



Alleviating the Burden of Chronic Conditions in New Zealand (The ABCC NZ Study)

Report: New Zealand Experts' perspectives of Chronic Conditions
Management

October 2008

Named Investigators: Martin Connolly, Janet Clinton, Peter Carswell, Nicolette Sheridan, Tim Kenealy, Harry Rea, Alan Barber, Allan Moffit, Gerard Devlin, Robert Doughty, Ross Lawrenson, John Kolbe, Lorna Dyall and Ngaire Kerse

Prepared by: Elizaveta Sopina, Janet Clinton, Faith Mahony, Maggie Fung and Danielle Vignati

Acknowledgement

We acknowledge with gratitude the valuable input from the following interviewees: Carole Atmore, Joanne Baigent, Anne Blundell, Michal Boyd, Keriana Brooking, Janine Bycroft, Sandy Dawson, Fiona Doolan-Noble, Stewart Eadie, Julia Ebbett, John Gemming, Nicky Hart, Rod Jackson, Craig Johnston, Michael Lamont, Rose Lightfoot, David Maplesden, Rhoda McDonald, Jean Mcqueen, Adrienne Murray, David Nixon, Celia Palmer, Marama Parore, Paul Roseman, Melanie Taylor, Murray Tilyard, Chris Tipa, Jocelyn Tracey, John Wellingham and Toni Melanie Wi.

Contents

Acknowledgement	1
List of Tables.....	4
1. Introduction.....	5
1.1 Aims of the ABCC Study.....	5
1.2 Methodology of ABCC Study	5
1.3 The Four Stages of the ABCC Study are:.....	5
1.4 The purpose of this report	6
2 Methodology.....	7
2.1 Identification of CCM Experts in New Zealand.....	7
2.2 The interview questions.....	8
2.3 The analysis of this information	8
3 Conceptual understanding of CCM	9
3.1 Inhibitor/Problem.....	9
3.2 Enhancer/Solution.....	10
3.3 Summary	11
4 Patient self management/empowerment	12
4.1 Inhibitor/Problem.....	12
4.2 Enhancer/Solution.....	12
4.3 Summary	13
5 Appropriate levels collaboration.....	14
5.1 Inhibitor/Problem.....	14
5.2 Enhancer/Solution.....	15
5.3 Summary	17
6 Active engagement of leadership.....	19
6.1 Inhibitor/Problem.....	19
6.2 Enhancer/Solution.....	20
6.3 Summary	20
7 Appropriate development of sustainable community links.....	21
7.1 Inhibitor/Problem.....	21

7.2	Enhancer/Solution.....	21
7.3	Summary	22
8	Focus on health reducing inequalities is central objective and is obvious in practice	23
8.1	Inhibitor/Problem.....	23
8.2	Enhancer/Solution.....	24
8.3	Summary	24
9	Decisions support system in place which is utilised and effective.....	25
9.1	Inhibitor/Problem.....	25
9.2	Enhancer/Solution.....	26
9.3	Summary	27
10	Appropriate delivery design system.....	28
10.1	Inhibitor/Problem.....	29
10.2	Enhancer/Solution.....	31
10.3	Summary	37
11	Knowledge transfer	38
11.1	Inhibitor/Problem.....	38
11.2	Enhancer/Solution.....	39
11.3	Summary	40
12	Adherence to clinical guidelines.....	41
12.1	Inhibitor/Problem.....	41
12.2	Enhancer/Solution.....	42
12.3	Summary	43
13	Conclusion	44
	Appendix I: CCM Dimensions	50
	Appendix II: Interview Schedule.....	52

List of Tables

Table 1 Inhibitors of Conceptual understanding of Chronic Conditions Management	10
Table 2 Three key areas of self management of chronic conditions	13
Table 3 Emerging themes for appropriate levels of collaboration	14
Table 4 Inhibitors of appropriate levels of collaboration.....	14
Table 5 Enhancers for appropriate levels of collaboration	17
Table 6 Underlying themes of inhibitors to active leadership	19
Table 7 Enhancers for active leadership	20
Table 8 Themes and examples of enhancers for developing sustainable community links	22
Table 9 Decision support systems themes	25
Table 10 Decision support systems inhibitors.....	26
Table 11 Dimension of appropriate design systems	29
Table 12 Work force as an inhibitor	30
Table 13 Examples of enhancers for an appropriate delivery system	36
Table 14 Inhibitors to knowledge transfer	38
Table 15 Enhancer for knowledge transfer	39
Table 16 Common themes in Adherence to Clinical Guidelines	41
Table 17 Enhancers for adherence to clinical guidelines	42

1. Introduction

Chronic conditions are the leading cause of morbidity and mortality in New Zealand causing over 80% of all deaths. This burden is particularly evident in CVD, COPD and CHF, and there are large inequalities in prevalence relating to social inequality and to ethnicity. The prevalence of such problems will rise exponentially over the coming decades. Current reactive models of primary and secondary healthcare cope poorly with this burden, although international and some local evidence suggests that models of chronic care management (continuous care) can improve the healthcare experience and outcomes of those with chronic conditions, such models have not been widely translated into practice in New Zealand or elsewhere, in part because the complexity of care systems and their wider societal contexts makes local interpretation and application difficult for DHBs and other agencies. The driver for the research is the need to improve effectiveness and efficiency of services for those with chronic conditions.

1.1 Aims of the ABCC Study

The aims of the ABCC NZ Study are to maximise potential health outcomes and reduce inequalities for New Zealanders with chronic conditions (CVD [including stroke], COPD, CHF) by: conducting a review of wide-ranging literature for service provision and process; evaluating current DHB service provision and process against best practice; and producing an interactive and practical workbook for DHBs in order to facilitate service development in chronic care. In addition, the study aims to contribute to international debate on the generalisability and practical applicability of evidence-based recommendations on chronic care. Overall, the aims of the study are:

- To gain an evidence-based perspective
- To present a stock take on what is happening within the ABCC programme
- To gain an experts' view on the current state of Chronic Care Management practice
- To provide a standard setting on what best practice looks like
- To evaluate current practice

1.2 Methodology of ABCC Study

A multidisciplinary and multidimensional project team approach was utilised, incorporating systems theory analysis and the iterative and inclusive methodology of Participatory Action Research within a 4-stage process, each stage of which will inform the subsequent stage.

1.3 The Four Stages of the ABCC Study are:

Literature Review

- Conduct a review of evidence-based literature for service provision and process
- Prepare a literature review document for submission to HRC/DHBNZ

Stocktake

- Undertake a comprehensive stock take/review of current and past programmes targeting management of chronic conditions (access existing databases and questionnaire all DHBs)

- Undertake detailed analysis of programmes for COPD, CVD, CHF
- Analysis, interpretation and standard setting
- Stock take report for submission to HRC/DHBNZ

Evaluation – Understand reason for success/failure

- Carry out observation, key informant interviews and focus group interviews
- Integrate and analyse data
- Create dimensions of best practice for workbook

Establishment of EAG and Development of Workbook and Implementation System

- Workshop with Expert Advisory Group (EAG) and Chronic Care Steering Committee to provide guidance to the research team on preparation and format of workbook
- Produce workbook for DHBs, under the guidance of the EAG.

1.4 The purpose of this report

The purpose of this report is to capture through interview, the views of those people who are experts in the field of management of chronic conditions. It is envisaged that this information will add a significant component to the literature review. This study is an addition to the original methodology of the ABCC Study in August 2007.

A number of experts in the field were interviewed and the ensuing information was analysed against the key dimensions presented in the literature review (see Appendix 1 for an overview of the Dimensions). The consensus of opinion gathered in the course of what we have chosen to call the ‘movers and shakers’ exercise adds weight to the international evidence base within our literature review, and adds a diverse but expert perspective to the data gathered in our stocktake analyses (particularly the generic stocktake), reinforcing the interpretations our own team have placed around the latter information. The literature review and stocktake are/will be published as separate documents, and they, the current document, and our standard setting exercise and exemplar analyses provide a portfolio of evidence for the conclusions and recommendations that will emerge in that ABCC Workbook.

The questions were designed to provide an expert opinion of the nature of the management of chronic conditions as well as the challenges and enablers of practice. The findings address the key factors that underpin managing chronic condition and additionally the inhibitors and enhancers of successful implementation of these factors. A brief overview of the methodology employed is presented, followed by findings categorized according to the dimensions cited in the literature review as well as areas thought to be essential according to the interview respondents.

2 Methodology

Semi structured interviews were conducted with a number of experts involved in CCM programmes (CCM). Two approaches were taken in the interviewing. First, a set of short answer telephone interviews were conducted with approximately 20 respondents, second, more in-depth semi structured interviews were conducted with nine respondents as a means providing a more comprehensive understanding of practices within New Zealand. Many of the issues that emerged in the short answers telephone survey were able to be explored in greater depth. The interviews were undertaken between December 2007 and May 2008. Identifying the experts within New Zealand and the development of appropriate questions were significant aspects of the methodology.

2.1 Identification of CCM Experts in New Zealand

The primary concern was that the interviewees represented a full and diverse group. In effort to achieve this diversity, the CCS Committee approached the EAG with a list of groups of people to draw interviewees from:

- General Practitioners
- Practice Nurses
- Community Health Workers
- Health Promotion
- Health Education
- CCM portfolio managers
- Secondary care specialists (from relevant disciplines)
- Maori health provider
- Pacific health provider
- Asian health provider

From these groups, the EAG assembled a list of potential interviewees, including people who presented at the Mid-Central DHB Towards 2010. Of these people considered to be knowledgeable about chronic care in New Zealand, 29 were eventually interviewed. The interviewees were employed in a range of roles including CEO, GP, CC Nurse, Clinical advisor and management. They represented a range of organisations including general practice, Primary Health Organisations, District Health Boards, Maori Health providers, Ministry of Health, PHARMAC and as Service Providers^[1].

^[1] Names of interviewees are listed in the acknowledgements

2.2 The interview questions

The interview questions were aligned with the CCM dimensions as identified in the literature, specifically the following CCM components were thought pertinent;

- the community
- the health system
- self-management support
- delivery system design
- decision support
- clinical information systems

A number of questions were also designed to elicit aspects of CCM that are pertinent to practice in the NZ context. Each respondent was asked to list CCM programmes that they were aware of in NZ and further who they thought the NZ experts in the field were. This provided a means of ensuring that the study was capturing the view of a wide range of appropriate experts and also to ensure awareness of practice within NZ (see Appendix II for Interview Schedule).

