Southern District Health Board:  
a model of care that integrates  
health and support services in the  
community for the older person

FINAL REPORT
June 2011

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Executive summary

This review of community health services for older people was initiated by Southern District Health Board to address the projected health needs of its older population. Supporting the growth in demand for services associated with a burgeoning older population and associated rise in the number of people with a long term condition is a national and international concern. The aim of this project is to outline a structure that will, within currently available funding, on an evolutionary basis enable services to refocus around the needs of people. The recommended structure involves building on the strengths of primary care and existing community based service delivery to enable improved integration between services, reduced duplication and reduced risk of disconnect between multiple services that may be involved in supporting a person’s care.

Simply put, the recommended approach will mean older people with complex needs will have an identified care manager who has an excellent relationship with their general practice and will work to ensure that all of the care they are receiving is connected. This person will work with a defined cluster of General Practices to allow relationships to develop and will be supported by a locally based team of nursing, allied health and non-government organisations providing support services. Further support will be provided across the nine proposed clusters through a Support unit that will include professional leadership, specialist input from nursing and doctors and provide oversight of care processes and professional development.
While significant this change builds on much of the infrastructure that is already in place in the Southern DHB region. The Rural Trusts already offer an example of community based services that serve as a hub for a number of different professional health services; General Practice already has examples of moving towards individualised care planning, as in the Year of Care project; there are already examples of specialist services, such as geriatricians, that have an excellent consult liaison relationships with the community; there is already a strong base of community organisations already offering community approaches that can be built on. An example is Arai Te Uru Marae which provided accommodation and support for approximately 20 Bhutanese people stranded as a consequence of the recent Christchurch earthquake. Community organisations such as local marae can be further utilised in the provision of community services.

The following key assumptions have been made in developing this report:

- Older people will continue to make significant contributions to communities and family / whānau and this will be important to their health and wellbeing.
- Once an older person has made contact with the health system through any point of access, they will be navigated through the system and no one will be lost between different points of service provision. Health profession referrals, self referral from older people and referrals from family / whānau will all be supported;
- That for most older people, General Practice will be the key ongoing point of continuity and care;
- Where older people are not engaged with a General Practice, a proactive response will be provided to meet their health needs and to reconnect them with a General Practice where possible, which will need to be supported by flexible and responsive access to specialist and support services; and
- A broader team will be established to support those with the most complex or variable needs and
- Existing Māori health providers and local marae will be recognised as important agencies for connecting with individual Māori, whanau and hapu/wider community.

Key elements of the approach include:

- Care Clusters will be developed, aligned to groups of General Practices, pharmacies and NGOs or emergent Integrated Family Health Centres (IFHC), involving Care Managers with cultural competencies, who will be supported by an inter-disciplinary team involving allied health input and Geriatrician oversight.
- Community services such as Home Based Support Services (HBSS), district nursing, Māori mobile nursing services and allied health will be aligned with the Care Clusters to promote integration and provide the platform for developing the model of care across current service areas;
- A Support Unit will be established which will include the following functions: quality assurance, monitoring, education and development for Care Cluster teams, professional discipline leadership, disciplines that have lower FTE numbers, e.g. allied health, dietetics, speech language, and management of low volume specialised programmes;

- Older people with non-complex needs requiring HBSS will be assessed by a registered health professional from within the HBSS organisation in a face to face interview, using the *inter*RAI Contact Assessment. Regular reviews will be undertaken by that same staff member;

- Transfer of care across the continuum of service delivery including between primary and secondary care will be improved. Hospital avoidance services will be developed for older people with acute needs and alongside supported discharge services to assist the discharge process for older people at risk of readmission;

- Targeted medicines review services addressing access, adherence and medication management issues will be provided by pharmacists; and

- Improved primary health care support will be provided for residential care facilities to address acute needs of residents and to prevent avoidable emergency department attendance and acute hospital admissions.

The proposed approach involves over time a significant realignment of service delivery for older people with a community based setting. There is no prescription in this report regarding who should ‘own’ services or who should employ staff. Instead, the aim is to describe the right set of functions and services to best support the ageing population. Suggested key indicators to evaluate the success of older person’s developments are as follows:

- All older people with an identified health need have a needs assessment completed in a timely fashion;

- All older people with an identified health need have an actively managed culturally relevant lifestyle and support plan and these support plans are consistent with funding parameters; and

- A reduced number of avoidable emergency department attendances and hospital admissions for older people.

The level of change noted in this document is significant and presents financial management issues for the DHB. There are obvious priority areas however which would bring immediate increases in quality, flexibility and responsiveness. The change management exercise required to shift the service towards the model described in this document is also considerable and cannot be underestimated. However, the review team were particularly impressed by a number of individuals and the leadership capability that they possessed across both hospital / community sectors. The challenge to the DHB will be to support and mentor these individuals to push through many of the changes noted here.
Key changes that will be seen based on what is recommended include the following:

- The development of at least nine clusters across the district
  
  i. Invercargill City;
  
  ii. Gore and the surrounding area;
  
  iii. Queenstown-Lakes District;
  
  iv. Lumsden, Tuatapere, Nightcaps (Rural Southland);
  
  v. Dunedin;
  
  vi. Taieri / Mosgiel;
  
  vii. Alexandra and the surrounding area [Central Otago];
  
  viii. Balclutha (Clutha District); and
  
  ix. Oamaru (Waitaki District).

  The actual number of clusters would depend on discussions in the rural areas on the degree of collaboration between rural trusts.

- Involvement of general practice, NGO and pharmacy providers as part of these clusters. Development of the model of care within the clusters to support stratified identification of older people at higher risk of acute deterioration and a team based response to supporting people with higher risks.

- Alignment of District Nursing, and Community Allied Health, to these clusters;

- Introduction of acute response services (Primary Options for Acute Care: [http://www.primaryoptions.co.nz](http://www.primaryoptions.co.nz) within the clusters providing alternatives to emergency department attendance and hospital admission.

- Introduction of supported discharge services, which is happening in a number of DHBs as a mechanism to improve transition home and lower rates of readmission and consequential long term care needs.

- Develop primary and community nursing into practice / clinic based nursing and mobile nursing functions, including Māori mobile nursing, and potential extension to navigation activity for people 65 and over with long term conditions;

- Development of NASC function into Care Management delivered in the clusters for people aged 65 and over with complex needs;

- Development of contact centre functionality managing all short term, district nursing and long term support needs, and potentially supporting general practice as part of future IFHC development.
- Introduction of the interRAI\textsuperscript{1} MDS-HC and Contact assessment to support comprehensive assessment for older people;
- Integration of triage and coordination for District Nursing, Short Term Home Based Support and non complex long term home based support;
- Establishment of a Support unit including professional leadership, specialist nursing and medical input, alignment of limited FTE disciplines and establish quality oversight function; and
- Establishment of an evidence-based approach to intake services\textsuperscript{2} based on the use of interRAI assessment tools. This will ensure that long term support and restorative home support services for ongoing care are only delivered when required.

It is expected that these changes will improve the experience of older people when they are accessing the health system. More services will be based locally and once someone has visited their general practice, it will be easier for them to find their way to other services when required. If people are not engaged with general practice then they will be more likely to connect with the mobile nursing functions, including Māori mobile nursing, and part of this response will be to assist them to connect with a suitable general practice. People with complex needs will only need to tell their story once to their care manager. The care manager will then work with the person’s general practice to make sure they are getting the best response possible. People with less complex needs will be able to access prompt efficient advice and support via the phone or face to face when required.

General Practitioners and practice nurses, NGOs, Māori Provider Organisations, and pharmacy will know who their local care manager is and they will be able to call them directly regarding any patient issues. As capacity builds they will also have access to navigators to assist people who have long term conditions. Health and patient navigators are the experts who help patients experience the best of the healthcare system by helping them navigate it successfully (http://patients.about.com/od/Patient-Advocate-Categories/a/Career-As-A-Health-Or-Patient-Navigator.htm)

Support staff including district nursing, allied health and workers from Non Government Organisations, along with Māori mobile nurses from MPOs and community health workers, will also be known within the cluster. Overtime, the role of district nurses will evolve into a mobile nursing function with clinic based activity supporting patients who are able to attend practice clinics. A wider range of service will be available to provide alternatives to emergency department attendance and hospital admission. When people are admitted they will be supported on discharge. These changes will lower admission and readmission rates and leave people healthier and more independent in the community. Home based support services will focus on enabling people and provide an ongoing restorative approach where

\textsuperscript{1} interRAI is currently being implemented in Southern DHB as part of the MoH supported national roll out of the new assessment tools for older people
required. Specialist services will focus more on providing a consultation service to care managers dealing with complex people through supervisory activities and advice giving. Discipline specific clinical leadership will be available district wide along with education and development opportunity for staff.

These changes are designed to address the current and future needs of older people in the Southern DHB region. The recommended changes will provide the basis for supporting the increasing population of older people and prevalence of long term conditions within the resources that are currently available.
Section I: Project plan

1.0 Project outline

1.1 Context

The population of the Otago and Southland region is approximately 280,000 but 23 percent of the people reside in rural areas which are geographically widely dispersed when compared to the rest of rural New Zealand at 14 percent. Of the Southern DHB catchment population 17.6 percent live in Invercargill City, 4.2 percent live in Gore District, 8.0 percent Queenstown-Lakes District, 9.9 percent live in rural Southland, 41.5 percent live in Dunedin City, 5.8 percent live in Central Otago, 5.9 percent live in Clutha District and 7.1 percent live in Waitaki District. A total of 73.8 percent of the Southern DHB catchment population is European. A total of 7.6 percent Māori, 1.5 percent Pacific Island, 3.0 percent Asian and 14.1 percent identify as an 'Other' ethnicity group. Around 14 percent of people in Southland Region and 13.8 percent of people in Otago Region are aged 65 years and over, compared with 12.3 percent of the total New Zealand population. The older population (over 50 years of age) is expected to increase considerably. By 2021, the 85 and older age group is expected to increase by 82 percent, whereas the age groups between 60 and 74 are predicted to increase by 45 to 55 percent. The number of people in Otago aged over 65 will increase by over 10,000 from 2006 to 2021.

Advancing age is associated with declines in physiological reserve and physical functioning and a higher risk of disability and dependency. Consequently, 85+ year olds utilise three times the health care resources of other age groups and the impact of this increasing age group is anticipated to have a considerable impact on health and disability resources. This increase in utilisation is largely reflected by the associated increase in chronic conditions with age. Chronic conditions are ‘the health care challenge of this century’. The World Health Organization (WHO) estimates that globally, 60-75 percent of all deaths are due to chronic conditions. Over the next ten years, the number of deaths attributable to chronic diseases is projected to rise by 17% [1]. The costs of chronic conditions are immense, both to the country and to the individual and family / whānau. International studies show chronic conditions are the leading cause of unequal health outcomes amongst social groups [2]. In New Zealand, it has been demonstrated that chronic conditions contribute the major share of inequalities in life expectancy for Māori, people with low incomes and Pacific peoples.

New models of care are required to improve both the efficiency and sustainability of the health system in Otago / Southland and provide an improved patient focus. Southern District Health Board cannot continue to fund existing service models given the projected growth in the population of older people, many of whom have chronic/long term conditions.

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The Southern DHB District Annual Plan for 2009 / 2010 noted that a principal area of service change for Southern DHB concerns Disability Support Services (DSS) for people aged 65 and over. The new models of care required for people being referred to disability support services must provide integrated health care across the primary and secondary health care spectrum and linking into community resources. Facilitating supported self management through better health literacy is essential. The New Zealand government has indicated that Primary Health Services in New Zealand must be more personalised, closer to home and reduce pressure on our hospitals. Prior to establishing any new patient focussed integrated models of care it is necessary to undertake a whole systems review of services currently available to older people. As part of this work the current models of care need to be reviewed and an analysis carried out on how these services currently integrate, identifying what works well and what doesn’t work well for both the client group to support their independence and also the healthcare providers.

