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

Report: Generic Stocktake Analysis

May 2009

Investigators: Martin Connolly (Principal Investigator), Janet Clinton, Peter Carswell, Tim Kenealy, Nicollette Sheridan, Alan Barber, Allan Moffitt, Gerard Devlin, John Kolbe, Lorna Dyall, Ngaire Kerse, Robert Doughty, Ross Lawrenson

Prepared by: Martin Connolly, Janet Clinton, Peter Carswell, Faith Mahony, Maggie Fung and Kathryn Cairns

ACKNOWLEDGEMENTS

We acknowledge the input the following District Health Boards: Auckland DHB, Bay of Plenty DHB, Canterbury DHB, Counties Manukau DHB, Hawke's Bay DHB, Hutt Valley DHB, Northland DHB, Nelson Marlborough DHB, Mid-Central DHB, Southland DHB, Otago DHB, Waikato DHB, Wairarapa DHB, Waitemata DHB and West Coast DHB.

This work was funded by a grant from District Health Boards New Zealand, administered by the Health Research Council.

PREFACE

This report acknowledges that health disparities for Maori are recognised to exist within a social, economic and cultural context as well as structural discrimination.

The involvement of Maori, the indigenous population of Aotearoa and Te Tiriti o Waitangi partner with the Crown, in the design of this research project is consistent with the Government's health strategy for Maori" He Korowai Oranga" that Maori are entitled and should access to effective health services.

Contents

LIST OF FIGURES

LIST OF TABLES

EXECUTIVE NOTE

A Précis version of the current document has been published separately.

ABBREVIATIONS

ABCC	Alleviating the Burden of Chronic Conditions
ACC	Accident Compensation Corporation
CCM	Chronic care management
CHF	Congestive Health Failure
COPD	Chronic Obstructive Pulmonary Disease
CVD	Cardiovascular Disease
DSAC	Doctors For Sexual Abuse Care
DHB	District Health Board
DHBNZ	District Health Boards New Zealand
GP	General Practice
HEAT	Health Equality Assessment Tools
HRC	Health Research Council
ICD	International Classification of Diseases
KPI	Key Performance Indicator
NHI	National Health Index
NZ	New Zealand
PHO	Primary Health Organisation
PMS	Patient Management System
RNZCGP	The Royal New Zealand College of General Practitioners
SES	Socioeconomic status

CHAPTER 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.

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 review; 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 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

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 informs the subsequent stage.

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 a questionnaire to all DHBs)
    - Undertake detailed analysis of programmes for COPD, CVD, CHF, Stroke
    - 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 across the country
    - 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.

Outline of this report

This report commences with the overview of the ABCC study as described above. Chapter 2 outlines the background and methodology for the Stock take analysis. Chapters 3 to 5 provide a description of each of the three generic questionnaires and their findings. The disease specific questionnaires and its findings will be presented in a subsequent report. Chapter 6 provides discussion and conclusions based around the findings of the generic questionnaire.

CHAPTER 2: Stocktake methodology

Stocktake background

A literature review of chronic care management in the New Zealand context was undertaken to examine the existing evidence-based, social science-based, and culture-based literature. The Stocktake was informed by this review. The review addressed global best practice regarding healthcare delivery for chronic conditions (chronic conditions management – CCM), including foci on: [1] the applicable chronic care frameworks; [2] understanding and updating health needs related to chronic conditions; [3] current examples of relevant workbooks; [4] disease specific literature review extracting aspects that are particular to each disease. Advisors during this stage of the study included the project's Expert Advisory Group, and the project's Governance Group as well as the HRC. Figure 1 gives an overview of the process. As a consequence of the process a Stocktake instrument was developed to capture an overview of CCM programmes and their practices within New Zealand.

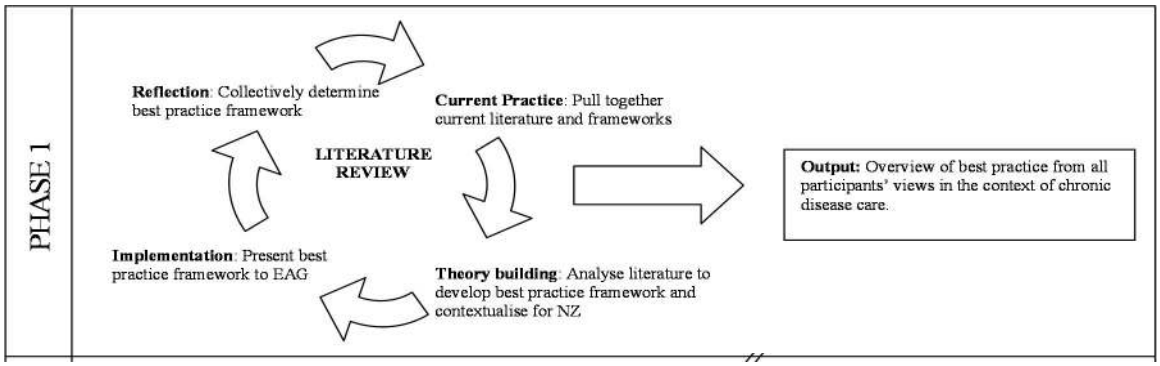


Figure 1 Overview of Phase 1 - Literature Review

Questionnaire development

The CCM dimensions detailed below, identified by the Literature Review formed the basis of the Stocktake questionnaire. We subsequently held a series of five Standard Setting workshops involving CCM professionals across New Zealand (to be reported in detail later) which have validated our choice of dimensions. The Stocktake questionnaire was divided into two parts: firstly a generic component that captured overall practice; secondly a disease specific component.

The dimensions are as follows:

1. Conceptual understanding of CCM
    - Patient empowerment
    - Patient Self-management
    - Self-management education
2. Appropriate levels of collaboration
3. Active engagement of leadership
4. Appropriate development of sustainable community links
5. Focus on health inequalities
6. Decision support systems in place
7. Appropriate delivery design system
8. Knowledge transfer that is organised and appropriate
9. Attention to Efficiency/Cost/Output
10. Attention to Effectiveness outcomes
11. Adherence to clinical guidelines

The dimensions for data collection were also informed by an analysis of existing national databases with content relevant to our four index chronic conditions (stroke, CVD, CHF and COPD). The Stocktake questionnaire to DHBs comprised core questions around CCM, service process/integration, implementation catalyst and systems, response to cultural context, and questions relating to each chronic condition.

The Stocktake development team comprised a senior clinician from each subject area, and representation from epidemiology, statistics, nursing, primary care, Maori health, Pacific health, IT and PAR expertise. MOH/ DHBNZ provided information extracted from the DHBs' District Annual Plans for the 2007/08 year.

The following diagram presents and overview of the Stocktake phase

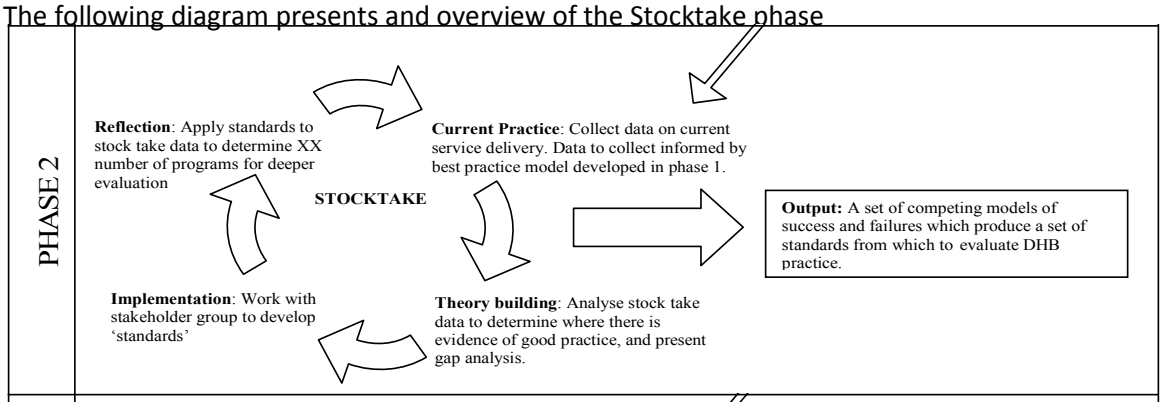


Figure 2 Overview of Phase 2 - Stocktake

The generic and disease specific sections of the Stocktake tool were circulated to the EAG and the questionnaire was modified as a result of feedback.

The Pilot

The tool was then piloted during July 2007 in two DHB's (Counties Manukau and Nelson Marlborough DHB) in two phases:

1. Demographic data gathering of the content of disease specific programmes and their funding streams.
2. Second questionnaire and follow-up telephone call exploring details of disease-specific CCM programmes and reasons for success/failure.

Feedback from the pilot sites included clarification regarding the ICD 10 codes to use for CVD, Stroke, COPD and CHF when extracting data from patient information systems; clarification as to whether 2006 referred to calendar or financial year; and using discharge rather admission for the count as information is coded after the event, thus discharge information is more complete. The length and content of the Stocktake tool was also discussed and, as a result, the disease specific components of the Stocktake tool were refined and subsequently sent in two phases to all 21 DHBs:

1. Generic sections of chronic care management, primary care and health inequalities as well as the 'trunk' disease specific questionnaires
2. Tailored disease specific questionnaires based on the trunk questionnaire information provided.

Four regional workshops were held during September 2007 to review the study and gain feedback on the questionnaire tool content;

- Auckland
- Rotorua
- Wellington
- Christchurch

Workshop areas were:

- Clinical decision support/ IT
- Nature of team work/ organisational design
- Self management
- Access/ inequalities
- Community linkages

These workshops were also used to promote and publicise the study to DHBs, PHOs and NGOs.

Ethics

Ethical approval was sought via the expedited process through the Multi-region Ethics Committee. The study MEC/07/21/EXP was approved on 28 June 2007.

Stocktake dissemination

The stock take tool was disseminated to all agreed stakeholders on 16 October 2007

- PHOs (Generic Questionnaires)
- Maori/ Iwi Providers (Generic Questionnaires)
- All 21 DHBs (Generic and Disease Specific Questionnaires)

The Generic Questionnaires comprised:

- A Chronic Conditions Management Questionnaire
- A Primary Care Questionnaire
- A Health Inequality Questionnaire

The Disease Specific Questionnaires focussed on:

- Chronic Obstructive Pulmonary Disease (COPD);
- Cardiovascular Disease (CVD)
- Chronic Heart Failure (CHF)
- Stroke

Stocktake response rate

PHOs and NGOs were sent the Generic Questionnaire. A small number responded and these responses will be reported later.

Only one DHB (extra to the pilot sites) responded by the due date[1]. During December three DHB's advised the project of their decision to decline to participate and two DHBs did not respond at all. Several advised they would be delayed. Those that did return the generic and trunk disease specific questionnaires had the appropriate second tailored disease specific questionnaires sent to them. By February 2008 the response rate of the remaining 18 participating DHB for the generic component of the questionnaires had increased to 72% for the chronic care management inventory, 61% for the primary care section and 66% for the health inequalities section. Over subsequent months the project manger continued to correspond, talk and visit the delayed DHBs in an attempt to improve the response rate. A common reason for delay was competing demands on DHB

[1] The original plan was for DHBs to return the completed Stocktake questionnaires by the end of November 2007.

resources such as having to prepare their District Annual Plans. By July 2008 the response rate of the remaining 17 participating DHB for the generic component of the questionnaires had increased to 88% (of 17 DHBs) for the chronic care management inventory, 70.6% for primary care questionnaire and 88% for health inequalities questionnaire (see Table 1).

Table 1 Overview of Questionnaire Response Rate (July 2008)

GENERIC QUESTIONNAIRES			FOUNDATION DISEASE-SPECIFIC QUESTIONNAIRES				COMPREHENSIVE DISEASE-SPECIFIC QUESTIONNAIRES			
CCM Inventory	Primary Care	Health Inequalities	CVD	CHF	COPD	STROKE	CVD	CHF	COPD	STROKE
88%	70.6%	88%	76%	82%	88%	75%	65%	76%	59%	65%

Fifteen DHBs completed and returned a full set or parts of the questionnaires, a response rate of 88% (of 17)[2]. [NB. This figure, however gives a more favourable impression of overall response rate than is justified. As will become apparent later in the present report, and in the disease specific report to be published separately, many of the responses submitted were incomplete]. The questionnaires were filled out by knowledgeable personnel including senior clinicians, service heads (clinical and managerial), Maori general managers/ liaison workers, and senior funders and planners within the DHB. Pacific and Asian general managers also completed relevant sections of the questionnaire.

Data Analysis

This report contains the analysis findings of the Generic Questionnaire components of the Stocktake relating to DHBs. Descriptive statistics was performed on the three generic questionnaires, and where appropriate, frequencies, percentages and central tendencies (mean, median and mode) were calculated. Qualitative analysis was performed on qualitative responses. Coding of text responses was performed where necessary.

[2] The DHBs who participated in the Stocktake were: Auckland DHB, Bay of Plenty DHB, Canterbury DHB, Counties Manukau DHB, Hawkes Bay DHB, Hutt Valley DHB, Northland DHB, Nelson Marlborough DHB, Mid-Central DHB, Southland DHB, Otago DHB, Waikato DHB, Wairarapa DHB, Waitemata DHB and West Coast DHB,

CHAPTER 3: Results from Chronic Care Management – Generic Stocktake

Overview:

A Stocktake questionnaire was sent out to all DHBs across New Zealand to determine the extent of CCM practice. Four DHBs declined to participate and fifteen of the remaining 17 DHBs completed and returned the Stocktake questionnaire (NB: DHB M and L, refer to Appendix A.1; DHB F and P, refer to Appendix A.2-3, on page75). The Stocktake questionnaire focussed on the generic features of CCM identified as chronic conditions management dimensions. The Stocktake questionnaire included dimensions on leadership, community linkages; inequalities in health care; organisation of health care delivery system; collaboration; systems for knowledge transfer; self management support; decision support and programme delivery system design. Participating DHBs were asked to comment on each of these CCM dimensions

Each CCM dimension comprised a set of variables that collectively represent the feature itself. Each of these variables was represented by a statement in the questionnaire; participating DHBs were asked to express their viewpoint on each of these statements.

Participating DHBs were asked to rate each statement on a Likert scale of 0-11, with higher point values indicating that the variable described in the statement is more fully implemented and the participating DHB gives greater support for the statement. Lower point values indicated that the action described in the statement is not fully implemented and there was lesser support for the statement. A score of zero indicated that the action in the statement is not implemented and there was nil support for the statement. This chapter provides an overview of participating DHBs' response on each of these CCM dimensions.

Rating range	Classification
0-2	No to little support for the statement
3-5	Basic support
6-8	Good support
9-11	Full support

The result of each CCM feature is presented in separate sub-sections[3]. The findings of each CCM feature are summarised, and the median, minimum and maximum ratings (providing the range) are presented in line graph. An explanation of these findings is offered for each CCM feature.

[3] On the CCM questionnaire of DHB A, two respondents responded. Given that both respondents are recognised as knowledgeable in the area of CCM, hence both scores were taken into account in the report by taking the average of both scores.

Part 1: Leadership

The first part of the generic Stocktake questionnaire gathered information regarding Leadership. High quality leadership is required for effective performance in an organisation's system for CCM. CCM programmes are more effective if there is active and visible leadership support and encouragement for the programme at all levels of the organisation (ABCC Study NZ: Literature Review, 2007). In the Stocktake questionnaire this CCM feature comprised the following variables: organisational leadership in chronic care, programme championship, clinical leadership and senior leadership. The mean, minimum and maximum ratings for each of the variables are presented in graphical form and are followed by a more detailed explanation.

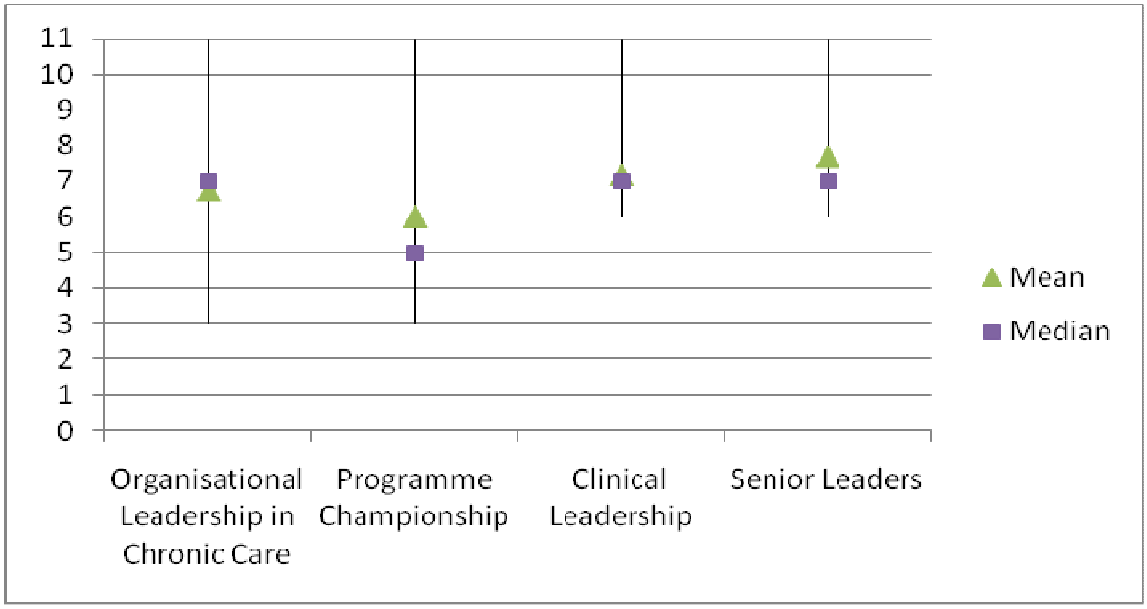


Figure 3: Line graph presenting the range, mean and median rating for the components within Leadership

On average, the 15 District Health Boards showed good support for overall **organisational leadership in chronic care** (mean rating for this variable was 6.7). Good support of organisational leadership was specified in the questionnaire as being the provision of senior leadership and specific dedicated resources (both financial and personnel). This is in contrast to basic support, which was defined as leadership that is reflected in vision statements and business plans, but with no resources specifically earmarked to execute the work. The lowest rating given to this variable by the DHBs was 3 and the highest rating this variable received was 11. The range (of 8) signifies that there is considerable variation in participating DHBs' response in this area.

Participating DHBs collectively gave basic support (a mean rating of 6) for the **overall programme championship** variable of leadership. This means that programme championship is believed by the DHBs to reside in a specific organisational role. However, DHBs believed (overall) that there were few specific appointed team leaders in the organisation who take responsibility for CCM programmes in the organisation. The range of response for this variable was 8; the lowest and highest ratings being 3 and 11, respectively. The mode and median rating was 5, suggesting that more DHBs gave a low rating and the mean rating was positively affected by an extremely high rating (i.e. 11).

Participating DHBs overall gave good support for **clinical leadership** in their organisation. This level of support indicates that DHBs are not operating in status quo in terms of the

development and management of CCM. Instead clinical leadership is perceived by the DHBs to be encouraging and supporting the use of an integrated approach to CCM (a mean rating of 7.2). This variable had a range of 5 (i.e. a smaller variation of response across participating DHBs). The most frequent response (the mode) for this variable was 6.

Finally, there was good support for **overall senior leaders** within the DHBs, which would suggest that DHBs generally thought that their senior leaders encourage improvement efforts in chronic care and make improvements to chronic illness care a priority (a mean rating of 7.7). Once again the range for this variable was 5, suggesting less variability between DHBs than for some other aspects of provision. However, this variable had a mode of 6 and a median of 7, suggesting that mean has be positively affected by some extremely high ratings.

Collectively, the questionnaire indicated that DHBs perceive that there is good leadership support and advocacy for CCM programmes at all levels of the DHB organisation. However, the DHBs feel that they have weaker programme championship for CCM programmes. The higher the quality of leadership the better the overall effectiveness of CCM. Therefore, this is an area of CCM that needs addressing in terms of future development. Programme champions are often those who inspire and who form links between clinical and managerial groups within a healthcare organisation. Without them the impact of more global leadership (i.e. organisational and clinical) aspect are limited.

The degree of variability between DHBs in some aspects of provision is of concern.

Part 2: Community linkage

Linkages between the health system and community resources play an important role in CCM (ABCC Study NZ: literature Review, 2007). Community linkages may be defined as the connectedness of the health system to resources, services and organisations in the community (ABCC Study NZ: Literature Review, 2007). In the Stocktake questionnaire, this dimension comprised the following variables: linking patients to outside resources, partnership with community organisations, traditional healers and complementary alternative therapists, biculturalism and partnerships with consumers. The results of this dimension are summarised in graphical form and are followed by a more detailed explanation.

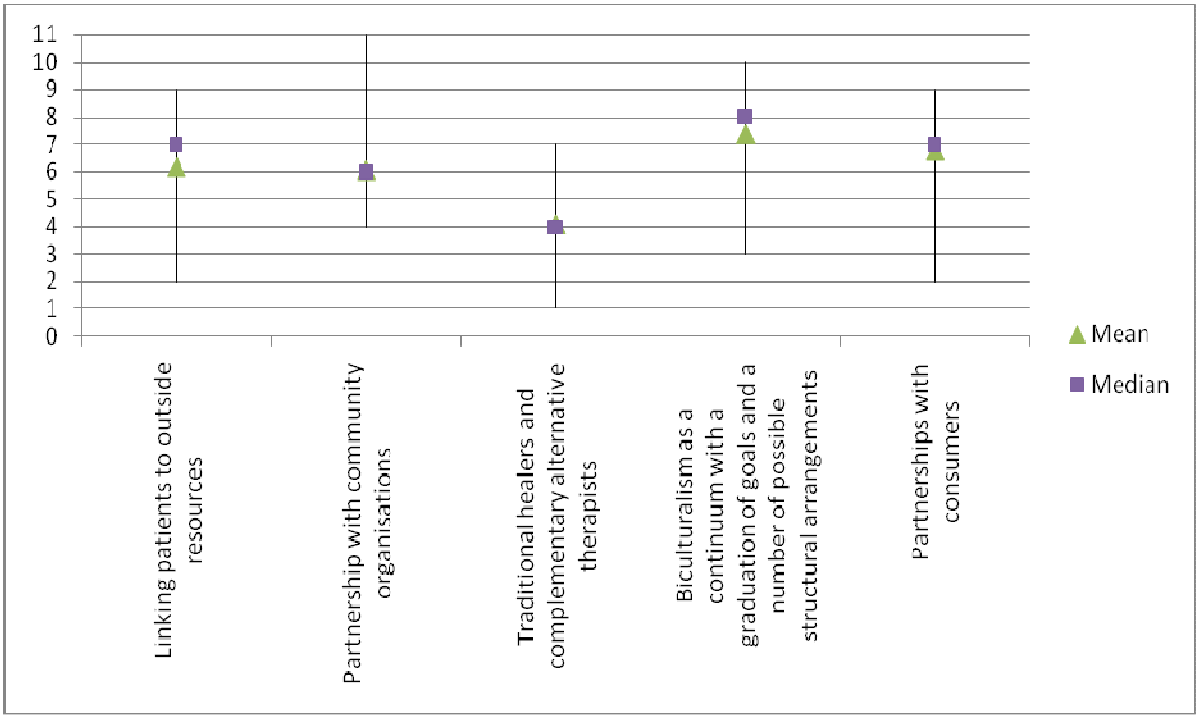


Figure 4: Line graph presenting the range, mean and median rating for the components within Community Linkages

The component relating to **linkage of patients to outside resources** scored a mean rating of 6.2 and a median of 7, indicating a good level of support. This level of support suggests that DHBs perceive that they link patients to outside resources in an effective manner and that this is accomplished through a designated person or resource responsible for ensuring providers and patients make maximum use of community resources. However, this variable had a mode rating of 8 and response range of 7, indicating that, most commonly, DHBs perceived their organisation is operating at a higher level i.e. that it has active coordination between the health system, community service agencies, and patients. The range suggests that a few DHBs had an opposite viewpoint; the lowest rating given to this variable was 2, which equates to a perception of no systematic procedure for linking patients to outside resources.

