARY

ARPHS	Auckland Regional Public Health Service (the public health unit for the Auckland region
DHB	District Health Board
NPS-UDC	National Policy Statement on Urban Development Capacity 2016. A policy statement by the New Zealand Government setting out the objectives and policies for providing development capacity under the Resource Management Act 1991.
OSWWM	On-site waste-water management. Systems of managing sewage and other waste-water that are situated on-site rather than reticulated to public disposal systems.
PAUP	Proposed Auckland Unitary Plan. This was a consultation document used in preparing for the Auckland Unitary Plan. The Plan has become “operative in parts” progressively since late 2016. The Unitary Plan is a principal statutory planning document for Auckland.
PHU	Public Health Unit. This is the generic term to refer to regional public health services. Public health units focus on environmental health, communicable disease control, tobacco control and health promotion programmes. There are 12 PHUs in New Zealand. Many of these services include a regulatory component performed by statutory officers appointed under various statutes, though principally under the Health Act 1956.
RMA	Resource Management Act. 1991
TTO	The Lakes and Bay of Plenty public health unit: Toi Te Ora Public Health.

APPENDIX A: INFORMATION SHEET

INFORMATION SHEET FOR INTERVIEWEES

Primary Prevention Practices in Public Health Units

April 2017

You are invited to take part in a study for the Ministry of Health (MoH). We are exploring primary prevention practices within Public Health Units (PHUs). The work aims to produce recommendations that will help PHUs to improve public health outcomes in their areas. We are in the early stages of a two-year study which includes three case studies of work undertaken by different PHUs. This entails exploring the details of a particular project you have undertaken; using it as a focus to identify the different practices, processes and conditions that influenced outcomes (successes …or not!).

MoH has contracted a Crown Research Institute, the Institute of Environmental Science and Research (ESR) to undertake this study.

ESR will interview key informants such as yourself, by phone or in person, at a time and place that is convenient to both parties. An interview will take 45 – 60 minutes. To supplement interview notes, the interview will be audio recorded (with your consent) and transcribed by a professional transcribing service for later analysis. The interview notes and transcripts will remain confidential to ESR and comments will not be attributed to identifiable individuals without their expressed permission. You are, of course, free to decline to be interviewed or to withdraw from the interview at any time.

Contact

Graeme Nicholas
ESR
DDI: 03 351 0134
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ESR
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APPENDIX B: CONSENT FORM

Primary Prevention Practices in Public Health Units

Consent form
April 2017

I have read and understood the information sheet dated _____ for taking part in the study of primary prevention practice in Public Health Units.

I am satisfied with the answers I have been given. I understand that taking part in this study is voluntary and that I may withdraw from the study at any time.

I understand that in written reports, comments will not be attributed to identifiable individuals/organisations unless permission is given.

I have had time to consider whether to take part in the study, and I know who to contact if I have any questions.

I consent to my interview being audio-recorded:

YES / NO

I _____ (full name) consent to take part in this study.

Date: _____

Signature: _____

APPENDIX C: INTERVIEW GUIDE

Case study – On-site Wastewater -Auckland *(NB: italic = comments just for us)*

We would like to start with a few general questions to introduce the PHU and your work, and then will then explore the casework you undertook. This will be followed by a few further general questions

General 1. Can you provide some background information about the PHU

a. Could you provide a little information about this catchment area – such as identifying features or any peculiarities (eg population numbers • socio-economic factors of those catered for • geography & travel demands on you • ease of recruitment to PHU and associate roles • more??)

b. What are your goals and priorities here in this PHU?

General 2. Can you provide some background information about your role here

a. What is your job title, professional education and on the job experience (years)?

b. Do you have any specific areas of expertise / interests?

c. Have you undertaken any additional education (special interest / general)?

d. What responsibilities are uniquely yours and which do you share with others (eg PHO/ EHO?)

e. What is a typical day … how do you spend your time?

Case study: Describe the On-site waste water project

Can you tell the story of how the PHS involvement with on-site waste water programme came about? – What made it important enough to work on? *We explore through discussion to answer the following*:

a. How did you become aware of the issue

b. Was this situation unusual or have there been other similar examples?

c. How did you identify and understand the risks? (such as existing knowledge, previous similar experience, PHU priority area, investigation / measurement data, 3rd party alert, etc.)

d. Which other parties did you collaborate with ... who, how and usefulness?

e. How did you decide what to do (applied existing knowledge, following procedure, guidance from Manager, collaborative decision (*with who?)*, literature search, consulted knowledge broker) & did any priorities drive your behaviour?

f. Did you need external input such as data from other agencies (eg Landcare, DHB, other council), or specialist knowledge (eg legal, planner, hygienist) etc..?

g. Did you experience any barriers in the process, such as: (*describe)*

    i. Lack of access to information / people

    ii. Difficulties in decision-making

    iii. Difficulties emanating from the organisation (PHU/ DHB etc.)

    iv. Problems direct from the general public (eg social issues)

h. What stage is it at now (what happened)?

i. Did you get any feedback - was your intervention supported by the PHU / your employer / the community?

j. Was there an evaluation or review of PHU practice / protocol as a result of your experiences?

k. What were the successes / failures of this case … with the gift of hindsight could anything have been done in a better way?