This project required the provision of evidence based recommendations on how health services in Otago / Southland could be reconfigured to provide integrated and supported health services to those older people living in the community. The evidence needed to be a mixture of information gained from consultation with the Southern DHB community and research evidence.

Long term conditions are ‘the health care challenge of this century’. The World Health Organization estimates that globally, 60 to 75 percent of all deaths are due to long term conditions [3]. Over the next ten years, the number of deaths attributable to long term diseases is projected to rise by 17 percent [1]. The cost to a country of long term conditions includes direct costs (subsidising providers, pharmaceuticals, providing income support), underlying costs (capital and equipment), and indirect costs (reduced employment or social productivity). Costs borne by the person with the long term condition and their family / whānau can include direct costs (visits to general practitioners and other health professionals / specialists, medication, aids, modifications, services such as home help, development of physical or mental co-morbidities) and indirect costs (including a loss or reduction in income, lowered participation in work and society, and the physical and emotional toll on family/whānau and other informal carers).

International studies show that long term conditions are the leading cause of unequal health outcomes amongst social groups [2, 4]. In New Zealand, it has been demonstrated that long term conditions contribute the major share of inequalities in life expectancy for Māori, people with low incomes and Pacific peoples [5]. The prevalence rates of long term conditions increases with age. The New Zealand Health Survey [6] estimates that the incidence of long term conditions increases 3.5 times from 50 to 85. Currently, older people (65+) make up 15% of the population in Southern DHB. This is anticipated to rise to over 20% by 2020 [7]. Of more significance however, is the doubling in the numbers of 85+ year olds over the same time period. Figure 1 highlights the anticipated changes in age structure over the next decade. Advancing age is associated with declines in physiological reserve and physical functioning and a higher risk of disability and dependency [8-13]. Consequently, 85+ year olds utilise three times the health care resources of other age groups and the
influence of this increasing age group is anticipated to have a considerable impact on health and disability resources [14].

Whether the current orientation and distribution of services can manage this burgeoning population and the resulting increase in long term conditions is questionable and has been the focus of multiple guidelines [15-21] and reports [15, 16, 22-26] over the past ten years. Addressing capacity issues in secondary care and Aged Residential Care (ARC) is highly pertinent now and can only become more pressing with the changing age structure. Age related long term conditions are an area of focus given the change in demographics however the needs of younger people with chronic conditions such as type 1 diabetes, multiple sclerosis and cystic fibrosis also need to be considered.

For an older person, primary care most often remains the key access point for health care. Redesign of primary care and the wider health system to support primary care activity offers the most viable means to address capacity concerns now and in the future. Indeed, New Zealand based evidence clearly indicates that focusing services for older people within primary care can significantly reduce the risk of institutionalisation for older people [22]. Development of primary care services is a key focus for the current government as articulated in “Better Sooner More Convenient” (http://www.moh.govt.nz/moh.nsf/indexmh/phcs-bsmc). Initiatives associated with this policy have resulted in significant developments in other parts of the country.

Notwithstanding the shift in the actual numbers of older people, there is an anticipated and imminent change in the characteristics of health care consumers [27, 28], with a move to a situation where the majority are more health literate and discerning around health care provision. These combined factors are likely to stretch organisations that are already at capacity and this is on a backdrop of a lower availability of health care workers [29] making it more efficient to link to established community groups, such as local iwi and marae, building on existing infrastructures and resources.

1.2 Methodology

The review team undertook on-site visits with focus groups and interviews over a three month period (February 2011 through to April 2011). Discussions were semi-structured based on identifying how services were organised, what people felt was working well and not so well, and what options people saw for the future to improve service provision. Material from these meetings were analysed to identify key issues, as well as possible drivers and enablers for change. The findings were then integrated with available evidence. Key directions were presented to a combined stakeholder forum in April and feedback incorporated. This report outlines the issues, the key drivers and enablers for change, and then outlines a proposed model of care.

1.2.1 Māori engagement and consultation

Specific attention has been paid to engagement with Māori. Dr Sheridan is of Ngapuhi descent and because of her existing networks and experience in working with Māori primary health care provider organisations, particularly those providing nursing services, was
responsible for consultation with Southern DHB Māori health provider organisations. Other members of the team, Dr Stephen Jacobs, Professor Matthew Parsons and John Baird have strong records of prior relationships with Māori health providers and consumers. All have worked on a number of DHB projects involving Māori such as the ‘Tairawhiti Services for Older People Project’ and have established links with Māori research organisations, such as The James Henare Research Centre, The University of Auckland.

On 4 April 2011, Dr Sheridan was welcomed onto Arai Te Uru Marae, Dunedin and the following day, 5 April, at the Southern District Health Board, Invercargill. Dr Sheridan was assisted by the Southern DHB Māori General Manager, Donovan Clarke and Acting Portfolio Manager, Health of Older People and Disability, Claire Lord. Māori health providers / health workers and community people, including a number of older adults who were service users contributed to the kanohi ki te kanohi (face-to-face) korero/talk undertaken using a facilitated focus group approach. The central purpose was to find out from consumers and providers about their experiences of service provision and to identify issues that extended to the wider Māori populations served by the DHB.

Specifically the review team were interested in what worked well, why that was so, and the degree of sustainability of successful interventions and processes. Notice was also taken of what was less successful, why, and whether any action had been taken or needed to be taken to address this. Thoughtful ideas and future solutions were presented in response to problems faced. These conversations indicated Māori providers and consumers were concerned and engaged in Māori health, placed high importance on integrated service provision and were willing to work in partnership to implement future health care services that demonstrated cultural relevance and were safe for Māori.

1.3 Project objectives

The government has indicated that Southern DHB is expected to provide better, sooner more convenient health care for the population of Otago and Southland. This project seeks to provide the evidence to implement innovative and affordable models of service delivery to people with long term conditions and for older people.

This new model of service delivery is expected to reduce avoidable hospital and residential care admissions by providing a supported and integrated health service to older people and those people with long term conditions living in the community. It will also reduce the dependence of those living with long term disability and long term conditions, ensuring interventions and services can deliver effective outcomes. This report provides recommendations on where these health services are best situated to enable improved client focussed models of care aimed at better health and socio-cultural outcomes for people.

1.3.1 Scope

This review examined against current evidence based best practice the health services delivered within the Otago and Southland regions to older people. Information about these
health services was gained through consultation with Southern DHB stakeholders. In particular the review included:

- Timely, meaningful and inclusive engagement of all Southern DHB key internal and external stakeholders (stakeholders were identified by Southern DHB), including Informal and formal (contracted) health and disability support services;
- Gaining an outline of current activity including strengths, weaknesses, gaps and opportunities;
- Assessment of Southern DHB urban and rural populations;
- Consideration of the place of three existing DHB specific programmes, namely: Community First, Enliven and Individualised Funding in the new model of care;
- Review of current models of care including service coverage, access and geographical placement of services; and
  - Review of utilisation data sourced from Sector Service and DHB payment systems.

Those services examined include:

- Primary care including General Practice and Pharmacy
- Southern DHB District Nursing Services (including short term Home Support);
- Needs Assessment Service Coordination Services;
- Kaiawhina and Kaumatua services, including the two Māori focused providers in Otago, Arai Te Uru Whare Hauora and Tokomairiro Waiora, and the one kaupapa Māori service in Southland, Awarua Social & Health Services;
- Home Based Support Services;
- Community First, Enliven and Individualised Funding; and
- The 11 rural health trusts within Southern DHB, of which five are rural hospitals including Waitaki, Clutha, Maniototo, Gore and Dunstan Hospitals.

This review examined the current models of care being delivered within Otago and Southland, and recommends a new model for more effective service delivery that is inclusive of all these services across the continuum of care while also addressing the current health inequalities. The recommendations describe where these services are best situated and include how this new model of care can enhance the development of extended Primary Care teams within expected future developments of integrated Family Health Care Centres. The project proposes an action plan for achieving service reconfiguration and supporting its implementation with training and mentoring.
1.4 Implications for Māori, other high needs and reducing inequalities

The recommendations aim to remove inequalities arising from differential access, assessment and treatment.

1.5 Assumptions and constraints

- Models of service delivery changes are required to meet Government priorities and to provide services that address current health inequalities.

- Appropriate configuration of services across community, including marae and Iwi communities, primary and secondary care will be identified by this project.

- All new models of care will be required to provide culturally appropriate health services to address the current health inequalities in Otago and Southland.

- Currently disability and health services provided to older people and those with chronic/long term conditions in the community are siloed, lack co-ordination and common goal setting.

- Many older people and people with chronic / long term conditions are unaware of the services available to assist them to remain healthy and safe in the community.

- Supported self management for people with long term conditions and older people will improve their health literacy.

1.6 Deliverables

- The development of clinically and financially sustainable models which support best practice, principles of restorative care, integrated services, person centeredness and the continuum of care.

- Provision for the new models of care to be implemented in parallel with other DHB activity i.e. Southern DHB Health of Older People planning, implementation of the InterRAI and other local and national related activity.

- Models of care that support the development of a community building approach, with strong integration between community based, and often well established, organisations and new community initiatives, primary health care and specialist services.

- Models of care that meet government priorities and will work within the Southern DHB and New Zealand context of health service delivery.

- Models of care that are culturally appropriate to Māori and other communities/peoples that comprise the Southern DHB region.
Section II: The current picture

2.0 Key drivers and enablers for change

2.1 Rural communities

Older people rely heavily on their community, as is evidenced in Southern DHB regions by older Māori living in poverty and rural isolation but describing the importance of belonging to marae-based communities. Delivering services that support ageing in place can be difficult in rural areas for conventional health providers as there are substantial challenges in delivering services outside the main centres. It is particularly difficult for people whose family has left the area. In smaller towns, community fatigue is an issue when people who are not family are supporting an older person. For example, in Southland District the demographic pattern reported in the consultations was that there is an older ageing group and a younger group of families with young children. There are with fewer people in the middle age groups as older children born in these areas move out for higher education and work opportunities. This means family supports may not be available for people at discharge, with the result that length of stay may be increased as reported in Southland. Transport to access services is a major issue for people living in rural areas. There is also a shortage of heath resources in the community, particularly physiotherapists and occupational therapists, further contributing to people potentially being kept in care longer because it is known that they won’t be able to access rehabilitation support at home.

There is increasing concern regarding the availability of an appropriate workforce. A number of factors combine to cause workforce shortages. Apart from the demographic issues of an aged population, there is significant competition for the unregulated workforce in the rural areas from tourism, agriculture and farming in all of which wages are higher.

In spite of these disadvantages, the rural communities were clear that some of the connectivity issues amongst local services that exist in urban settings do not apply in rural areas. There are strong networks operating between people, and older people and people with long term conditions are frequently well-known to clinicians and community health workers in the area. Workers (district nurses, Māori mobile nurses, practice nurses, general practitioners, allied health, community health workers) also connect and communicate outside organisational boundaries in ways that don’t often happen in large urban settings. Building on community linkages to strengthen established networks is a recognised element of chronic care management (30).

However, there are issues that clinicians in the rural areas think need to be improved. It was reported that improved access to specialist services for older people and better connectivity is required. There was concern expressed regarding the availability of specialist clinics in the community, which increases the need for people to travel to access services. Discharge summaries are often received too late to be useful or clinicians in the community have
difficulty deciphering the writing on the summaries and have to spend time contacting the author for clarification. A strong theme from the consultation concerned the need for enhanced alignment of services for older people across primary, community and secondary care.