Generally DHBs supported the view that **partnerships with community organisations** are formed to develop supportive programmes and policies within their organisation (a mean of 6.1; mode and median of 6). Moreover, this variable had a response range of 7, minimum and maximum ratings of 4 and 11, respectively. Given that the three central tendencies are approximately the same; these results suggest that participating DHBs rated this variable relatively 'evenly' along a

wide range of scores of 4 and 11. It also means that some DHBs rated this variable much lower than others, a rating of 4 indicate that partnership with community organisations are being considered but have not yet been implemented.

This section of the questionnaire also explored the issue of **alternative therapies**; whether traditional healers and complementary alternative therapists are consider by the DHBs as possible treatment opinions and whether DHBs refer patients for these alternative therapies. Participating DHBs on the whole gave a mean rating of 4.1 and median rating of 4, suggesting that traditional healers and complementary alternative therapists are tolerated but not encouraged. However, the mode for this variable was 2, indicating that the most common view was that traditional healers and complementary alternative therapists are not recognised within the DHBs. The response range was 6, the lowest rating being 1 and highest 7.

Biculturalism is an important element in CCM in New Zealand; CCM programmes need to be structured in a way that is appropriate for patients from different cultures, in particular for Maori. It is also relevant for Pacifica and for other ethnic groups. Participating DHBs gave a mean rating of 7.4 for this variable, indicating a perception that active Maori involvement exists in organisations across the health sector. There was however a response range of 7, suggesting considerable variation between DHBs. The lowest rating given to this variable was 3 and the highest was 10. This equates to a wide variety of perception of view on biculturalism across DHBs, varying from 'simply' having a Maori perspective to having parallel Maori organisations across the health sector.

The last variable within the community linkage dimension was **partnerships with consumers**. Overall, the DHBs gave a mean rating of 6.8, a mode and median of 7, indicating a view that consumers are respected and consulted about their perspective on health care services. However, again there was a relatively wide response range of 7, the lowest being 2 and the highest 9. This indicates that some DHBs do accept the idea of having partnerships with consumers but these partnerships are not actively sought or are restricted to the clinical consultation.

On the whole, the DHBs expressed the view that there is a good level of community linkage, in terms of linking patients to outside resources, forming partnerships with community organisations and customers, and also for biculturalism in CCM. However, there was a low level of support for alternative therapists.

Once again the wide response ranges for some variables were notable and of potential concern.

Part 3: Inequalities in health care

It is well established that certain groups in New Zealand, such as Maori and those from lower socioeconomic brackets, have an increased likelihood of experiencing poorer health (ABCC Study NZ: Literature Review, 2007). Thus inequalities in health care were investigated in the Stocktake questionnaire. The following variables together contributed to the understanding of this CCM dimension in this questionnaire: strategic focus to reduce inequalities; commitment to Maori and developing cultural safety; commitment to cultural safety when working with people diverse in ethnicity, religious, and sexual preference, and with people of different physical and mental abilities; and overall level of equitable access to health care. Results of this dimension are summarised in the graph below, which is followed by a more detailed explanation.

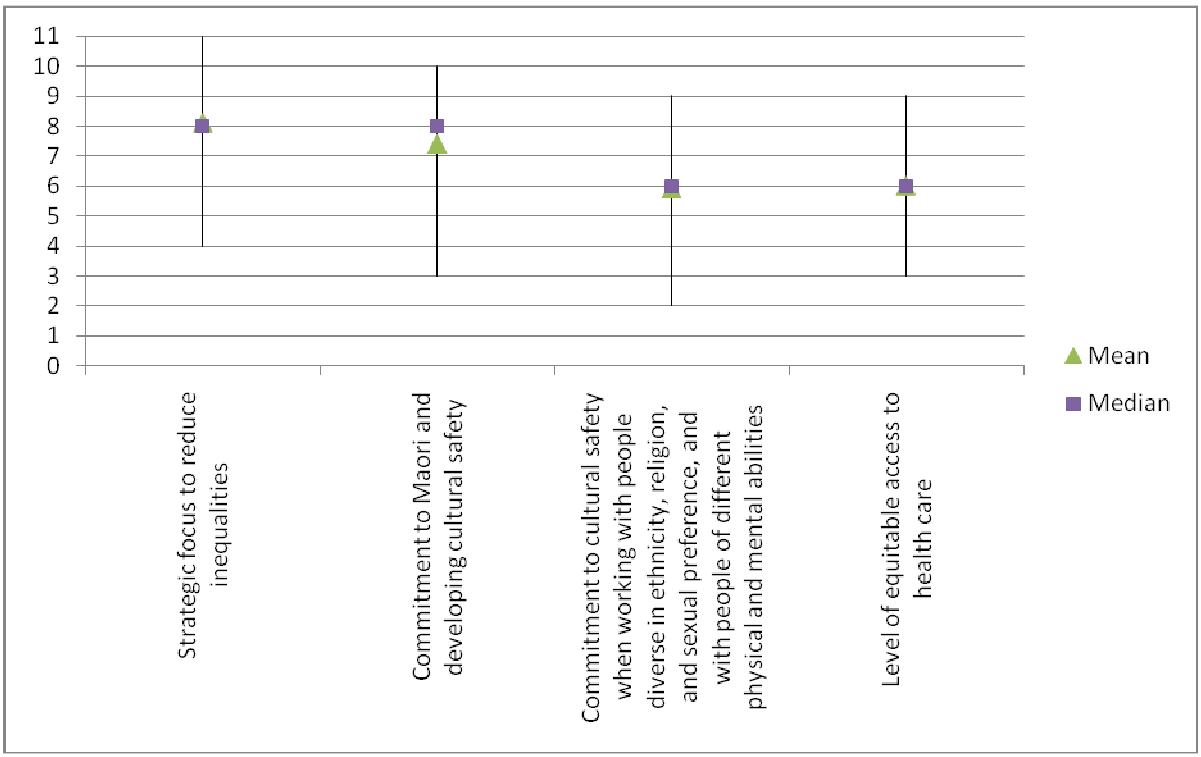


Figure 5: Line graph presenting the range and mean rating for the components within Inequalities in Health Care

Overall, there was a high level of support (a mean rating of 8.1, a median and mode rating of 8) for the **overall strategic focus to reduce inequalities**. This level of support equates to a DHB perception of having senior leadership and resources dedicated to programmes aimed at reducing inequalities. There was a response range of 7, the lowest rating being 4 and the highest 11. There was thus considerable variation between DHBs in response for this variable. The central tendencies indicate that the majority of DHBs felt this area was well developed, however a few DHBs felt that the overall strategic focus to reduce inequalities in their DHB was limited.

Overall, **commitment to Maori and developing cultural safety** was well supported (a mean rating of 7.4, mode and median of 8), equating to a self-perception of a strong focus within DHBs on Maori issues, Maori organisations, and the best outcomes for Maori. Again, however, the response range of 7 suggests that there was a wide variation in DHBs' response for this variable. The lowest rating was 3 and the higher rating was 10. This indicates that a few DHBs perceived that they had a

low level of commitment to addressing this aspect of inequality. This lower level of commitment equates to a perception of the existence of cultural skills and knowledge development and a good awareness of Maori positions on issues within the DHB.

There was overall a lower level of support (a mean rating of 5.9 and a mode of 5) for **commitment to cultural safety when working with people diverse in ethnicity, religious, and sexual preference, and with people of different physical and mental** abilities. The mean rating equates to a perception that this commitment is reflected in cultural skills and knowledge development and a better awareness of diverse perspectives. The median rating was 6. Although there were only small numerical differences between mean, mode and median rating respectively, a rating of 6 represents a different level of support in the questionnaire, i.e. good support. Good support in this area is defined as being reflected by a strong focus on cultural safety when working with diverse people to achieve best outcomes. This variable had a response range of 7 (minimum rating of 2 and maximum rating of 9), suggesting that some DHBs felt that this area of cultural safely was poorly or only moderately developed in their DHBs, whereas a few DHBs felt strongly about their level of commitment to cultural safely when working with diverse people.

In regards to **level of equitable access to health care**, DHBs indicated that, overall, there was perceived to be only a basic level of support in this area (mean and median rating of 6). This level of support indicates that DHBs perceive that they offer tailored high quality clinical services, moreover, special steps are taken to address cultural appropriateness and accessibility. This component has a mode rating of 5, indicating that most often DHBs support for equal access to clinical services at designated times and locations, but not to the extent that special steps are taken to address cultural appropriateness and accessibility in their clinical services. This variable had a response range of 6 (minimum rating of 3 and maximum rating of 9). These descriptive statistics together indicate that majority of DHBs felt that equitable access to health care was only averagely supported in their DHBs. However, the median of 6 suggests that, a few DHBs perceived their organisation as having a good level of equitable access to health care- i.e. they offer high quality clinical services that are culturally appropriate, and available at easily accessible times and places.

Overall, there was a high level of strategic focus to reduce inequalities amongst the participating DHBs, and a good commitment to Maori and developing cultural safely within the participating DHBs. However, the DHBs perceive a weaker level of cultural safety when working with people diverse in ethnicity, religion, and sexual preference, and with people of different physical and mental abilities. There was an above average level of equitable access to health care within the DHBs. In essence these results suggest that DHBs appear to have a vision for reducing inequalities, however, this vision does not seems to have been manifested in the level of equitable access to health care within the DHBs.

In all areas within this dimension, variability between DHBs was moderate. Given that inequality is a significant issue in New Zealand, further improvements in levels of equitable access to health care are needed.

Part 4: Organisation of the health care delivery system

CCM programmes can be more effective if the overall system or organisation in which the care is provided is orientated and led in a manner that allows for a focus on chronic conditions (ABCC Study NZ: Literature Review, 2007). Any network based organisational system has a number of key features that enhance performance. In this questionnaire, the following variables were considered critical to the understanding of this CCM dimension: organisational goals for chronic care; improvement strategies for CCM; financial resources; workforce; team-based improvement focus; incentives for CCM; and regulations for CCM. Results of this dimension are summarised in the graph below, followed by a more detailed explanation.

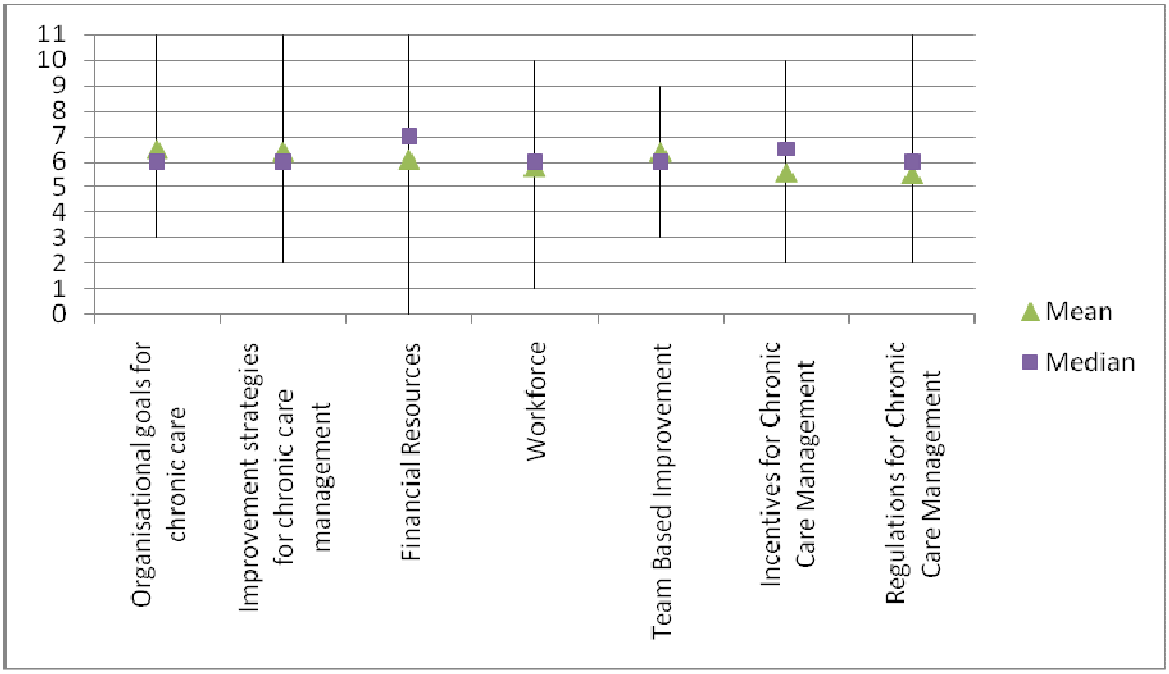


Figure 6: Line graph presenting the range, mean and median rating for the components within Organisation of Health Care Delivery System

There was a moderate level focus on **organisational goals for chronic care** (median of 6 and mean of 6.5). A moderate level of support suggests that DHBs perceive that organisational goals are measurable and reviewed. However, one-third of the DHBs gave a rating of 5 (the mode). A rating of 5 is classified as only a basic level of support, indicating that organisational goals for chronic care exist but are not actively reviewed. There was a wide response variation for this variable (a range of 8; minimum rating 3, maximum rating 11).

The DHBs' perception of **improvement strategies for chronic care management** was relatively good (with a median of 6 and mean of 6.4). These indicate that the DHBs claim to utilise a proven improvement strategy for targeted problems. However, the mode rating for this component was 5 (i.e. a basic level of support), indicating that many DHBs perceived their improvement strategies for CCM as ad hoc, and not organised or supported consistently. Again there was a very large response variation across the DHBs (a range of 9, minimum 2, maximum 11).

Financial resources on average were perceived as being adequate, but DHBs felt that they had to regularly fight to retain the financial resources they had (mean rating of 6.1 and median of 7). This variable has recorded the maximum available response variation of 11, suggesting that there

were very different viewpoints across DHBs regarding this issue, and that some felt that financial resources were completely inadequate or marginal for the delivery of an integrated CCM programme.

Workforce is self-evidently a key element in the provision of chronic care management. The DHBs in our survey perceived their workforce to be marginal and not projected to increase in terms of the needs of CCM programmes (a mean rating of 5.8).The mode and median rating of this component was 6. Although, there is only a 0.2 different between mean, mode and median rating, a rating of 6 signifies a higher level of support- i.e. good support. This level of support suggests that some DHBs project their workforce to increase in the future to accommodate the needs of the CCM programme. Once again however, there was a broad response variation for this variable (a range of 9), the lowest rating being 1 and the highest rating 10. Thus a few DHBs felt that their workforce for CCM programmes was sufficient, and all have the appropriate skills, whilst other had a diametrically opposite view.

For **team based improvement focus**, a mean rating of 6.4, a median and mode rating of 6 indicates DHBs perceive there is a team discussion, but final decisions usually rest with the clinician. This variable has a range of 6 (minimum rating of 3 and maximum rating of 9).

Overall, participating DHBs use **incentives** to influence utilisation of CCM strategies (mean rating of 5.6). This variable has a median rating of 6.5 and mode rating of 7, which suggests that some DHBs used incentives in CCM to support patient care goals. This variable also has a wide range of 8 (minimum rating of 2 and maximum rating of 10).

Finally, the component pertaining to **regulations for chronic care management** refers to the encouragement of self management in CCM. This variable received the lowest mean rating out of all the variables within this dimension, with a mean rating of 5.5. These suggest that the DHBs neither encourage nor discourage patient self-management or system changes in CCM. In contrast, six DHBs gave a rating of six (i.e. the mode) and a median of 6 demonstrating that their DHB encourages patient self management. This variable had the maximum possible response range of 9.

In summary, DHBs rated relatively evenly across all variables within this dimension. Each variable received an average level of support. Variables such as financial resources and incentive for CCM had slightly better support from the DHBs collectively. On the whole though these results indicate the there is a self-perception of a relatively low level of attention currently given within participating DHBs to organisational levers to advance CCM plans. They further reveal an extremely wide (in some cases the widest possible) degree of variability between DHBs in their perception of their own performance in these areas.

Part 5: Collaboration

Networks are important for collaboration to occur; they play important roles in both fostering and sustaining effective CCM programmes. Intersectoral collaboration is considered a critical contributing factor to successful CCM, particularly with respect to coordination between primary and secondary services (ABCC Study NZ: Literature Review, 2007). The following variables together contributed to the understanding of this CCM dimension in this questionnaire: connection with other organisations relevant to their CCM programme; decision-making process on the design and delivery of the CCM programme; the number of parties a DHB engages with regarding CCM; the extent to which individuals believe others will do what they say they would in relation to the CCM programme; the level of perceived honesty between individuals involved in the CCM programme; and the level of perceived trust between individuals involved in CCM. The results of this dimension are summarised in Figure 7, followed by a more detailed explanation.

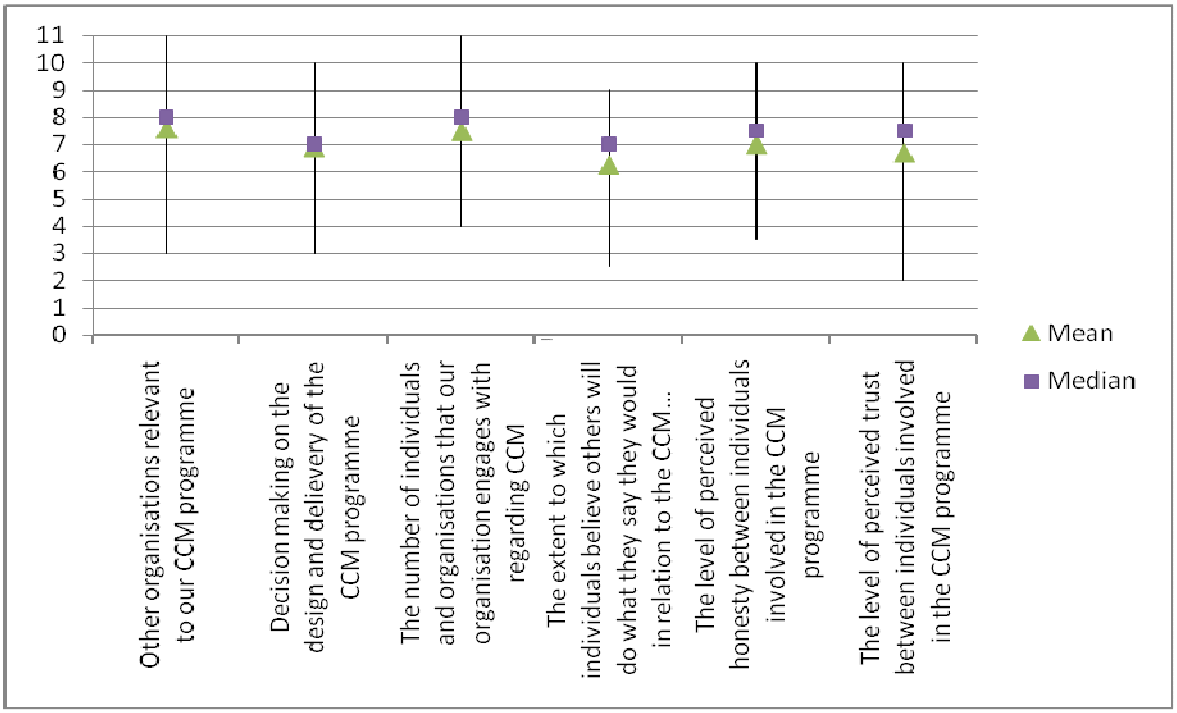


Figure 7: Line graph presenting the range, mean median rating for the components within Collaboration

DHBs were asked about their connections with **other organisations relevant to their CCM programme**. Participating DHBs signalled fairly good support in this area (a median of 8 and mean of 7.6). This level of support is defined in the questionnaire as being a perception of scheduled occasional meetings within their organisation and with (at least) one other organisation to discuss issues relevant to CCM. In contrast, seven of the 15 DHBs (the mode) gave a rating of nine, indicating that these DHBs gave themselves full support for this component. In this instance, full support means that their DHB regularly meets within themselves and with other(s) and these meetings involve multiple members from each of the respective organisations. This variable had a range of 8 (lowest rating of 3 and highest rating of 11).

In term of the **decision-making process on the design and delivery of CCM programmes**, participating DHBs mostly perceived the decision making process to be determined by a central

agency, with *considerable* input from the practice level (median rating of 7 and mean rating of 6.9). The rating that was most frequently selected by the DHB (i.e. the mode) was five, indicating that the decision making process is determined by a central agency, with *some* input from the practice level. It is worth noting that four DHBs reported that this component is not applicable for their DHB, and that another three DHBs considered their decision-making process as being one that is guided by a central agency but applied according to demands of the practice (a rating of 10). This variable also had a very large variation in response, a range of 7.

We also enquired about **the number of parties a DHB engages with regarding CCM**. Participating DHBs perceived the amount of engagement had increased over time (mean rating of 7.5 and median rating of 8). Additionally, it was found that five DHBs gave full support for this component (a mode of 9). Full support indicates that the numbers of parties a DHB engages with has grown considerably over time. This variable had moderate variability between DHBs (a range of 7).

In terms of the quality of collaboration, the **extent to which individuals believe others will do what they say they would in relation to the chronic care management programme** was perceived by the DHBs to be generally good (a mean of 6.3 and a median of 7). By contrast, the most frequently selected rating (mode) was 5, indicating that the extent to which individuals believe others will do what they say they would in relation to the chronic care management programme was generally only moderate. This variable had a lowest rating of 2.5 and highest of 9 (again a moderate range).

The level of perceived honesty between individuals involved in the chronic care management programme was thought to be generally good with a mean rating of 7.1, a median of 7.5 and a mode of 8. The response range was 6.5.

Similarly, **the level of perceived trust between individuals involved in the chronic care management programme** was thought to be generally good with a mean rating of 6.7, a median of 7.5 and a mode of 8. This variable had a range of 8, the lowest rating and highest ratings received being 2 and 10, respectively. Again, some DHBs rated themselves poorly on this variable.