2.3 The analysis of this information

Written notes taken during the short answer interviews were coded and categorised. In-depth interviews were audio-taped with permission and subsequently transcribed. Transcriptions of interviews were analysed by identifying and coding relevant themes.

The provider interview data has been analysed using the general inductive method with the aid of NVivo software for qualitative data analysis (QSR International, 1999-2002). Key themes have been summarised, and quotes from the experts captured to retain the depth of meaning for the interviewee. The use of interviews allowed findings to emerge through common and significant themes identified. Analysis was led both by research questions and by additional themes that arose from the interview content. The findings provide an overview of practice as aligned with dimensions that are perceived to underpin CCM. Inhibitors and enablers are also presented. The following section of report presents the findings that align with the dimensions as presented in the literature review as well as themes that emerged from the practice perspective. Where feasible tables outlining examples from the short answer interviews are presented, where there is not enough information available themes are simply discussed.

3 Conceptual understanding of CCM

Conceptual understanding of Chronic Conditions Management was viewed by interviewees as all professionals having an in-depth understanding of chronic conditions specifically it was suggested that it means *'All parties will having a genuine understanding and interest in working together to share the problem'*.

In particular, it was identified that having staff with a specific area of expertise in a chronic condition is an effective way of delivering chronic care management:

I think that – within primary healthcare – to have let's say advanced nurses that are expert, or even GPs that are expert in CHF, in COPD...they're still generalists, but they have an area of expertise. I think that does work.

Another key factor identified in regards to what constitutes effective understanding of chronic care management was the transition away from acute to chronic diseases one respondent suggested *'It is changing the way we think about healthcare...it really does shift us to the reality of chronic illness care, where we're still – a lot of us – in acute care'*.

There were a number of inhibitors and enablers identified in assuring an understanding of CCM in practice in present.

3.1 Inhibitor/Problem

Participants have identified a number of factors that impede thorough understanding of the concept of CCM. The following table describes a collation of these themes. One of the key factors was professional resistance from the workforce. As CCM requires a new way of thinking and understanding illness and treatment, there are a number of professionals who do not want to adopt the new model of care. This was attributed partially to intentional desire to maintain the 'old' approach, as well as to lack of initial understanding of the CCM concept and its potential benefits. It was stated that forcing the concept onto the professionals, however, is not an acceptable way to implement CCM, as this is likely to cause further frustration and resentment towards the change. The following quote is a good illustration of the issue of professional resistance towards CCM :

...., yeah, the biggest thing that inhabits the process is the fact that the status quo is... that you can adopt the position that 'I'm not going to change. And if I was the doctor in that position that I didn't want to change and adopt CarePlus, and all that' liberal-socialist' 'thinking I wouldn't lose any money, I wouldn't lose my stand in the community, my patients aren't obviously going to drop dead and be any worse off, you know.

Another issue that inhibits conceptual understanding of CCM was inappropriate levels and delivery methods of support and education/training. It was indicated that health education does not equal chronic care management, and to achieve the conceptual understanding of CCM we need to deliver address the issues of self-management and behavioural change in delivery of chronic care.

Further, confidence in the programme was a concern for some of the participants, indicating that professionals' trust in people who develop the programme and the programme itself is inherent to adoption and implementation of the programme. Sustainability of the programme was of importance to some participants, stating that continuity of behaviour change is vital for effective

CCM and was often not followed through. Lack of community consultation was also considered an inhibitor to conceptual understanding of chronic diseases and their management by the participants.

The inhibitor information was bountiful enough to be coded into theme with a specific example to illustrate the theme.

Table 1 Inhibitors of Conceptual understanding of Chronic Conditions Management

Theme	Examples
Professional Attitude and Engagement	<ul style="list-style-type: none"> • Philosophical- don't want to change • Not having buy in from senior managers • Lack of Buy-in • A lack of buy in from parties • Not having good provider buy in or If they providers feel the concept has been forced or imposed upon them • Some professional resistance to these approaches. • status quo, people just not wanting to change • Will always get the odd practitioner who doesn't support the approach. Always have your detractors. • Change can sometimes be a barrier for some people. It is hard to change practitioners' behaviour, due to resistance. • Not owned by Primary Care
Support and Education	<ul style="list-style-type: none"> • Providing education sessions without the behavioural component in regards to self management education. I think that people will be tempted to do what they have always done regarding that. • Needs to be chronic care management NOT health education dressed in drag.
Trust	<ul style="list-style-type: none"> • If developed by someone who doesn't understand how they work (GPs) GPs need to know people they trust have been involved in the development of the programme and then they will take notice of it. • No trust in the programmes • Fear
Behaviour change/continuity	<ul style="list-style-type: none"> • Not carrying on behaviour change in good times/bad i.e. busy may relapse previous to previous behaviour before sustain change
Community/family/whanau engagement	<ul style="list-style-type: none"> • If you haven't consulted with the people about the programme, and have it fully integrated into the community. • The pervading ethos of community can be an enhancer or an inhibitor

3.2 Enhancer/Solution

A number of ways of improving the current status of conceptual understanding of CCM were suggested in the course of the interviews. Having expectations of outcomes and using those to encourage others was one of the key suggestions:

They need to have a rough idea of what success would look like at the end of the project. They need to use that to motivate the leaders of the stakeholder groups and to work with them, and to shift the ownership down to those that are going to do the work.

A well-prepared primary care team was highlighted as important in chronic care management as they are the people who adopt and implement the chronic care programmes. Many interviewees felt that on-going education, training and support for staff running chronic care management programmes are important as this training helps keep them well-prepared and informed about the chronic care management programmes. The following quotes illustrate this theme.

And another key factor is through education. In our District Health Board we are approaching that by making education available to everybody who interacts with clients with long term conditions in primary health care.

...., first of all you've got to have um adequate training and support, it was interesting that with the PREDICT studies that I did, quite a lot of the nurses, I think it was like, just off the top of my head, but it was something like 75% of the nurses, would have actually liked more support and ongoing training.

....., so adequate training and support for staff ., and how to use it, and what the programme is and how to use it, and communication skills and behaviour change of support and all those things. And then ongoing training.

....., so increase, support and views of multidisciplinary teams within primary care.

3.3 Summary

The majority of the experts felt that conceptual understanding of CCM was characterised by having understanding expert staff planning and delivering the care. However, this was perceived to be inhibited by professionals' attitudes and behaviour, lack of support and education for staff, trust of professionals in CCM and lack of continuity and community engagement.

4 Patient self management/empowerment

This dimension was identified as one key components of Best Practice in CCM, three themes were noted. First, self management and support component, second, comprehensive holistic client-centred care towards self management and finally dedicated diabetes self management programme facilitator.

One of the interviewees noted that self-management support is about providing comprehensible and accurate information to patients and their families:

Yes, because ... we could, I could talk for ages about self management and the definitions and the principles, and it's a term that some people don't like. But it's mostly when people haven't really understood what it means. And if you really look at what self management support – it's about saying what are all the services, the support we can give that will help it enable the person in their family to be more in control, to share in decision making equally, and to receive the best care possible?

4.1 Inhibitor/Problem

One of the key issues that was identified around self management of chronic conditions was that with increased focus on clinical management of chronic diseases, there was a significant lack of emphasis on self-management itself. In fact, it was noted by the respondents that self management has not been 'cracked' a national level. One respondent suggested:

...with a lack of emphasis on improving self management of the patient, self management skills I do not think we are going to get results. It is such a huge part of chronic care management. So if the focus is purely on clinical management, GP management for instance it totally ignores I think all the potential barriers to that patient being able to adhere to so called best practice.

Effectiveness of encouraging behaviour change was also perceived as an issue for patient self-management. Understanding why chronic illness or risk behaviours occur was identified as important for self management:

Because it's not really a domain that general practices are really good at. They're very good at saying to people, stop smoking, it's bad for your health. But to actually get deeper into complexity of why people smoke in the first place.

4.2 Enhancer/Solution

Participants discussed improvements in three key areas of self management of chronic conditions as described by the following table. Approaching self-management systematically was the most widely suggested improvement. Systematic continuity, provider support and patient input were perceived to be beneficial for self management. Further, engaging the community, family and whanau in self-management of chronic conditions was also seen as an enhancer to CCM. Finally, support, education and training were discussed by the participants. The concept of 'train the trainer' was suggested as a good way of passing on the skills and knowledge of self-management and maintaining them in the community. Financial support of self management was also identified as a priority. Table 2 provides illustrative examples of each theme.

Table 2 Three key areas of self management of chronic conditions

Theme	Example(s)
Systematic Structure	<ul style="list-style-type: none"> • For example use effective self management support strategies that include assessment, goal setting, action planning, problem solving and follow up and that this is shared between providers • Providers need to have guidelines for self management support integrated with education, reminders, specialist involvement and decision support interventions. • Requires patient’s ability to improve confidence and skill at managing their conditions as opposed to patient knowledge of the conditions themselves i.e. empower the patient to manage their health and health care
Community /family/whanau engagement	<ul style="list-style-type: none"> • Self management is the key (they miss out the psychological aspects of chronic disease from programmes at times); Build in more family approaches knowledge re condition and how to manage the condition • Self Management – work with communities • Diabetes Self Management – Maori facilitator for that area deems it “whanau management”. Someone available for childcare. Extended whanau management. • Enabling people- using self management approaches are helpful
Support and Education	<ul style="list-style-type: none"> • Lay people can be trained in training self management then the resources are always within the community. • Invest in support for change (there for 3-5 years). Change management is the most crucial! Unless support change the money going into the change is wasted i.e. infrastructure to encourage take up is needed

4.3 Summary

The concept of self management in CCM appeared somewhat under-developed to the experts, who believed that it involves deeper understanding of underlying complexities of chronic conditions and their causes. It was suggested that this can be improved through enhancing systematic structures in place to create continuity, increasing community, family and whanau engagement, as well as providing more effective support and training for both patients and staff.