### 2.2 Primary Care

The 2007 National Health Care Committee report notes that chronic care models require two major foci. The first is proactive support for people in a community setting, emphasising the central role of primary health care. The second looks for a redesign of the health system to deliver a continuum of care across hospital and community-based services. Both areas of change are required to successfully address issues for people with chronic conditions, in particular those who have the worse health outcomes and are the least well served. It is clear that in Southern DHB there are proactive initiatives underway in both rural and urban settings, for example ‘The Year of Care programme’ in Dunedin. However, during the consultation process it emerged that linkages between primary care, community based services and secondary services required development to adequately provide clients with an integrated efficient and fully effective service. Mornington Health Centre operates a team approach, with a range of nurse delivered services that enable home visits, a courtesy coach from free transport to the practice, guidelines and pathways for use in the home, and good linkages with geriatricians. As with ‘The Year of Care’, there is a willingness to work more closely with NGOs and home support providers, but there appeared to be a lack of coordination and structure to enable this. Nga Kete Matauranga Pounamu, Charitable Trust, Invercargill, described a coordinated transport service for older adults living in rurally isolated areas that had been successful. The driver was trained in first aid/CPR, handled difficult situations safely, and worked alongside a range of agencies. This service was highly rated by older adults and community workers but had been terminated six years earlier.

Primary care practitioners have a number of issues that they grapple with. Access to diagnostics is an ongoing issue. GPs also reported experiencing a lack of immediate response from secondary care to referrals and enquiries. This has lead to an increased use of Emergency Department (ED) in some areas as there is a guaranteed response from the service. ED is thus acting as a back-up to primary care clinicians. ED is also used by people who cannot afford GP visits. For example, in Invercargill, there are 32,000 ED presentations per year, when benchmarking nationally would predict 24,000. Some presentations to hospital and ED might also be prevented by implementing an acute diagnostic and treatment programme such as Primary Options for Acute Care (POAC) (http://www.primaryoptions.co.nz) which would allow primary care to assess and treat a host of conditions in the community and avoid hospitalisation altogether.

The Year of Care programme has been operating in three Taieri general practices and is reported by all consulted as being a successful innovation within the primary care context. The programme uses Care Plus funding and aims to keep older people at risk at home through a proactive response, with the aim of reducing adverse outcomes and lowering secondary care utilisation. It involves targeted input using nurses, and has shown a positive
impact on reducing ED visits. However, the programme could be developed further to provide connection to other health services. Better integration with a broader spectrum of services for people living at home is seen as a way to improve the outcomes of this programme.

There was comment from a number of stakeholders concerning the potential for pharmacies to support patients in the community. Individuals use pharmacies as a key point for advice. Pharmacists were clear they feel insufficiently involved and not part of an integrated health team unless involved informally through good relationships. An example of where pharmacists could be utilised appropriately is though medication review. Pharmacists also report real frustration with the illegibility of scripts, particularly from junior hospital based staff. This presents a risk and is time consuming to clarify.

A major issue facing Southern DHB primary care is the availability of a health workforce, in particular GPs. This is particularly the case in Invercargill, where some of the older GPs wish to retire but have been unable to sell their practices. New models of primary care that are attractive to younger doctors are necessary. These models also need to be attractive to a more highly educated nursing workforce, encouraging the full development and use of their capabilities.

### 2.3 Secondary care

The Base Hospitals and the Rural Hospitals offer different services, with insufficient coordination with each other. There are ongoing communication issues between secondary and primary care which clinicians in both services see as needing improvement. For example, there is a lack of implementation of care pathways for patients transitioning between secondary and primary care, and also from primary into secondary care. Clinicians in both services see the implementation of care pathways as desirable.

The Otago based Specialist Older Peoples Health Community Rehabilitation team is piloting an Early Supported Discharge service. This is providing support for early discharge from some acute wards and the Emergency Department. Geriatricians are seen as being available to primary care clinicians for support and advice in general, although Southland reports less geriatrician resource than other areas.

In Southland, the length of stay in AT&R in Southland Hospital was reported to be between 12 – 21 days in 2010. Patients are sometimes kept in hospital because of concerns that if they are discharged they will not be safe in the community as there do not appear to be sufficient resources to provide satisfactory support. The ED was also reported to be very busy, with the belief being that this is partly due to a lack of community based resources. This view is supported by some GPS who advise patients to go to ED as they will get quicker service there than through a GP referral. There needs to be more availability of secondary services, such as specialist advice, physiotherapy and occupational therapy, into the community as people often present to secondary services too late which has a negative impact on ED visits, admissions and length of stay. A wish was expressed by Southland clinicians to be able to formalise a team able to provide 6-8 weeks Allied Health intensive
follow up post discharge for those appropriate patients. Currently they are limited to 1x RN and community OT, PT and SW with occasional doctor input as individual services.

While there are examples of very good interconnections between individual hospital based clinicians and departments with the rest of the hospital, primary care and the community, there is an underlying dichotomy in the perception of secondary care by the primary and community care services, particularly in the rural areas. Alongside the comments on very good liaison and consultation support there were perceptions that some parts of secondary care operate on the basis that they know best and have a specialist expertise which means that everyone must come to them. Some parts of Dunedin Hospital were perceived to have a poor relationship with other parts of the hospital and the primary care health service, with poor communication and sharing of information. An example of this is patients being discharged with insufficient development of care plans or transfer to care to the community they are going home to.

District nurses are seen as vital health care providers in the community, particularly in the period post discharge. Although they are based in the hospital, they estimated in the consultation meetings that 40% of their referrals are from primary care. Due to the large number of primary care referrals, the belief is that a closer integration of district nursing with other primary care services would be beneficial.

Primary care clinicians believe that improvements in patient outcomes and reductions in service usage can be achieved through a shift from a focus on specialist outpatient visits to a greater consultation, liaison and virtual advice capability provided by secondary to primary care. This will require hospital based system to change to ensure that individual clinicians work within a patient pathway that considers the patient’s life, without just a focus on the time of their particular engagement with the patient.

### 2.4 Mental health of older people services

The mental health of older people service in Otago is a separate service that has managed dementia patients for many years. The service manages people with complex behaviour issues. This service employs a Nurse Practitioner who provides specialist assessment, intervention and education to the primary sector - particularly to residential care facilities. This has proven to be very successful with acute admissions reduced significantly.

The mental health service in Southland has recently taken over responsibility for dementia care. This is in conjunction with the AT & R service. The general view of the service is that there is untapped potential for it to provide more appropriate care in a more flexible way than at present. For example, there is a need for short term high packages with a rehab focus that tail off over time, but the service is currently unable to supply these. The service is also unable to provide tailored plans for people living in their own homes. There is a clear feeling that the service could be more creative in their response to the varied needs in the community and that a more flexible approach would reduce the current pattern of people receiving intervention too late and ending up in acute care. In Southland there appear to be
less specialist staff available to assist with mental health issues. A consistent model needs to be developed across both regions

2.5 Disability support services

There is poor integration between disability services and primary and secondary care across the district. The existing Southern DHB home based care is the historical task based, ‘do for’, fee for service model that a number of DHBs are moving away from. This means there are significant issues around the availability and training of a sufficient and appropriate workforce to meet future needs. Providers and workers also struggle to cover the travel costs for delivering services across the extensive rural areas in Southern DHB. Evidence indicates that in order to be sustainable and to improve outcomes for consumers future home based support will need to be modelled on flexible delivery of services that support people to maintain their mobility and social connections and assist them to self manage.

At the same time, there are Home Based Support Services (HBSS) providers within Southern DHB who operate nationally and therefore have considerable experience of alternative models of care that have been implemented elsewhere. There is also the Community First/Enliven programme, a restorative model of home support that has been operating successfully in Dunedin for a number of years and has demonstrated that a restorative service can have a positive impact on client outcomes while also reducing staff turnover and increasing staff competency. In terms of the availability of workforce, the common view that there is not a motivated workforce available for home support services is not supported by Presbyterian Support experience. It is also not supported in the small provincial areas such as Alexandra. There may be significant differences though between Alexandra and Queenstown with its greater tourist industry.

There was significant comment in relation to the recent review of people receiving household management. Anecdotal concerns were expressed about people who had struggled following service removal although it was noted without exception that re-referral to NASC had generated an appropriate response. This left some with concerns that there may be other unidentified people who have not received follow up. Data analysis were undertaken as outlined in appendix one to identify any concerns. At this point there is no evidence from the data (See Appendix One) of any reactive pattern of increased personal care or residential care entry. It is suggested that this could be checked again once a longer period has passed.

There was a commonly stated opinion that much residential care entry is due to social isolation. There was also a belief that day activity services would be a valuable service for carers and care recipients alike, and might help some of the isolation issues. The term “day care” was disliked because of its connotations – the link with the term “child care”. However, existing day care services in the district are mainly attached to residential care facilities and not well linked with other community organisations. The belief is that day care delivered either in people’s homes or as part of community organisation involvement, including marae-based initiatives, would help to maintain or increase consumers’ existing social contacts and activities.
Aged residential care (ARC) providers were proud of their work, but seeking to understand what they could do to support an “active ageing” model. There are examples of ARC facilities supporting older people to recover sufficiently that they are able to be discharged home. This is an example of transitional care. In the recommendations it is suggested that the Waikato DHB current programmes in this area be explored to assist with further developments in Southern. There are also examples of where the recovery has happened but by then the person’s house has been sold, so they have nowhere to be discharged to. From within the hospital and primary care sector, there was confusion about what exactly ARC are expected to provide. There is a general view that ARC should be providing more services within their funding envelope, e.g. a dietician or rehabilitation. However, ARC providers consider that funding is not sufficient to provide such services over and above the ARC national contract. ARC providers also have sustainability issues with a high turnover of staff, with large variability evident across the district in the quality and availability of allied health. However, the general view is that there is untapped potential for ARC providers to deliver a wider range of services as part of care clusters, and that this would be possible within a different model of care.

2.6 Needs Assessment and Service Coordination

The Needs Assessment and Service Coordination (NASC) service in Southern DHB has recently moved to a single consistent NASC service operating from two sites, and is beginning the introduction of the interRAI assessment tool. An InterRAI project manager has recently been appointed. For many, there was a “wait and see” feeling. There are widely held concerns over the recent reductions in HBSS services, but during that process the NASC service was seen having responded appropriately. People had a “let’s move on” approach. In general discussion, there was a clear understanding of the difference between assessment and service coordination. The success of the centralised NASC service was dependent on the relationship between the service provider and the NASC personnel. Particularly in the rural provincial regions, there was a sense that the primary health and community workforce knew the client better than a NASC person could, so there was some sense of overlap of roles. This was particularly so when the older person was not stable, so that their day to day life needed monitoring, with occasional entry into and discharge from hospital. The feedback particularly from Southland was that the current NASC service was responsive. The DHB is in the process of merging the Current Community Service Coordination Centre for short term community based care with the NASC to achieve a single point of entry and management of community based care and support. This will be called the Community Coordination centre.

2.7 Community Based NGOs

There are a number of strong community organisations that have a long history in the Southern DHB district. These organisations want a better engagement with the DHB, with improved communication and increased opportunities for collaboration. The NGOs have
concerns around the ageing of the volunteer population, but are able to give accounts of successful initiatives that have provided opportunities for social engagement and activity for both volunteers and care recipients. For example, Age Concern successfully offer a peer delivered Tai Chi fall prevention programme. This has engaged over 80 older volunteers in teaching other older people, and thereby created a social network. Age Concern themselves have been delighted by the success of this programme in building a community. They also offer a Blokes Sheds programme. NGOs in the district believe they offer the DHB the potential for sustainably improving social connection and mobility outcomes for the population working alongside health professionals where necessary, but freeing up those health professionals for other work. They would like to work with the DHB to develop these programmes through a community building approach. Concerns were also expressed about the knowledge of referrers around the range of services that are available and the marginal visibility provided particular in hospital settings. Community groups were keen for more to be known about the support they could offer.