One DHB reported that these last three components of the collaboration dimension were not applicable and therefore did not provide responses.

Overall, there was good support for the view that the collaboration 'attribute' was well implemented in CCM among the DHBs. The variables relating to other organisations relevant to CCM programme; engagement with other parties regarding CCM; the level of perceived trust and honesty between individuals involved in the CCM programme had better mean ratings than the other variables in this dimension. This pattern might suggest that the more relevant an organisation(s) is to a CCM programme, the more likely the DHB would engage with them regarding CCM, and that increased engagement might foster trust and honesty between and amongst organisations. The fact that these variables could be related (or at least perceived as such), may at least partially explain the congruity of scores seen between them.

Once again variability between DHBs was at least moderate (and was high for some variables).

Part 6: Systems for knowledge transfer

An organised and appropriate information transfer system allows information to flow freely and helps to improve programme delivery quality. Evidence suggests that effective CCM programmes have systems for actively learning about how to improve the impact of the programme (ABCC Study NZ: Literature Review, 2007). The following variables together contributed to the understanding of this CCM dimension in the Stocktake questionnaire: clinical IT capability; knowledge management strategies; and systems for feedback. The results of this dimension are summarised in Figure 8, followed by a more detailed explanation.

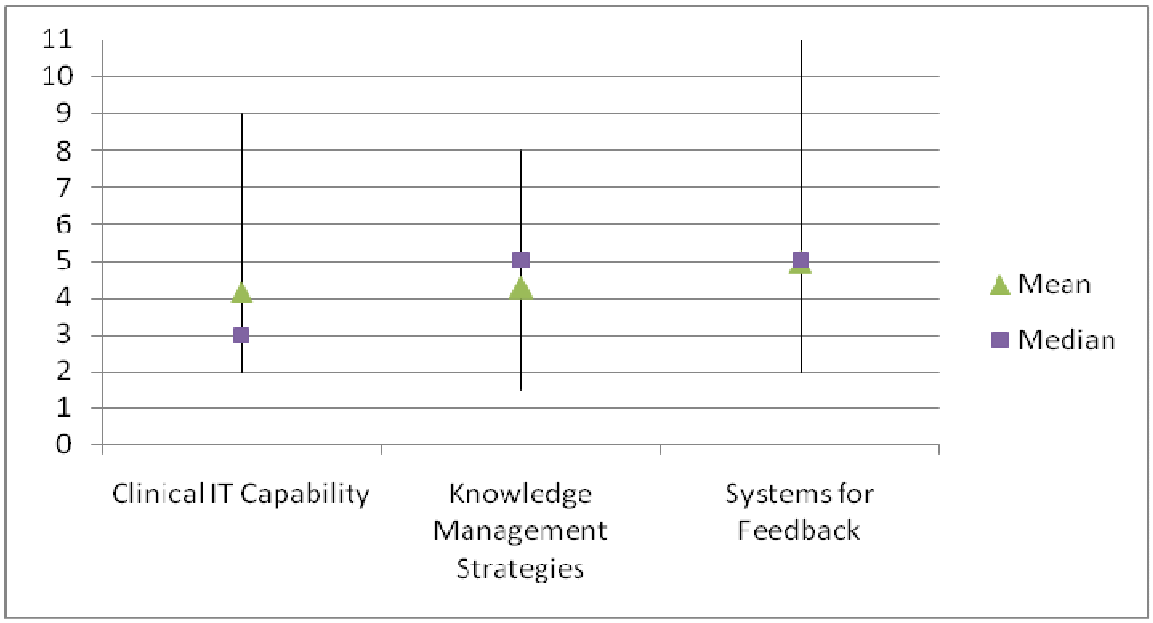


Figure 8: Line graph presenting the range, mean, median rating for the components within Systems for knowledge transfer

DHBs were asked to rate their **clinical IT capability**. In general, participating DHBs perceived their clinical IT capacity as being limited and also they felt that some people in their organisation had better understanding of clinical IT than others when using IT systems within CCM programme(s) (a mean rating of 4.2 and a median of 4.5). However the mode rating was 2, suggesting that many perceived their clinical IT capacity to be poorly developed. The range of response for this variable was 7; the lowest rating given to this variable was only 2 and highest was 9. These figures indicate that the majority of DHBs viewed their clinical IT capability as poorly developed, and only a few DHBs regarded it as well developed.

There was also only average level of **knowledge management strategies** within DHBs, represented by a mean rating of 4.3, a median and a mode rating of 5. As described in the questionnaire, this equates to a perception that some individuals in the DHB attempted to create and share new knowledge and insights of CCM programme(s) with other individuals within their organisation. This variable had a range of 6.5, a minimum rating of 1.5 and maximum of 8.

Overall, DHBs perceived their **systems for feedback** as minimal, and recognised that information provided as often being hard to understand, or irrelevant (a mean and median rating of 5). This variable had a mode of two, indicating that some believed systems for feedback are non-existent in their CCM programme. This variable had a wide response range of 9 - i.e. some DHBs felt

that they did very poorly in this area and some felt the opposite. This variable had a minimum rating of 2 and a maximum of 11.

DHBs collectively viewed their system for knowledge transfer to be relatively poor. This has significant implications for developing and sustaining CCM systems. Without basic IT capability it is clearly difficult to access and exchange relevant data. Without adequate and responsive feedback systems there is limited opportunity to understand the impact of the actions taken. The limited investment in knowledge management strategies (the creation and sharing of new ideas) means that systems and programmes cannot capitalise on innovative and effective interventions. The poor development in all these areas suggests that it is questionable how effective change will come about in the complex health system within New Zealand.

Part 7: Self-management support

Because responsibility for management techniques for chronic illnesses typically falls to the patient and/or Whanau, self-management support may be the most important component of any CCM approach. Effective self-management support can help patients and families cope with the challenges of living with and treating chronic conditions and can reduce symptoms, disease progression and complications (ABCC Study NZ: Literature Review, 2007). The following variables together contributed to the understanding of this CCM dimension in the Stocktake questionnaire: assessment and documentation of self-management needs and activities; self-management support; addressing concerns of patients and families; effective behaviour change interventions and peer support; patient engagement with the CCM programme. The results of this dimension are summarised in Figure 9, followed by a more detailed explanation.

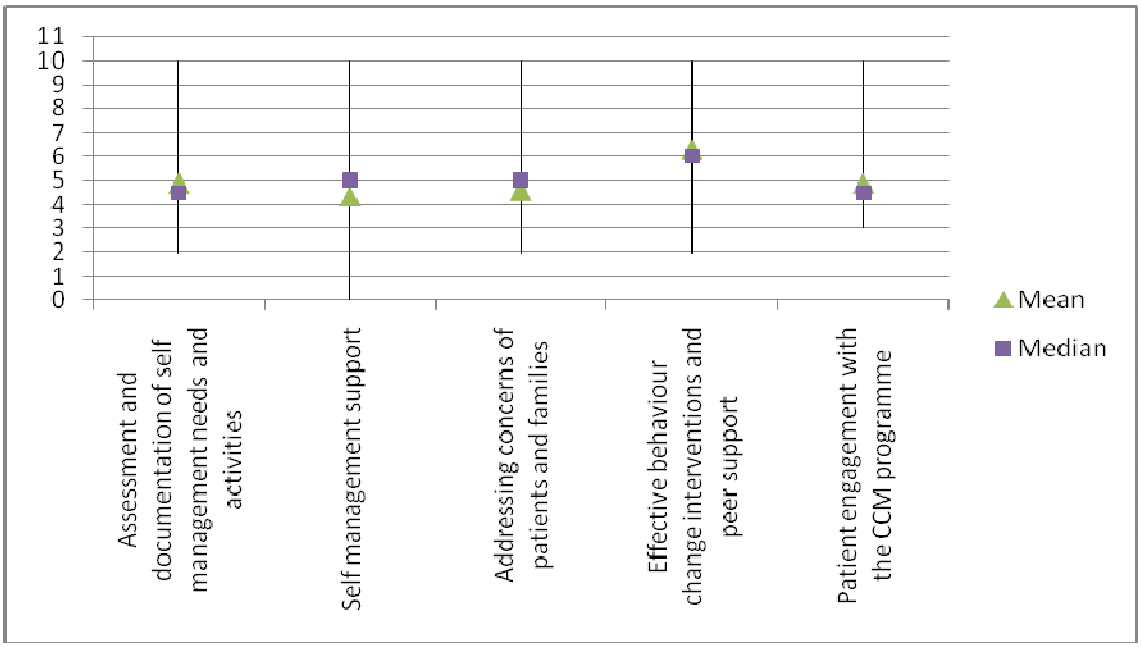


Figure 9: Line graph presenting the range, mean and median rating for the components within Systems for Self-management support

On the whole, the DHBs considered that **assessment and documentation of self-management needs and activities** are expected in CCM programmes (a mean of 4.9, median of rating of 4.5, a mode rating of 5). This variable had a very large response range of 8, the lowest rating being 2 and the highest rating 10. The range and the central tendency measurements indicate that some DHBs perceived that they performed well in this area of self-management support, whilst others perceived marked underperformance. In the questionnaire, a 'well supported assessment and documentation of self-management needs and activities' is one that is regularly assessed and recorded in a standardised format and is linked to treatment plan available to practice and patient.

In general, there was evidence of basic support for **self-management support.** As defined in the questionnaire basic support means that self-management support is available for patients by referral to self-management classes or educators (a mean rating of 4.4 and a median of 4.5, a mode

rating of 5) as opposed to mere distribution of information. This variable also had a very large response range of 10 (minimum rating of 0, maximum rating of 10). These results indicate that most DHBs viewed their self-management support as being developed to only a limited degree, though a few perceived their self-management support as being well-development and encouraging patient empowerment in CCM.

As for **addressing concerns of patients and families,** there was only limited support for the view that self-management support was available for specific patients and families through referral (a mean rating of 4.6 and a median and a mode rating of 5). This variable had a large response range of 8 (a minimum rating of 2 and a maximum rating of 10). DHBs' responses were distributed evenly across the response range.

Effective behaviour change interventions and peer support were generally thought by the DHBs to be available only by referral to specialised centres staffed by trained personnel (a mean rating of 6.3, median and mode of 6). This variable again had a large range of 8, with a minimum rating of 2 and a maximum rating 10. The responses of DHBs for this variable were again distributed consistently across the response range.

Lastly, **patient engagement with the chronic care management programme** was rated as only moderate (a mean rating of 4.9, a median of 4.5, a mode rating 5). This variable had a very wide range of 7, with a minimum rating of 3 and a maximum rating 10. The responses of DHB for this variable were again spread consistently across the response range. One DHB did not respond.

On the whole, participating DHBs are performing only 'averagely' in most of the variables of self-management support. This suggests that they perceive that self-management is not strongly encouraged or developed within DHBs. Participating DHBs demonstrated a perception of greater strength in behaviour change interventions and peer support than other aspects of self-management support. This result suggests that these DHBs might have focused on making behavioural changes in patient and peer support, and neglected (at an organisational level at least) the view that self-management support also requires engagement with patients and whanau. When coupled with the very wide variability between DHBs this is evidence that this important dimension needs much more attention in New Zealand.

Part 8: Decision support

Decision support is an important feature, contributing to quality primary and secondary care provision; timely, patient-specific, specialist advice can help coordinate the actions of primary and secondary care. Effective CCM ensures that providers have access to evidence-based information necessary to care for patients (ABCC Study NZ: Literature Review, 2007). The following variables together contributed to the understanding of this CCM dimension in this questionnaire: evidence-based guidelines; involvement of specialists in improving primary care; provider education for chronic illness care; and patients are informed about guidelines. The results of this dimension are summarised in Figure 10, followed by a more detailed explanation.

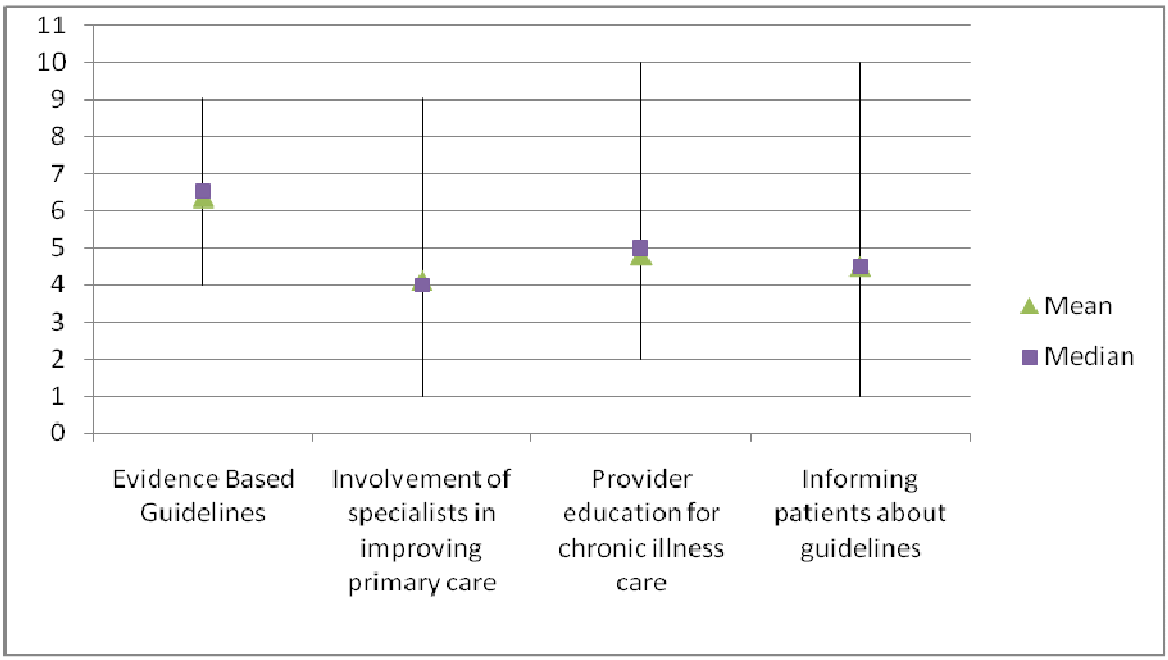


Figure 10: Line graph presenting the range and mean rating for the components within Systems for Decision Support

There appears to be a good level of support for **evidence-based guidelines.** This level of support means that evidence-based guidelines are available and supported by provider education (a mean rating of 6.4, median of 6.5 and mode of 6). This variable had a relatively small response range of 5 (lowest rating 4, highest 9), indicating a perception of only limited variability of provision across DHBs.

Involvement of specialists in improving primary care was perceived by participant DHBs to be at basic level only. This was defined in the questionnaire as involvement of specialists in improving primary care being achieved through specialist leadership, by enhancing the capacity of the overall system to routinely implement guidelines (a mean rating of 4.1 and median rating of 4). The mode rating for this variable was 2 (little support). As defined in the questionnaire, this level of involvement of specialists is primarily through traditional referral. This variable had a range of 8 (from 1 to 9). These results indicate a wide range of views among DHBs in terms of the degree of involvement of their specialists in improving primary care.

Furthermore, DHB perceived that there was also only basic level support for **provider education for chronic illness care**. Basic level of support was defined as systematic education for

chronic illness care being available for providers through traditional methods (a mean rating of 4.8, mode and median of 5). The response range was large, at 8 (from 2 to 10).

Finally, DHBs perceived that **patients are informed about guidelines** only at a 'basic' level. In this case, basic level of support indicates that patients are informed about guidelines only on request or through publications (a mean rating of 4.3, mode rating of 5 and median of 4.5). Therefore, patients are not given education materials for each guideline or materials that describe patients' role in achieving guideline adherence. This variable had very wide response range of 9, with the lowest rating of 1 and the highest rating of 10 i.e. most DHBs feeling that they were performing only averagely or poorly in this area with a minority rating themselves more highly.

In summary, it appears that participating DHBs collectively gave relatively high support for the view that their organisation followed evidence-based guideline to support decision making. However, the other three variables known to facilitate decision making were rated as being only averagely developed within their organisation. It appears that DHBs used evidence-based guidelines as a support tool for decision making. However, DHBs seem to be underperforming in training and education for health care providers and patients about evidence-based decision making. To ensure decision support contributes to quality primary and secondary care provision, the variables within this dimension need more development.

As in many other areas the wide variability in most aspects relating to this dimension across DHBs was of concern.

Part 9: Programme delivery system design

Effective CCM involves more than simply adding additional interventions to a current system focused on acute care (ABCC Study NZ: Literature Review, 2007). Effective CCM programmes will necessitate changes to the organisation of practice that impact care provision. In this questionnaire, the following variables were considered critical to the understanding of this CCM dimension: practice team functioning; proactive follow-up; flexible appointment systems; and continuity of care. The results of this questionnaire dimension are summarised in Figure 11, followed by a more detailed explanation below.

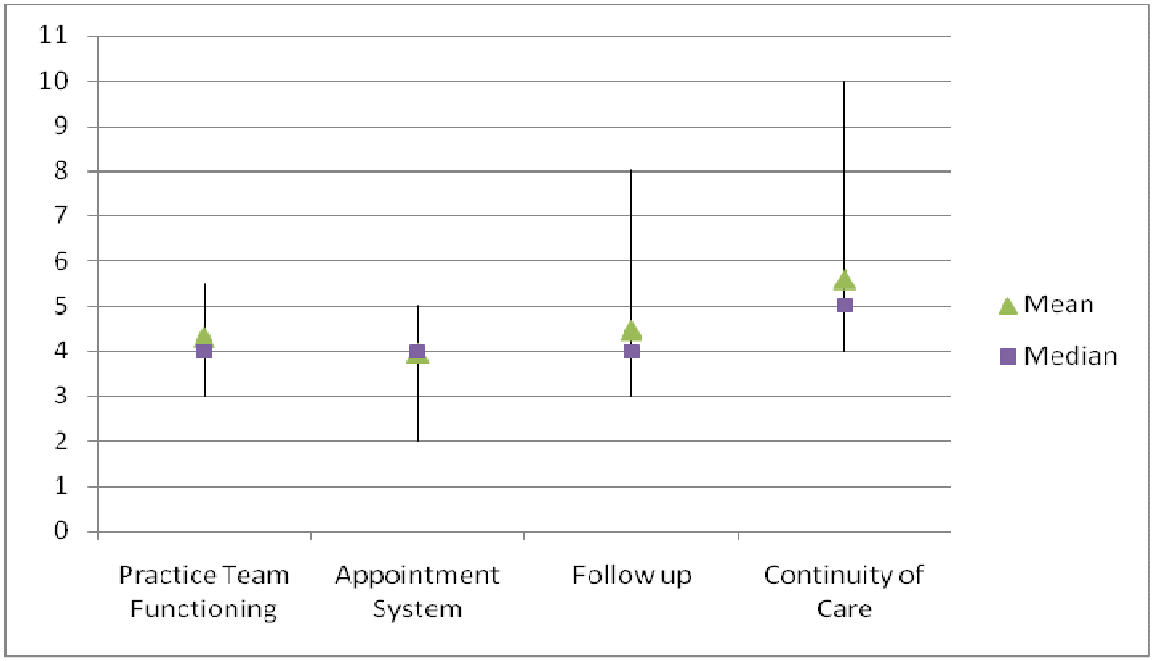


Figure 11: Line graph presenting the range, mean and median rating for the components within Programme Delivery System Design

The questionnaire enquired about **practice team functioning**. Participating DHBs gave only basic level of support for this component (a mean rating of 4.3, a median and mode rating of 4). A basic level of support for practice team functioning was defined as being addressed by assuring the availability of individuals with appropriate training in key elements of CCM. However, this level of practice team functioning does not resemble multidisciplinary or interdisciplinary team functioning exemplified by regular team meetings. This variable had a response range of only 2.5 - i.e. all DHBs who responded scored themselves at basic level or below for this variable. Three DHBs did not respond and one (surprisingly) reported that this question on practice team functioning was not applicable within their DHB.

Flexible and pro-active appointment systems are recognised as essential to good CCM. However, this aspect of delivery system design had mean, median and mode rating of 4, indicating appointment systems which assure scheduled follow-up with chronically ill patients but not to an extent that they are proactive, flexible and can accommodate customised visits. This variable had a range of only 3, indicating all DHBs viewed their appointment systems similarly.

In addition, **follow up** was perceived as being 'scheduled in accordance to the guidelines of the organisation' (a mean rating of 4.5, a median and a mode rating of 4), but not to the extent of 'monitoring patient utilisation'. This variable had a slightly wider response range of 5, a minimum

rating of 3 and a maximum rating of 8. It appears that most DHBs perceived their follow-up procedures as performing at a basic level only, though a minority felt that their follow up procedures were operating more proactively. Again three DHBs did not respond.

Continuity of care, a cornerstone of CCM, was regarded by participating DHBs to be dependent on written communication between primary care providers and specialists (a mean rating 5.6 and median of 5). However, participating DHBs most frequently gave a rating of 4 (i.e. the mode), indicating that continuity of care depends on written communication between primary care providers and specialists. . This variable had a response range of 6, minimum rating of 4 and maximum rating of 10. In general, most DHBs perceived their continuity of care to be at average level, a few DHBs felt that they did better in this aspect and rated themselves more highly. Two DHBs did not provide a response to this variable.

Overall, DHBs perceived their programme delivery system to be only average, and (in contrast to perception for many other dimensions) there was general unanimity of view on this. Only the variable **continuity of care** had slightly higher level of support (though with greater variability of response). The questionnaire suggests that programme delivery systems, essential to effective CCM, need substantial further improvement.

Summary and DHB comparisons

The following figures (12 and 13) summarise the responses from the respective DHBs. There are some important findings presented in this graphic.

a. Those DHBs that rate themselves poorly/highly tend to consistently do so.

b. The median scores indicate that the DHBs collectively have, to a moderate level, developed strategies for responding to chronic conditions.

c. Across most of the dimensions the range of practice is from poor to highly developed

d. Two of the dimensions that relate particularly to change management (knowledge transfer and delivery system design), are noticeable lower in rating than the other dimensions

e. Strategies that focus on the patient as the centre of the system are underdeveloped relatively to measures that place the health provider at the centre of the system.