5 Appropriate levels collaboration

Within this dimension two themed emerged systematic structure and provider interactions table 3 provides examples. Systematic structure of collaboration and the importance of interactions amongst providers were the most commonly discussed aspects of collaboration in CCM. Consistency of goals and actions was especially important to the participants. Communication across all health sectors was seen as a vital part of collaboration in CCM. Further, as well as clarifying responsibilities, communication and systematic structure was said to be associated with successful implementation of CCM programmes:

There is quite a lot in the literature that says the ability of the practice to be successful depends on the demography and type and attitude of the population in which it works. The work that we have done in [...] does not demonstrate that. And it demonstrated the practices that had internal good structural process and internal communication were more successful

Table 3 Emerging themes for appropriate levels of collaboration

Theme	Examples
Systematic Structure	<ul style="list-style-type: none"> • Integration and Collaboration – right across services • Working closely with providers • Everyone doing the same thing • Patient pathway - everyone working towards the same goal.
Provider interactions	<ul style="list-style-type: none"> • Ongoing MDT including primary, secondary and tertiary - sharing information and resources • Productive interactions between provider and patient • Communication with parties

5.1 Inhibitor/Problem

The participants perceived there to be a lack of systematic structure in collaboration, specifying that a lot of work was done in sector silos. Poor communication between the sectors, as well as individual providers, was one of the reasons for lack of consistency in collaboration. This, in turn, amounted to participants' view on the way collaboration was happening in CCM, suggesting an overall absence of appropriate collaboration.

Table 4 Inhibitors of appropriate levels of collaboration

Theme	Examples
-------	----------

Systematic Structure	<ul style="list-style-type: none"> • Working in silos • Disease specific silos – Public/Primary Health • Fragmentation across the team (or across primary-secondary care services)
Provider Interactions	<ul style="list-style-type: none"> • Poor information management within primary and secondary services. If it is difficult to share information, it inhibits continuity of care. • Secondary care dominance • Lack of communication with parties between primary to secondary care (and vice versa) • Poor communication between primary and secondary • Lack of co-ordination amongst providers and amongst community agencies (& secondary/tertiary care) • Primary care teams ... not gelling together • Not having cohesion amongst key providers groups
Absence of Appropriate Levels of Collaboration	<ul style="list-style-type: none"> • Lack of partnership approach • Lack of coordination • Inability to use team members effectively

5.2 Enhancer/Solution

A number of ways to enhance collaboration in CCM were suggested by the participants examples are provided in table 5. One of the key factors that many of them believed would develop and strengthen collaboration was effective communication and interactions between providers:

The establishment and maintenance of relationships with specialists is important.

Further, team work, especially multidisciplinary teams, were praised for their adaptability. The importance of multidisciplinary teams was stressed a number of times, also highlighting that it is a more efficient way to work. One interviewee described an example of what they perceive to be an effective primary care team:

..... so the one-stop shop type of practices where there's the pharmacy is in the same building, the lab, the physiotherapist, counsellor or health psychologist, or social worker – to me that would be a primary care team.

Further, the importance of coordination of and communication within such teams were also brought up as factors that could enhance provider collaborations:

...enhanced communication across all care providers so that everyone knows what everyone else is doing and have clear roles and responsibilities

Visibility of collaboration was another priority for the participants, indicating that for collaborations to be truly effective they need to be transparent and observable. Further, engagement of health professionals in design, development and delivery of CCM programmes was seen as an enhancing factor for collaboration as it promotes ownership of programmes. Systematic approaches to delivery and design of such programmes were highlighted as a major enabler for collaboration within CCM.

Table 5 Enhancers for appropriate levels of collaboration

Theme	Examples
Provider Interactions	<ul style="list-style-type: none"> • Organisational team approach • Need effective team work between people with different expertise. As not every link in the chain has all the answers. • In terms of CCM, as there are so many players it is important to be seen as one team and share resources. • Work as multidisciplinary team • Multidisciplinary team meetings are critical
Visibility of Collaboration	<ul style="list-style-type: none"> • A prepared primary health care team • Stakeholders need to be involved. They need to be part of it, rather than having it done to them. • Not just about Maori and Pacific Island in the health sector it's about everyone across all areas: funders and planners, managers and qualified health practitioners. • Maori Provider in area and develop close links with them- work in partnership
Professional Attitude and Engagement	<ul style="list-style-type: none"> • Provider buy-in • Specialist buy-in • Buy in from senior managers • Medical buy-in and support • Ownership by providers; and engagement in planning its development and implementation
Systematic Structure	<ul style="list-style-type: none"> • Consultation- not getting anything happening unless you consult. Face to Face consultation is really important. Getting feedback and taking it back to governance. • Ownership if in primary sector needs to be owned by primary care therefore involved in the development of the programme • Trust • Trust from all involved • Provider involved in planning the programme and implementing it

5.3 Summary

While the experts perceived that the key characteristics of collaboration in CCM were systematic structures and appropriate interactions between providers, these were seen as potential inhibitors

as well. It was suggested that to improve collaboration, it needs to be more systematic and interactions between providers need to be observable.

6 Active engagement of leadership

Active engagement of leadership is acknowledged in the CCM dimensions to be a pre-requisite for sustained success. A number of comments made by respondents in the short answer survey that were consistent with this view:

Localized clinical champions provide good system logic around decision to be made regarding clinical activity. Good centralized clinical governance

They have champions

Best practice means that primary care should have leaders. Champions across the PHOs.

In practice support i.e. champions

The notion of the champion or the driver and how this individual contributes to leadership is critical to inhibitors and enhancers to understanding leadership in CCM.

6.1 Inhibitor/Problem

Many of the participants regarded active engagement of leadership to be currently lacking in New Zealand. Professional attitude to active leadership was also perceived as a barrier to CCM. Interestingly, some interviewees specifically addressed the issue of financial support, stating that money might not be an issue. Instead, it could be leadership and poor project management problems that lead to financial issues:

Money follows not knowledge; money is not the problem, the problem is leadership and direction, I think that what might be the issue that the focus is on the money and not on the leadership.

Poor project management, where a lot of money can be put into a project which is not constructive in a way that projects are known to work

There were two aspects identified in terms of activity leadership from the short answer interviews first attitude and second absence of leaders. The following table provides examples.

Table 6 Underlying themes of inhibitors to active leadership

Theme	Examples
Professional Attitude	<ul style="list-style-type: none"> • Key general managers who don't want a bar of it • Key influential people who have a lot of 'bollocks' is helpful (or key local person who has sway) • If people are keen you will still be able to muddle on
Absence of active engagement of leadership	<ul style="list-style-type: none"> • Lack of leadership • Lack of champions • Lack of clinical champions • Not having key people who are enthusiasts – your champions.

6.2 Enhancer/Solution

A number of suggestions on how to improve leadership levels in CCM were made by interviewees. Table 7 provides suggestion from the interviews. Visibility of the active engagement of leadership was perceived to be a key enhancer for CCM ; presence of evident leaders and champions in CCM teams was one of the factors identified as successful leadership in CCM :

Visible leadership by someone who is respected within the sector...

Effective and strong of leadership was also seen as an enabling factor to CCM :

Another key factor is having effective leadership

Strong leadership from the people that are propagating the idea

Systematic structure of leadership was also a factor of CCM important to participants, where identification and development of leaders systematically is viewed as a potential improvement of leadership in CCM. Having able, appropriately trained staff in leadership roles was also important to participants. As well as leaders within the workforce, however, community leadership was identified as an area that could improve CCM and needs further development.

Table 7 Enhancers for active leadership

Theme	Examples
Workforce	<ul style="list-style-type: none"> • A good practice manager is the key - a skilled person who uses systems to the best of their ability
Visibility of active engagement of leadership	<ul style="list-style-type: none"> • Leadership/champions amongst clinicians • Champions • Champions who will take it on • Champions - to lead the process
Outreach and Systematic Structure	<ul style="list-style-type: none"> • Identify key champions • Develop champions in teams
Community / family/whanau engagement	<ul style="list-style-type: none"> • Developing community leadership to implement the programmes

6.3 Summary

Active engagement of leadership in CCM was characterised by presence of champions in the workforce. The experts felt that this could be jeopardised by professional attitudes and lack of obvious and observable leadership, but enhanced by visible leadership in the workforce, creating and supporting systematic structures for leadership and encouraging community leaders.

7 Appropriate development of sustainable community links

Consistent with the ABCC Dimensions, many participants identified the importance of sustainable community links to CCM. The importance of community's role as the 'workforce' in CCM was suggested:

How community can play a part

They include patients and families as part of the "workforce"

Flexibility of providers towards the patients and their family was also one of the characteristics of appropriate community links within CCM :

Diagnosis it is quite a crucial time, best to engage with the family from the start, get people on board to manage the condition as a team. Flexibility to respond to patients (availability – hours for access)

One of the interviewees provided an interesting outlook on Maori communities. The interviewee commented on the close and interwoven structure of Maori communities, and how the CCM programme needs to incorporate those structures:

And then there is community engagement; and they have got on the whole much, much better community engagement than we have got; and they have got channels of communication deep into that community through Maori women's welfare league and all sorts of things. We could never set up the infrastructure, because they are organic. They are an organic society and they have organic networks, and we need to let them use those and support them. I think that can be done, but you can't design a Maori programme put into a Maori territory

7.1 Inhibitor/Problem

Surprisingly, no comments in regards to problems or inhibitors around having sustainable community links could be identified.

7.2 Enhancer/Solution

One of the key factors discussed in the course of interviews was systematically identifying and engaging the parts of population that are not already involved and/or are hard to reach. Special attention was given to getting links with Maori communities through Maori providers, and using Pacific providers for Pacific communities.

Another potential way of improving community links raised in the interviews was increasing consultation with the community and the inclusion of community leaders in CCM programmes. This was further explained by one of the interviewees who stated that community structures need to be utilised through consultation:

So you might keep the same overall principles of what makes a good chronic care management programme, but usually in consultation with the community you adapt those to what will work best

Another interviewee explained that integration between the programme indicates presence of the community values in the governance of CCM :

But where it's adapted to the community is when the governance understands what community thinks success is, what the individual people think success is

A number of ways of creating and enhancing existing links with the community were suggested during the short interviews.