In the rural areas, the Rural Trusts operate as community NGOs, and already have strong linkages with their communities. They are seen as being owned by their communities.

2.8 Māori

In the consultation, Māori identified issues of poverty, chronic illness and disability, elder abuse and isolation. Approximately 12.5 percent of Southland are Māori compared to 7.6 percent across Southern DHB. A high proportion of these are whanau waka, who went there to work in the freezing works, fisheries, etc, and therefore do not have family or whanau supports in place. Those who have families present also lack support, as increasing numbers of families must have all adult members working. Consequently, there are an increasing number of kaumatua and kuia who have limited or no supports. Isolation is exacerbated for Māori because of lack of transport and as a result Māori experience limited opportunities to engage with their community and reduced access to services. The risk of this is increased by the low number of Māori health workers available. However, there are a number of engaged marae in the area which are inclusive and welcome Māori from other areas. Existing services, such as transport enable connectivity and supports relationships, but have restricted funding. Māori health workers are central to connecting isolated older adults with health services and maintaining community networks. Māori see appropriate support delivered in the home and on marae as a solution to meeting their needs.

Data from Māori consultations is combined. Approximately 40 Māori Health Providers (MHP) and older people / consumers participated at Arai Te Uru Marae, Dunedin and about 20 MHPs at the Southern DHB, Invercargill. Key concerns include:

- Poverty and related hardships, such as food, heating and medical/pharmacy costs;
- Chronic illness and associated disability;
- Social isolation, loneliness, and related lack of (public) transport;
- Reduced access to services, and in particular the ‘right’ support at home;
• Reduced access to opportunities that allow older Māori to continue to contribute to their communities – TRANSPORT a barrier to participation and a cost to those who are poor;

• Elder abuse within family homes; and

• Health services (and funding) centres solely on individuals, with insufficient inclusion of whanau/families.

2.9 Individualised funding

Southern DHB has had an Individualised Funding programme operated by Standards Plus since 2008. A recent review established that the existing clients are very pleased with this approach. Individualised funding fits philosophically very well with an approach to supporting people that is focused on assisting them to remain independent and the information on the Standards Plus model shows that it works well for those clients involved. Availability of a supportive oversight function is seen as critical to the success of this approach and Standards Plus have played a key role in this regard as part of the programme.

Although the review team recognise the successful nature of this innovative initiative, given the level and depth of work undertaken by other DHBs (Auckland, Canterbury, Capital and Coast) into Case-mix funding, it is not prudent at this time to explore expanding this funding approach in the absence of a wider and more complete review.

2.10 Dementia care

The issue of how to care well for people with dementia was raised at a number of the meetings. This echoes concerns being expressed around the world: “Dementia is poised to become the dread disease of the developed world in the 21st century” [30, p195.] The prevalence of dementia in New Zealand was estimated to be around 38,000 people in 2002 [31, 32], but has risen to 40,746 people in 2008, with a projection of 74,821 people with dementia in 2026 [33]. The prevalence of dementia in the 65-69 age group is 1.1 percent, increasing to 4.7 percent for the 75-70 age group and 15.2 percent for the 85-89 age group [34] showing a strong correlation with age. It is well known that most older people wish to remain within their own environments [35], and people with dementia are more able to cope within a situation which is familiar to them. However, there are a number of different factors which influence the ability of a person with dementia to remain at home: the availability of informal support, community services, and the extent of the impairment including behaviour and psychotic symptoms [32]. Dementia has a huge impact on the person’s well-being as well as his/her social environment [36], consequently the services provided to people with dementia and their families are crucial to the well-being of both.

Families and people with dementia generally prefer the option of home based care, which can eliminate or delay the need for more costly levels of health care [37]. Many argue that
the most appropriate option for people with dementia is to remain living in a familiar environment, [38], rather than to relocate to a residential care facility, which can be associated with multiple negative outcomes, such as wandering, social isolation, increased risk of falls, incontinence, and aggressive outbursts [39]. However for a person with dementia to remain living at home there are stresses that may become untenable for the caregiver in terms of wellbeing and financial sustainability. Research around optimising care for people with dementia to remain at home is scant. However, internationally, there are examples of care practice associated with positive outcomes [40]. However, support for people with dementia and their families involves the integration of services in the community and home [41].
Section III: Recommendations

3.0 A description of the model of care

3.1 Introduction

Although this review has focussed on older person services, the fact that over 50 percent of people over 75 years [14] have three or more long term conditions means that it is important to not only acknowledge but moreover build on existing successful long-term condition management programmes. All New Zealanders are affected by long-term conditions, whether as carers for family and whänau, taxpayers, health professionals or managing their own chronic condition. Mismanagement of chronic conditions is the leading cause of hospitalisations, accounts for 80 percent of all preventable deaths and is estimated to consume a major proportion of our health care funds [15]. Chronic conditions are also a barrier to independence, participation in the workforce and in society, social and economic costs that are yet to be calculated as a nation. Chronic conditions account for a higher proportion of illness and deaths among Mäori, people on low incomes and Pacific peoples than among the general population. The need to reduce health inequalities for these populations remains urgent and is a priority. For example, from 2007 to 2011, the prevalence of diabetes is predicted to increase by 148 percent among Pacific peoples and 132 percent among Mäori. Work to prevent and manage chronic conditions should ensure outcomes for groups at greatest disadvantage improve earliest and most significantly. If this approach is not taken, health inequalities are likely to grow.

The most widely known framework for providing care to people with long term conditions is the Chronic Care Model, first enunciated by Wagner in 1998 [42]. The model attempted to draw together all the activities being used up to that time to care for patients with chronic illnesses and for which there was some evidence of effectiveness. The model describes an informed and activated patient in partnership with a prepared and pro-active health care team. It consists of six components; community resources; the healthcare system; patient self-management; decision support; delivery system (re)design; and clinical information systems. A recent meta-analysis of 112 studies concluded that interventions that contain at least one Chronic Care Model element improve clinical outcomes, processes of care and quality of life for patients with chronic illnesses [43]. Nevertheless, the six components are each relatively broad, and what might be classified as, for example, decision support in one programme might be very different from decision support in another programme. Examples are shown in the following table. Such elements are intrinsic to the development of the Model of Care within Southern DHB.
Table 1: Strategies included within each category of the Chronic Care Model (From Tsai 2005 [43])

<table>
<thead>
<tr>
<th>Delivery System Design</th>
<th>Decision Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care management roles</td>
<td>Institutionalisation of guidelines/prompts</td>
</tr>
<tr>
<td>Team practice</td>
<td>Provider education</td>
</tr>
<tr>
<td>Care delivery/coordination</td>
<td>Expert consultation support</td>
</tr>
<tr>
<td>Proactive follow-up</td>
<td>Clinical Information Systems</td>
</tr>
<tr>
<td>Planned visit</td>
<td>Patient registry system</td>
</tr>
<tr>
<td>Visit system change</td>
<td>Use of information for care management</td>
</tr>
<tr>
<td>Self-management Support</td>
<td>Feedback of performance data</td>
</tr>
<tr>
<td>Patient education</td>
<td>Community Resources</td>
</tr>
<tr>
<td>Patient activation/psychosocial support</td>
<td>For patients</td>
</tr>
<tr>
<td>Self-management assessment</td>
<td>For community</td>
</tr>
<tr>
<td>Self-management resources and tools</td>
<td>Health Care Organization</td>
</tr>
<tr>
<td>Collaborative decision making with patients</td>
<td>Leadership support</td>
</tr>
<tr>
<td>Guidelines available to patients</td>
<td>Provider participation</td>
</tr>
<tr>
<td></td>
<td>Coherent system improvement and spread</td>
</tr>
</tbody>
</table>

Indeed, the Chronic Care Model may best describe primary care. The World Health Organization (WHO) adapted the model to develop the Innovative Care for Chronic Conditions Model which focuses more on community and policy aspects of improving chronic care. There is always a challenge to match the needs of different population groups and invariably health care delivery is a compromise. The model of care is no exception, as it attempts to meet the needs of all people with long term conditions as well as older people who often have multiple co-morbidities. In this instance however, the key recommendations from evidence for optimal long term condition management as well as meeting the needs of a growing older population is similar. The model of care described here therefore blends these two elements. The service developments described here are underlined and emphasised by the need for services to be integrated, interdisciplinary, individualised and localised. The model will provide the building blocks for consumer co-creation\(^3\) and positive ageing [18]. All people with long term conditions as well as older people will have access to health professionals who know and work as a team in collaboration with their General Practitioner, in their local community. People with long term conditions and older people will have access to services which focus on promoting and

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\(^3\) Co-creation is the practice of health care delivery that is collaboratively developed and delivered by health professionals and consumers together.
supporting active recovery and rehabilitation and preventing unnecessary loss of independence within the wider picture of the need for long term condition management. Health services for people with long term conditions and older people in the Southern DHB region will be guided by the principles described in Table 2:

**Table 2: Principles guiding the model of care in Southern DHB**

<table>
<thead>
<tr>
<th>Descriptors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Information systems will be utilised to appropriately share key data on individuals and populations;</td>
</tr>
<tr>
<td>2  Proactive case finding;</td>
</tr>
<tr>
<td>3  Systematic and multidimensional assessment of health and social care needs;</td>
</tr>
<tr>
<td>4  Risk stratification to provide appropriate and timely intervention;</td>
</tr>
<tr>
<td>5  Involvement of consumer and their whānau / family in care;</td>
</tr>
<tr>
<td>6  Active coordination / navigation using a named Care Manager;</td>
</tr>
<tr>
<td>7  Inter-disciplinary teams will be locally based and when required, work together to meet the needs of the individual and their whānau / family;</td>
</tr>
<tr>
<td>8  Specialist and generalist care will be integrated across organisational boundaries;</td>
</tr>
<tr>
<td>9  Services will aim to minimise unnecessary visits and admissions to hospitals; and</td>
</tr>
<tr>
<td>10 Care will be provided in the least intensive setting.</td>
</tr>
</tbody>
</table>

Drawing on the models of international best practice outlined above, the key elements of the services proposed for the Southern DHB region are:

- Comprehensive assessment;
- Enhanced care management functionality;
- Active client management and individualised lifestyle and support planning;
- Integration across health and social care;
- Clinical leadership and workforce development; and
- A community development approach, assisting local communities to develop support networks

The proposed model has four distinct aspects, Care Clusters of health professional teams aligned to General Practice, Pharmacy, Māori Provider Organisations and NGOs that are locally based or are emergent Integrated Family Health Centres (IFHCs); development of a Support Unit; consolidation of triage and coordination functions; and engagement with community organisations, including local marae.
3.2 Assessment systems

Assessment for people with long term conditions who are not older tends to specific to the disease state in questions. For instance, a 45 year old man with Heart Failure may be assessed using a tool such as the Self Care of Heart Failure Index, whereas older people, due to the increase in co-morbidities with age and increase in frailty, require a more comprehensive assessment approach. Comprehensive health assessment covers several domains of health and welfare including: physical, psychological, social and cultural, community support and functional status and is beneficial for older people as their problems span broad areas of need [44-47]. Assessment leads to recommendations for interventions appropriate to the older person’s needs. To be effective, assessment must be followed by implementation of recommendations [48]. Comprehensive assessment and management have been proven for older people [49, 50].