How did this case fit in terms of meaning and significance with the rest of your work programme?

Building on this we are also interested in gaining a little more information on the nature of 'prevention' in your work and how you operate.

General 3. How do you see your role in "prevention"?

a. What are your key areas of work? (plus those you're less frequently involved in)

b. What type of things are straightforward and go well and what are more of a challenge?

c. What influences the varied successes and failures?

d. How do these aspects fulfil your accountabilities to both the DHB & PHU – are their needs compatible to your way of working and what you are trying to do?

e. Could anything be done better / improved?

General 4. For your 'prevention' work how do you become alert to potential health hazards or risks where you need to act? (*and rough proportion of each?)*

a. Who would consult you directly for advice or to raise concerns (eg EHO, general public, knowledge broker, collaborating agencies)

b. What monitoring do you undertake and how?

i. following a set down schedule of assessments and analysis (*how was/ is the set- down schedule / programme determined?)*

ii. responding to data alerting you to problems … perhaps your own or those compiled by o/s agencies (*examples ??)*

c. *Any other means?*

d. Do you have any thoughts on how the 'alert' process could be improved

General 5. Which collaborations are most useful and why?

a. Who is your team in-house and third-party (such as outside agency)?

b. Who is easiest to deal with and why? (eg *personality, communication means, common purpose, supportive policy etc…)*

c. Does means of communication have any impact on success (eg F2F, phone, email, skype, shared message board / platform (*cloud*), others???

d. Do you have any thoughts on how 'collaborations' could be improved?

General 6. In deciding what to do which methods (below) do you use and in what order (and rough proportion *of each?)*

a. Follow procedures, legislation, Standards

b. d/w colleagues in house

c. d/w community members

d. access and assimilate research evidence

e. Use decision support tools

f. d/w a researcher / knowledge broker / trusted expert

g. d/w a 'network' or peer support groups

h. *any other means (outside procedures, beyond rules, areas of discretion)*

i. Use of specialist advice – ESR, DW co-ordination service database, EMIS (Emergency Mgmt, Information Service), MoH - monthly circulars, FAQ's, manuals, guidelines

General 7. Regarding these methods – are there any reasons why some are any better / worse for you? *Example reasons*

a. Accessibility

b. Trust

c. Easier of understanding

d. Speed of gaining results

e. Traceability of outcome to support action

f. Suitability for the type of enquiry

g. Most up to date

h. any more reasons?

i. Do you have any thoughts on how decision-making resources could be improved?

General 8. What sort of range of intervention do you feel is within the remit of your role?

a. Respond to findings* (*generated in F) by giving advice / making plans etc. independently

b. Respond to findings* by working collaboratively with colleagues / o/s agencies to agree an action plan

c. Respond to findings* by reporting problems to your manager [for their decision]

d. [*more]*

e. Do you have any thoughts on how 'intervention' practice could be improved?

General 9. In deciding what to do are there any boundaries or restrictions that 'influence' your actions (such as)

a. Political influences

b. Community needs

c. Financial pressures

d. Policy initiatives – eg, National Policy Statement on Urban Development Capacity 2016

e. Concerning your organisation /workload / workspace / time/ capability / work culture etc.

f. Do you have any thoughts on how the impact of these 'influences' could be improved?

General 10. When you have made decisions or plans do you know whether or not they have been successful? Such as through:

a. Feedback on performance (in-house, external agencies, clients)

b. Data gathered through active monitoring

c. Evaluation

d. Other?

e. Does this match your own perception of 'success'?

f. Do you have any thoughts on how your 'feedback' role could be improved?

General 11. Are you ever involved in developing the strategies [protocols / guidance / procedures] that guide your work? (*through in-house consultation, mock-up exercises etc*.)

General 12. Are there any elements of decision-making and planning that you would welcome more input on? Such as:

a. Own education and understanding research

b. How to apply findings in practical terms

c. How to manage conflicting actions (perhaps when there are cross-purposes with other initiatives in terms of manpower, time, finances etc.)

d. How to deal with ambiguity / uncertainty:- when data is incomplete &/OR when there are no definitive actions

e. How to manage work conditions and pressures upon your job (eg targets and workload)

f. How to manage differing expectations upon you from different sources (eg Manager, PHU. MoH, outside agencies, general public …)

g. How to enhance public / client interactions

h. How to gain additional professional support

i. *Other*

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