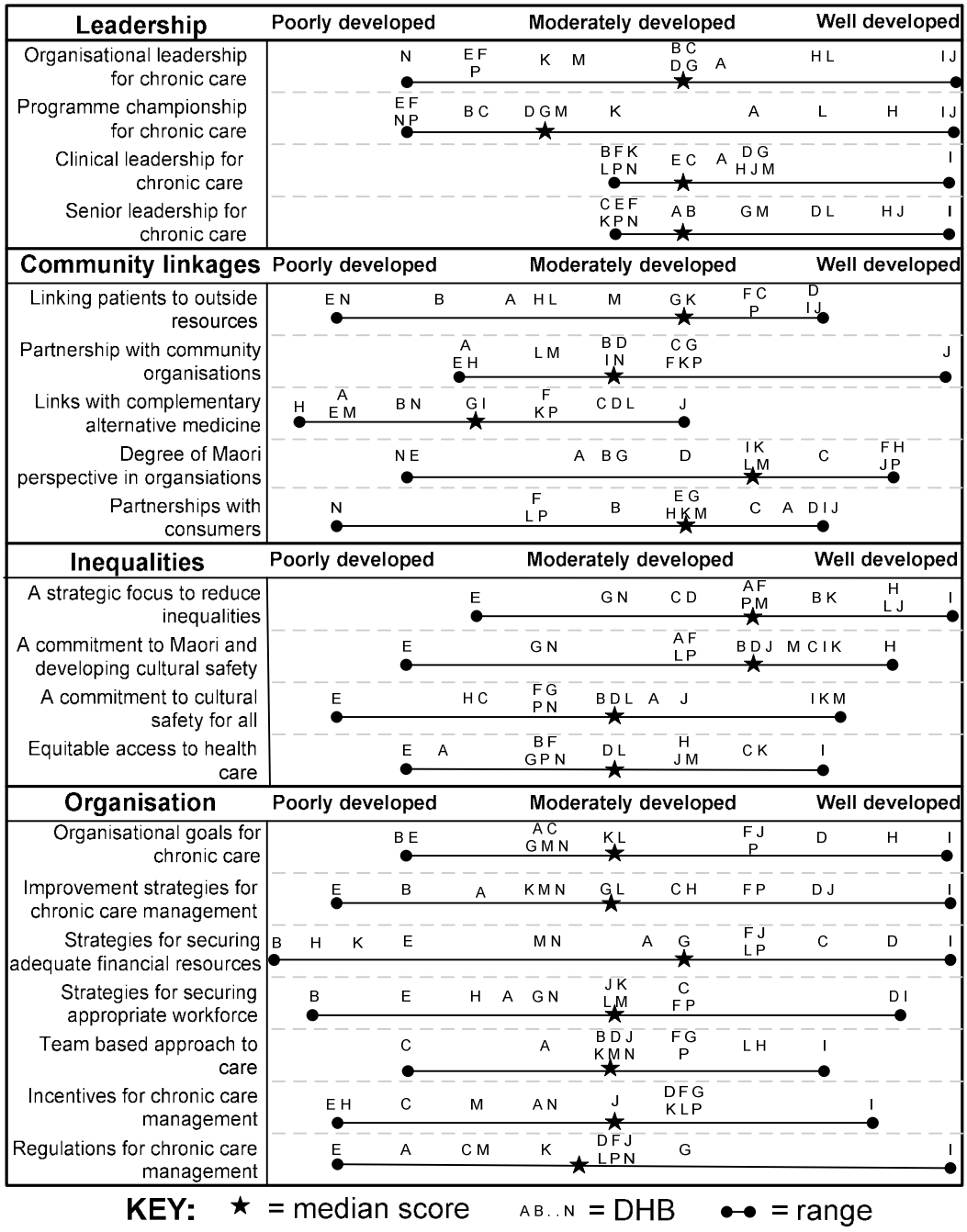


Figure 12: A summary of response from respective DHBs in relation to their perception of CCM for leadership, Community linkages, Inequalities and Organisation of health care delivery

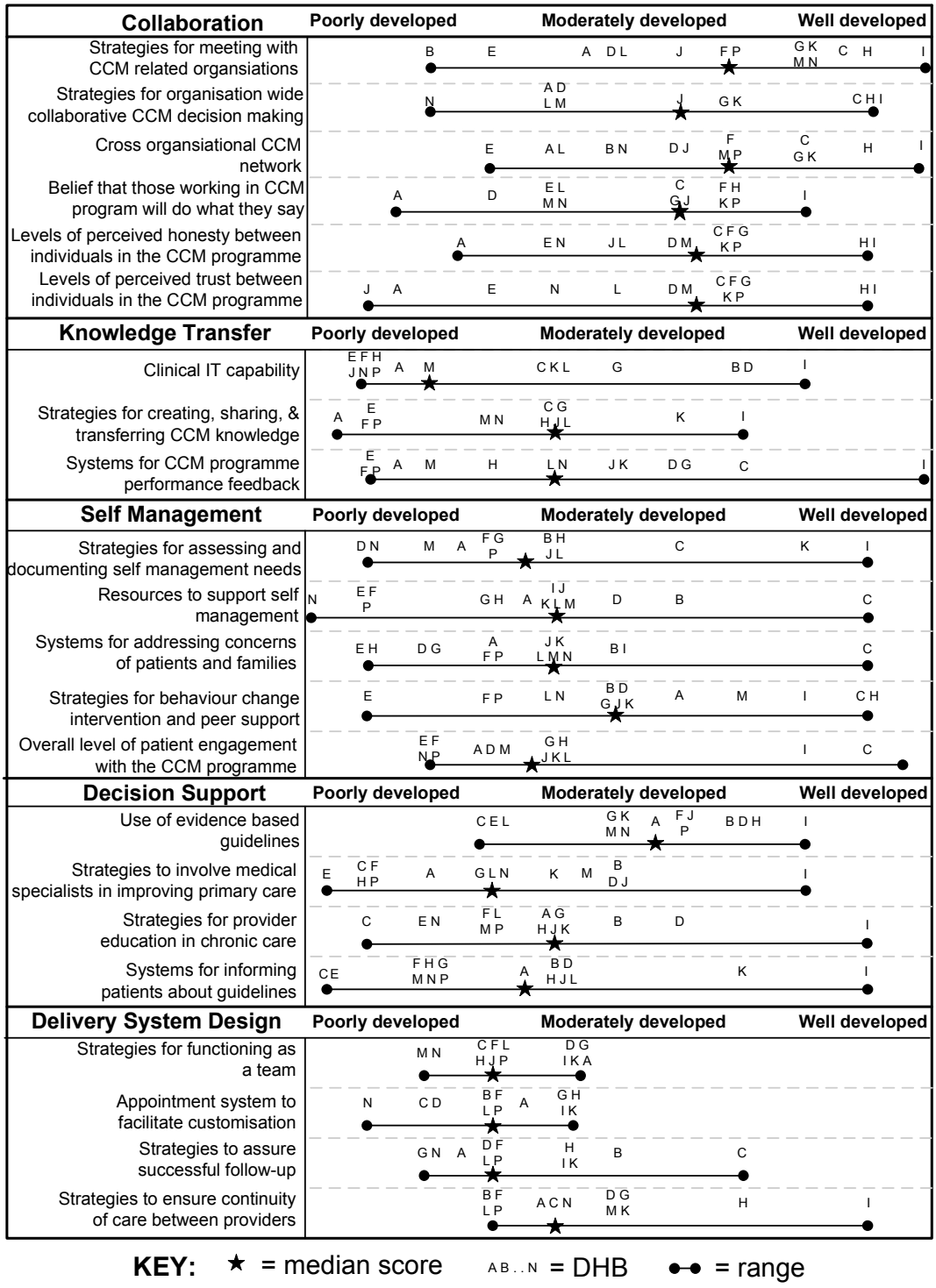


Figure 13: A summary of response from respective DHBs f in relation to their perception of CCM for Collaboration, Knowledge transfer, Self-Management, Decision support and Delivery System Design.

Overview/ Conclusion

Generally, mean scores in almost all areas were quite moderate (mean scores between 4 to 6) indicating a self-perception in DHBs of only basic levels of support (translating as limited development of desirable features within key CCM dimensions) at best. The exceptions to this were the dimension of leadership (where DHBs perceptions were generally encouraging – though with some variability), some aspects of the dimension of community linkage, some aspects of the

healthcare and equalities dimension (discussed in more detail below and in Chapter 5 – where the picture is perhaps less reassuring), the collaboration dimension (where mean scores were reassuring, though with a very high level of variability between DHBs). The overall self-perception of only limited CCM dimension development was particularly evident in multiple aspects of decision support, multiple aspects of self-management support, all aspects of knowledge transfer (particularly in knowledge management strategies) and was also noted in some aspects of the organisation of healthcare delivery systems. There was also minimal commitment to the incorporation of traditional healers and complementary alternative therapies into chronic conditions management. This latter is particularly relevant to the New Zealand context.

The fact that DHBs assess most of their systems aimed at promoting self-management (patient and/or whanau) as being at basic level is particularly worrying in the light of the fact that self-management *support* (which includes but is not restricted to patient and whanau education) is fundamental to the current understanding in chronic conditions management, including lifestyle change. This area is explored further in the disease specific Stocktake, the results of which will be published separately.

Low scores that were reported by DHBs for aspects of delivery systems designs such as the appointment system, practice team functioning and follow-up, together with the extremely low scores provided in the inter-related dimension of knowledge transfer are disappointing given the likely relatively small level of investment that would be needed to produce more responsive, patient integrated systems (i.e. such systems in themselves would not depend on large increases in personnel). Such integration is an essential component of any system which aims to increase 'fidelity' to a CCM programme. It is of course also true that the *operation* of such systems (e.g. regular and responsive follow up) depends not only on the logistics of organisation (e.g. IT hardware and software) but also on adequacy staffing, skill mix and attitudinal change.

The very low scores given for knowledge transfer are also of considerable concern in terms of service planning (as opposed to day to day service operation). Service planning, even with a clear destination in mind, in the context of inadequate IT capability, knowledge management strategies and systems for feedback (or even a self-perception of inadequacy in such systems) is akin to navigation with an inadequate map and compass.

In terms of decision support the provision of evidence based guidelines for admissions was reported as being generally good, though we did not enquire about ease of access to such guidelines. Even taking this moderately high score at face value however, there was little evidence that DHBs supported their guidelines by provider education or reminders. Again our literature review has emphasised the greater effectiveness of guidelines when such support is available. Other aspects of decision support were rated by DHBs to be provided only at a much more basic level. This was particularly so in terms of involving specialists in primary care and in terms of informing and involving patients around guidelines. This latter also speaks to self-management (see above).

In terms of inequalities in healthcare provision the relatively low scores given to a DHB commitment to cultural safety and to the level of equitable access to healthcare must be of concern. This area is reviewed in more detail in Chapter 5.

The other very noticeable feature which was seen in almost all aspects of almost all dimensions was the very wide variability in scores between different DHBs. Those DHBs that rated themselves poorly/highly tended to consistently do so. Whilst we must remain cognisant of the fact that data are self-rated scores and that DHBs may vary in their degree of optimism or pessimism around CCM, in many cases the range of scores for a single aspect within a single dimension was from 1 to 10 and 1 to 11, in one case was from 0 to 11. This was not perhaps a surprising result but was most alarming nonetheless in that it seems to reflect a 'post-code lottery' of commitment to CCM and its provision across the country. Our results reinforce the view that whilst the solutions of one DHB may not be directly applicable to another (geographically, topographically, culturally, urban vs. rural etc.), DHBs need to take every opportunity to learn from each other in terms of the development of CCM programmes.

CHAPTER 4: Results from Primary Care Questionnaire

The primary care questionnaire required DHBs to describe the level of CCM service that currently exists within their DHB on a 12 point Likert scale (0-11), where zero indicates no provision of that particular service in question and 11 indicates the opposite; a full provision of that particular service. The questionnaire had five sections relating to service provision for congestive heart failure (CHF), cardiovascular disease (CVD), chronic obstructive pulmonary disease (COPD) and stroke, and to general primary care provision. In total, only 12 DHBs (57% of 21) responded and returned the Primary Care Questionnaire (NB: DHB F, refer to Appendix A.1, on page 75). This chapter presents the analysis for all five sections, with graphs presenting the mean rating, minimum and maximum rating for each variable. In addition, key findings for each variable are presented in a summary textbox.

Congestive Heart Failure (CHF)

This section provides an overview of how participant DHBs generally described the level of service provision that they believe currently exists within their primary care providers for Congestive Heart Failure. The results of CHF service provision are summarised in Figure 14 and key findings are summarised below.

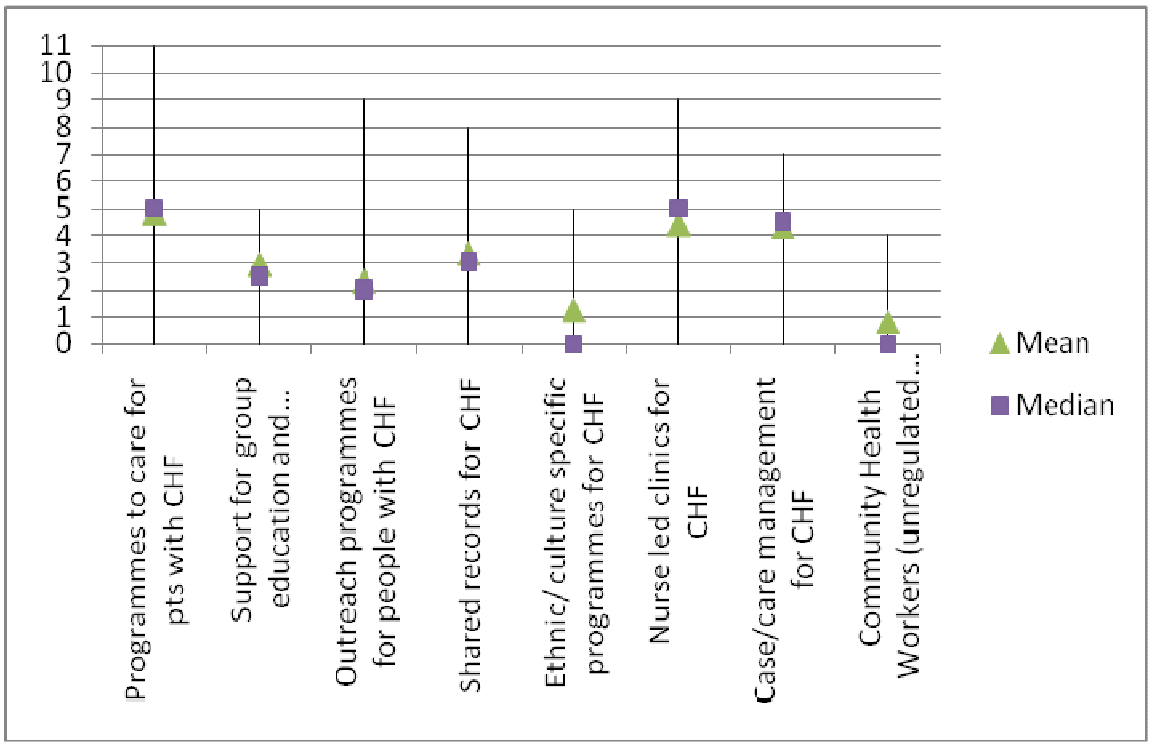


Figure 14: Line graph presenting the range, mean and median rating for service provision for CHF

CCM Programmes to care for patients with CHF were thought by the participating DHBs as being available within practices or PHOs, but not to the extent that they were formalised within a CCM model or that the programme had been developed by primary and secondary care, and included regular information transfer and feedback of specialist advice to primary care (a mean rating of 4.8 and a median of 5). This variable however had the maximum possible response range of 11.

On the whole, participating DHBs thought that there was no specific support for group education and consultations for patients with CHF and their family/Whanau (a mean rating of 2.9 and a median of 2.5). Group education and consultations were felt generally not to be discussed and encouraged at GP and nurse meetings. The response range for this variable was 5.

For outreach programmes for people with CHF, the overall perception was that no formal programmes existed and home visits were available only on request (a mean rating of 2.3 and a median of 2). Again however DHBs' responses varied widely for this variable (a range of 9).

There was a perception that there were some forms of shared records for CHF; electronic records and information shared with other providers on paper or electronically but not to the extent of routine information transfer or the existence of protocols for recording, task management and recalls (a mean rating of 3.3 and a median of 3). Again however this variable had a wide response range of 8.

DHBs reported a perception of no ethnic or cultural-specific programmes for CHF within providers (a mean rating of 1.3, a median of 0 and a range of 5).

DHBs collectively did not have nurse-led clinics. Although nurse appointments were available, patients may also have another appointment with a doctor (a mean rating of 4.4, a median of 5). However there was once again a wide range of response (from 0 to 9) indicating that some DHBs perceived that their providers did not have nurse-led clinics or even nurse appointments for CHF at all and whereas in other DHBs, providers operated nurse-led clinics.

In terms of case management for CHF, DHBs overall perceived that single disease focus case management was available (as opposed to a case management system for multiple co-morbidities, primary and secondary care integration and systematic decision support), and patients with CHF are referred to other services (a mean rating of 4.3 and a median of 4.5). The response range (7) for this variable was again fairly wide.

By and large, the DHBs reported that there were no community health workers for CHF (a mean rating of 0.8 and a median of 0). This variable had a low response range of 4, i.e. the majority of DHBs rated their providers at the lower spectrum of the rating scale.

Overall, the self perception of respondent DHBs is that CCM service provision for CHF within primary care is minimal with, in most cases, services existing only at a very basic level if at all. DHBs collectively were a little better at providing the following CCM services for CHF patients; PHO or practice-based programmes to care for patients with CHF, nurse-led clinics for CHF and care management for CHF. However, even these services appeared to be limited and informal. Services that were perceived as being weakly developed and implemented for CHF include group education for patients with CHF and their family/Whanau, outreach programmes, shared records, cultural specific programmes and community health workers.

It is perhaps paradoxically reassuring however that in many areas there was wide variability of perception of provision between DHBs; reassuring in the sense that a few DHBs at least have provision at a higher level, paradoxically so in terms of the post-code lottery of provision that this implies.

Cardiovascular Disease (CVD)

This section provides an overview of how participant DHBs generally perceived and described the level of CCM service provision for Cardiovascular Disease that currently exists within their primary care providers. The results of CVD service provision are summarised in Figure 15 and key findings are summarised below.

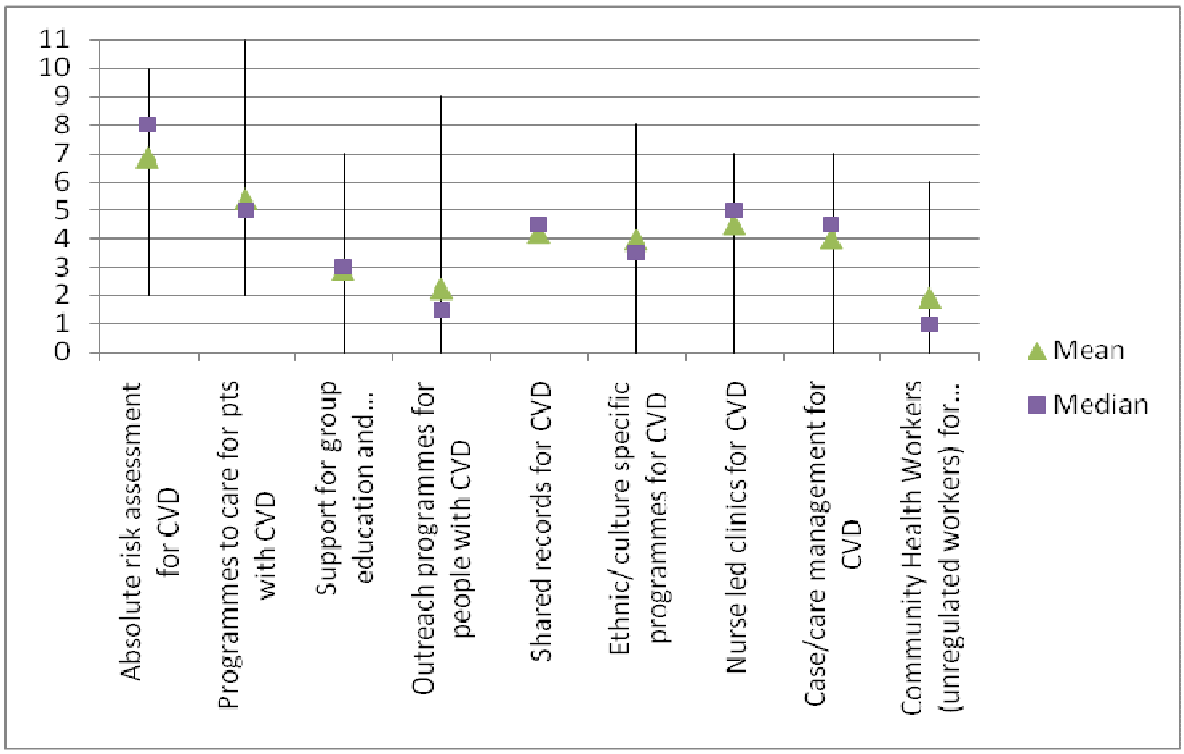


Figure 15: Line graph presenting the range, mean and median rating for service provision for CVD

Absolute risk assessment for CVD was generally reported by the DHBs as being available on computer and in a systematic format. However, information is not pre-populated from health records and it was yet to be linked to disease support systems and continuous monitoring for change over time in patients and in populations (a mean rating of 6.8 and a median of 8). This variable had a wide range of 8. It is worth noting that, although the mean and median suggests that risk assessment for CVD was available on computer in a systematic format, 6 DHBs gave a rating of 9 or 10 (mode), which indicates that some DHBs have computer calculator, pre-population of fields, data is recorded in a systematic searchable format and it is linked to disease support system and their system monitors change over time in patients and in population.

CCM Programmes to care for patients with CVD were reported by the DHBs to be available within practices or PHOs but not to the extent that they were formalised within a CCM model or that the programme had been developed by primary and secondary care, and included regular information transfer and feedback of specialist advice to primary care (a mean rating of 5.4 and a median of 5). There was a wide response range of 9.

In general, participating DHBs perceived that there was no specific support within their providers for group education and consultations for patients with CVD and their family/Whanau (a mean rating of 2.9, a median of 2.5 and a range of 7). The mode for this variable was zero. These figures taken together suggest only little variation in this view.

In terms of outreach programmes for people with CVD, DHBs generally that perceived no formal programmes existed and home visits were available only on request (a mean rating of 2.3, a median of 1.5, though a wide range of 9).

There was a perception that there were some forms of shared records for CVD; electronic records and information shared with other providers on paper or electronically but not to the extent of routine information transfer or the existence of protocols for recording, task management and recalls (a mean rating of 4.2, a median of 4.5 and a range of 9).

Overall, the DHBs reported that there were only limited programmes within their providers for ethnic / culture-specific programmes for CVD. Moreover, if programmes are available, they are not run by providers of same ethnic/cultural identify of patient (a mean rating of 4, a median of 3.5 and a range of 8). The mode for this variable was zero, indicating that many DHBs possessed no cultural specific programmes for CVD.

DHBs collectively perceived that their providers did not have nurse-*led* clinics. Nurse *appointments* were available but patients may also have another appointment with a doctor (a mean rating of 4.5, a median of 5 and a range of 7). The mode rating however was 7, suggesting that many DHBs perceive that their providers do operate nurse-led clinics for CVD.

Participant DHBs overall perceived that single disease focus case management was available (as opposed to a case management system for multiple co-morbidities, primary and secondary care integration and systematic decision support), and patients with CHF are referred to other services (a mean rating of 4 and a median of 4.5). The response range (7) for this variable was again fairly wide.

Generally DHBs reported they had no community health workers for CVD within their DHBs (a mean rating of 1.9, a median of 1 and a range of 6). The mode rating for this variable was zero, i.e. the majority of DHBs did not have community health workers for CVD.