Specific to older people is the development of interRAI, a United States based not-for-profit organisation with membership from notable international gerontologists and clinicians. The organisation has developed and implemented a range of assessment tools specific to older people. Following a systematic review of the literature on comprehensive geriatric assessment instruments [51] and trial implementation and evaluation across six DHBs [52], two tools (MDS-HC or Minimum Data Set Home Care and Contact assessment) are being supported by the Ministry of Health for national implementation. Carpenter [53-55] reports that the tools have significant benefits in that:

- They facilitate the consistent and comprehensive assessment of older people;
- The use of the tools support assessors to consider the whole person;
- Care is based on accurate, reliable information;
- The results of the assessment assist clinicians in identifying problems and potential for improvement; and
- Inter-disciplinary staff involvement in assessment and care planning is improved.

Further, the data arising from the assessment facilitates the monitoring of indicators of quality of care, which in turn allows for evaluation of impact on case mix and resource management as well as clinical effectiveness.

The MDS-HC is electronic and is undertaken with the older person and their whānau / family through a face-to-face interview, where as the Contact assessment is designed as a first contact assessment and can be undertaken via telephone.

The Ministry of Health funding that supports the national roll out of interRAI has become available to Southern DHB in 2011. The adoption and utilisation of the two tools will support a standardised response within Southern DHB to the assessment of older people, plus it will also provide the basis for streamlined responses to service access for older people and for those assessed as like age and interest.
3.2.1 Proactive case finding and screening

For some time, it has been recognised that considerable unmet need amongst older people and indeed people with long term conditions remains unassessed and unidentified [56-59]. This issue has subsequently been the subject of 41 trials of proactive home based assessment, 15 systematic reviews and four meta-analyses [49, 60-62] and is not yet settled as evidence from systematic reviews have been mixed [63, 64]. When results of individual trials are combined, meta-analyses show the positive impact of in-home assessment such as reduced mortality [60] and admissions to residential homes [60, 61]. Indeed, since the 1990s, routine visits to people aged 75 and over have been publicly funded and required of health professionals in the United Kingdom, Denmark and Australia. However, despite the positive evidence, at least one series of large trials not included in the meta-analyses have resulted in increased placement in residential care after health assessment and case management [65]. The Australian Coordinated Care Trials enrolled over 1000 patients with long term conditions and / or complex care needs and tested a variety of assessment and care coordination models of care. Overall, there was no significant difference in the cost of medical care, hospitalisation rate or mortality [65]. Similarly, another study of 1000 Australian Veteran beneficiaries showed increased admission to nursing homes, without effect on hospital admissions or mortality after three years of comprehensive assessment [66].

More pertinent to the Southern DHB Model of Care is whether it may be possible to identify those in special danger of deterioration [57], in other words, target assessment activities to those in most need as opposed to offering assessments to everybody (targeted assessment vs. universal assessment). Indeed, this question was addressed by a recently published MRC assessment trial from the UK. Over 40,000 people over the age of 75 years were followed for three years. General Practices were randomised to undertake comprehensive assessment for all, or target assessment using a two-stage case-finding process. Older people were assessed based on responses to a lengthy self-report questionnaire [67]. There was no benefit to universal assessment over a targeted approach, except a very small improvement in quality of life.

The evidence to date for proactive case finding therefore remains mixed and on the basis of this very significant unanswered question, The Health Research Council funded BRIGHT, a large trial of proactive case finding across New Zealand due for completion in 2011, which will provide answers within the New Zealand context around the value of screening amongst older people. In the face of these factors, it is sensible to await the findings of BRIGHT prior to supporting implementation of any form of pro-active case finding. However, building a model of care that involves creating a community of support around an older person means that older people are known to the community and that there is someone in the community who is aware of that older person’s health and wellbeing. This means that older people who need assistance may be more easily identified. Those older people may also more readily agree to assistance because they may already know and trust the people offering it.
3.3 Care referral & coordination

There are core functions that require management and coordination that can most efficiently occur at a central level. How these activities connect with primary health centres, rural trusts, and community providers is a key discussion. The Model of Care presented here outlines the approach and this can be configured either as a standalone unit within Southern DHB or as a shared role with primary and community care. The recommendation of this report is that care referral and coordination functions be devolved as much as possible to the communities the client lives in, with oversight from a central DHB carer referral and coordination centre based within the Support Unit (See 3.5 below).

Care referral and coordination will focus on five pertinent functions for older people and those with long term conditions:

Table 3: Referral and Coordination functionality

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triage</td>
<td>Referrals for older people referred for disability support</td>
</tr>
<tr>
<td>Short term care assessment &amp;</td>
<td>Access point for clients requiring District Nursing and short term home care</td>
</tr>
<tr>
<td>coordination:</td>
<td></td>
</tr>
<tr>
<td>Non-complex assessment (interim)</td>
<td>Of older people (or like age and interest) using the interRAI Contact tool,</td>
</tr>
<tr>
<td></td>
<td>via telephone(^5) by health professional assessors. It is recognised that</td>
</tr>
<tr>
<td></td>
<td>this is less than satisfactory and must be viewed as an interim step prior to</td>
</tr>
<tr>
<td></td>
<td>the assessment role migrating to HBSS as described below. Figure 2 illustrates</td>
</tr>
<tr>
<td></td>
<td>the criteria for categorisation of disability support, using Levels I through</td>
</tr>
<tr>
<td></td>
<td>to V(^6). Older people assessed within Levels I to III will be managed</td>
</tr>
<tr>
<td></td>
<td>through the non-complex assessors within Care referral and coordination</td>
</tr>
<tr>
<td></td>
<td>service and older people assessed as Levels IV or V will be passed to the</td>
</tr>
<tr>
<td></td>
<td>care clusters for assessment by the care managers using the interRAI MDS-HC.</td>
</tr>
<tr>
<td>Non-complex coordination (future)</td>
<td>In the future it is envisaged that redeveloped community support providers</td>
</tr>
<tr>
<td></td>
<td>will undertake non complex assessments and the support unit will provide</td>
</tr>
<tr>
<td></td>
<td>contact centre functionality together with a monitoring role to support quality</td>
</tr>
</tbody>
</table>

\(^4\) There are several other services that would lend themselves to inclusion in such an access point such as allied health and disease specific services.

\(^5\) In those instances when a telephone based assessment is inappropriate, such as when the older person has a hearing loss, or when a face to face assessment is a more culturally appropriate option, the client will be passed to the care manager based within the clusters.

\(^6\) This leveling system has been developed from the IN-TOUCH programme, a partnership between ten DHBs, Nurse Maude and The University of Auckland and is discrete from the Support Needs Level and interRAI Contact Acuity Scale. It is currently in operation in Multiple DHBs.
Table 3 (continued): Referral and Coordination functionality

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration and interface with national payment systems</td>
<td>For all older people(^7) (or like age and interest) receiving disability support services (HBSS, Carer Support or ARC). The administration function will manage provider allocations, payment systems and databases.</td>
</tr>
</tbody>
</table>

\(^7\) Whether non-complex, assessed through the interRAI Contact assessment through the care referral and coordination service or complex assessed using the MDS-HC by the Care Cluster based Care Managers.
Supporting Allocations Tool
(To be used in conjunction with the interRAI Contact assessment tool)

Does client require assistance or have difficulty in ANY of the following: Mobility, showering/bathing, dressing, medication management or have some level of cognitive impairment?

No

Is client assessed as being: socially isolated and requires assistance with shopping?

No

Does the client require assistance with ordinary housework (e.g. cleaning, changing linen, vacuuming)?

Yes

Allocate care package according to Level II criteria with an automatic discharge at four months unless indicated otherwise through provider three month review

No

Allocate care package according to Level III criteria with an automatic discharge at 12 months unless indicated otherwise through provider three month review

Yes

Continue assessment using goal facilitation tool using interRAI contact assessment by telephone based assessors

Pass through to cluster and assessment to be undertaken using MDS-HC and goal facilitation tool

Yes

Allocate care package according to Level IV criteria with an automatic discharge at 12 months unless indicated otherwise through provider three month review

No

Allocate care package according to Level V criteria with an automatic discharge at 12 months unless indicated otherwise through provider three month review

Yes

Sign off required by Team Leader prior to commencing package

Does total PoC (including carer support) exceed $XXX per week?

No

Sign off required by DHB Planning & Funding and allocate intermediary (3 month) package according to Level V criteria

Hospital

* Case Conference (within 3 months of allocation)

Medicine (GP or geriatrician)

Yes

Decision on Level V package allocation, service input or placement in residential care

Does package (including carer support) value less than $XXX per week?

No

Sign off required by Team Leader prior to commencing package

Does total PoC (including carer support) exceed $XXX per week?

No

Allocate care package according to Level III criteria with an automatic discharge at 12 months unless indicated otherwise through provider three month review

Yes

Continue with goal facilitation process and development of goal ladder using interRAI contact assessment by telephone based assessors

Do client require assistance or have difficulty with ANY of the following: Dressing, medication management and/or has cognitive impairment and/or the carer is reporting significant burden and stress (brittle social support)

No

Continue with goal facilitation process and development of goal ladder using interRAI contact assessment by telephone based assessors

Allocate care package according to Level II criteria with an automatic discharge at four months unless indicated otherwise through provider three month review

Yes

Allocate care package according to Level III criteria with an automatic discharge at 12 months unless indicated otherwise through provider three month review

Does client require assistance or have difficulty in ANY of the following: Mobility, showering/bathing, dressing, medication management or have some level of cognitive impairment?

Yes

Does the client require assistance with ordinary housework (e.g. cleaning, changing linen, vacuuming)?

Does client require assistance or have difficulty with ANY of the following: Dressing, medication management and/or has cognitive impairment and/or the carer is reporting significant burden and stress (brittle social support)

No

No Service (Consider alternative community services as required)

No

No

Yes

Yes

No

No

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

No

No

No

No

Figure 1: Assessment process for disability support services (HBSS and ARC)
3.4 Care Clusters

A total of at least nine Care Clusters are proposed across the DHB and will be aligned to emergent Integrated Family Health Centres (IFHC). Care Clusters will need to be developed according to a mixture of general practice alignment, local geography and population sizes. The location and mix of care clusters need to be discussed further. For instance the rural Southland cluster has been suggested on the basis of the existing non hospital rural trusts, but geography may mean this does not seem appropriate in practice.

3.4.1 Potential Care Cluster locations

Table 4: Care Cluster locations (to be developed)

<table>
<thead>
<tr>
<th>Region</th>
<th>Descriptor</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Invercargill City</td>
<td>50,000 plus (17.6% of Southern DHB)</td>
<td></td>
</tr>
<tr>
<td>2. Gore and the surrounding area</td>
<td>12,000 (4.2%)</td>
<td></td>
</tr>
<tr>
<td>3. Queenstown-Lakes District;</td>
<td>23,000 (8.0%)</td>
<td></td>
</tr>
<tr>
<td>4. Lumsden, Tuatapere, Nightcaps (Rural Southland)</td>
<td>28,000 plus (9.9%). This figure may be too high for the population of these 3 regions, but is based on the figure for Rural Southland.</td>
<td></td>
</tr>
<tr>
<td>5. Dunedin</td>
<td>118,000 plus (41.5%). Sub splits within Dunedin City may be appropriate as IFHC development progresses</td>
<td></td>
</tr>
<tr>
<td>6. Taieri / Mosgiel</td>
<td>South Dunedin (population included in Dunedin City figures)</td>
<td></td>
</tr>
<tr>
<td>7. Alexandra and the surrounding area (Central Otago)</td>
<td>16,000 plus (5.8%)</td>
<td></td>
</tr>
<tr>
<td>8. Balclutha (Clutha District)</td>
<td>17,000 (5.9%)</td>
<td></td>
</tr>
<tr>
<td>9. Oamaru (Waitaki District)</td>
<td>20,000 plus (7.1%)</td>
<td></td>
</tr>
</tbody>
</table>

NB: These figures are taken from the Southern DHB website, and are based on the 2006 census.