Table 8 Themes and examples of enhancers for developing sustainable community links

Theme	Examples
<p>Outreach and Systematic Structure</p>	<ul style="list-style-type: none"> • Hard to reach communities are often more disorganised, thus one needs to be organised and take advantage of opportunities when they arise. • We send more recall letters to this population • Maori providers doing well by getting out into their communities. Working to try to reach them. Then reaching them is easier than maintaining contact • They are hard to run. They must work alongside the other programs for hard to reach communities – social support, welfare, housing etc. Need outreach services. Lay people are valuable for this population group- i.e. in Northland the approach has been extremely useful. We don't know enough to effectively engage with these people.
<p>Community / family/whanau engagement</p>	<ul style="list-style-type: none"> • Community engagement with local Iwi, Pacific, so leaders in the community can make suggestions of how to reach the hard to reach • Developing community leadership to implement the programmes • Involving communities. Community leadership, working alongside people who are community leaders

7.3 Summary

Flexibility of providers and engaging of community in the workforce were the key features of appropriate community links in CCM. Interestingly, the experts did not identify any obvious issues around this dimension, although suggested that systematic outreach and engagement of the community in CCM could further enhance development of community links.

8 Focus on health reducing inequalities is central objective and is obvious in practice

Focusing on reducing inequalities was an important issue for many interviewees. Many of them reported that equality is jeopardised as a relatively large number of people are not enrolled in CCM programmes:

Harder to do. New Zealand has really tried hard to identify and work with high needs population. More than many countries, we have made an enormous effort to do this and we haven't done a bad job. Need lots of resources and lots of time. Appropriately put a lot of funding into this group

How big a group do you think is not enrolled?

I think it is something like 15%. I might be off with that but it is certainly not 1%, certainly for the Midland Region I think it may well be around that level.

However, some of the interviewees felt positively about CCM and identified a potential reduction of inequalities in the future:

Ultimately I think what we will see is a decrease in the disparity between Maori and non-Maori in terms of age of onset of some of these chronic diseases and level of complications of chronic diseases and longevity.

8.1 Inhibitor/Problem

Two key issues in relation to reducing inequalities emerged from the interviews. The most widely discussed issue was the people who are not enrolled in CCM programmes when they should be and the difficulty of accessing them:

You can take it right back to the step of the hardest to reach in fact those that are not enrolled with a PHO, they haven't taken that first step of being visible on the primary health radar if you would like

Further, after identifying the hard to reach communities, it was stated that engaging and changing these communities was another (related) factor inhibiting reduction of inequalities:

Second one is that there is a sort of hierarchy of hard to reach, there's people that we don't know about – the ones I just talked about; there is the people that we work with who are not doing well, there are the hard to change as opposed to hard to reach, but actually it's the same thing, well it's not quite the same thing, but it's the same end problem.

One of the reasons given for this was that inequalities were not considered in the design of the programme:

Um, well they often don't reach them. Um, it depends if the programme has been designed with that target group in mind.

The second issue emerging from the interviews was the inequalities between Maori and Non-Maori populations and addressing those. One of the problems was meeting the cultural needs of Maori people:

How could they, how would they or do they? Cos I don't know that they do that.

8.2 Enhancer/Solution

A number of solutions were identified in terms of identifying the hard to reach communities. The most commonly mentioned suggestions were on how to define hard to reach populations:

The technical side of things is how define hard to reach in general, what we mean, and then how do we put some specific criteria into the population databases in order that we can name the hard to reach.

Further, it was explained that these people often had to be proactively sought out in the general population:

...trying to identify the hard-to-reach people, so you have this population of people... you're trying to say, okay, out of these people, who needs my help? And so there are several schemes to do some kind of population screen of this, of the population in general. And those that don't answer your screen, those are the ones that you've got to go out and visit.

Special attention was given to reducing inequalities between Maori and non-Maori populations. One of the key points arising from the interviews was the need for more Maori providers, in order that cultural needs can be met and better communication achieved:

In the contract they are also looking at recruitment and retention of Maori staff because we need to encourage Maori nurses to get into CCM. As Maori engage more with other Maori, that's why Maori health providers were established.

8.3 Summary

Overall, the experts felt that identifying and approaching those who need to be enrolled in CCM, as well as eliminating inequalities, especially between Maori and non-Maori people. Incidentally, the two factors mentioned above were also identified as key inhibitors of reducing inequalities in CCM. It was further suggested that these can be corrected through systematically identifying and approaching un-enrolled populations, especially Maori.

9 Decisions support system in place which is utilised and effective

When addressing the matter of decision support systems, the majority of responses specified that such a system needs to be in electronic format to allow integration of information across a number of providers. Quality of information and decision support systems was important to many of the participants. Some of the participants stated that it would lead to provision of better healthcare, while others highlighted importance of integrated patient data and information as a tool to help achieve effective CCM. The common themes identified during the short answer interviews in this dimension were electronic format, quality and use/purpose (see table 9).

Table 9 Decision support systems themes

Theme	Examples
Electronic Format	<ul style="list-style-type: none"> • Electronic stuff, when we move to being electronically connected that will be good! • Good electronic information management tools and resources; electronic decision support. • Integrated patient notes are essential. Electronic patient note keeping is essential, as notes cannot truly be integrated unless they are electronic.
Quality	<ul style="list-style-type: none"> • Good decision support tools (PREDICT a good example) • Having access to IT support/ decision support
Uses and Purposes	<ul style="list-style-type: none"> • How help clinicians provide better healthcare; Information systems IT/paper based • Tools: to aid in electronic invoice generation, data collection monitoring and reporting, connection between providers, data mapping.

9.1 Inhibitor/Problem

A key inhibitor identified from the data was the quality of information system (and of training in their use) for knowledge transfer and communication some participants commented that it is necessary to have strong IT infrastructure to facilitate communication and information sharing. Others noted that there was limited integration of such systems across sectors of healthcare, which was linked with inhibited continuity of CCM. Overall, it was suggested that there is a general absence of decision support systems in the area of CCM in New Zealand. There were three themes identified during the short answer interviews (see table 10).

Two interviewees very clear pointed out that making good use of information technology can help improve their everyday clinical practice. However, these interviewees expressed that this is not being practiced in some clinics:

We have put the software in now into 6 practices in the [REGION] and just looking at the patients with ischaemic heart disease, for example, one of the practices discovered that they have got 30% of their patients with known heart disease who have not had a [inaudible word] in the last two years. Yeah, given them a tool to solve that problem. But a lot of the practices don't actually want to know that there is a problem there... ..So I think practices needs to be aware that they need to be managing patients on a capitation basis.

Unnecessary data collection um, complicated or long enrolment process. Um, and sometimes that can be as simple as passwords to get into things. Now you do need to need that, but it was really interesting how often people weren't using the _____ PREDICT because they simply hadn't worked out the password. Um, so just making sure people have got past those initial hurdles.

Interestingly, regular recording and feedback of measurable outcomes was reported as insufficient in New Zealand by another interviewee. It was stated that regular measurement allows for monitoring high-priority patients and success of programmes:

I want to go back a step, because I think that there is a really important point that hasn't been fully recognised in New Zealand. That is that whether we think that the quality outcomes framework in England is good or bad, the amount of measures that they have used that they have usefully been able to see and change has been significantly dependant on live – almost live – virtually live data, coming in to practices on a daily basis. Every day practices can see exactly who has the biggest problem on that day or over the last period of time that they need to work on. Projects that have longer reporting – like one month, or three months, are unable to manage the change, because they actually don't know what they are working on in enough detail to do it on a daily basis. That is a huge problem in this country.

Table 10 Decision support systems inhibitors

Theme	Examples
Absence of Decision Support System in place	<ul style="list-style-type: none"> • Not having good IT
Systematic Structure	<ul style="list-style-type: none"> • Poor information management within primary and secondary services. If it is difficult to share information, it inhibits continuity of care.
Quality [of IT system]	<ul style="list-style-type: none"> • IT issues can be a problem • Lack of good IT and information management systems • Poor IT infrastructure, this will stand in the way of people communicating well. • Not having a strong IT infrastructure • IT that doesn't work properly. IT has to be really foolproof.

9.2 Enhancer/Solution

Overall, one of the key potential improvements that emerged from the study in regards to decision support systems was the importance of simply having the systems in place that exemplified decision support-IT, electronic decision tools and decision support enhanced.

Effective collection of data was another suggestion for enhancing decision support, as it was thought that it would allow tracking notable changes in the population, one respondent suggested that *'data is needed; to see if changes in the way people are prescribing based on decision support, makes a difference'*. Some of the participants stated that tools for decision support are required and suggested a 'Predict' programme as an example. Further, some other characteristics of a good information/decision support system were given. One of the factors was responsiveness to the patients' needs as one respondent suggested. *'System..... I guess one that's responsive to the needs of the patient'*. One of the benefits of such a system, as pointed out in one of the interviews, was its multifunctional nature as the respondent suggested *"another one is the linkage with the information systems that we use for variety of purposes"*.

The role of IT support systems in providing a 'full picture' in terms of patient demographics and characteristics was also highlighted by one of the interviewees as a potential improvement on existing decision support systems:

It needs to be well supported from the point of view of IT support so you know as much about the characteristics of the patient/group you are delivering to and you also know the availability of the services in the same region and you are trying to match the two or to fill in gaps where there are gaps.

9.3 Summary

An electronic decision support system was exemplified by an electronic high precision tool. Lack of such systems, as well as lack of systematic structure and poor quality of IT was perceived as potential inhibitors, which, however, could be resolved by creating a systematic integrated approach designed for CCM.

10 Appropriate delivery design system

A number of features were identified as being an integral part of an effective delivery design system for CCM programmes. The common themes identified in the interviews for this dimension were systematic, integrated needs based approach, patient family centred and adapted frameworks for Maori and for Pacific peoples (see Table 11).

Systematic, integrated, needs-based approach

It was indicated that the delivery design needs to be systematic, integrated (non-disease specific) and needs-based. Having an appropriate and research based framework for CCM programmes was identified as one of the key features of an appropriate delivery design system. One respondent suggested '*I think having a well researched framework for a start is key*'. The majority of the interviewees mentioned Wagner's Model of Chronic Care as an example of an outcome-oriented, well researched model with a broad perspective of Chronic Care:

I think they are best characterised by Wagner's model

...certainly the literature that I have looked at would probably support Wagner's model as being one of the predominant well researched models

I see that the Wagner model is about the components, the characteristics of components of successful programmes which allow the course of the journey for the patient to go through. I think that synonymous, but they certainly look different. And then when you can pull those out there's the six pillars –community engagement work where the community uses community resources; [prevention in the community, health promotion in the community, change in the community attitudes, change in the community awareness

Maori frameworks adapted

Adapting existing programmes to the cultural needs of Maori was one of the most discussed aspects of the interviews in regards to appropriate delivery design of CCM and cultural competency.

you might keep the same overall principles of what makes a good chronic care management programme, but usually in consultation with the community you adapt those to what will work best. So if you look at methods of service delivery you may find for a community where transport is a major problem where they don't like coming into town ...so it might be an outreach service [or providing services] by a known or respected member of that community will work best

.. support Maori with a construct they can use, for the questions they need to answer in their own society

Looking at a marae-based intervention rather than, [saying] come to my clinic at my time

Pacific frameworks adapted

Likewise adapting existing programmes for appropriate delivery design of CCM to meet the cultural needs Pacific peoples was also frequently discussed. Cultural competency was also identified as being important.