Overall, there is evidence that CCM service provision available for CVD was a little better than that for CHF. CVD risk assessment in particular was considered to reasonably well-developed. Services including Practice/PHO based programmes to care for patients with CVD, shared records, nurse-led clinics, cultural specific programmes and care management for CVD were available, but generally at a low level of development. Services lacking or underdeveloped were group education for patients with CVD and their family, outreach programmes and community health workers for CVD patients.

Once again, in many areas there was wide variability of perception of provision between DHBs; our interpretation of this is similar to that for CHF.

Chronic obstructive pulmonary disease (COPD)

This section provides an overview of how participant DHBs described their level of CCM service provision Chronic Obstructive Pulmonary Disease (COPD) that currently exists within their primary care providers. The results of COPD service provision are summarised in Figure 16 and key findings are summarised below.

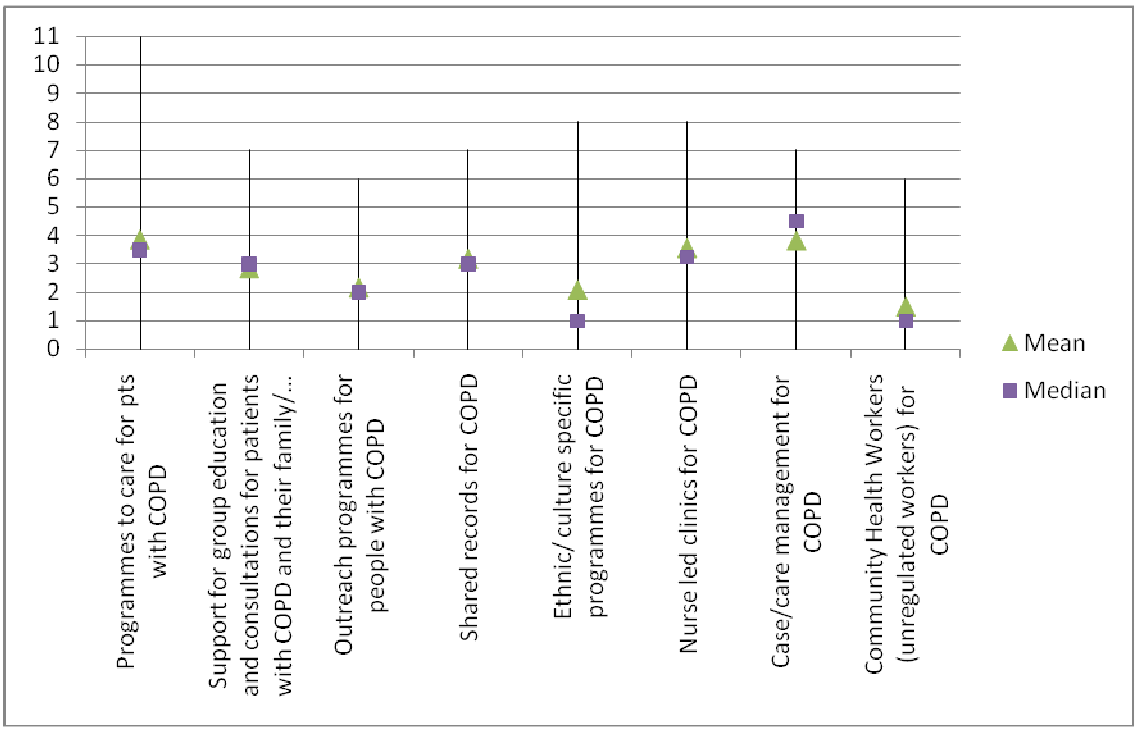


Figure 16: Line graph presenting the range, mean and median rating for service provision for COPD

PHO or Practice based CCM programmes to care for patients with COPD were reported by participating DHBs as being available within practice or PHO but not to the extent that they were formalised within a CCM model or that the programme had been developed by primary and secondary care, and included regular information transfer and feedback of specialist advice to primary care. Indeed the average ratings given by DHBs for this variable (a mean rating of 3.8 and a median of 3.5) are on the borderline between a perception of the existence of some basic programmes (as described above) and a perception that no programmes existed at all. Further, the mode rating was 0, suggesting most commonly DHBs perceived the latter situation. This variable had a range of 11, i.e. there was very large response variation. One DHB commented that their district has their programme formalised in line with a chronic care model and the programme is in the same format for CHF, CVD, COPD and diabetes (self-rated at point 11).

On average, participating DHBs reported that there was no specific support for group education and consultations for patients with COPD and their family/Whanau (a mean rating of 2.8, median rating 3.0). Once again, this variable had a mode of 0, reinforcing the perception that a large number of DHBs believed no such programmes exist within their providers. This variable had a range of 7.

For outreach programmes for people with COPD, participant DHBs reported that no formal programmes existed and home visits are available only on request (a mean rating of 2.2, a median and mode of 2). This variable had a response range of 6.

There was a perception that there were some forms of shared records for COPD; electronic records and information shared with other providers on paper or electronically but not to the extent of routine information transfer or the existence of protocols for recording, task management and recalls (a mean rating of 3.2, a median of 3 and a range of 7). These mean and median values however represent the borderline between a perception of the existence of some shared records (as described above) and a perception that records are not shared (in paper or electronic form) between providers. Conversely the variable had a mode of 5, indicating that some DHBs felt that they and their providers had a slightly better shared record system.

DHBs generally reported that no ethnic/ culture-specific programme for COPD existed within their providers, (a mean rating of 2.1, a median of 1 and a mode of 0). The mode suggests that most commonly DHBs perceived that no cultural-specific programmes existed at all. This variable however had a wide range of 8.

Participant DHBs on the whole perceived that their providers did not have nurse-*led* clinics. Nurse *appointments* were available but patients may also have another appointment with doctor (a mean rating of 3.5 and a median of 3.25). This variable has a mode of 1, suggesting that most commonly DHBs perceived no nurse-led clinics existed.

Participant DHBs overall perceived that single disease focus case management was available (as opposed to a case management system for multiple co-morbidities, primary and secondary care integration and systematic decision support), and patients with COPD were referred to other services (a mean rating of 3.8, a median of 4.5 and a mode of 5). This variable had a range of 7.

DHBs reported that their providers had no community health workers /unregulated workers for COPD (a mean rating of 1.5, a mode and a median of 1). This variable had a response range of 6.

Overall, the self perception of respondent DHBs is that CCM service provision for COPD within primary care is minimal with, in most cases services existing only at a very basic level if at all. These services include: programmes to care for patients with COPD, shared records, nurse-led clinics, and disease-specific care management for patients with COPD. Generally some services for COPD were perceived as totally lacking - namely; group education for patients with COPD and their family, outreach programmes, cultural-specific programmes and community health workers for COPD patients.

Once again, in many areas there was wide variability of perception of provision between DHBs; our interpretation of this is similar to that for CHF.

Stroke

This section provides an overview of how participant DHBs generally described their level of CCM service provision for Stroke that currently exists within their primary care providers. The results of Stroke service provision are summarised in Figure 17 and key findings are summarised are summarised below.

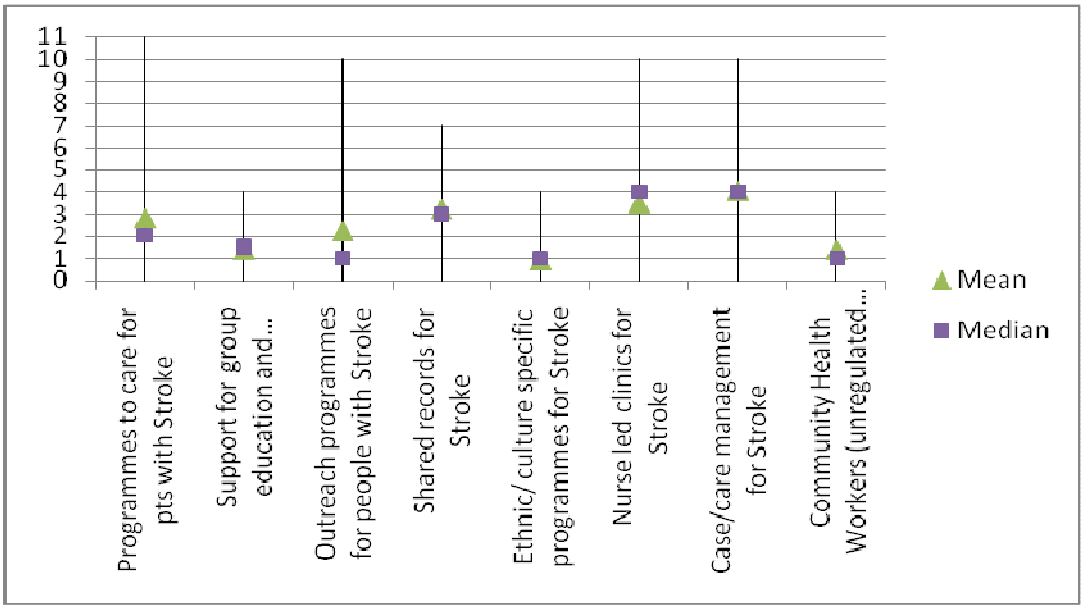


Figure 17: Line graph presenting the range, mean and median rating for service provision for Stroke

Participating DHBs overall reported that no PHO or Practice based CCM programmes to care for patients with Stroke existed within their primary care providers (a mean rating of 2.8, a median and mode of 2). This variable however had the maximum possible response range of range of 11 (largely explained by one 'outlier' at the top of the range).

Participating DHBs reported that there was no specific support for group education and consultations for patients with stroke and their family/Whanau (a mean rating of 1.4, a median of 1.5, a mode of 0, and a range of 4). DHBs appeared to have unanimity of view regarding the lack of provision in group education and consultation within their primary care providers.

On average, participant DHBs perceived that there were no formal outreach programmes for patients with stroke within their primary care providers, and home visits were available only on request (a mean rating of 2.3, a median of 1 and a mode of 1). This variable had a wide response range of10 (largely explained by one 'outlier' at the top of the range).

There was a perception that there were some forms of shared records for COPD; electronic records and information shared with other providers on paper or electronically but not to the extent of routine information transfer or the existence of protocols for recording, task management and recalls (a mean rating of 3.3, a median of 3 and a range of 7). These mean and median values however represent the borderline between a perception of the existence of some shared records (as described above) and a perception that records are not shared (in paper or electronic form) between providers. Further, the variable had a mode of 2, reinforcing the latter view.

DHBs collectively reported that there were no ethnic/ culture-specific programme for stroke, (a mean rating of 0.9, a median of 1, a mode of 0, and a range of 4). DHBs appeared to have unanimity of view regarding the lack of provision of ethnic/ culture specific programmes for stroke within their primary care providers.

Participant DHBs on the whole perceived that their providers did not have nurse-*led* clinics. Nurse *appointments* were available but patients may also have another appointment with doctor (a mean rating of 3.5 and a median of 4). However, the most common response found in the questionnaire was that DHBs perceived that providers did not have nurse-led programmes. However there was a relatively broad response range of 10, with some DHBs reporting higher levels of provision.

Participant DHBs overall perceived that single disease focus case management was available (as opposed to a case management system for multiple co-morbidities, primary and secondary care integration and systematic decision support), and patients with Stroke are referred to other services (a mean rating of 4.1, a median of 4). The mode rating however was 0, indicating that many DHBs perceived case management care management for patients with Stroke to be lacking within their primary care providers. Conversely the variable had a broad response range of 10, with other DHBs reporting higher levels of provision.

Community health workers /unregulated workers, for Stroke were reported by DHBs not to exist in the primary care setting (a mean rating of 1.4, a median of 1 and a mode of 0).

Overall, the self perception of respondent DHBs is that CCM service provision for Stroke within primary care is minimal with, in most cases services existing only at a very basic level if at all. It would appear, on the basis of participant DHB perception that Stroke CCM provision is the least well developed of four index conditions. Shared records, nurse-led clinics and case/care management are available. However, even these services are not well developed. PHO or practice based CCM programmes to care for patients with Stroke, group education and consultation for patients with Stroke and their family, outreach programmes, cultural-specific programmes and community health workers for patients with stroke are perceived to be essentially non-existent

Once again, in many areas there was wide variability of perception of provision between DHBs, which in some (though not all) cases was due to a single DHB with self-perceived high performance; our interpretation of this is similar to that for CHF.

Summary and DHB comparisons

Figures 18 and 19 summarise the responses from the respective DHBs in relation to their perception of CCM service provision for CHF, CVD, COPD and Stroke. They also allocate an alphabetical code to DHBs. Each DHB will be provided confidentially with its own code (only), thus allowing a DHB to compare its own self perception with those of other participant DHBs. There is evidence from the international literature that such comparisons are a lever to improved performance in clinical services (www.renalreg.org [UK Renal Registry, Chapter 6]). There are some important finding presented in this graphic.

a. Those DHBs that rate themselves poorly/highly tend to consistently do so.

b. The median scores across the different condition (CHF, CVD, COPD, Stroke) indicate that the DHBs collectively have developed strategies within some areas to a low or moderate level only.

c. Across most areas the range of provision is from 'unavailable' to 'available', with only a minority of services or processes in a minority of DHBs being rated as 'available and well developed'.

d. Overall, provision for CVD is rated by DHBs to be better than that for CHF, COPD and Stroke.

e. Strategies that focus on outreach, provision of community health workers and on ethnic/culturally specific programmes are perceived to be particularly poorly developed.

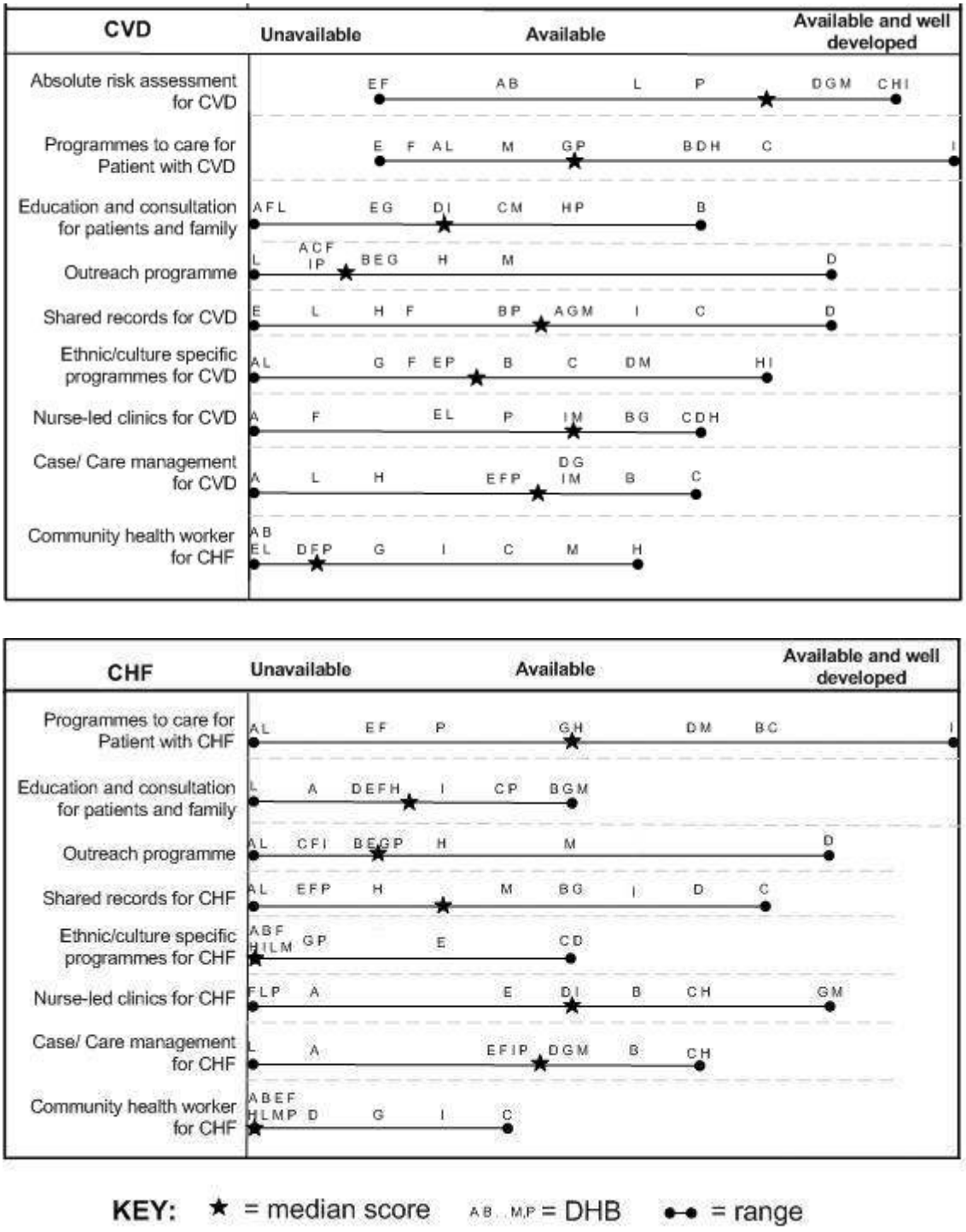
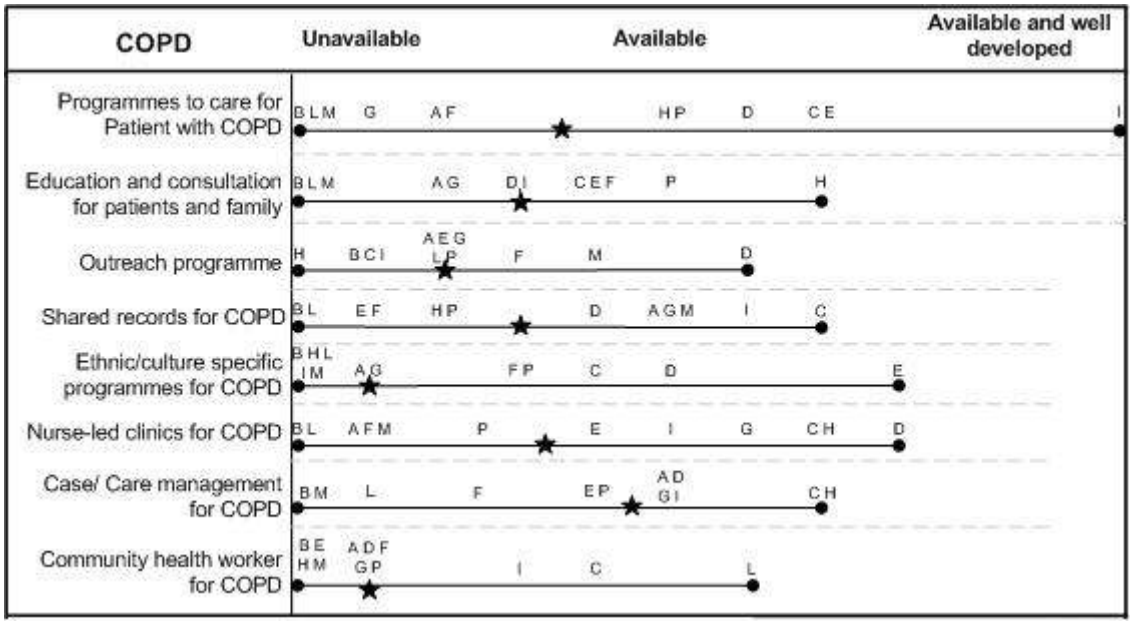


Figure 18: Summarises the responses from the respective DHBs in relation to their perception of CCM service provision for CVD and CHF



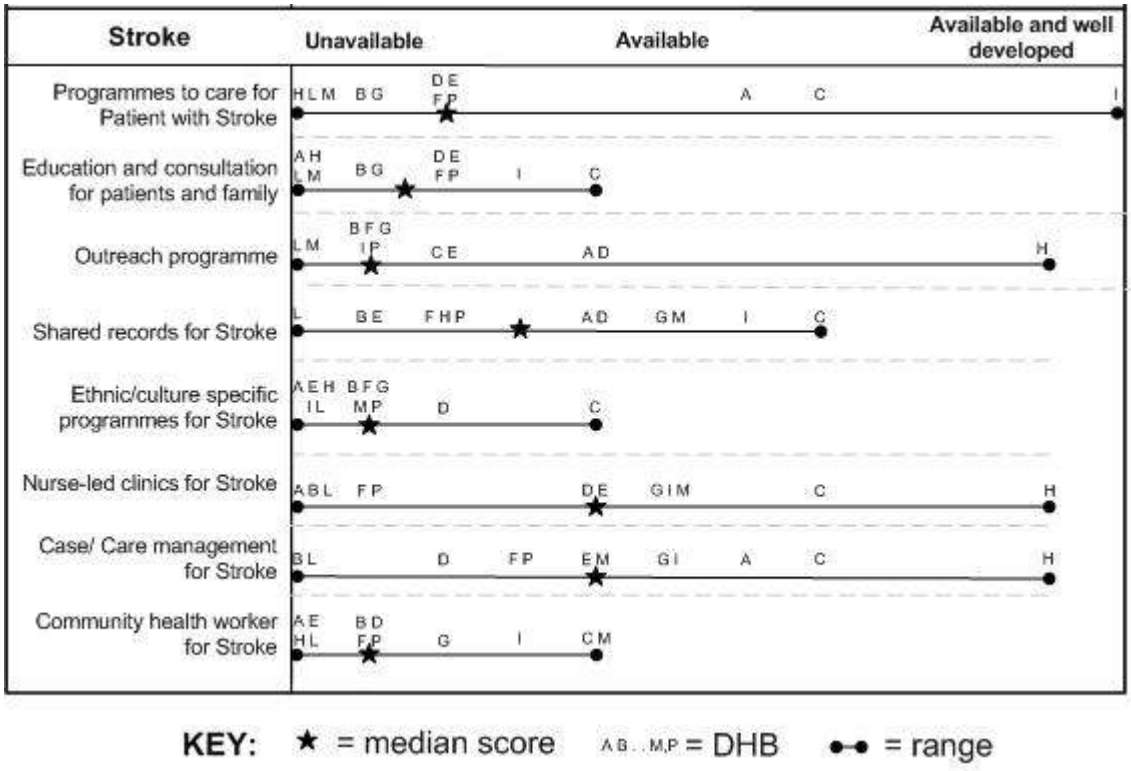


Figure 19: summarises the responses from the respective DHBs in relation to their perception of CCM service provision for COPD and Stroke

General

This section provides an overview of the ways in which the DHBs described their primary care service CCM provision in relation to five issues: avoidable hospitalisation; evidence-based practice; equity of health inputs; continuing education for health professions; and referral processes. The results are summarised in Figure 20 and key findings are summarised in a textbox.