Indicative centres for the clusters are outlined below. Further work is required to determine the right boundaries.
3.4.2 Cluster model of care

Clusters will involve at their core, General Practice, Pharmacy, Māori Provider Organisations and NGOs and will be supported by additional locally based or aligned functionality such as mobile nursing, including Māori mobile nursing, community health workers, community allied health, rural hospital beds and mental health services. The following principles will apply:

- Older people will continue to make significant contributions to communities and family / whānau and this will be important to their health and wellbeing.
- Once an older person has made contact with the health system through any point of access, they will be navigated through the system and no one will be lost between
different points of service provision. Health profession referrals, self referral from older people and referrals from family / whānau will all be supported;

- That for most older people, General Practice will be the key ongoing point of continuity and care;
- Where older people are not engaged with a General Practice, a proactive response will be provided to meet their health needs and to reconnect them with a General Practice where possible, which will need to be supported by flexible and responsive access to specialist and support services;
- A broader team will be established to support those with the most complex or variable needs; and
- Existing Māori health providers and local marae will be recognised as important agencies for connecting with individual Māori, whanau and hapū/wider community.

The development of clusters will be evolutionary and it is expected in line with current government policy that a range of hubs and integrated family health centres will emerge supporting a greater range of services to be delivered in local communities. Pivotal to the function of clusters will be the use of a stratified approach recognising the following levels of response.

**Table 5: Targeted responses**

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High and Complex</strong></td>
<td>Those with chronic and unstable needs at risk of hospitalisation and acute decompenation</td>
<td>Team work across key members of the cluster. Care management response. Admission avoidance strategies</td>
</tr>
<tr>
<td><strong>Complex</strong></td>
<td>Those with chronic but stable needs</td>
<td>Monitor for exceptions, response to keep stable, support self management, adherence and compliance important</td>
</tr>
<tr>
<td><strong>Non complex or at risk</strong></td>
<td>Those with risk factors</td>
<td>Support self management, monitor for progression of risk. Efficient and regular follow up</td>
</tr>
</tbody>
</table>

Extended services will need to be available over time to support the developed role of clusters and emergent IFHCs these include:

- Access to primary referred diagnostics;
- Primary options for acute care;
- Supported for discharge; and
- Access to consultation input from hospital or community based clinical specialists as required
3.4.3 Care management and navigation

Navigation and care management are critical components to successful long-term condition management or older person specific services. The Southern DHB Model of Care will incorporate both elements. For older people, working alongside General Practitioners and aligned to each Care Cluster will be a health professional Care Manager who will provide care management for all older 65 and over with complex needs including disability support provision. The Care Manager will assess people using the MDS-HC and coordinate care according to their needs. The model is well supported by evidence at both a national level [22], as well as internationally [68-71]. People requiring long term disability support such as HBSS, Carer Support, day programmes, ARC and respite care and who are triaged as complex via the care referral and coordination service will be assessed and their care coordinated by the Care Managers. The Care Manager will have an integral working relationship with the older person’s General Practitioner and will be able to provide an immediate and flexible response when required. This model has been demonstrated to significantly reduce risk of institutionalisation for older people, whilst not detrimentally impacting on carer stress and well being [22].

Disability Support Services, namely ARC and HBSS providers will be similarly integrated within the Care Clusters to ensure appropriate response and care delivered in a timely manner. Table 6 outlines the relationship and roles of the disability sector in relation to the cluster.

The need for navigation and care management increases as disease complexity increases as there is an associated need for consumers to access different services. Figure 2 highlights this relationship. As risk factors emerge, the GP and Practice Nurse (clinic nurse) will provide care and navigation as appropriate. For people 65 and over, if conditions worsen the need for navigation and or care management increases; this will continue to be focussed within the cluster, with an assigned District Nurse (mobile nursing) for those who are housebound or Practice Nurse (Clinic Nurse) for those who are mobile. All will operate within a co-creation / self management model such as Flinders. Kaiawhina, Māori mobile nursing and Disease State Management (DSM) roles are particularly pertinent within such a framework.

8 An augmented Needs Assessment Service (NASC) Coordination response for clients assessed with complex needs. Indications from other DHBs operating using the split of non-complex / complex described in Figure 2 is that approximately 50% of all clients receiving long term disability support are assessed as complex therefore will be managed by the Care Cluster based Care Manager, with the remaining assessed and coordinated through the non-complex team working within the care referral and coordination service.
Long term condition management

Risk factors for disease development

Presence of long term condition, though stable

Unstable long term condition

Risk factors for disease development

Presence of long term condition, though stable

Unstable long term condition

Population based programmes for example:
- Green prescription,
- Tai Chi

Restorative Home Support (65+ or like age and interest)

Restorative Home Support (65+ or like age and interest)

Cluster aligned ARC facility for respite

Services or Programmes

General Practitioner

Practice Nurse (Clinic Nurse)

Other disciplines as appropriate (fitness instructors etc)

General Practitioner

Practice Nurse (Clinic Nurse)

District Nurse (Mobile Nurse) with consumers who are housebound

Other disciplines as appropriate (Kaiawhina etc)

General Practitioner

Medical specialist Providing consultancy

Disease state nurses

District Nurse (Mobile Nurse) with consumers who are housebound

Practice Nurse (Clinic Nurse)

Other disciplines as appropriate (Kaiawhina etc)

Use of Co-creation / Self Management model (i.e. Flinders or goal facilitation model with older people)

Use of health / disability services

General Practitioner / Practice Nurse (Clinic Nurse)

Practice Nurse (Clinic Nurse)

District Nurse (Mobile Nurse) for housebound

Cluster Complex care manager

Practice Nurse (Clinic Nurse)

District Nurse (Mobile Nurse) for housebound

Cluster Complex care manager

Care Management / Navigation

Health professional

Use of health / disability services

Use of health / disability services

Use of health / disability services

Figure 2: Illustration of Navigation / Care Management interface
3.4.4 Aligned functions

Included in the inter-disciplinary team within each Care Cluster will be various allied health professionals, for example, Physiotherapy, Occupational Therapy, Social Work, Pharmacy and Dietitians. Each discipline will operate with those living within the Care Cluster boundaries and will work both in a uni-discipline manner as well as inter-disciplinary. Social Work will have a specific remit for working with older people who are not engaged with primary care and will utilise well evidenced techniques such as those associated with the Flinders model [72] (motivational interviewing, counselling, goal facilitation) to support engagement as required. A further focus for Social Work would be around developing a local response to increase social engagement and community development\(^9\), such as local shopping deliveries, reading volunteers at local schools, older people contributing to walking school bus as conductors.

Nursing services will be organised around the Care Clusters, with traditional District Nursing being re-focussed from a centrally organised structure to the Care Clusters. The role of Practice and District Nursing will be reframed around activity associated with home visiting versus clinic based\(^10\). Any client who can attend the surgery for treatment (continence assessment, wound dressings etc) will be attended to by the clinic based nursing team (previously Practice Nurse) and any client who is housebound will be seen by the mobile nursing team.

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\(^9\) As defined as the process of supporting a community to strengthen itself and develop towards its full potential.

\(^10\) Examples already exist nationally of District Nursing being organised around clinic versus housebound services, i.e. in Counties Manukau, District Nursing home visits are limited to those that are unable to attend a clinic.
Table 6: Care cluster staffing components

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Practitioner</td>
<td>A Care Cluster may align several practices and General Practitioners dependent on geography and population.</td>
</tr>
<tr>
<td>Pharmacy and NGOs</td>
<td>May include several pharmacies and the localised functions of aligned community providers</td>
</tr>
<tr>
<td>Care Manager</td>
<td>Health professional working at an advanced level with augmented Needs Assessment Service Coordination (NASC) function. The Care Manager will utilise the interRAI MDS-HC assessment tool and will actively care manage a defined group of older people with complex needs. The Care Manager will provide access to disability support services, carer support and respite for older people with complex needs within the care cluster</td>
</tr>
<tr>
<td>Physiotherapy, Occupational Therapy, Social Work</td>
<td>Physiotherapy, Occupational Therapy and Social Work will be aligned to Care Clusters and will provide care to the older people within their cluster. As with the Care Manager, allied health may provide care across a number of smaller Care Clusters. Social Workers will be anticipated to work directly with disengaged older people utilising Flinders principles, motivational interviewing techniques as well as counselling as appropriate. Social Workers will take responsibility for community development within each cluster as well as maximising social connectivity for older people at a community level.</td>
</tr>
<tr>
<td>Nursing: Clinic and mobile component</td>
<td>Nursing services from District Nursing and Practice Nursing will be integrated; District Nursing will be based within the Care Cluster and will continue to deliver services to housebound clients in their own home. Practice Nursing will be surgery or clinic based and will provide a range of services to clients who are mobile and can attend the surgery or clinic. Nursing services will be supported by the DHB professional leadership operating through the District Support and District Support &amp; Development unit. Kaiawhina/community health workers and Māori mobile nurses, including disease state management functions are seen as directly relevant to this structure in the provision of culturally competent services to Māori and facilitating access to Te Ao Māori.</td>
</tr>
<tr>
<td>Residential care facility</td>
<td>The Care Clusters will be aligned to one or more ARC facilities within the local geographical boundaries to provide transitional care capability(^{11}), a form of intermediate or slow stream rehabilitation as well coordinated residential respite care. Clients accessing these services will be actively care managed by the Care Manager located within the Care Cluster. These facilities will have full access to the inter-disciplinary team for clients receiving care and the team will have a focus not only on direct care for clients within these contracts but indirectly for quality improvement across the facility.</td>
</tr>
<tr>
<td>HBSS</td>
<td>The Restorative Home Support model has been implemented in many DHB regions across New Zealand. The model in the main comes from a quality improvement drive for home care. There are several key components and these include: geographically based health professional coordinators and support workers; Nationally recognised training for Support Workers; three</td>
</tr>
</tbody>
</table>

\(^{11}\) As already in place in Waikato DHB
monthly reviews with clients; individualised goal setting with clients; Integration with the Care Manager; functional rehabilitation integrated as required with allied health.

3.5 Māori

Strategies recommended include:

- Use local Marae and re-orient primary health care services;
- Develop an existing cultural resource that embodies kaupapa and tikanga, has physical amenities, and can provide culturally competent/relevant services;
- Promote and fund a whanau-centred model of care using a traditional setting and gaining kaumatua/pastoral care;
- Provide services that are interdisciplinary; facilitate proactive case finding; assess health and social care needs; assist with access to entitlements/benefits; provide early intervention and longer term management;
- Utilise for health promotion activities – Waiata, Tai Chi, Zumba;
- Build capacity in culturally relevant successful roles and services, such as: Māori mobile nursing; Kaiawhina - community health workers; navigator/care coordinators; outreach workers; and Te Ao Māori concepts;
- Address transport need – transport enables connectivity and supports relationships. Māori health workers are supporting networks between older Māori and their communities, connecting outside mainstream organisational boundaries and are culturally responsive;
- Develop sector alliances and strengthen integrated networks between mainstream and Māori Provider Organisations at the strategic level to ensure service developments maximise community resources and deeper understandings of PHC work in Māori communities; and
- Building capacity through successful initiatives.

3.6 The Support Unit

The Support Unit will have a core professional leadership and education role for nursing and allied health across the DHB. The function will extend to staff based within the Care Clusters. Figure 3 highlights this relationship. Specialist services will operate from the secondary care in the usual fashion. However, the links between Specialist Health Services for Older People (SHSOP) with the clusters will be actively maintained through the Care Manager who will although be physically based within the Care Cluster will have a direct reporting relationship through SHSOP. The linkage and professional guidance for the Care Manager will most likely occur through peer reviews and case conferences with SHSOP and
in particular the appropriate community Geriatrician, as well as professional leadership provided through the Support Unit (nursing and allied health). This will enable a quality and oversight role to be developed.