To bring the construct of CCM into the Pacific environment

Where its adapted to the community is where the governance understands what the community thinks is success.... front line workers need to be very closely involved with Pacific

Patient Centeredness:

Patient-centred care which was also discussed in association with the concept of family-centred care was identified as an important factor to consider in designing CCM programmes:

...and that real team approach including the patient and their family in the team. So we talk about patient-centred care and family-centred care.

Um, and seeing the patient and their family as the whole key person that everything should be designed around

Table 11 Dimension of appropriate design systems

Theme	Examples
Systematic, integrated needs-based approach	<ul style="list-style-type: none"> • Systematic approach, people work within a team, same set of clinical issues, collect same set of data • A generic approach is important (rather than disease specific) • Programmes designed and delivered in an appropriate / culturally sensitive way which meets individual client need
Maori and Pacific frameworks adapted	<ul style="list-style-type: none"> • We take programme that have been designed and adopted them for Maori and Pacific Island; rather than designing programmes specifically for that population from scratch! Effort required in developing Maori and Pacific Island services in these area • Have seen existing programmes re-designed into Te whare tapa wha models of health
Patient family centred	<ul style="list-style-type: none"> • From the outset the patient should be the focus at every step of designing chronic care management programme • Take a broad range view; look at the patients as individuals within context of their family and community

10.1 Inhibitor/Problem

There were a number problems identified by the respondents workforce was perceived by the interviewee in the short interviews in the in-depth interviews revealed more specific problems in attempting to deliver a well researched a patient/family centred programme. Moreover these

problems are exacerbated when working with Maori and with Pacific communities. These inhibitors are outlined in the following section

Workforce

Many participants commented in the short answer surveys that an adequate workforce is needed to provide CCM as illustrated in Table 12; however, participants reported that there are difficulties with workforce development, recruiting and finding the right people to do the right job. Therefore, lack of adequate workforce undermines the capacity and capability of health care providers to provide CCM programmes.

Table 12 Work force as an inhibitor

Theme	Examples
Workforce	<ul style="list-style-type: none"> • A high turnover of staff or not having staff, or the rightly trained staff (it’s about capacity and capability - both are needed) <p><u>Not enough staff</u></p> <ul style="list-style-type: none"> • Workforce issues • Lack of workforce (i.e. Capacity or capability) in the disease specific areas. • Workforce issues – in areas where practices are busy, and workforce development issues; they will retreat to normal practice. Not having enough staff in each practice will inhibit the CCM programme. • So when you don’t have the workforce (either in numbers or skills) to provide such a service. <p><u>High Turnover of Staff</u></p> <ul style="list-style-type: none"> • Operational- workforce issues that can disrupt change • “We need to ensure that we employ the right people to do the right job”. • Recruitments issues <p><u>Lack of appropriately trained staff</u></p> <ul style="list-style-type: none"> • Lack of an adequate workforce to manage it, especially in a rural area with small practices • Workforce issues- availability, capability and capacity • Workforce- lack of it in regards to numbers or appropriately trained people

Focus of Programme

Focus of CCM programmes was an issue discussed by the interviewees, with some debate around population versus an individual-based approach. Interestingly, a number of interviewees did not see community-focus and individual-focus to chronic care management as mutually exclusive, but rather suggested that there is a missing link between the two, and these need to be integrated more:

But we need to understand the difference between population-focussed versus individual-focussed; and how to take a population-focussed guideline down to the individual level. I think sometimes that's missing.

Funding Methods

Funding methods were also discussed during the interviews, and some interviewees reflected on fee-for-service funding as not ideal for CCM. One interviewee specified that fee-for-service payment scheme is not entirely suitable for chronic care as it prioritises number of people seen over quality of care delivered, which is not desirable in a chronic care setting:

I think for nurses in particular or anybody who's doing chronic illness care to – sometimes with chronic illness care, people can look from the outside and say whether or not they're doing anything. I think there's a – I think that type of care needs to be valued in a different way. What I mean is, you're not going to see you know, 20 people in a morning, when you're doing chronic illness care. You're going to see three you know, four. And so it's a whole different way of thinking about how we're providing this care and that's really hard in a fee-for-service kind of mentality. Um, now when you're – you know, if you've completely capitulated that mix, complete sense; if you're in a fee-for-service, flowing down and working with people in a chronic illness kind of way is not cost-effective. It's really difficult.

10.2 Enhancer/Solution

As with inhibitors there were a considerable number of perspectives that emerged from the interviews. Table 13 describes a number of these themes illustrated by the short answer interviews, and the following provides an overview of the perspectives from both the short and in-depth interviews

Workforce

Staff involved in or delivering chronic care management programmes were identified as crucial to the success of programmes. Interviewees identified a number of professionals that might have a significant impact on chronic conditions:

So it might be the nurse educator or it might be the GP, or it might be um, the health psychologist. But someone within that team who they find they connect with the best and are able to um yeah...sort of like a primary contact person. It might be the physiotherapist

Flexibility of staff and programmes and models that meet the needs of the hard to reach populations were identified as an integral to delivering CCM. Further, many participants also found that involvement of ethnic-specific workers is important during the design stage of CCM programmes in order to achieve cultural appropriateness.

Using a multi-disciplinary approach and teamwork in creating continuity of care was another point stressed during the interviews:

Absolutely essential that you have – use psychologists if you need it, that you have your physio when you need it, you have your occupational therapist, that you have your practice nurse who's working with the GP and the GP is working with the whole team in an interdisciplinary way, where everybody's opinion is valued, and there isn't a head _____ over the team, and that the team is working in a very...everybody's opinion is valuable. And that is really important

Patient Centeredness

Overall involvement of patients in all aspects of chronic care management appeared to be a priority in improving overall delivery design. Apart from the need of engaging patients and considering their perspectives and needs during CCM programmes delivery, many interviewees added that it is also important to focus on patients – the end users of the CCM - during the programme development process. Consideration also needs to be given to individual needs of patients, their family and community. This was supported by one of the interviewees, who noted that the health system needs to be responsive to individual need, and continuity of care is supported by regular feedback:

...system?... I guess one that's responsive to the needs of the patient and has some sort of mechanism to feed back from the patients about what is happening what how it is being received, so the patients are empowered to make changes in the actual process

Organisational Support

Some participants reported organisational support as a factor that helps enhance the implementation of CCM programmes. One participant noted that the organisation needs to provide support for training and feedback. Another participant commented that support needs to come from the top level and needs to reach to the bottom level- the ultimate end users of the CCM programmes.

Support and Education

Several participants mentioned that education and training are important factors that enhance CCM programme delivery as they provide the knowledge and skills basis of CCM, enabling better care provision. In addition, it was noted that education and training need to be delivered to staff in an appropriate method suited to their needs.

Systematic Structure and Continuity of Care

Continuity of care was identified as one of the most important aspects of CCM. One interviewee highlighted the need for continuous quality care by describing the ideal process:

...identifying the highest needs people and assisting practitioners to identify those people as possible. Um having identified them ...ensuring that the patients and providers can see some uptake in these methods. That once in the programme the patients are assisted to remain engaged in the programme and that the level of um clinical interaction

Efficiency of care was noted as one of the benefits of providing continuous care, as it avoids fragmentation of care:

I think it is important to address as much of the disease continuum in a coordinated way as possible rather than isolating that one small piece addressing that then trying to take on something else at some later stage

A number of ways of ensuring systematisation and continuity of care were suggested by interviewees. A record book that allows for recording all the contacts and treatment for the person was noted as a simple and effective way to add to continuity of care:

I quite like the idea of keeping to it a bit like the ante-natal book where people carry along your book and whoever sees you just puts one line in each time you're seen, so that at least

anyone else caring for you knows the key things that have happened or been noted or ____ etc.

Regular recalls for follow up in all clinics/providers were also suggested as a way to integrate continuity into chronic care management programmes:

The whole sort of um regular planned follow-up, where with recalls to get people back; um, most clinic management programmes will have regular recall in there, but not always. Um, and goal setting...

Overall, presence of systematic structure in design and delivery of programmes was identified as highly important to chronic care:

Underneath all that, I suppose, the key part is structured care.

Provider Interactions

Efficient integration between primary and secondary health care also appeared to be one of the key features of a health system that was seen as contributing to CCM programmes. One of the interviewees presented an example of such integration, and suggested that direct communication between service providers would avoid complex health system pathways, thus simplifying chronic care delivery processes:

Direct linkages to ancillary services should be enabled more by CCM programmes... ...it would be good for diabetes for instance if a clinical need was found that a patient could be directly referred to a local dietician rather than having to go through a rather circuitous outpatient clinic process

Effective management and sharing of information between different providers was also seen as an aspect enhancing delivery of CCM programmes.

Engaging and supporting Maori and other populations in need of services

Catering for the unique cultural needs of Maori and of Pacific peoples in CCM programmes has been discussed with respect to approaches taken towards these populations in delivering programmes. The majority of the interviewees discussed the design and delivery of services as key factors in delivering culturally responsive CCM Programmes.

One of the most widely discussed factors in regards to delivery of the CCM programmes to Maori and to Pacific populations was the importance of community governance of the programmes:

And I think they could, by having significant governance, absolutely not nominal governance. Respectful, contributory leadership, influential part of the governance of the programme. The programme therefore has to deliver to the bottom, where those people have been intimately involved in agreeing upon

One of the interviewees gave an example of how consultation about delivery of CCM may work in practice:

So if you look at methods of service delivery you may find for a community where transport is a major problem where they don't like coming into town or whatever and outreach service all work much better for them or it might be an outreach service by a known or respected member of that community will work best

Importance of approaching CCM programmes for Maori and for Pacific people without imposing European or western values upon the way a programme is delivered was discussed. One of the interviewees stated that deep understanding of the community's specific values and culture is key to delivering CCM programmes:

Where Maori and Pacific may define success differently from Europeans, but the frontline workers understand the success we are trying to achieve therefore it becomes in the context of those people because they are in governance, and probably in order to do it they have to be if not Maori or Pacific, they have to be very closely involved in Maori or Pacific culture

Funding

Funding methods were also discussed by interviewees in regards to how they affect the overall setting for CCM :

But where we're getting unstuck, is the different ways we're getting paid.