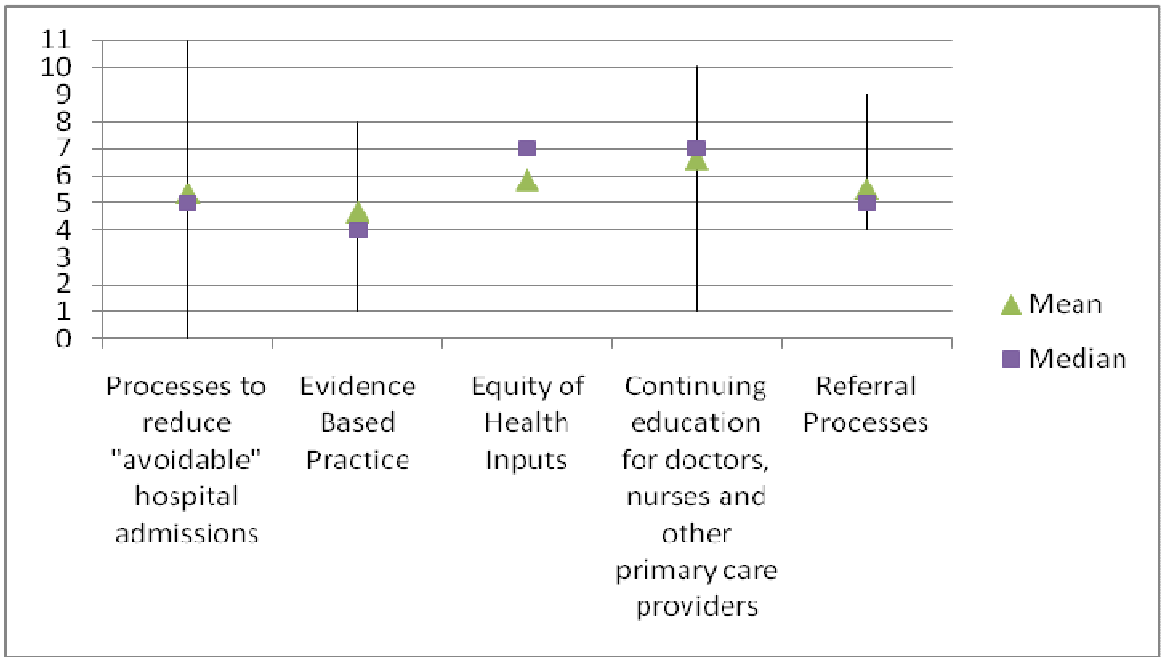


Figure 20: Line graph presenting the range, mean and median rating for general service provision in primary health care

On the whole, participating DHBs reported that processes to reduce 'avoidable' hospital admissions were formally discussed between primary and secondary care, and educational sessions were run in relation to this matter (a mean rating of 5.3 and a median of 5). Although the mode rating was 2, this variable had the maximum possible response range of 11, with reasonably normal distribution of responses across the continuum.

In terms of evidence-based practice, it is evident that participating DHB perceived their primary care providers had opportunistic programmes driven by individuals with a special interest (a mean rating of 4.6, a median and mode of 4). However, DHBs did not perceive that there were systems in place to identify evidence and gaps between practice and performance. This variable had a range of 7. One DHB did not respond to this question.

Participating DHBs were asked about the equity of health inputs and outcomes, and there was considerable discrepancy between three measures of central tendency. The mean (5.8) indicated limited awareness about equity of health inputs and outcomes. However, the median (7) and mode (7) indicated that the existence of routine measurement and monitoring of a suite of potential process and outcome inequalities. This variable had a wide response range of 9.

The questionnaire also enquired about the continuing education for doctors, nurses and other primary care providers. The responses indicate that regular mandated meetings are held, allowing for opportunistic topics to be discussed but that educational content is variable. The perception was that these education sessions tended to be driven by local specialists. Some multidisciplinary

meetings were also held (a mean rating of 6.6, a median and mode of 7). This variable had a wide response range of 9.

Referral process typically involved computer generated letters that included problem list, drug list and allergies (a mean rating of 5.5, a median and mode of 5). Referral practices however did not include templates provided by the receiving provider, clear question to the receiving provider or clear statement of who is responsible for follow up. This variable had a narrower response range of 5.

Continuing education for doctors, nurses and other primary providers appears to be somewhat better implemented in primary care than CCM variables around service provision examined earlier in this chapter. Process to reduce 'avoidable' hospitalisation, measuring equality of health inputs and outcomes and referral processes exist in primary care and are also reasonably well developed. Again, however, there was worrying variability in DHB response in these areas.

Summary and DHB comparisons

Figure 21 summarises the responses from the respective DHBs in relation to their perception of general primary care provision for CCM. It also allocates an alphabetical code to DHBs. Each DHB will be provided confidentially with its own code (only), thus allowing a DHB to compare its own self perception with those of other participant DHBs. There is evidence from the international literature that such comparisons are a lever to improved performance in clinical services (www.renalreg.org [UK Renal Registry, Chapter 6]).There are some important findings presented in this graphic.

1. There was a very wide range of perceived provision in all variables that formed part of our enquiry. This wide range however was largely dictated by a small minority of outliers who perceived very poor or unavailable provision in some areas.

2. The median scores across different DHBs suggest that DHBs collectively have developed strategies to a moderate/high level in these areas.

3. The tendency for DHBs to consistently rate themselves poorly/highly was not as marked in this sub-section of the survey.

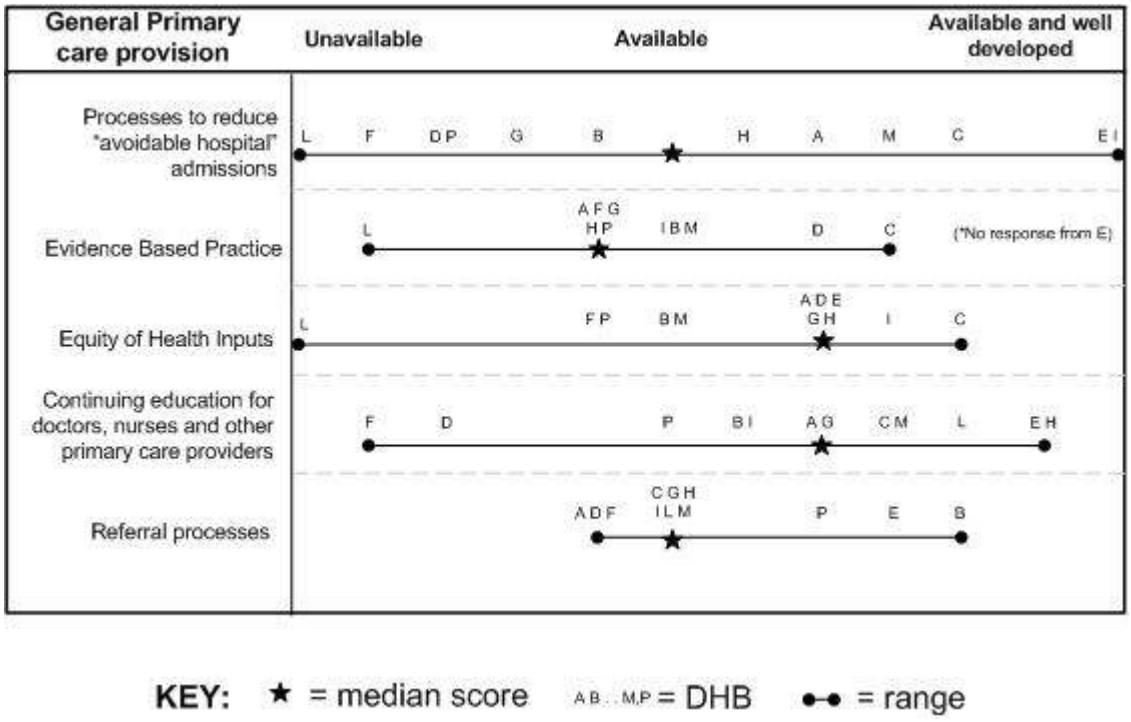


Figure 21: Summarises the responses from the respective DHBs in relation to their perception of CCM service provision for General primary care provision

Process to improve any underperformance in referral to programmes of proven efficacy

The Primary Care Questionnaire also asked DHBs whether they had processes to measure, and mechanisms to improve, any underperformance in referral to programmes of proven efficacy (evidence-based programmes). The questionnaire enquired about the following programmes: cardiac rehabilitation; pulmonary rehabilitation; self-management for CHF; self-management for COPD (including an activity programme); green prescription; and smoking cessation programmes. One DHB reported that this question was not applicable, and therefore did not give a response. One other DHB did not respond to any of the items within this question. Therefore 12 DHBs' responses (57% of 21) in total were available for analysis. The table below provides a summary of these responses. It also allocates an alphabetical code to DHBs. Each DHB will be provided confidentially with its own code (only), thus allowing a DHB to compare its own self perception with those of other participant DHBs. There is evidence from the international literature that such comparisons are a lever to improved performance in clinical services (www.renalreg.org [UK Renal Registry, Chapter 6]).

Table 2: Methodologies to measure and improve underperformance in referral to evidence-based programmes

	No Count (% of 12) and DHB code		Yes Count (% of 12) and DHB code		Not applicable/ nil answer and DHB code	
Cardiac Rehabilitation	5 (42%)	B C G H L	5 (42%)	D F I P M	2 (17%)	A E
Pulmonary Rehabilitation	5 (42%)	B C G H L	5 (42%)	D F I P M	2 (17%)	A E
Self Management for CHF	8 (67%)	B C P F G H I L	3 (25%)	D E M	1 (8%)	A
Self Management for COPD that includes an activity programme	8 (67%)	B C P F G H I L	3 (25%)	D E M	1 (8%)	A
Green Prescription	7 (58%)	B C G H I L M	4 (33%)	D E F P	1 (8%)	A
Smoking Cessation Programmes	5 (42%)	B H I L M	6 (50%)	C D E F P G	1 (8%)	A

Evidence-based programmes can, self-evidently, only benefit patients who are referred to them, who consent to participate in them and who maintain fidelity to them. The literature has revealed problems, both internationally and in New Zealand in all these areas (ABCC Study NZ, Literature Review, 2007). This subsection of the questionnaire referred only to processes designed to improve referral to such programmes. Our results in this area are of concern with a half to two thirds of all respondent DHBs having no processes to monitor or improve referral. Generally DHBs fell into two 'camps': those with process in place for most/all evidence-based services examined, and those with such process for few/none. Such disparity is again of concern.

Accreditation process

The Primary care questionnaire also involved asking participating DHBs about accreditation process. DHBs were asked whether their practices or PHOs participated in recognised accreditation processes viz: RNZCGP membership for all GPs; ACC accreditation for practices; vocational training programmes for nurses; and RNZCGP Practice accreditation. An accreditation process ensures structured process of organisational performance assessment to encourage continuous quality improvement (Quality Health New Zealand, n.d). The table below provides a summary of 12 DHBs' responses. It also allocates an alphabetical code to DHBs. Each DHB will be provided confidentially with its own code (only), thus allowing a DHB to compare its own self perception with those of other participant DHBs. There is evidence from the international literature that such comparisons are a lever to improved performance in clinical services (www.renalreg.org [UK Renal Registry, Chapter 6]).

Table 3: Table presenting the percentages of response for each accreditation process by type of response

	No Count (% of 12) and DHB code		Yes Count (% of 12) and DHB code		Not applicable/ nil answer and DHB code	
RNZCGP Membership for all GPs	3 (25%)	D H L	7 (58%)	B C E F G P M	2 (17%)	A I
Vocational Training programmes for all nurses	2 (17%)	H L	6 (50%)	B C D F P M	4 (33%)	A E G I
ACC accreditation for practices	3 (25%)	D L M	5 (42%)	B C F H P	4 (33%)	A E G I
RNZCGP Practice accreditation	6 (50%)	D P F H L M	3 (25%)	B C G	3 (25%)	A E I

By and large, the majority of respondent DHBs indicated that participation in accreditation processes was uncommon. Again there was a trend for DHBs who responded positively for one accreditation process to respond positively in respect of others.

Overview/ Conclusion

This chapter describes the DHBs' perceptions of primary care provision in terms of CCM for our index conditions (CHF, CVD, COPD, Stroke) together with the DHBs' view on how primary care provision performs in relation to issues such as avoidable hospitalisation, evidence based practice, health equity, continuing education, and referral processes. It also examines the DHBs' perception of ongoing processes within primary care to improve under-performance in referral to evidenced based programmes.

It is disappointing that with only a few exceptions DHBs believe that all these above issues are addressed at best only moderately and often poorly or very poorly by PHOs within their districts.

In terms of the CCM provision for the index conditions examined there is a perception that (of the four conditions) the best provision is available for CVD, though even here the perception is of almost an absence of patient education and of outreach and only limited provision of culturally specific programmes. DHBs believe that primary care is performing much better in terms of risk assessment and moderately in terms of the existence of CCM programmes for CVD in primary care, the sharing of records, the provision of nurse led clinics and single-disease focused case management.

The better provision for CVD (compared to CHF, COPD and Stroke [see below]) probably relates to the strong association between CVD and diabetes, together with emphasis on CCM for diabetes within New Zealand over a longer period of time.

Provision for CCM for CHF within primary care is believed by DHBs to be poor. Though DHBs acknowledge that CCM programmes exist, the ratings provided for patient education, outreach programmes, shared records, culturally specific programmes, and provision of community health workers were very low indicating that there were minimal or no services within these areas. Provision for nurse led clinics and single disease focused case management was regarded as better but still only moderate.

In terms of provision of CCM for COPD in primary care, DHBs perceive the situation to be even worse than that for CHF. Whilst DHBs acknowledge some CCM programmes for COPD do exist in primary care, the mean rating for this variable was only 3.8 indicating a low level of perceived provision. Ratings for provision of support groups, outreach programmes, shared records, culturally specific programmes, nurse led clinics, single-disease specific case management, and community health workers were perceived as poor or very poor.

In terms of Stroke the picture is similar to that for COPD (indeed a perception of lower provision in many areas) although there is a perception of greater provision of nurse led clinics and single-disease focused case management.

It also noteworthy that in all of the above areas there was a very wide variability in the perception of provision with some DHBs scoring several areas as zero (no provision) and others scoring the same areas as 8, 9,10 or 11 (out of 11) indicating excellent provision. Again, in common with DHBs perception of overall CCM within their remit (Chapter 3), this suggests a "post code lottery" of perceived provision across New Zealand.

The view of DHBs on approaches to improve underperformance in referral to evidence based programmes was variable. Although only 12 DHBs responded to this aspect of the Stocktake, only a quarter were of the view that such processes existed within primary care for programmes around self management of CHF and COPD. The perceived situation for green prescription programmes was almost as discouraging, with only 33% stating that such processes were in place. The perception around processes for cardiac rehabilitation, pulmonary rehabilitation and smoking cessation was a little better (though still less than ideal) with approximately 40-50% of DHBs believing that processes to improve under performance in referral to these programmes were in place. We are not aware of any previous work in this area in New Zealand and thus cannot comment on whether the situation is stable, or improving, or worsening. Furthermore, the fact that only 12 DHBs responded may mean that our data are from a possibly unrepresentative sample.

The situation around accreditation processes was perceived by DHBs to be a little better. Again however only 12 DHBs responded to this aspect of the questionnaire and therefore once again our data might not be fully representative of the true picture. Nevertheless, between 40 and 50% of DHBs believe the GP practices participated in recognised accreditation programmes for ACC or for vocational training for practice nurses. A slightly higher number (58%) believe that all GPs are members of the RNZCGP. Practice accreditation for RNZCGP was believed however to occur at a higher level (25 %).

CHAPTER 5: Results from Health Inequalities Questionnaire

The Health Inequalities Questionnaire sought macro-strategy answers at both a DHB and a PHO level; these responses are presented separately in the following chapter.

At the DHB level, the questionnaire addressed: methods for tackling health inequalities at the population level; groups at the greatest disadvantage; inequalities within each DHB's district; barriers to access into programmes for people with chronic conditions; and cultural safety training.

At the PHO level, the questionnaire addressed: processes or programmes to manage people with chronic conditions by ethnicity and SES; barriers to access into programmes for people with chronic conditions; and cultural safety training.

Health Inequalities at the DHB macro-strategy level

This part of the Stocktake questionnaire required participating DHBs to respond to questions regarding health inequalities in their district (NB: DHB M refer to appendix A.1, on page 75). The majority of the questions required short responses such as 'yes', 'no' or the provision of a percentage. Some parts of the questionnaire required respondents to make comments. A summary of the findings is presented below. Where appropriate, findings are presented in tables followed by a discussion. In regards to short responses answers, these answers were collated and summarised.

The first section of this part of the questionnaire pertained to the tools employed by the DHBs to tackle health inequalities, and the following section related to DHBs' strategic inequalities plans. Finally, DHBs were asked about plans/ frameworks developed to address health inequalities for at-risk groups. These data are presented in tables which provide a summary of 12 DHBs' responses. They also allocate an alphabetical code to DHBs. Each DHB will be provided confidentially with its own code (only), thus allowing a DHB to compare its own self perception with those of other participant DHBs. There is evidence from the international literature that such comparisons are a lever to improved performance in clinical services (www.renalreg.org [UK Renal Registry, Chapter 6]).

Tackling health inequalities at population health level

Table 4: Responses for questions relating to addressing health inequalities at population health level

Processes for addressing health inequalities	Percentage of response	Comments and DHB codes for those DHBs possessing the relevant processes/tools/plans
Have tools for tackling health inequalities	14/ 14 DHBs (100%)	Some DHBs use HEAT tool and some use other tools
Have strategic inequalities plan	2 /14 DHBs (14%)	**A, H**
Have plans/framework developed to address health inequalities		
• Maori Health Plan	13/14 DHBs (93%)	**A, B, C, D, E, F, G, H, I, J, K, M, P**
• Pacific Health Plan	7/14 DHBs (50%)	**B, D, E, H, I, L, K**
• Asian Health Pan	Nil	
• Refugee and Migrants	1/14 DHBs (7%)	**B**
• Other	2/14 DHBs (14%)	Population Health Plan; Health of Older People Plan; Primary Care Concept Plan; Palliative Care Strategy and Chronic Condition Programme **B, J**

Tools for tackling health inequalities at population health level

All 14 (100%) of the DHBs for which we have data reported using the HEAT[4] or other tools for tackling health inequalities at the population level.

Strategic Inequalities Plan

Two out of 14 (14%) DHBs reported they had developed a Strategic Inequalities Plan. One DHB reported that, although they had not developed such a plan, a focus on inequalities was part of their business and focal to their District Strategic Plan. Another three DHBs responded that reducing inequalities was incorporated as part of their District Strategic Plan and Annual Plan; hence no specific and separate plan for health inequalities was developed. Accepting these arguments as reasonable increases the number of positive responses to this question to 6 (of 14 DHBs - 43%)

[4] The Health Equality Assessment Tool (HEAT) is a 12-question tools developed to assist in assessing how particular inequalities in health have developed and assist in identifying where effective intervention points are to tackle those inequalities. The HEAT is adapted from part of a health impact assessment tool developed in Wales. The HEAT enables rapid assessment of health policy, programmes or services for their current or future impact on health inequality (Signal et al. 2007).

Plans/ frameworks developed to address health inequalities

Maori Health Plan

Thirteen out of 14 (93%) DHBs had developed Maori Health Plans/Frameworks to address health inequalities in their district.

Pacific Health Plan

Seven out of 14 (50%) DHBs had developed Pacific Health Plans/ Frameworks to address health inequalities in their district.

Asian Health Plan

None of the DHBs reported having developed an Asian Health Plan/ Framework to address health inequalities in their district heath region, though no DHB actually responded to this part of the questionnaire.

Refugee and Migrants Health Plan

One out of 14 DHB (7%) had developed Refugee and Migrants Health Plan/Framework to address health inequalities in their district.

Other

Two DHBs (14%) reported they had other health plans such as a Population Health Plan, a Health of Older People Plan; a Primary Health Care Concept Plan; a Palliative Care Strategy and a Chronic Conditions Programme to address health inequalities in their district.

Groups at greatest disadvantage

Table 5 presents a summary of the responses for the questions relating to disadvantaged groups.

Table 5: Summary of the response to questions relating to disadvantaged groups

Outcomes for groups at greatest disadvantage	Percentage of response and DHB codes of those responding in the affirmative	Nil response (and DHB code)
Have committed resources for groups at greatest disadvantage	12/ 14 DHBs (86%) **A, B, C, D, F, G, H, I, J, L, M, P**	1/14 DHB (7%) **J**
Have data on the estimate number of people within your district by ethnicity and quintile with:		
• COPD	4/14 DHBs (29%) **B, D, K, M**	1/14 DHB (7%) **J**
• CHF	2/14 DHBs (14%) **A, K**	1/14 DHB (7%) **J**
• CVD	4/14 (29%) **A, I, K, M**	1/14 DHB (7%) **J**

• Stroke	4/14 DHBs (29%) **A, D, K, M**	1/14 DHB (7%) **J**

Resources aimed at ensuring outcomes for groups at greatest disadvantage to improve earliest and most significantly

Twelve out of 14 DHBs (86%) reported they had committed resources aimed at ensuring outcomes for groups at greatest disadvantage improve earliest and most significantly. One DHB answered 'no' and one DHB did not answer.

Of those twelve DHBs that had committed resources to disadvantaged groups, 10 provided examples of their plans and services for disadvantaged groups. The following is a summary of the examples given by the 10 DHBs:

> Most DHBs have some form of health services initiative orientated toward disadvantaged populations who are experiencing inequalities. Disadvantaged groups that were identified by these 10 DHBs were: Maori, in particular those with low income; Pacific people in particular those with low income; adults with mental health problems; refugees and migrant peoples.
>
> The type of services that were mentioned included: free access to services such as community transportation to services; interpretation service; free health clinics in low decile schools and healthy home projects. In addition some DHBs provided Maori mobile nurses for disadvantaged Maori. Further, some DHBs reported they had separate funding for targeting Maori. Others reported the existence of separate funding for targeting Pacific populations and for targeting specific health conditions such as diabetes, asthma and mental health. One DHB reported they had launched a larger health initiative in the above areas. Specific disease services such as Maori cancer coordinators were available in one DHB.

Inequalities

Areas where inequalities exist

Several DHBs confirmed that health inequalities are a major issue for Maori. Others confirmed the same for Pacific populations. Comment indicated a perception that Maori had higher rate of disease, earlier disease onset, higher hospitalisation rate, and longer hospital bed days than other ethnicities for their health condition. Once again others reported similar perceptions in relation to Pacific peoples.

Moreover, comments confirmed that Maori had poor access to service, for example, Maori showed a lower uptake in the Get-checked programme even where it was offered free of charge. Maori had rates of lower access to their first specialist appointment (cardiology), cardiac rehabilitation and education session. Inequality was reported by some DHBs to be related to: barriers to access (e.g. lack of transportation and financial constraints); language and cultural differences in assessment and treatment; and a lack of workforce cultural sensitivity. Lastly, the nature of programmes was also thought to contribute to inequalities. It was found that there was a lack of Maori education programmes for patients discharged from hospital and if programmes were

available in the hospital they were designed for the majority population (i.e. mainstream population), and were thought not to integrate well into the Kaupapa Maori view.