The Support Unit will also be involved in low FTE or volume service delivery as follows:

- Limited FTE roles: for example, Speech language Therapy, Dietetics; and
- Low volume specialist programmes: for example, cardiac rehabilitation, Supported Discharge and Rapid Response.

### 3.6.1 Hospital avoidance and supported discharge

Supported discharge teams typically operate by taking a sub-group of frail older people who are at risk of readmission to hospital or to residential care and providing a short term period of intensive home based support. The teams typically take referrals from AT&R facilities and medical and surgical wards. Hospital Avoidance or Rapid Response teams provide a response to primary care and/or emergency departments and support admission avoidance. The population of Southern DHB is such that it would be difficult to justify a discrete team providing such responses. However, existing nurse positions might have their roles developed to provide such in-reach into the Emergency Department. If such roles were able to assess older people using the interRAI Contact assessment, they could have direct access to HBSS as appropriate through the care referral and coordination services described in this document.

### 3.6.2 Quality assurance and monitoring

The Support Unit will undertake a quality assurance and monitoring role. Specifically this will be in relation to the Care Cluster activity through activities such as facilitated peer review processes, supported practice development, disability support allocation, complaints management and monitoring of exceptions. Several DHBs have also engaged in performance management and quality improvement initiatives. For instance, for three years The University of Auckland has operated a benchmarking exercise for home support services called IN TOUCH. In addition roles specifically reviewing quality improvement approaches in services, such as across the Aged Residential Care sector, would be based within this structure.
Figure 3: Illustration of described services
3.7 Restorative home care: an explanation

The restorative care model is based on principles adapted from geriatric medicine, nursing, rehabilitation and goal attainment. Among key characteristics are training of nurses, therapists and home health aides in rehabilitation, geriatric medicine and goal attainment; a team approach to maximize function and comfort, and input from the patient, family and home care staff in the process of establishing and reaching these goals [73]

3.8 Case-mix: a new method of funding

3.8.1 What is case mix?

Case mix [74, 75] is by definition a system that classifies people into groups that are homogeneous in their use of resources. A good case-mix system also gives meaningful clinical descriptions of these individuals. The application of case mix is broad; it provides the basis, not only for reimbursement, but also for benchmarking facilities or programmes. The origins of case mix funding lie with hospitals, whereby the funding system was developed to measure hospital performance, aiming to reward initiatives that increased efficiency. It also served as an information tool that allowed policy makers to understand the nature and complexity of healthcare delivery.

Diagnosis Related Groups (DRG) are the best-known classification system that are used in the case mix funding model. They are used to classify acute inpatient episodes into a number of manageable categories based on clinical condition and resource consumption. A single acute episode of inpatient care is allocated to one DRG using coded clinical information derived from the patient’s medical record. This information is coded by the Health Information Managers in order to allocate a DRG. Each DRG is allocated a ‘weight’, which is dependent on the average cost of inputs (e.g. nursing, diagnostic services, procedures) required to achieve the appropriate patient outcome. The facility is reimbursed a predetermined amount for each patient episode. DRGs were designed to be homogeneous units of hospital activity to which binding prices could be attached. A central theme in the advocacy of DRGs was that this reimbursement system would, by constraining the hospitals, oblige their administrators to alter the behaviour of the physicians and surgeons comprising their medical staffs. Moreover, DRGs were designed to provide practice pattern information that administrators could use to influence individual physician behaviour.

3.8.2 What are the key principles of case-mix?

There are a number of key principles central to a case mix model [76-78] and these are illustrated below:
Table 7: Key principles

<table>
<thead>
<tr>
<th>Resource use homogeneity</th>
<th>The type and amount of resources used should on average be the same for each episode of care within a class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within each class</td>
<td>The diagnostic episodes should apply to that class alone and not to multiple classes</td>
</tr>
<tr>
<td>Clinical meaning</td>
<td>The diagnoses within each class should be accepted by health professionals</td>
</tr>
<tr>
<td>Limited number of groups</td>
<td>If too large are not clinically useful</td>
</tr>
<tr>
<td>Generalisability</td>
<td>Each class should have clearly defined variables that are uniform across many facilities.</td>
</tr>
<tr>
<td>Statistical validity</td>
<td>The solution should be based on insights gained from statistical analysis</td>
</tr>
</tbody>
</table>

3.8.3 The development of case mix in home care

The model of home care case mix most often described in the literature is the Resource Utilisation Groups – Version III for Home Care (RUG-III/HC), derived on the basis of data from Michigan. It consists of seven core headings and 23 groups overall, with the Minimum Data Set – Home Care (MDS-HC) comprehensive assessment tool being used to identify client specific problems. Issues have been raised concerning its relevance to other countries and how open to interpretation its designated classes are [79]. A study that repeated the Michigan study in Ontario believed the reduced function class needed to be expanded and definitions such as “rehabilitation” needed to be more clearly defined, as were widely open to interpretation across states [79]. The RUG-III/HC model explains 33.7% variance in resource use.

Minimal other work has been undertaken exploring case mix in home care. However, one study [80] created a preliminary case mix model using data from ten regions across an unnamed state in the United States. Data from 779 patients were examined, with the method of assessment being the Community Care Assessment Tool. The authors reported that in order to successfully develop a coherent case mix model, it is essential to include cognitive function, Activities of Daily Living (ADL) status, Instrumental Activities of Daily Living (IADL) status and continence issues. Limitations of the study were the small number of clients in each class, making estimates of care questionable. Like studies before, IADLs and ADLs were found to be of overwhelming importance in classifying patients. It was recommended that due to the discretionary nature of home care, the classifications be used as a guide, with the level of care being able to be increased or decreased at a worker’s discretion, within boundaries and if noted and explained.

Perhaps of more relevance to the New Zealand environment was a study undertaken in Australia with clients receiving home care as part of the Home and Community Care contract...
(HACC). The authors developed a case mix model but were only able to explain 23.7% of variance [81]. It had nine broad categories, and found ADLs were the best predictor of resource use. Notably it used rural as well as metropolitan data. The authors argued that there were significant differences between the Australian and US care systems, and a US system is not appropriate for Australians.

3.8.4 Developing case mix for Home Care in New Zealand

Two District Health Boards have been involved in the development of case mix for Home Care in New Zealand. Of significance is the split of home care clients between non-complex and complex, as illustrated and described earlier. The casemix templates have been developed and are currently undergoing testing in Auckland. The testing will continue until data on sufficient client numbers has been received. The non-complex and complex casemixes allow for not only the identification of clients with homogenous groups but moreover the description of ‘ingredients’ that would be anticipated within each category. The use of case-mix within home care is a critical development step envisioned for Southern and it is anticipated that within 12 months up to five DHBs will be utilising the algorithms based around the MDS-HC developed by Auckland DHB, Canterbury DHB and The University of Auckland.

3.9 The role of pharmacists

During the consultation pharmacists identified that they felt insufficiently part of the overall health care team. There are two key roles pharmacists can play apart from the dispensing of medications: health information and medication oversight. Medication mismanagement has been identified as a major contributor to poor health outcomes for older people, and also raises health expenditure (New Zealand Guidelines Group 2003). An example of how pharmacists are being advised to increase their role is given in the following website from the NHS Greater Glasgow and Clyde:

http://www.nhsggc.org.uk/content/default.asp?page=s908_6

12 Auckland District Health Board (ADHB) has provided non-complex data and Canterbury District Health Board (CDHB) has provided complex home care data
4.0 Implementation

4.1 Key implementation steps

This paper outlines phase 1 of the review process. Two subsequent phases are recommended as outlined in the diagram below:

- **Phase I**
  - Completed as per this paper
  - Analysis of current service provision, review of evidence and recommendations for future service delivery model

- **Phase II**
  - Consultation regarding implementation
  - Multistakeholder consultation regarding how the recommended approach can be best implemented
  - Ensure alignment with Better Sooner More Convenient developments

- **Phase III**
  - Implementation management
  - HR change process as appropriate to the outcome of phase II
  - Implementation management reflecting HR change process and management of change amongst contracted providers

4.2 Transition management

The proposed model includes a mix of planned change and an evolutionary approach to development. The shift to a cluster and support structure, and the enhancement of care management activity can occur as planned changes whereas the development of practice and mobile primary care nursing, and further development of the cluster model of care is expected to be evolutionary as funding allows and as is supported by general practice and other stakeholders. Work that may be required, dependant on the outcome of consultation, is outlined in the subsections below.

4.2.1 Establishment of Cluster and Support structure

Detailed design work will be required to inform the development of the cluster and Support structure. Changes will also need to be aligned to the developments that are anticipated as part of BSMC rollout in primary care.

Key activities would involve the following:

- Detailed boundary mapping for the clusters and identification of aligned general practice, Māori Provider Organisations, NGO and pharmacy provision;
Alignment of district nursing and short term home based support to clusters;
Detailed description of roles within the clusters and within the support unit;
Identification of appropriate facility bases for clusters and the support unit (expected to largely be existing locations immediately with the potential for integration as part of IFHC or hub development);
Description of care process and team management across clusters and the support unit;
Identification of appropriate leadership roles; and

All of these changes will need to follow appropriate HR change processes. While there is nothing in this paper that requires changed employers there are some significant shifts in role function envisaged over time.

4.2.2 Enhancement of care management activity
Care management activity would need to be developed within the clusters. This would involve the following

- Change process for NASC services;
- Process establish consolidated care referral and coordination function (aligned to likely developments with the Better Sooner More Convenient programmes (http://www.moh.govt.nz/moh.nsf/indexmh/phcs-bsmc) Develop relationships within the cluster as per 4.2.5, in particular relationship between complex care managers and general practice;
- Training in assessment care management driven by the goals of the person being cared for, and restorative home support; and
- Progressive rollout of restorative home based support and shift of non complex case management function.

4.2.3 Development of practice / clinic and mobile primary care nursing
This would require a detailed review of activity to determine what may be clinic based and what needs to be mobile. Role descriptions may require review through appropriate HR change process but this is not expected to involve major change. Balance of work would be expected to shift over time but the nature of this should still align with primary and community nursing role descriptions. Further training will be required in Flinders type approach to long term conditions management. Additional development opportunity may be possible dependant on the degree of change in the base general practice model as part of Better Sooner More Convenient

4.2.4 Development of cluster model of care
Key steps that would be involved in cluster development are as follows:

- Engage providers within cluster including general practice, Māori Provider Organisations, pharmacy and NGOs;
  - Establish potential for improved model of care;
• Allow providers to review business models as appropriate and establish any case for facility development;
• Establish cluster aligned staffing;
  • Undertake HR change process as appropriate;
  • Train all cluster aligned staff in delivering care that is driven by the goals of the person receiving the care;
  • Develop operational manual for detailed service process between teams; and
  • Engagement with community organisations.

4.2.5 Development of support functionality
Development of the support unit functionality would essentially involve the extension of current activity / development with the following points of emphasis:
• Clear definition of professional discipline and nursing leadership roles;
• Establishment of a district wide development plan for cluster based teams (building on development plans for these staff which will already be in place);
• Development of quality and oversight functionality utilising existing staffing and benchmarking / quality improvement programmes linked with other DHBs; and
• Introduction of supporting information technology.