Another interviewee linked integration of health services and funding methods, noting that the fee-for-service funding discourages integration across sectors as it hinders patients' independence and encourages the provider to 'anchor' patients to them:

...they have to pay for each visit, they have to pay for the expensive dressings, they um, there's kind of an incentive to keep seeing that person rather than making them independent. So right now, it's really hard to integrate across settings; so that integration is really vital

A number of these themes were also illustrated by the short answer interviews

Table 13 Examples of enhancers for an appropriate delivery system

Theme	Examples
Workforce	<ul style="list-style-type: none"> • Those that work well; catch people when they can, and do what they can (brief opportunistic interventions). • For the hard to reach you need to be flexible enough to do all you can in short space of time. You need to "grab the moment" sometimes you compromise gold star scenario. Taking resources out to the people, this approach needs different resources, flexible guidelines, and recognition that one size does not fit all! Have some thinking re: safe parameters re no flexible model • It is a process of adopting and being flexible how you deliver the programme/ service. • The key is to be as flexible as possible, for example where you see them – it could be at home, in the clinic or in the environment of their choice. Persistence is important, as if someone does not show up 2-4 times, you should not just give up on them. • The programme needs to be designed in a way that is culturally appropriate. If we preach from the roof tops it won't reach these people. • You have to have ethnic specific workers that are involved in the development, implementation and ongoing monitoring/ evaluation of the programme, to ensure that it is relevant and appropriate.

Patient Centeredness	<ul style="list-style-type: none"> • Patient centred care –self management focus • Patients felt a sense of connectedness to programme of what it's going to deliver. • Getting a consumer perspective is the key • You need to listen to people who carry the burden of the disease.
Organisational Support	<ul style="list-style-type: none"> • Organisational support for training and feedback • Organisational support • Top-to-bottom support- “funders, board, management providers, patients felt a sense of connectedness to programme of what it's going to deliver.”
Support and Education	<ul style="list-style-type: none"> • Education and training • Training/competency of staff is important • Education to improve self management of chronic illness. • Education of participating providers and stakeholders in disease management and behaviour support • Education delivery - method of delivery specifically tailored to meet the needs of staff
Systematic Structure	<ul style="list-style-type: none"> • Depends on the way the programme is set up, there needs to be some type of outreach component for this population. Involvement of hard to reach stakeholders in the development of the programmes of that population • Rather than various initiatives, they should be pulled together and services brokered. As currently it's too fragmented and services are being duplicated at times. This results in a lack of appropriate service for the population.
Provider Interactions	<ul style="list-style-type: none"> • Information management between primary care and the DHB.

10.3 Summary

An appropriate delivery design system was characterised by taking a systematic, integrated (non-disease specific) approach to CCM, use a well researched programme, and if needed utilise Maori models and Pacific Models and is centred on the patient, rather than the professional. Inappropriate funding mechanisms as well as a number of issues in the workforce, such as lack of staff, high turnover of staff and lack of appropriately trained staff were seen as the key inhibitors for delivery design in CCM. The experts made multiple suggestions for improving delivery design system in CCM. Enhancing the numbers and training of the workforce in chronic care was seen as the key improvement; centring the delivery design systems on the patient and providing support and education for both staff and patients and their families was seen as imperative to improving delivery design systems. Having systematic structure and organisational support, as well as effective provider interactions and appropriate funding methods were the key structural changes and improvements suggested by the experts. Finally, addressing Maori, Pacific and hard to reach populations through adopting their infrastructure enhances the outreach of CCM.

11 Knowledge transfer

In discussing knowledge transfer in CCM setting, most participants discussed efficient flow of information in programmes. Information for area was provided around inhibitors and enhancers particularly in the short answer interviews. Some characteristics included formation and access to information on high-risk populations, while others specified active use of the information as key to effective knowledge transfer:

Disease registers

They use information actively

Good ability to draw out data, at a population and individual level

Provide data to identify the need “burning platform”

It was highlighted that the messages that are delivered by different professionals have to be consistent in order to avoid confusion and promote continuity of care:

...so whether the patient sees the pharmacist or the GP they will get the same message. They are not given conflicting or confusing messages

11.1 Inhibitor/Problem

A number of factors that inhibit efficient flow of information in CCM were identified by the participants. Table 14 describes workforce and education as major issues. The most prominent issue as described in the in-depth interviews was the lack of knowledge and skills in the workforce. Interestingly, both general and specialist knowledge was reported as lacking. Behaviour change and self management were specific areas where workforce knowledge was lacking. In particular, nurses’ knowledge was found to be critical to and lacking in CCM programmes:

I think practice nurses in general or nurses in general _____ don’t understand at a pathophysiological pharmacology basis about medications and disease processes. But I think it’s really hard to explain to somebody about a disease process in pharmacology when you don’t understand it yourself.

Lack of provider communication skills were also often seen as somewhat inhibiting transfer or knowledge.

Table 14 Inhibitors to knowledge transfer

Theme	Examples
Workforce	<ul style="list-style-type: none"> • Not having access to people with specialist knowledge to liaise with quickly if needed • Most patients with chronic disease have more than one chronic condition. As such these patients can benefit from providers with more generalist knowledge in each condition • Expertise in behavioural change and self management support is central to successful care. Whilst new graduates have these skills we continue to work with those who have not received this training and no agreed

	<p>vehicle to achieving this.</p> <ul style="list-style-type: none"> • The inability to engage with resources/ people i.e. you need help or investigations and you cannot get it. • Disease Specific Approaches – new Practice Nurse may have trouble with knowledge information and advice to give.; brief intervention may cause problems
Support and education	<ul style="list-style-type: none"> • Lack of training in interpersonal skills

11.2 Enhancer/Solution

Approaching the issue of inefficient knowledge transfer systematically was one of the most prominently discussed suggestions. Namely, information gathering process is in need of systematisation, as this would clarify the demographical complexities of CCM. Systematic process and provider interaction were seen as crucial (see Table 15)

Further, quality of the knowledge transferred and the pathways along which it gets transferred were also a priority to many participants. It was suggested that electronic IT systems were advantageous to collection of quality information. Timely management of information gathered was identified as contributing to quality of data.

Interactions amongst providers of CCM were also seen as potentially enhancing knowledge transfer. Further, enabling staff, especially nurses, to improve their skills and gain more knowledge was an example of how knowledge transfer in CCM can be improved:

I think that really, we really need to figure out ways of getting nurses up-skilled with science – you know, and that doesn't mean postgraduate work. That actually means more modules, given where they are, or DVD or whatever you want to do, so that they can get up-skilled themselves

The short answer interviews also pointed to the following themes as enhancers of knowledge transfer.

Table 15 Enhancer for knowledge transfer

Theme	Examples
Systematic Structure	<ul style="list-style-type: none"> • Information gathering regarding the high needs population in your district is important. It helps to determine the profile of the population, what their needs are and the geographical spread of the population. • Being about to have money to put in sufficient IT systems for consistency across the practices
Provider interactions	<ul style="list-style-type: none"> • Information management between primary care and the DHB
Quality/Characteristics	<ul style="list-style-type: none"> • Information Management- "It means that you can collect really good information about what is going on with patients and feed it back to clinicians, to build on

	<p>the programme, thus improving the quality."</p> <ul style="list-style-type: none">• Having information technology makes it easier• Information sharing and adequate time• Simplified information technology template system
--	--

11.3 Summary

Quality and consistency of information gathered were the key features of 'knowledge transfer' domain. The experts found that the lack of knowledge and skills in the workforce were the key inhibitors of effective knowledge transfer. They also suggested that these could be improved through enhancement of systematic structures of knowledge and provider interactions.

12 Adherence to clinical guidelines

The common themes identified in this dimension were visibility in adherence to clinical guidelines; processes / methods; and quality/ characteristics as described in Table 16. A number of participants indicated that evidence-based guidelines were a crucial part of CCM while others commented on the process of development and characteristics of guidelines. Having best practice guidelines was also considered as a vital component of quality care in managing chronic conditions and a characteristic of best practice as one respondent suggested *“What are the characteristics of best care, chronic care management?... ..evidence-based guidelines.”*

Table 16 Common themes in Adherence to Clinical Guidelines

Theme	Examples
Visibility of Adherence to Clinical Guidelines	<ul style="list-style-type: none"> • Evidence based guidelines • Best practice guidelines • Use of best practice regimens; Clinical guidelines • Having access to guidelines; links to guidelines.
Processes/Methods	<ul style="list-style-type: none"> • Development of step by step manuals of how to do stuff. Those that are process orientated. We find step by step guidelines very important and extremely helpful for staff. • Show rigorous and agreed evidence base behind recommendations. NZGGP have developed nationally agreed guideline not only evidence based, but an explicitly based process to get it and great buy in. Large number of key stakeholders inputted.
Quality/Characteristics	<ul style="list-style-type: none"> • Based on evidenced based practice (latest and relevant to the population group (s) you are working with) • A good theoretical background (evidenced based)

12.1 Inhibitor/Problem

The majority of the issues found around clinical guidelines for CCM were around inadequacy and absence of appropriate guidelines for CCM. The short answer interviews described the lack of guidelines and easy to follow guidelines two factors as important. In addition it was also felt that the lack of awareness of such guidelines was also seen as a factor inhibiting to their use. The respondents cited the lack of marketing and training as an issue. It was felt that as the Message is not reinforced CCM will not be embedded throughout the organisation

One of the interviewees, however, noted that although presence of evidence-based guidelines is a positive factor contributing to quality of care, integration of these may be difficult due to institutional/clinical nature of guidelines. A more integrative approach to implementing guidelines is recommended:

Well what I mean is that you know we've got these great guidelines; so if somebody comes into your office with diabetes and you say okay right, you need to get your retinas done and you need to get your feet examined and you need to have your ____ and you need to do this, and this and this. There's a tick box kind of mentality, when actually that person is not a tick box; that person is a human being and we need to look at you know, that's where the time needs to be put in about how to – how to work with them in their life

12.2 Enhancer/Solution

A number of participants mentioned availability of clear and accessible guidelines as the key factors that enhanced the implementation of a chronic care programme. It is apparent from the interviews that having evidence-based guidelines helps evolution and implementation of CCM programmes:

Having systematic approach enhances the implementation, people actually understanding that you're trying to change from an acute care model to a chronic care model.