Groups who are most disadvantaged

Seven DHBs suggested that Maori was most disadvantaged. Five DHBs suggested Pacific peoples, seven DHBs suggested low SES populations. Four DHBs suggested rurally isolated populations and two DHBs suggested the elderly. Other groups of people who were thought to be most disadvantaged and were only mentioned once were: low income Maori; people with disability; refugees; recent migrants with limited knowledge of what services are available; and people with limited or no English.

In addition, the DHBs suggested that these groups were disadvantaged because they variably have: poorer health status; higher mortality rates; younger age of morbidity; poorer access to primary health care services; lack of transport and cost of transport; financial difficulties; geographical availability of services and lack of resource control to drive worker development and community education programmes.

Processes and programmes DHBs use to identify ethnicity and SES demographic characteristic of their population for the four disease specific diseases

For COPD, five out of 14 DHBs (36%, **DHB:** D, E, G, H and L) reported they had no processes or programmes in their DHBs to identify individuals within their region by ethnicity and by SES for COPD. One DHB reported they would only find out through acute admissions (B). Two DHBs (F and P) reported using their pulmonary rehabilitation programme. Two DHBs reported getting this information from Pacific Island nurse-led clinics (P) and PHO nurse-led clinics (K). One DHB (I) reported using Primary and Secondary Care data and a CCM programme. One DHB (A) reported that they needed to rely on mainstream systems for Maori. Three DHBs (D, G and M) reported they were working on having an integrated service and building a data profile with a primary practice dataset to allow this type of data to be accessed.

For CHF, four out of 14 DHBs (29%, **DHB:** D, G, H and L) reported that they did not have processes and programmes in their organisation to identify individuals within their region by ethnicity and by SES for CHF. One DHB (B) reported they would only know through acute admissions that subsequently enter the cardiac rehabilitation programme. Two DHBs (F and P) reported using the heart failure clinic data. One DHB (K) reported getting this information from outreach cardiology nurse clinics in high needs communities. Another DHB (M) reported using an integrated heart failure programme. One DHB (I) reported using primary and secondary care data and CCM data. Moreover, two DHBs (G and D) reported they are currently working on producing further information/ build data profiles from the primary practice dataset of information. Finally, one DHB (M) suggested that building capacity with general practice PMS system can be used to identify this type of information.

In terms of CVD, four DHBs (29%, **DHB:** D, E, G and H) reported they had no programmes and processes in place to identify individuals within their region by ethnicity and by SES for CVD. Two

DHBs (F and P) relied on mobile disease state nurses, Heart Guide Aoteoroa and the Cardiac Rehabilitation programme. Two DHBs respectively reported they used a community dietician programme (F) and The Edge (M). DHB M reported using NHI/ICD 10 code data. One DHB (I) reported using primary and secondary care data and a CCM programme. One DHB (K) reported using the One Heart Many Lives-Cardiovascular social marketing campaign (Pharmac), Smokefree Initiatives and Health Assessment at worksites. Two DHBs (L and B) reported they had started introducing risk assessment tools. One DHB (I) was about to implement a CVD screening and CVD Get-Checked programme. Finally, one DHB (M) mentioned that primary and secondary data systems were not integrated and suggested that this would inhibit identifying this information.

For Stroke, five DHBs (36%, **DHBs:** D, E, G, L and H) reported they had no processes or programmes to identify individuals within their district region by ethnicity and by SES for Stroke. Two DHBs (K and I) did not give an answer. One DHB (B) reported using information through acute admissions. Two DHBs (F and P) reported used stroke clinic data (post event). One other DHB (M) said that a new stroke unit has been established with funding for management of TIA (Transient Ischemic Attack), and (presumably) planned to use data from this source.

Barriers to assess into programmes for people with chronic conditions

Problem of access into programmes

Eleven of 14 DHBs (79%; **DHB** A; B; C; D; F; I; J; K; L; P and M) identified and quantified issues of access into programmes for people with chronic conditions. Three DHBs (21%; **DHBs** E, G and H) reported they did not identify and quantify problems of access.

Programmes or services to address barriers to access

The different DHBs adopted diverse methods to address barriers to access in their district. In terms of programmes, DHBs repeatedly mentioned using: the healthy homes project; health service planning project; DNA (did not attend) project; HEAT tool Workshop; chronic care management programme; Care Plus programme and self-management education programmes. Affordable or free services that were used to assist people to achieve healthy lifestyles included: the Kura GP clinic; Youth Health clinics and moving secondary care services out to primary care settings. In addition, funding was also available to address barriers to access, for instance reduce inequalities funding and SIA funding[5] is used in primary care organisations to offer after-hours services at no cost.

Other services and programmes that DHBs mentioned using to address barriers to access in relation to culture and transport included: rural service; more services in the community; appropriate cultural mix of health care providers; 24hours 7days interpreters service for clients and staff at both primary and secondary care services; cultural advice and workforce training; cultural

[5] 'Services to Improve Access (SIA) funding is available for all PHOs to reduce inequalities among those populations that are known to have the worst health status: Maori, Pacific people and those living in NZDep index 9-10 decile areas. The funding is for new services or improved access and is additional to the main PHO capitation funding for general practice-type care' (Ministry of Health, 2007)

specific diabetes care; Maori health care providers and new services with a cultural flavour with Maori and Pacific staff.

Procedures employed by DHBs to find out if barriers to access are reduced or eliminated

In total, 12 out of 14 (86%) DHBs commented on this topic. There were a number of different ways that DHBs used to identify whether barriers to access are reduced or eliminated. The most commonly mentioned methods were: monitoring the uptake of and access to services and programmes. It is assumed that there will be an increase in uptake or access to service if barriers are reduced or eliminated (e.g. increased enrolment of population in PHO; uptake of Get Checked; uptake of Care Plus; increased in GP utilisation rates and attendance of programmes). Other methods used to assess whether barriers to access are reduced or eliminated were: community feedback; monitoring report; overall improvement in health outcomes; improved management of condition (e.g. HbA1c levels); monitoring KPIs with regular systematic audits; hospitalisation rate, mortality rates; reduction in co-morbidities in at risk populations and reductions in years of life lost for Maori, Pacifica, Asian people.

Cultural safely training

Cultural safety training in relation to Maori

Ten out of 14 DHBs (71%, **DHBs** C; D; F; G; H; I; J; L; P and M) reported that their organisation required their employees to undertake Maori cultural safety training. However, four other DHBs (29%, **DHBs** A; B; E and K) reported their organisation did not require their employees to undertake Maori cultural safely training. DHB B reported that it is optional, not mandatory, to attend cultural training day at the local Marae, however, there was an average of 130 people per year, with roughly 15-25% of current staff having received training.

The proportion of employees undertaken cultural safety training

Four DHBs (28%) reported that the proportion of employees who had undertaken cultural safely training was difficult to quantify and therefore could not be determined. Two DHBs (14%) did not respond to this question. Only three DHBs (21%) provided a figure, one large DHB reported that a minimal proportion of their employees had undertaken cultural safety training (200/6000 per annum), a medium size DHB reported 722/1570 employees had undertaken cultural safety training and a medium size DHB reported 20% of their employee had undertaken cultural awareness training, 5% had Marae Protocol training, 10% had Te Reo education and 30% had Treaty of Waitangi education. The rest of the DHBs reported that cultural training/Treaty of Waitangi training was compulsory for all staff. One DHB reported that cultural safely training for Nurses was part of their degree. Another DHB explained that training was provided regularly (several times per year) via 3 separate courses- open to all staff, training topics included: Treaty Training; Te Pikorua Training; and Tikanga Best Practice. Some staff completed all three blocks, while others only completed some of parts of the training.

Cultural safety training in relation to working with people who have disabilities, belong to different ethnic groups, religious groups, and people with different sexual orientations within New Zealand

Thirteen out of 14 DHBs (93%; **DHBs** A; B; C; D; E; F; G; H; J; K; L; P and M) reported that their organisation did not require employees to undertake cultural safety training in relation to working with people who have disabilities, belong to different ethnic groups, religious groups, and people with different sexual orientations within New Zealand. One DHB (**DHB** I) indicated that their organisation did require employees to undertake cultural safety training in relation to working with people who have disabilities, belong to different ethnic groups, religious groups, and people with different sexual orientations within New Zealand.

The proportion of employees undertaken additional cultural safely training

Three DHBs (21%, **DHBs** H; F and P) reported that none of their employees had undertaken additional cultural safely training. Nine DHBs (64%; **DHBs** A; C; D; E; G; I; J; L and M) reported that the proportion of employees undertaken any additional training was unknown. Of these, DHB G reported that some cultural safely training programmes were provided by the DHB and some were run by other providers or organisations (e.g. local disability support service networks) and because there was no central database to capture attendance detail, it was difficult to determine the proportion of employees who had undertaken training programmes. DHB B (7%) reported that this question was not applicable and one DHB (**DHB** K) did not provide an answer.

Overview/ Conclusion

This part of the Stocktake was aimed at addressing whether the DHBs have strategies in place around health inequalities, both in the generic sense and also in relation to our index conditions. There was also some attempt to ascertain how DHBs are monitoring the success of these initiatives. It was thus particularly disappointing that only 14 DHBs (82% of 17 engaged with the study and 67% of 21 DHBs in total) responded to this part of the questionnaire.

We were reassured to find that in general DHBs perceived that they have the correct tools in place to tackle inequalities in this area (e.g. all 14 DHBs who responded use the HEAT tool and many are using other tools as well). At first glance the fact that only 14% of the respondent DHBs have a strategic inequalities plan seems to be of very significant concern. However a further 4 DHBs, whilst not having a strategic inequalities plan in name, incorporate this area directly into their District Strategic Plan and/or Annual Plan. This still means however that over 50% of DHBs who responded admitted to not having any form of strategic plan to tackle inequalities at a macro level.

More reassuringly 93% of respondent DHBs (13 of 14 respondents) have a Maori Health Plan. Further, 50% (7 from 14) possess a Pacific Health Plan. However, the fact that no DHBs possess a Asian Health Plan (admittedly many do not have a significant Asian population) and only 14% (2 of 14) have developed plans around the Health of Older People Strategy, the Primary Care Strategy and other Ministry of Health strategies, many of which have been in place for some considerable time, is of concern.

Further, although 86% of respondent DHBs reported that they had committed resources to improve outcomes for those with greater disadvantage, when asked for examples of services provided in this regard few quoted services aimed at people suffering from our index conditions

(CVD, CHF, COPD and Stroke). This might at least be partly explained by the fact that very few DHBs reported that they had reliable estimates of the demographics of these conditions by ethnicity or by quintile. Indeed, the assertion of those that *did* claim to possess such data (see Table 6) is at least in some instances questionable, as the systems and processes that DHBs claim to employ to collect this data for our index conditions generally rely on opportunistic discovery (e.g. hospital admissions, outreach nurse reporting, patients enrolled in rehabilitation programmes, patients coming to clinics etc.). At the very best these processes will only identify patients with significant symptomatology which necessitates they obtain specialist help. Those with undiagnosed index conditions, those with less symptomatology, and (perhaps most importantly) those with limited access to services will not be identified by such systems. We were also concerned that when DHBs were asked to identify disadvantaged groups there seemed to be little mention of the elderly in this regard. Given the fact that New Zealand has, among the OECD, the highest institutionalisation rate for the over 85s (many of whom are disabled by one or more of our index conditions), this is a worrying revelation.

However it was reassuring (in terms of access) that 79% of respondent DHBs (11 out of 14) reported to be able to identify and quantify issues of access into programmes for people with chronic conditions. Some DHBs were able to quote examples of a variety of methods used to address access barriers.

When it came to DHBs' ability to assess whether access barriers had been reduced or eliminated the data provided was only partly reassuring. DHBs are tending to rely on process monitoring (e.g. enrolment in programmes such as Care Plus and the Get Checked programme) rather than improvements in outcome measures. When outcome measures *are* used the methods chosen seem to be rather blunt tools such as hospitalisation rate, mortality rate, reduction in years of life lost for disadvantaged groups. There was some mention of potentially "sharper" outcome measures such as HbA1c levels, together with the monitoring of unspecified KPIs. We recognise however that many DHBs and many health systems around the world, are struggling with the range outcome measures to rely on in this regard.

In terms cultural awareness and safety training, at first glance the situation (particularly in relation to Maori cultural training) would appear reasonably good, with 71% of respondent DHBs reporting that they require their employees to undertake such training. However few appear able to report the proportion of employees who have undertaken training and where figures are reported there is a wide variation in the proportions given. One DHB appears to rely on the nursing curriculum (prequalification) to provide such training. Whilst this reliance may be reasonable for New Zealand trained nurses it is not so for those (many) trained elsewhere. The situation as regards cultural safety training for those working with people with disabilities, those belonging to other religious groups, and those working with people with different sexual orientation is even poorer, the vast majority (93%) of DHBs reporting that they do not require their employees to undertake such training. Furthermore, when asked what proportion of their employees had undertaken such training, one DHB reported that the question was not applicable, one failed to answer, nine said that the proportions were unknown and three reported that none of their employees had undertaken such training. Thus no DHB in our survey was able to confirm that any of their employees had undergone any training in this area. Such a return is disappointing.

Health inequalities at the PHO macro-strategy level

This part of the Health Inequalities questionnaire enquired about the service provision at the PHO strategy level of each DHB for the four index conditions. Only 7 DHBs (33% of the total; B; C; E; F; I; L and P) completed this part of the health inequalities questionnaire. A summary of the results from this section of the questionnaire is presented below.

Processes or programmes to manage people by ethnicity and SES with chronic condition

COPD

In total, all seven respondent DHBs reported having PHO strategy level processes or programmes to manage the care of people with COPD. However, one of these DHBs reported that they did not have COPD specific programmes. Six out of seven DHBs (86%) reported their PHOs used a Care Plus case management programme with patients with COPD. The size of the DHB did not appear to affect the number of programmes and services provided for people with COPD. In addition, the data revealed that a DHB with a very high Pacific load did not have programmes targeted specially for their Pacific population.

Other programmes or services that were used by the DHBs for managing the care of people with COPD included: 1) Outreach COPD service targeting to improve uptake in Maori; 2) healthy homes projects; 3) a Respiratory Specialist Nurse working across hospital and community settings (including Marae) – for education, advice and management of those with complex conditions; 4) Long term case management by District Nurses with input from the Oxygen Nurse and Respiratory Nurse Specialist; 5) Respiratory Rehabilitation (Respiratory Nurse Specialist and Physiotherapist); 6) COPD Group (with physiotherapist-led education); 7) Short and long term home based support, including flexible packages of care; 8) Health Recovery Programme for those returning home after a hospitalisation event; 9) Smoking cessation programme support targeting Maori, Pacifica and Low decile; 10) Health Clinics and linkage Nurse; 11) Chronic Care Management; and 12) Home heating initiatives.

CHF

In total, all seven DHBs reported that they had some processes or programmes to manage the care of people with CHF at their PHO strategy level. However, one DHB did not have CHF specific programmes. The size of DHB again did not appear to affect the number of programmes and services provided for people with CHF. A DHB with a very high Pacific load did not have programmes targeted specially for their Pacific population.

Six out of seven DHBs (86%) reported their PHOs use Care Plus to manage the care of individuals with CHF. Other programmes these DHBs used for managing the care of people with CHF are: 1) Cardiac Nurse Specialists who work across hospital and community (including Marae) – for education, advice and management of those with complex conditions; 2) Long term case management by District Nurses with input from the cardiac nurse specialists; 3) Care Plus case management by practice nurses with input from the cardiac nurse specialists; 4) cardiac

rehabilitation; 5) Strong links with Heart Foundation for patient support (e.g. education, transport); 6) Short and long term home based support, including flexible packages of care; 7) Health Recovery Programme for those returning home after a hospitalisation event; 8) Health clinic; 9) Linkage nurse and 10) Chronic care management.

CVD

All seven DHBs reported they did have processes or programmes to manage the care of people with CVD at the PHO strategy level. However, one DHB reported they did not have CVD specific programmes at their PHO strategy level. Six out of seven (86%) DHBs reported that they use Care Plus to manage the care of individuals with CVD.

Other programmes for managing the care of people with CVD were: 1) Cardiac Nurse Specialists who work across hospital and community settings (including Marae) for education, advice and management of those with complex conditions; 2) Long term case management by District Nurses with input from the Cardiac Nurse Specialists; 3) Cardiac Rehabilitation; 4) Strong links with Heart Foundation for patient support (e.g. education, transport); 5) Short and long term home based support, including flexible packages of care; 6) Health Recovery Programme for those returning home after a hospitalisation event.

Some DHBs reported that at their PHO strategy level they managed CVD by early detection. The risk assessment programmes they used were PREDICT and performance management programme -a CVD screening indicator. A DHB launched some HEHA activities that focused on those at risk of developing CVD. Once again, the size of DHB did not appear to affect the number of programmes and services provided for people with CHF. A DHB with a very high Pacific load did not have programmes targeted specially for their Pacific population.

Stroke

Six DHBs responded to this question and two DHBs (33%) reported they had no processes or programmes for people with Stroke. Four DHBs reported they used the Care Plus programme at their PHO level. Again, the size of DHB did not appear to affect the number of programmes and service provided for people with CHF. However, a DHB with a very high Pacific load did not have programmes targeted specially for their Pacific population.

Other programmes these DHBs used for managing the care of people with stroke were: 1) Long term case management by District Nurses with input from the diabetes nurse specialists; 2) Stroke rehabilitation; 3) Short and long term home based support, including flexible packages of care; 4) Health Recovery Programme for those returning home after a hospitalisation event and 5) Linkage Nurse.

Barriers to access into programmes for people with chronic conditions

Identifying problem of access into programmes

Five out of seven respondent DHBs (71%) reported that their PHOs had identified and quantified issues of access into programmes for people with chronic conditions. Two DHBs did not identify and quantify problem of access. Four DHBs suggested that transportation and cost were readily apparent problems of access and that these problems of access were greater for rural areas.

One DHB reported that face to face interviews were carried out to identify issues with access and usage of health services at the PHO level. Another DHB commented that problems of access were recognised by all PHOs and they identified these problems through CCM programmes. This DHB also explained the services they had for the hard-to-reach including; outreach nurses or community health workers and some PHOs offering transport assistance to improve access. This DHB also suggested that systematic identification and quantification of those people experiencing difficulty with access is only going to occur once IT based risk assessment tools are rolled out. Otherwise, identification and quantification of those with chronic disease would not be consistent across the practice/PHO population. Another DHB suggested that problems of access were identified across PHOs, by monitoring enrolments and the utilisation rate of chronic care management programme; Care Plus; Get Checked and various other indicators e.g. control of risk factors and hospitalisation.

Processes to address recognised barriers to access

Six DHBs commented on this topic. Of these, two DHBs reported that they had SIA funding to address barriers to access at the PHO strategic level. Other processes DHBs cited were: 1) dialogue with PHOs, DSAC and Te Iwi Kainga (DHB Maori Governance Group); 2) Packages of care are made available to provide free appointments with the GP after discharge from hospital; 3) Voucher system for patients who are unable to meet GP appointment cost; 4) Care Plus Programme; 5) Transport Schemes; 6) intensive outreach/follow up with community health workers; 7) Removal of co-payment and 8) Medtech systems enable all practices to identify their population by location and ethnicity. Whilst ethnicity and NZDep provide a means of identifying those in the population likely to be facing access barriers, these are by no means fully inclusive of those experiencing access barriers. It *did* appear that the size of DHB had an effect on the processes available to address recognised barriers to access. Larger DHBs seemed to have more processes available to address barriers to access than small DHBs.

Programmes or services to address recognised barriers to access

Five of seven respondent DHBs (71%) responded to this question. Processes in place to address barriers to access at the PHO strategy level were: 1) Focusing use of SIA, Health Promotion (HP) and Care Plus funding on high need populations; 2) Funding provision of free community transport service; 3) Funding provision of outreach clinics, health clinics (nurse and GP) and Free Kura GP clinics in certain areas; 4) Maori for Maori services; 5) linkage nurses and community health workers; 6) a chronic care management programme and 7) Care Plus programme. The size of the

DHB did not appear to have an effect on the provision of services or programmes for addressing barriers to access.

Procedures employed by DHBs to find out if barriers to access are reduced or eliminated

The following indicators were used by the DHBs to help make inferences about whether barriers to access are reduced or eliminated: 1) Patient management data; 2) Deceased unnecessary emergency department contacts and ambulatory sensitive hospital admissions; 3) Less acute presentations in primary care for specific high needs individuals as their conditions are better managed through programmes like Care Plus; 4) Increase in rate of CCM visits and more GP visits; 5) Greater willingness to engage with mainstream practices/outreach workers; 6) Access by health professionals to wider Whanau/family members; 7) Results of specific programmes/ initiative evaluated against projected outcomes; 8) Improvement in clinical indicators; 9) ASH rates and EC attendances are reported quarterly to each PHO and annually with some detail and practice level by disease category and 10) Feedback to the DHB through the health needs assessment process- involving individuals and organisations in the community. Once again it did not appear that size of DHB had an effect on the process of identifying whether barriers to access are reduced or eliminated.

Cultural safely training

Cultural safety training in relation to Maori

Six of seven respondent DHBs (86%) reported that their PHOs required their employees to undertake cultural safety training in relation to Maori. One DHB reported their PHOs did not require their employees to undertake such training. Seven out of all participating DHBs did not respond.

In terms of the proportion of employees who had undertaken training, three of seven DHBs reported that the proportion was unknown or could not be determined. Two DHBs reported that all staff in their PHO had undertaken cultural safety training. One DHB reported that they had only just commenced training in September (they completed the questionnaire in November 2007). One DHB did not give a response.

Cultural safety training in relation to working with people who have disabilities, belong to different ethnic groups, religious groups, and people with different sexual orientations within New Zealand

Four of seven respondent DHBs reported that employees within PHOs are not required to undertake such training, two DHBs reported that employees were required to undertake training in relation to working with diversity of people and one reported they did not know. In terms of the proportion of employees who had undertaken this level of training, five of seven (71%) reported that

they did not know. One DHB reported that this question was not applicable, and one DHB did not respond.

Overview/ Conclusions

Again it was disappointing that only 7 DHBs completed this part of the health inequalities questionnaire. At least in some areas the perception reported is that strategies are poorly implemented.

Most of the DHBs reported that PHOs have processes or programmes in place to manage the ongoing care of patients with COPD, CHF and CVD. The situation regarding stroke was however less satisfactory with only 4 DHBs responding in the same manner (and 1 of 7 providing no response). There appears to be good "buy-in" to the Care Plus programme for patients with COPD, CHF and CVD and to a lesser extent stroke. Early detection at a PHO level was mentioned by some DHBs in terms of CVD but not in relation to COPD (in which early detection has shown to be of great value in terms of 'secondary prevention' of progression and complications), CHF and cerebrovascular disease.

It was interesting (and reassuring) that generally the size of DHBs did not appear to affect the number of programmes or services provided at PHO level. This is perhaps not surprising as the size of PHOs rather than DHBs might be more relevant. We will examine this variable at a later point.