In addition, it is mentioned that having a structured plan for implementation and use of such guidelines would further enhance CCM and health outcomes, and suggestions like “so actually having them used on a day to day basis” were made. Three factors; having the dimension, quality and systematic structure were noted from the short answer interviews as being important. These factors are illustrated in the following table.

Table 17 Enhancers for adherence to clinical guidelines

Theme	Examples
Dimension itself	<ul style="list-style-type: none"> • Great if there are guidelines- Gives you something to follow • Guidelines help you to identify any gaps and how you can monitor it to make a programme better and a lot tighter. • Using guidelines
Quality	<ul style="list-style-type: none"> • Easy to follow guideline • Clear guidelines
Systematic Structure	<ul style="list-style-type: none"> • Putting structure around it and making it easier to do. • Have a plan (a grand plan!) • System and process • Agreement on best practice implementation (i.e. what is

	best practice) <ul style="list-style-type: none">• Review of evidence-based guidelines
--	---

12.3 Summary

According to the experts, clinical guidelines need to be high quality clear and systematic. However, it was also identified that unless these guidelines were used, there was little benefit from them to CCM. Enhancement of clinical guidelines in CCM was perceived to be in creating easy to follow systematic guidelines and actually following them.

13 Conclusion

The burden of chronic conditions as the leading cause of morbidity and mortality in New Zealand is particularly evident in CVD, COPD and CHF and in addition, substantial inequalities in prevalence and provision of service have been identified. It appears that the current models of primary and secondary healthcare are coping poorly with this burden. Subsequently the driver for this overall research is the need to improve effectiveness and efficiency of services for those with chronic conditions.

Specifically, the purpose of this study was to provide an overall understanding of the perspective of nominated experts working in the field of provision of CCM programmes. Throughout this study the intrinsic qualities of CCM programmes were explored as well as the current status of in NZ.

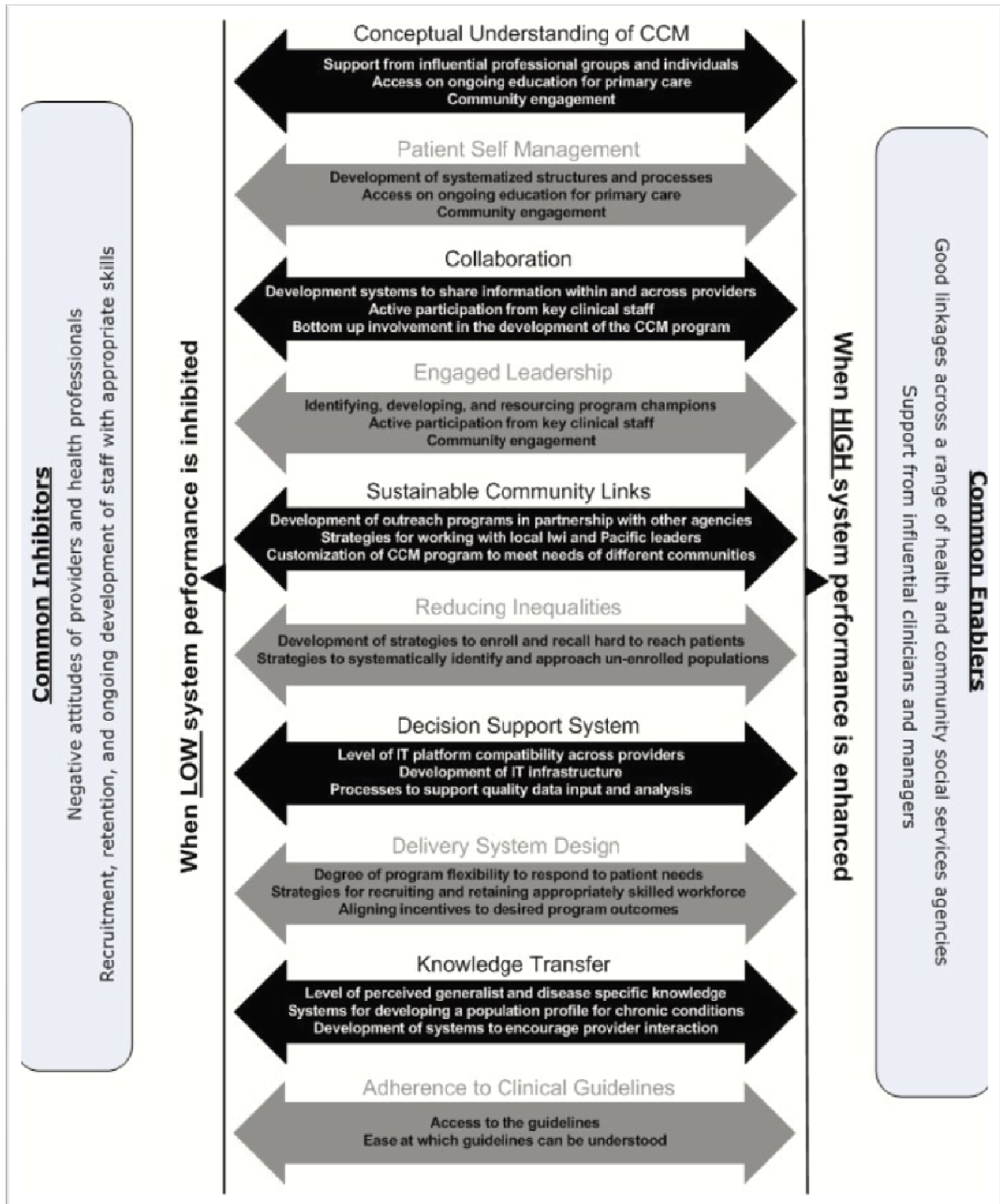
By and large the experts saw pockets of success and were able to provide examples of good practice and innovative ideas observable throughout NZ; however, the opinion overwhelmingly presented was one of a need for improvement. Subsequently, the insight about the system in practice provides a useful perspective about the nature of inhibiting and enhancing factors. Enhanced and coordinated systems, service and support are seen as the panacea for the burden of chronic conditions.

The following model (Figure 1) and explanation provides an overview of the enablers and inhibitors for CCM programmes as identified by the experts interviewed. A perspective across a number of essential dimensions for successful CCM programmes is presented. It is apparent that successful CCM programmes engage a whole community approach that is supported by an innovative and integrated delivery system. A successful programme will be patient centred and fit with the needs of the community. Strong relationships between the provider organizations and the community are seen as critical. The common enablers for such programmes are good linkages across a range of health and community services and support from clinicians as and managers; whereas the greatest inhibitor is the negative attitudes and lack of awareness by health professionals. While a knowledgeable and a well resourced workforce are obvious enablers for any health initiative, they are indispensable in CCM given the complex nature of most programmes. This is particularly true to ensure that CCM programmes acknowledge and support the principles of the Treaty of Waitangi and strategies to improve Maori health consistent with government policy He Korowai Oranga 2002.

Conceptual understanding of CCM

A conceptual understanding of CCM was believed to be fundamental to the development of CCM programmes. It is commonly agreed that for the system to work an understanding of the multiple dimensions related to CCM was an absolute necessity and hence a good programme was characterised by having knowledgeable and understanding expert staff planning and delivering the care. To this end, education and support (particularly in primary care) were seen as paramount. There appear to be a number of inhibitors to CCM uptake that pertain to the system as it is currently structured. The lack of continuity and community engagement were also seen as impacting on understanding the ideals of CCM. The enablers on the other hand, relate to either additional resources being allocated or current resources being rechanneled. Of course education and support were seen as paramount.

Figure 1 Overview model of a continuum of the inhibitors and enablers



Patient self management

Many experts believed that patient self management entails engaging patients in a deeper understanding of underlying complexities of chronic conditions and their causes. Expert informants appeared to perceive the patient/client as an individual. This is interesting given that much of the literature discusses the individual and family/whanau. There was a common view that the concept of self-management in CCM appeared to be somewhat under-developed in NZ. The implications for Maori were considered as a suggestion. Self management does not incorporate inter-dependence and needs to be balanced by the concepts of whare tapa wha.

While the need for strategies to encourage patients/ clients to adopt healthful behaviours were recognised, it was suggested that this can be improved through enhancing systematic structures in place to create continuity, increasing community, family and whanau engagement.

In addition it was thought enhanced structures could provide more effective support and training for both patients and staff to ensure the development the requisite skills. It was acknowledged financial support would be necessary to further develop this dimension

Appropriate levels of collaboration

While the experts perceived that the key characteristics of collaboration in CCM were systematic structures and appropriate interactions between providers, these were conversely seen as potential inhibitors. Observable systematic interactions between providers was seen as essential to improving collaboration,

In fact interactions in a variety forms was key. This collaborative interaction within and between the community/family/whanau, and the sector would ensure success of CCM. Currently this type of interaction is limited because little or no formal structural arrangements exist to support such interaction.

Active engagement of leadership

Visible presence of champions engaged in active leadership was an essential element of success in CCM programmes. It is clear that leaders and champions need to be present at several levels in the system, i.e. at community level, the practice, and PHO and management level, and DHB. Subsequently, leadership must be linked to a culture of engagement within a systematic model of CCM, hence creating and supporting systematic structures for leadership development and encouragement of community leaders. There was a strong perception that this vision could be jeopardised by a poor professional attitude and lack of obvious buy-in. Moreover, it was felt very strongly that structures are currently not in place to support active engagement of leadership. Interestingly a common view was that it is important that these structures actually support the identification of the leaders, and the resources to support programme champions' once they are identified. The frequently reference to the resistance to change or the lack of buy-in suggests that there needs to be some emphasis on the reasons for this change resistance and the strategies to overcome such resistance.

Appropriate development of sustainable community links

Flexibility of providers and engaging of community in the workforce were the key features of appropriate community links in CCM. It was however the area that most CCM programmes appeared to have the greatest difficulty with.

It was suggested that systematic outreach and engagement of the community in CCM could further enhance development of community links. These enhancers are opportunistic behaviours and likely result because there is a passionate leader somewhere that is driving the initiatives. The development of formal infrastructure and incentives to support community linkages will also go some way to institutionalising sustainable community linkages.

Focus on health reducing inequalities

On a high level, reducing inequalities was seen as the foundation of CCM, however it was acknowledged that reducing health inequalities was typically not built into the programme as a key element. It was clear that inequalities need to be identified and data collected to establish the degree of inequality. In turn inequalities can be corrected through systematically identifying and approaching un-enrolled populations, especially Maori. These enablers of change were also perceived as key inhibitors.

The essential contribution of Maori providers delivering care for Maori, Pacific providers for Pacific peoples and Asian providers for Asian peoples was acknowledged and marked as a significant systematic issue.

Decision support

An electronic decision support system was exemplified as an electronic high precision tool. For example integrated patient notes are essential, preferably electronic information would be shared between primary and secondary. Lack of such systems, as well as lack of systematic structure and poor quality of IT was perceived as potential inhibitors,

In truth some systems were thought to fail because of lack of the most basic training. Again, training is perceived as essential to CMM training that provides ongoing support as well as developing new professional in decision support needed. Generally it was felt that there was a relative lack of decision support systems within New Zealand. The fact that there is poor access or use of performance data was thought to explain the limited collaboration. Decision support systems were clearly viewed as a catalyst for other essentials for CCM success. Good data provides information that in turn creates a purpose for collaborating.

Appropriate delivery design system

An appropriate delivery design system was characterised by taking a systematic, integrated non-disease specific approach. This approach would make use of a well researched programme, which is centred on the patient rather than the professional and is culturally sensitive-its key would be structured care. While multiple suggestions for improving delivery design were articulated by the group, a key element was perceived as a systematic approach with people working in a team, sharing the same set of clinical issues and collecting the same data, thus the need for a systematic structure and organisational support. Enhancing the numbers and training of the workforce within

this system would be the essential element for improvement. Specifically, providing support and education for both staff and patients and their families is imperative. Addressing issues for Maori and hard to reach populations through adopting their infrastructure to enhance outreach of CCM, as well as taking in to account appropriate health models was seen as important to success.

Key inhibitors for delivery design in CCM are generally seen as the antecedents of the enablers. Inappropriate funding mechanisms as well as a number of issues in the workforce, such as lack of staff, high turnover of staff and lack of appropriately trained staff were seen as the key challenges.

The same issues seem to be coming up again i.e. need for systems that integrate, need access to people with appropriate skills, the need to change the focus from the provider to the patient. All these issues require a reframing of the 'work' or general practice and wider primary care. The move needed though is quite vast.

Knowledge transfer

Quality and consistency of information gathered were the key features of 'knowledge transfer' domain. The experts found that the lack of knowledge and skills in the workforce were the key inhibitors of effective knowledge transfer. For example, disease registers, storing data and being able to extract it in a timely manner; and quick feedback is much more effective than delayed feedback

Much of the discussion around knowledge transfer relates to the need for access to good information, whether this is in the form of 'experts' or a robust database. The need for such systems is addressed in the decision support section. It may well be that people see the two as one and the same. However, access to good information alone will not create knowledge transfer, i.e. just because you know there was a change in HbA1c for a population does not mean that you know why. In other words, a process needs to be resourced were providers can examine changes in their population, link the changes to some form of intervention, and be able to communicate this to other providers.

Adherence to clinical guidelines

The general perception was that clinical guidelines need to be high quality, clear and systematic e.g. good quality evidence-based guidelines such as those from NZGG are valued, in fact some of these have probably driven the development of chronic care management. However, it was also identified that unless these guidelines were used, there was little benefit from them to CCM. A means of enhancement of clinical guidelines for CCM was perceived to be creating easy to follow systematic guidelines and that are utilized. A good guideline provides key information on structure and best practice. In addition, practitioners want process-oriented, step-by-step guidelines.

Conclusions

The consistency of view on the necessary elements of effective CCM programmes for a New Zealand context, expressed within the literature review, 'movers and shakers' analysis, standard setting and exemplar analyses is remarkable. Also remarkable is the congruity (in all ABCC dimensions) between the information gleaned from the stocktake and the opinions of the 'movers and shakers' regarding the missing elements, in terms of both infrastructure and (arguably) vision, of New Zealand's CCM provision.

The data gathered in the current exercise suggests five issues for attention - all of which interact in a dynamic way. These issues are:

- a need for connection within and across providers,
- an attitude in both primary and secondary care that widens its focus from acute care to include chronic care,
- investment in ongoing education and workforce development (at all levels but including programme champions and leaders) for CCM
- a greater focus on addressing health inequalities by the use of appropriate strategies for meaningful engagement
- infrastructure to support a quality improvement process in primary care for CCM

Responding to these themes will require a refocus of resources and investment in change management that motivates behaviour change. The challenge of change is significant, but so is the problem faced.

What these results mean for New Zealand

There is a need to invest in structures at a national/regional/local level that connect currently diverse parts of the health system. This will enable interactions which focus on quality improvement initiatives linked to CCM programme outcomes. Given the pervasive attitude that CCM is difficult, it is vital that individuals and agencies are incentivised to be a part of this process. Further, it is important that regular feedback is communicated within and across networks.

Appendix I: CCM Dimensions

<p>Conceptual understanding of CCM which includes as central themes:</p> <ul style="list-style-type: none"> • Patient empowerment • Patient Self-management • Self-management education 	<p>'Conceptual understanding' of CCM implies a belief in the fundamentals ('ethos') of the programme and thus runs through all of the dimensions. However, a 'patient/professional partnership' is in turn an essential element (perhaps the most important essential element) of such understanding. Self-management support may be the most important component of any Chronic Conditions Management approach. Systematic reviews, however, reveal mixed evidence of the effectiveness of self-management <i>in isolation</i>. Mere provision of knowledge does not change behaviour and patients need practice in problem solving, interaction with health professionals, support from family/whanau and peers, and repeated follow-up is required for the full effect of self management to be achieved.</p>
<p>Appropriate levels of collaboration: Teams and partnerships are fundamental to the program</p>	<p>"Teams may be the fundamental primary care redesign that allows other components of the chronic care model to succeed". Such teams may provide building blocks for the development of other interventions. There is a reasonable evidence base that multidisciplinary team working has patient and service benefits in many areas of healthcare, including management of at least some chronic conditions.</p>
<p>Active engagement of leadership: Strong leadership is obvious at a clinical and non clinical level</p>	<p>There is consensus that in complex health care systems (particularly in secondary care or on the primary/secondary interface) both clinical and managerial champions are needed for sustained success. The evidence base on this is beginning to accumulate.</p>
<p>Appropriate development of sustainable community links:</p>	<p>Community participation in design/planning of healthcare services is important in terms of access, relevance and affordability. Links across sectors (particularly across the primary-secondary care interface but also across the health-social service-housing interfaces are of relevance.</p>
<p>Focus on health Reducing inequalities is a central objective and is obvious in practice</p>	<p>Research strongly recommends the need to target risk factors. However, risk factor targeting is not a population based approach and may lead to an increase in inequities as the better informed/educated are more likely to respond.</p> <p>Current research suggests that barriers to accessing services are varied and problems of access remain. In New Zealand there is strong evidence that such access problems are particularly felt by Maori, by Pacific peoples, and by other minority groups. Older people may also experience inequalities and access difficulties.</p>
<p>Decision support systems in place which is utilized and effective</p>	<p>All CCM models and frameworks identify the essential role of ensuring timely and effective management of patient information, tools to assist the clinician to make decisions and a service designed to facilitate effective interventions, and 'patients flows'. Such tools may be (but do not have to be) IT-based.</p>
<p>Appropriate delivery design system: Clarity in the organizational system is displayed</p>	<p>It is important that the programme (whether disease management or case management based) for delivery and coordination of care includes some or all of the following elements: case management roles; team practice; multidisciplinary interventions and clinics;</p>

	care delivery and coordination; pro-active follow-up; planned visits; visit system change; patient registry; use of information for care management; feedback of performance data; telephone and telemonitoring systems. Individual programme design may vary depending upon population demographics, geography, etc, etc and upon what the programme builds upon, and thus not all the above elements necessarily need to be present for a programme to be effective.
Knowledge transfer that is organised and appropriate: Information flow freely and is managed throughout the system	Information to improve programme delivery is essential for quality improvement. Research is increasingly highlighting the need for implementing structures and systems that ease the sharing of information. This information needs to be presented and target in different ways, depending on the receiver. Some of the main audiences are the funder, the health professional, and the patient.
Attention to Efficiency/Cost/Output is obvious within program	Programmes need sustainable and reliable funding. To justify such funding they must provide evidence of their cost-effectiveness. At its simplest level this evidence may be service-related and financial (e.g. reduction in hospital admissions, or demonstrably better use of valuable clinician time) but it may also be related for example to reduced need for social care (e.g. by reduction in disability), and reduction in time lost from work by the patient. Some factors are easier to measure than others.
Attention to Effectiveness/Outcomes is obvious within program	For a programme to become and to remain effective it must 'monitor itself' and respond appropriately to the information gained from this monitoring process. Is audit and/or quality improvement embedded within the programme? If so, what clinical indicators are employed and are these appropriate? Is there evidence that the programme is responsive to this and to changing need. Is there evidence of evolution and development?
Adherence to clinical guidelines;	Guidelines for management of COPD, CHF, CVD and stroke have been in place for some time, are generally evidence-based and are well recognised. Nonetheless there remain barriers to their implementation, and the degree of and standard of implementation may vary between counties, between health sectors within a single country and between 'institutions' within the same health sector (e.g. between DHBs). Our disease-specific stocktake questions have been based on existing guidelines for COPD, CHF, CVD and stroke.

Appendix II: Interview Schedule

Can you think of any programme that you have heard about or seen published that exemplifies the management of chronic disease?

What are the characteristics of best practice in chronic care management programmes?

What are the differences in these criteria for the diseases? (CHF, CVD, COPD, Stroke)

What factors enhance the implementation of a chronic care programme?

What factors might enhance a programme in the specific diseases areas? (CHF, CVD, COPD, Stroke)

What factors inhibit chronic care programmes?

What factors might inhibit a programme in the specific diseases areas? (CHF, CVD, COPD, Stroke)

Across Chronic care programmes who are the experts in New Zealand?

What happens to chronic care programmes for the hard to reach communities?

What is the impact of chronic care programmes?

How do chronic care programs cater for the unique cultural needs of Maori and of Pacific peoples?