In terms of barriers to access we note that two DHBs did not identify or quantify problems of access in any way. Others employed (once again) relatively blunt surrogates (e.g. hospitalisation rates) as well as more appropriate and potentially "sharper" measures such as enrolment in CCM programmes. We to some extent agree with one DHB's suggestion that access barriers will only be more uniformly and accurately quantified following the roll-out of interconnected data management systems. The current paucity of such systems has been discussed in a previous chapter.

In terms of processes and services employed to reduce access barriers there seems to be emphasis on financial aspects (e.g. removal of co-payment, free GP appointments or GP voucher systems). There was also (reasonably) emphasis on the provision of transport for patients in hard to reach areas and on the use of culturally relevant services.

It was interesting that although the size of a DHB did not appear to have effect on conditions and provision of <u>services</u> bigger DHBs did appear to have more <u>processes</u> available to address access barriers.

DHBs are employing a variety of procedures to ascertain whether access barriers are being reduced or eliminated. Once again it was reassuring that DHBs size did not appear to have a major effect in this area. Some of those that had procedures in place employed rather blunt tools in assessment (reduced emergency room contacts and ambulatory centre admissions together with focus on the number of acute presentations in primary care). Others however reported more appropriate and potentially sharper process issues such as increases in CCM visits, access to whanau and the use of clinical outcomes for specific programmes.

In terms of cultural safety training the situation at a PHO level appears to be similar to that at the macro-DHB level, with 86% of DHBs reporting that their PHOs require employees to undertake cultural safety training in relation to Maori. It was disappointing that 7 of the 14 participating DHBs did not respond to this question and in particular that 3 of the 7 who did respond reported that they could not determine the number of employees who had undertaken taken such training. The situation as regards cultural safety training for other ethnic groups, religious groups and people of different sexual orientations was once again poorer than that in relation to Maori, with, only 29% of responding DHBs saying such training was compulsory at a PHO level. Once again, however, no DHB was able to provide figures on the proportion of PHO employees who had undertaken such training.

Appendix A

1) All data was verified by manually checking, except:

   DHB M – Chronic care management questionnaire

   DHB L – Chronic care management questionnaire

   DHB M – Health inequalities questionnaire

   DHB F –Primary care questionnaire

   We would like to give an opportunity to these DHBs to verify their data in relevant parts of the report.

2) The same individual filled in the Chronic Care Management questionnaire for DHB F and DHB P. Both regions were given identical scores throughout the questionnaire. We believe this to be appropriate as the DHBs in question operate a cooperative initiative in this field.

3) In some questionnaires, instead of any one answer being recorded, two adjacent numbers were highlighted on the questionnaire (they appear to be technical errors). In this report, the highest scores were taken as DHB's final response. This incident occurred in;

   DHB F –The entire Chronic care management questionnaire

   DHB P – The entire Chronic care management questionnaire

   DHB E – one question in Chronic care management questionnaire

CHAPTER SIX – Summary of findings and overall conclusions

Introduction

The management of chronic conditions poses the greatest foreseeable healthcare challenge for New Zealand and for many other countries over the next few decades. Our own index conditions (CVD [essentially ischaemic heart disease], CHF, COPD and Stroke) together with diabetes, mental health and (for the elderly) dementia rank most highly among the list of priorities. Fortunately, we have a reasonable idea from the international literature, as documented in our Literature Review, of ways to address that challenge, not least through reorganisation, revision and realignment of health service provision. Our interpretation of the international and New Zealand literature has led to us expand upon the accepted Wagner 'pillars' and produce what we have chosen to refer to as 'dimensions' of chronic conditions management (CCM) appropriate for the New Zealand experience. We have subsequently validated those dimensions at further levels of evidence, most particularly by means of in-depth interviews with acknowledged clinical experts within New Zealand ('movers and shakers') and with a series of Standard Setting workshops with those working in CCM around the country. The results of both these exercises will be published separately. The present survey is based around these dimensions.

Our results do not make reassuring reading. However before discussing the results in any detail we feel that it is essential that we make two important points:

> Firstly, any survey is only as good as the accuracy of the information provided to it. The current survey was commissioned as a survey of the DHB perspective of what is happening in primary care. It is therefore dependent on the accuracy and completeness of the knowledge of DHBs employees (most particularly that of Funders and Planners, but also that of clinicians) of the services they are commissioning and with which they are cooperating. However, it is possible that the DHB perspective of primary care activity is variable in its accuracy and completeness around the country. **We did, in fact, also send the generic stocktake questionnaire to all PHOs, and only received 20 responses.** Thus we were unable to use PHO information to validate DHB responses (the PHO responses available to us will be presented in a separate document). It is also however arguable, and indeed we argue later in the present chapter, that if the DHB perspective of primary care activity is indeed inaccurate in some areas, this situation in itself is nearly as bad as if nothing was happening in primary care. Nonetheless the critique in the bulk of the current chapter assumes a reasonably accurate and complete DHB perception (from those who responded) of primary care activity.
>
> Secondly, we wish to strongly state that any criticism (in the colloquial sense of that word) we make about services, attitudes, vision (or about lack of these and other parameters) should not be interpreted as criticisms of clinical colleagues. Many of the members of our team and the authors of this report are clinicians, and we recognise the pressures, constraints and frustrations that our hard working colleagues have to contend with on a daily basis. Our critiques should be interpreted as critiques of vision, opportunity, training, planning, organisation and in some cases funding which can be best summarised as 'the healthcare system and environment' rather than the healthcare workers. Any individual clinician may have the knowledge, awareness and vision necessary to lead or contribute to

service redesign. That does not mean that he/she has the time, opportunity, structure or funding to make that redesign happen.

Main Findings

Overall Comments:

Our first concern with the data must revolve around the response rate of DHBs. In this regard we are not wishing to emphasise the possibility that an incomplete response from DHBs may suggest that the data may be to some extent unrepresentative of the national picture (though we of course acknowledge this possibility), but that, particularly for a study commissioned by DHBNZ, the lack of engagement of some DHBs must call to question the priority given to CCM development in those districts. It is true that one DHB wished not to take part because of clearly expressed concerns that our methodology was too cognisant of a secondary care perspective at the expense of primary care engagement. However, the other DHBs who declined to engage at the outset or subsequently, cited lack of resource within the DHB. This was despite the fact that within the current survey (as opposed to the disease specific survey to be published separately) our questions generally required answers based on opinion and impression, or categorical (yes/no) responses rather than necessitating ascertainment of demographic, continuous, and numerical information. The completeness of response within the 15 participant DHBs was also variable, and again lack of time and resource, despite multiple offers of practical assistance from our project managers, was a reason commonly cited for inability to fully complete all questionnaire variables (other reasons are discussed below). We recognise of course the phenomenon of 'survey fatigue', and indeed are aware of one or two particular examples where the current survey clashed with or followed closely on the back of a recent local survey asking similar questions. Nonetheless, engagement in any initiative may be crucially dependent on the priority accorded to the issue in question. We will explore this area in more detail in a subsequent analysis of DHBs' priorities as published in their District Strategic Plans, District Annual Plans and other associated strategies.

Perhaps the most striking overall finding in the current survey is the **wide variability in perception of provision, processes etc between DHBs**. In the UK, particularly when referring to clinical service availability, such geographical disparity has been termed a 'postcode lottery' and has been the subject of much medical, media and lay interest and of political controversy. The fact that a postcode lottery can exist even within such a nationally 'cohesive' service as the UK NHS should result in a lack of surprise at its existence in New Zealand. However, whatever a nation's system of organising and overseeing its health care provision, such a situation, if genuine, must be cause for concern. The first question therefore must be whether the impression of a postcode lottery given in Chapters 3-5 is a true reflection of the current situation around CCM (for CVD, CHF, COPD and Stroke in particular) in New Zealand. Given our concerns regarding the possibility of variability in DHBs' awareness of primary care/PHO provision this is a valid question. However, in very many cases, even if minimum perceived provision underestimated actual provision by a factor of 2 or 3, variability would still be marked (see e.g. Figure3, Figures 6 to 10 and Figures 14 to 17) particularly given the

lesser likelihood of other DHBs significantly *over*estimating primary care provision in their districts. It is also noteworthy, and perhaps of even greater concern, that in addition to the overall pattern of variability discussed above, those DHBs that rate themselves poorly/highly tend to consistently do so across the spectrum of dimensions. We anticipate that allowing individual DHBs access to their own alphabetical code, even without access to the codes relating to other DHBs, will result in a narrowing of the variability in provision as the 'poorer performing' DHBs are incentivised to improve. Even without a publicly available 'league table' of performance, which runs the risks of simplistic and inexpert misinterpretation, manipulation and the introduction of perverse incentives, such a system has been shown in other healthcare situations to be of benefit in this regard (www.renalreg.org [UK Renal Registry, Chapter 6]). In parallel with the current publication we are producing a 'Précis' document, which by virtue of brevity will be more accessible to decision makers and which we therefore hope will further facilitate this process.

Inequalities:

In all countries, but particularly in a New Zealand context, it is vital that healthcare providers are aware of inequalities of access, provision and outcome. This is no less so for our four index conditions, and given what our Literature Review tells us of the national demographics of these conditions it is perhaps more so. We were thus disappointed with some of the DHBs' responses around the strategies and initiatives that both they and PHOs have in place for health equalities, and how they monitor the success of these initiatives. This area is addressed in more detail in the 'Overview / Conclusions' sections of Chapter 5 (pages 67-68 and 73-74) but we particularly note once again that very few DHBs reported that they had reliable estimates of the demographics of these conditions by ethnicity or by quintile, and others relied on opportunistic discovery only able to identify patients with significant symptomatology necessitating specialist help. DHBs' responses on whether access barriers had been reduced or eliminated were a little more reassuring, though there was a tendency to rely on process monitoring and on improvements in rather blunt outcome measures. We recognise, however that this is an extremely difficult area and that health systems around the world are struggling with the range outcome measures to utilise in this regard. Nonetheless the fact that few examples of initiatives to address inequalities were directly related to CVD, CHF, COPD or stroke was also disappointing. It would also appear, despite a low response rate to this part of the questionnaire, that the situation regarding cultural safety training, particularly the monitoring of the uptake of such training, has considerable room for improvement in both DHBs and PHOs.

In contrast however, the results from the **inequalities** dimension (Chapter 3), when taken in isolation, make relatively reassuring reading, with DHBs *perceiving* that their own structures at least provide commitments to cultural training, cultural safety, and equitable access, and provide a strategic focus to reduce inequalities. There was a reasonable degree of congruity between those DHBs reporting that they possessed data by ethnicity and by SES on the demographics of our four index conditions (Chapter 5, Table 6) and the scores DHBs accorded to the inequalities dimension in Chapter 3 i.e. the two sets of data appeared to validate each other. In contrast there was less apparent congruence between DHBs' impressions of their commitment to cultural safety (Chapter 3) and either their requirement for employees to undertake cultural safety training in relation to

Maori or to other ethnic groups, or their ability to provide data on the proportion of their employees who had undertaken such training (Chapter 5).

Overall these findings (again assuming accuracy of DHBs' perspectives) suggest that there needs to be greater effort in terms of recognition of the Treaty of Waitangi and inequalities for Maori. They also suggest a need for improved efforts in relation to other ethnic groups and minorities.

ABCC Dimensions:

The overall perception of only limited CCM dimension development was particularly evident in **decision support**, **self-management support**, **knowledge transfer** and in some aspects of **delivery system design**. Two of these dimensions (**knowledge transfer** and **system design**), relate particularly to change management. Indeed this may also speak to a difficulty *accepting* the need for change as also evidence by the fact that strategies which focus on the patient as the centre of the system are underdeveloped relative to measures placing the healthcare provider at the centre of the system. That DHBs perceive most of their systems aimed at promoting self-management as being at basic level is particularly worrying in the light of the fact that **self-management *support*** (including but not restricted to patient and whanau education) is fundamental to current understanding in CCM, including lifestyle change. This area is explored further in the disease specific Stocktake (to be published separately).

Decision support and **knowledge transfer** (both underdeveloped in relation to many other dimensions) relate to IT provision, an area also highlighted as weak in other aspects of our project - particularly in the 'movers and shakers' interviews and in the exemplar visit interviews (both to be published separately). The inability of many DHBs to provide data on numbers of employees attending cultural awareness training, together with (again in many DHBs) the lack of processes to improve patient access to evidenced based programmes, and the lack data on prevalence of our index conditions may also be, at least in part, a consequence of inadequacies in IT support. Inability to access data was also a major problem for many DHBs in our disease-specific stocktake, the results of which will be reported separately. This issue again, in some ways speaks to 'change', in that without the IT infrastructure and data needed to locate one's starting position, how is it possible to know where to go or how to get there?

In terms of **decision support** the provision of evidence based guidelines was reported as being generally good, though we did not enquire about ease of access to such guidelines. Even taking this moderately high score at face value however, there was little evidence that DHBs supported their guidelines by provider education or reminders. Again our Literature Review has emphasised the greater effectiveness of guidelines when such support is available.

The low scores given to aspects of **delivery systems design** such as the appointment system and follow-up, together with the extremely low scores provided in the inter-related dimension of **knowledge transfer** are disappointing given the likely relatively small level of investment that would be needed to produce more responsive, patient integrated systems (i.e. such systems in themselves would not depend on large increases in personnel). Such integration is an essential component of any system which aims to increase 'fidelity' to a CCM programme. It is of course also true that the

operation of such systems (e.g. regular and responsive follow up) depends not only on the logistics of organisation (e.g. IT hardware and software) but also on adequacy of staffing, skill mix and on attitudinal change.

Within the **leadership** dimension DHBs' perceptions were generally more encouraging, and although there was some variability in response between DHBs, this was less apparent than in many other dimensions. Disappointingly however the lowest median score for any aspect of this dimension (5) was for programme championship, and this aspect of the dimension also showed the greatest variability. In contrast the highest median rating (7) was for *senior* leaders**,** the scores for this aspect of the dimension also having a relatively small variability. Similarly encouraging scores were seen for *clinical* leadership. This would suggest that one of the challenges for New Zealand is how to facilitate and encourage its clinical and senior leaders to become champions. Unfortunately data in the current report do not provide insight into the reasons for the disparity in the scores for leadership and championship, but our 'movers and shakers' report (to be published separately) highlights the need for *active development* of leadership and championship within systematic development structures, and particularly stresses the need for the development of community leadership.

Most self-rated scores within the dimension of **community linkage** were reassuring. The exception to this was the area of links with traditional healers and complementary therapy, which are of particular importance in a New Zealand context. These scores however are of course only one perspective (i.e. that of the DHBs) and we did not explore in this survey the perspectives of community organisations in this regard. In our report on our visits to eight 'exemplar' DHBs and our admittedly limited PHO Stocktake (both to be published separately) we will explore this area in a little more detail.

Similar comments apply to some aspects of the **collaboration** dimension, particularly in terms of collaboration with other organisations relevant to CCM, and the number of organisations with which DHBs engage in terms of CCM development. Within the **collaboration** dimension it was gratifying to find that honesty and trust between individuals are perceived strengths. In addition to the obvious advantages of fostering a good working environment, our Literature Review has confirmed the necessity of high levels of honesty and trust in CCM development internationally.

We now turn to the dimension of **organisation of the health care delivery system** where scores were perceived as moderate in all areas. However merely visually examining Figure 6 gives a falsely reassuring picture and it behoves us to address what 'moderate' actually translates as: 'marginal workforce, not projected to increase in the future'; 'team discussion, but final decisions usually rest with the clinician'; 'no encouragement for self management'; 'the need to fight to retain financial resources'. These are far from encouraging descriptions. The workforce issue is of particular and major relevance in New Zealand, and the problems of recruitment and retention of the *medical* workforce have been recently examined in an OECD/WHO report (Zurn & Dumont, 2008). Clearly workforce issues are not confined to the purely medical sphere but are relevant for all healthcare professional groups. New Zealand has not yet provided an answer to these problems and although it is beyond the scope of our project to suggest what the answers might be (other than involvement of more multidisciplinary working), the issue poses one of the biggest challenges for CCM development in our Islands.

Primary Care Questionnaire – Disease Specific:

The perception within DHBs of provision within primary care of CCM services for our four index conditions is not an encouraging one. Of the four conditions, the best provision seems to be for CVD. This may relate to the strong association between CVD and diabetes, together with emphasis on CCM for diabetes within New Zealand over a longer period of time. However even for CVD the perception is of almost an absence of patient education, of community workers and of outreach (all with median scores below 3) and only limited provision of culturally specific programmes and nurse-*led* clinics. This latter again contrasts with DHBs assertions around cultural safety in Chapter 3. DHBs believe that primary care is performing much better in terms of risk assessment and moderately in terms of the existence of CCM programmes for CVD in primary care, the sharing of records, and single-disease focused case management.

Provision for CCM for CHF within primary care is believed by DHBs to be poor. Though DHBs acknowledge that CCM programmes exist in primary care, the ratings provided for patient education, outreach programmes, shared records, culturally specific programmes, and provision of community health workers were very low indicating that there were minimal or no services within these areas. There was also little provision for nurse led clinics and case management was regarded as having single-disease focus, rather than an integrated approach cognisant of co-morbidity and patient centeredness.

In terms of provision of CCM for COPD in primary care, DHBs perceive the situation to be even worse than that for CHF. Whilst DHBs acknowledge some CCM programmes for COPD do exist in primary care, the mean rating for this variable was only 3.8 indicating a low level of perceived provision. Ratings for provision of support groups, outreach programmes, shared records, culturally specific programmes, nurse led clinics, single-disease specific case management, and community health workers were perceived as poor or very poor. These findings largely accord with the results of a survey by the New Zealand Branch of the Thoracic Society of Australia and New Zealand (TSANZ) conducted in 2006, in which provision was measured against agreed TSANZ standards. The TSANZ survey found that only 10 of 21 DHBs had implemented *any* aspects of a CCM strategy for COPD, and only 12 reported cooperation in *any* COPD service provision between primary and secondary care providers. Interestingly the TSANZ survey also accorded with other aspects of the present report in that it revealed that many DHBs did not audit their services and only a minority measured them against KPIs. It also highlighted issues around staffing, including a low rate of employment of allied health professionals within multidisciplinary teams essential for CCM within COPD (Garrett J, Chen B, Taylor RD. A survey of Respiratory services in New Zealand undertaken by the Thoracic Society of Australia and New Zealand [TSANZ]. The New Zealand Medical Journal, 13th February 2009. Vol. 122. No. 1289).

In terms of Stroke the picture is similar to that for COPD (indeed a perception of lower provision in many areas). It is once again noteworthy that in all of the above areas there was a very wide (in many cases the maximum possible) variability in the perception of provision between DHBs.

In common with DHBs' perception of overall CCM within their remit (Chapter 3), the DHBs' perceptions of diseases-specific CCM services within primary care, if accurate, suggest a "post code lottery" of perceived provision across New Zealand. It is perhaps paradoxically reassuring that in

many areas there was such a wide variability of perception of provision between DHBs – in that some at least perceive provision at a higher level, and might be viewed as islands of relative excellence. The challenge will be dissemination of experience and knowledge from these islands. This will be part of the role of our forthcoming Workbook.

Primary Care Questionnaire – General:

DHB perception of CCM in primary care in relation to processes to reduce avoidable hospital admissions, the use of evidence-based practice, referral processes, equity of health inputs, and continuing education for health care professionals is moderately reassuring, particularly in relation to the last two variables. In addition, though variability in these areas between DHBs was perceived to exist, it was to a large extent influenced by a small minority of DHBs who perceived very low provision. Furthermore, the tendency for some DHBs to rate themselves relatively high in all areas, and for other DHBs to rate themselves consistently low, seen in other areas of the current report, was considerably less marked in this area. These factors suggest more equity of provision across the nation than do the results of other aspects of the current survey.

Methodological Constraints

As discussed briefly in the introduction to the present chapter we are aware the results and interpretations within this report are dependent on the accuracy of DHB perceptions of the situation regarding CCM in primary care, including of course a knowledge of the primary care services they commission and with which their secondary care services cooperate. The questionnaires were completed by DHB Funders and Planners in cooperation with lead clinicians in the relevant areas (a staffing mix likely to possess reasonably accurate perceptions). If however DHB perceptions are inaccurate then this report may have overestimated, or (more likely) underestimated primary care activity and provision. If this were the case however it would suggest a systemic problem of intersectoral understanding which would, arguably, mitigate against effective, coordinated CCM provision for patients with CVD, CHF, COPD, Stroke and indeed other co-morbidities almost as much as would the limited levels of activity and provision highlighted in the report assuming their accuracy. This argument pertains particularly to patient experience at the primary/secondary care interface, most especially around the time of unplanned hospital admission for acute exacerbation of a chronic condition. Although they represent only a very small proportion of the life journey of a person with a chronic condition, acute unplanned secondary care events, and the period immediately before and after these events, are often crucial and life changing (as well as being the most expensive), and thus intersectoral awareness of each others' processes and services is also crucial. Our Literature Review has highlighted the fact that primary/secondary care co-operation is more effective in prevention of unplanned hospital admission than either isolated primary care initiatives or isolated secondary care initiatives, further reinforcing this point. In simple terms: if the DHBs' perceptions contained within this report are accurate there remains much to be done; if they are inaccurate the same is true.

Nonetheless we did attempt to validate DHBs' perceptions around the current report. Our own resource did not allow us to do a full stocktake of all PHOs much less GP practices, NGOs etc, replicating for example the disease-specific stocktake of DHB activity to be reported separately. We

thus, following wide consultation regarding our protocol both within DHBNZ and elsewhere (with our Expert Advisory Group and Governance Group, with our first series of national workshops, and at two pilot sites), chose at the outset to direct our resource towards the area where we were likely to gather the most information. In fact even DHBs, with their considerable resource (relative to PHOs etc) had resource difficulties completing the questionnaires. We did however ask all PHOs to complete the current (generic) stocktake questionnaires. Unfortunately we only obtained responses from 17 PHOs and three Iwi providers (though we did not chase PHOs as 'hard' as we chased DHBs). This small and potentially unrepresentative database (to be reported separately) was not sufficient for validation of DHB perceptions. The level of questionnaire return from PHOs did however reinforce the appropriateness of our initial decision on prioritisation.

The above being said, we are far from claiming that the present report paints a complete picture. We recommend that it be seen as contributing pieces to a large and ever-changing jigsaw. It is unlikely, given the fluidity and complexity of healthcare services, that the New Zealand CCM jigsaw will ever be complete. Indeed it would be unfortunate if it was, as this would suggest an unresponsive system.

REFERENCES

Ministry of Health (2007). Primary Health care: Services to Improve Access. Retrieved July 18, 2008, from http://www.moh.govt.nz/moh.nsf/indexmh/phcs-projects-sia#purpose

Quality Health New Zealand. (n.d). Accreditation. Retrieved July 11, 2008, from http://www.qualityhealth.org.nz/show.asp?pageid=3

Zurn P, Dumont J-C. Health workforce and international migration; can New Zealand compete? OECD Health Working Papers. WHO and OECD (2008).