4.2.6 Implementation of restorative home support
The following key steps are recommended for the establishment of restorative home based support:
• Development of service specifications and funding model (based on experience and work completed elsewhere in NZ);
• Request for proposal process for home based support provision to the service specification and funding model;
• Introduction of case mix model;
• Training for coordinators undertaken in parallel to care managers as part of enhancement of care management activity;
• Progressive development of experience with new clients and review of existing clients matched to provider based rollout of systems, enhanced coordination and support worker training; and
• Transition of non complex care management and establishment of contact centre and monitoring functionality within the support unit.
4.3 **Financial Implications**

Financial implications will be worked through in detail following consultation regarding implementation approach. Initial assumptions are outlined in the table below. The net impact of the proposed approach should provide a significant improvement in service delivery within current available funding. An investment in Care management activity is proposed utilising existing NASC capacity and significant improvements could be made in the mix of home based support and residential care service delivery better supporting transitions out of hospital and avoiding hospital admission and long term care where possible.
Table 8: Implications of change

<table>
<thead>
<tr>
<th>Proposed component</th>
<th>Anticipated cost</th>
<th>Financial impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster based care managers</td>
<td>Current NASC staffing 21.6 FTE provides for a ratio of 1:2000 people over 65 and should be sufficient to cover the full range of complex and non complex care management for disability related care</td>
<td>Development of NASC Investment in care management activity based in the clusters will improve coordination of care, reduce duplication of assessment, provide more timely intervention and result in on average less costly intervention. In particular growth in hospital admissions, emergency department attendance, residential and home care utilisation that would be expected on a straight age standardised projection will be reduced. If long term conditions coordination to be covered then additional resource will be required but this should be justified on compensatory savings against ED, Acute and long term care</td>
</tr>
<tr>
<td>Triage and Non Complex Care Management</td>
<td>Split of complex and non complex work will be required to identify staffing for support unit and resource to community service providers</td>
<td>Development of NASC More efficient basis for triaging and coordinating work. Further efficiency by combining with non complex care provision avoiding duplicate contacts / visits.</td>
</tr>
</tbody>
</table>
| Compensatory savings        | Savings are expected as a result of the reconfiguration                          | Potential savings arise from the following shift in mix and focus of services  
• Clear criteria applied to residential care entry associated with the introduction of InterRAI (see appendix 1 for comparative ARC utilisation)  
• Higher end flexible packages enabled as part of this transition support people to remain at home and reduce relative residential care utilisation toward the national average  
• Supported discharge and rapid response services reduce hospital readmission and residential care utilisation  
• Intake services reduce dependency and long term care utilisation  
• Medication management services reduce medication oversight requirements, release nursing and support worker capacity to support more people at home |
| Home Support                | As per current                                                                   | As above. Change in client mix for long term home based support to enable higher packages for people with complex needs. Change to case mix funding model to support restorative service provision  
Short term supports shift to supported discharge and Intake response |
### Table 8 (continued): Implications of change

<table>
<thead>
<tr>
<th>Proposed component</th>
<th>Anticipated cost</th>
<th>Financial impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mobile Nursing</strong></td>
<td>As per current</td>
<td>Shift in mix of mobile versus practice/clinic nursing is possible.</td>
</tr>
<tr>
<td><strong>Practice / Clinic based nursing</strong></td>
<td>As per current</td>
<td>A shift in the mix of general practice staffing is likely overtime to a greater ratio of nurses. Initiatives such as “Year of Care” demonstrate potential for improved use of Care Plus, Services to improve Access and Health Promotion funding. In other parts of the country this is used to support enhanced comprehensive assessment and follow up occurring through nursing based in general practice, IFHCs or clusters.</td>
</tr>
<tr>
<td><strong>Residential care</strong></td>
<td>Reduction expected</td>
<td>Expect accelerated decline in rest home level care and increase in hospital care. Improved home based support packages for people with complex needs and improved care management processes is expected to result in a further reduction in growth of rest home level care for a period of two years. Analysis in Appendix I supports potential for change in rest home level care.</td>
</tr>
<tr>
<td><strong>Allied Health</strong></td>
<td>Potential additional investment</td>
<td>Aligning allied health within clusters can be achieved within current resources Additional resources may be required to support restorative community based care.</td>
</tr>
<tr>
<td><strong>Support Unit</strong></td>
<td>As per current</td>
<td>This unit will essentially be a realignment of existing resources. Some additional investment in the quality oversight function may be deemed appropriate and this will be reviewed after consultation regarding implementation.</td>
</tr>
</tbody>
</table>
### 4.4 Risks

Table 9: Risks and mitigation

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation</th>
</tr>
</thead>
</table>
| Concern from DHB employed staff regarding potential shift or change in employment | Nothing outlined in this document requires a shift in employer. Any change in employment would require a full change process to be followed as outlined in MECAs.  
Retention of current staff will be critical to support the proposed evolutionary approach. If any change in employer were to be considered then staff would need to be satisfied that they would be appropriately supported by any new employer.  
While nothing in this document requires a change in employer an evolution of current roles is expected across the sector. Exploring and defining these changes will require MECA change processes to be followed by the DHB and appropriate processes to be followed by other organisations. |
| Stranded overhead costs left with DHB provider arm if there are any service shifts to other organisations | Nothing outlined in this document requires a shift in employer. If there were to be any service transfers then the implications of this would need to be fully costed including consideration of stranded overheads.  
It is noted that other DHBs are currently undertaking work in this area that should be available if required within the timeframe for implementation of this project. |
| Constraints to full integration of services due to the involvement of multiple organisations | The consultation phase is designed to get input from all stakeholder organisations regarding implementation.  
Contracting approaches are available that support multiparty service delivery and would aid integration between organisations. These involve defining common aspirations, partnership arrangements and respective accountabilities. |
| Availability of staff | Retention of existing staff is critical. The proposed approach will require the ongoing retention and attraction of general practitioners, primary health care nurses working both within practices and as part of mobile nursing functions, specialist nurses and allied health staff working in a primary and community environment.  
Employment terms and conditions, the nature and culture of the workplace, and the availability of support for development and career growth will all be important. In the proposed approached the environment and team culture within the clusters and the support unit with both be important. |
Table 9 (continued): Risks and mitigation

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of base stable General Practice</td>
<td>The approach proposed is reliant on continuity at a general practice level. The risks around short to medium term sustainability of rural as aspects of urban general practice have been highlighted. Evolution of the general practice model into one that is sustainable and attractive to replacement workforce is vital. IFHC development and the associated development of the model of care is critical to this.</td>
</tr>
<tr>
<td>Lack of clarity and overlap between nursing roles</td>
<td>Clear definition required of practice/clinic based versus mobile primary care nursing roles. Clear distinction required between primary care nursing and specialist nursing roles. The care process for specialist nursing roles must not be parallel or disconnected from primary care delivery.</td>
</tr>
</tbody>
</table>

Health inequity is perpetuated by conventional services not reaching the poorest and sickest people.
5.0 Summary

The aim of this paper has been to outline a structure that will on an evolutionary basis enable services to refocus around the needs of older people as their health deteriorates. The recommended structure involves building on the strengths of general practice and existing community based service delivery to enable improved integration between services, reduced duplication and reduced risk of disconnect between multiple services that may be involved in supporting a person’s care.

Simply put, the recommended approach will mean people with complex needs will have an identified care manager who has an excellent relationship with their general practice and will work to ensure that all of the care they are receiving is connected. This person will work with a defined cluster of General Practices to allow relationships to develop and will be supported by a locally based team of nursing, allied health and non government organisations providing support services. Further support will be provided across the nine proposed clusters through a Support Unit that will include professional leadership, specialist input from nursing and doctors and provide oversight of care processes and professional development.

This is not a radical change. While significant, what is recommended builds on much of the infrastructure that is already in place in the Southern region. District Nursing services already operate in geographical clusters, Nurse educator services are already evolving to provide a mix of locally based service delivery and district wide delivery, General Practice is already looking at consolidating activity around Integrated Family Health Centres, and there are already examples of specialist services that are significantly community based.
Innovative examples already exist where District Nursing is better integrated with General Practice and these are well regarded provided the isolation issues are be addressed. Key recommendations arising from the approach are outlined in the next section.

6.0 Recommendations

In no order of priority:

- Development of Care Clusters in collaboration with primary care and community organisations, including iwi organisations and local marae;

- Alignment of District Nursing, Practice Nursing and allied health within clusters, actively consulting with Māori Provider Organisations, Māori primary health care nurses and community health workers who can inform new developments;

- Development of Support Unit;

- Roll out of Restorative Home Support using Casemix funding methodology, use of Contact assessment by HBSS registered health professionals;

- Consideration of Request for Proposals for HBSS providers;

- Ongoing roll out of interRAI MDS-HC and Contact Assessment;

- Improved range of acute response services within clusters providing alternatives to hospitalisation; and

- Scope the implementation of (i) Supported Discharge Services; (ii) medication management; and (iii) Intake services. Include Māori representation in planning the approach for stated services to ensure competency is addressed at both clinical and cultural levels.

- Apply the above recommendations for Māori, incorporating marae and a whanau ora concept.
References


15. National Advisory Committee on Health and Disability, Meeting the needs of people with chronic conditions. 2006, Ministry of Health: Wellington.


Authors

*Stephen Jacobs PhD BA DipTchg.* Stephen is Co-Director of the Ageing Research Group and a Senior Lecturer at The University of Auckland. His PhD in the School of Medicine at the Faculty of Medical and Health Sciences developed a process to assist planners and funders design, implement, performance manage, and evaluate health services. Stephen worked in the Ministry of Health from 2000 to 2006, in the Disability Services Directorate, the Health of Older People team, and the Primary Health Care team. He was involved in the development of the Assessment Guidelines for Older People, support for family and whanau carer issues, and ageing in place initiatives. Prior to joining the Ministry of Health, Stephen managed a community and residential services for older people for five years. Prior to that he had experience as a family therapist and counsellor for the Department of Social Welfare, the Family Court, the Ministry of Justice, and in NGOs dealing mainly with family violence and sexual abuse.

*John Baird BMedSci MBA.* John has extensive operational management and service review experience within health and disability services over the past 20 years. This has recently included operational and funding reviews for District Health Boards, Hospitals, Primary Health and other Non Government Organisations. He has a particular interest in service development and change management and has lead development processes in secondary care, primary care, disability services and mental health. He is currently working with several District Health Boards and provider organisations to support operational and strategic reviews of services including specialist, primary health and other community based services.

*Matthew Parsons PhD MSc BSc (Hons) RGN.* Matthew has a PhD and Masters in Gerontology from The Institute of Gerontology, The University of London and a BSc (Hons) in Psychology and Human Biology from King's College London and is a registered nurse. In the UK, he developed and managed numerous community based rehabilitation teams, of which the supported discharge team model was implemented across the UK. He is a Professor in Gerontology at The Faculty of Medical and Health Sciences. He has participated in numerous national strategy development groups including the Health of Older Person and the Specialist Health Services for Older People and has numerous contractual obligations around service development and evaluation to both DHBs and Non Government Organisations in New Zealand and Australia.

*Nicolette Sheridan PhD MPH (Hons) RGN.* Nicolette is of Ngapuhi descent and has a PhD and Masters in Public Health from The University of Auckland and is a registered nurse. She has experience in primary health care and has worked as an advisor and consultant in New Zealand. Nicolette is Associate Dean Equity for the Faculty of Medical and Health Sciences and a senior lecturer in the School of Nursing, The University of Auckland. She is a researcher with the Integrated Care Research Group, South Auckland Clinical School, Middlemore Hospital, The University of Auckland. Nicolette has chaired the MOH Expert Advisory Group on Primary Health Care Nursing and was appointed to the Access to Services Steering Committee in 2006 by the District Health Board Research Fund Governance Group. Nicolette’s doctoral research in primary health care and chronic conditions was awarded the
Te Amorangi: National Māori Excellence Award in 2007. She researches and lectures in primary health care; was an associate investigator in the HRC funded study ‘Evaluating the Primary Health Care Strategy’ and co-author of the 2009 report ‘Nursing Developments in Primary Health Care 2001-2007’. In 2001 she coordinated a postgraduate programme in long term condition management for 41 Māori nurses providing mobile services across New Zealand; at present she is the NZQA academic monitor of the Te Ōhanga Mataora Paetahi (Bachelor of Health Sciences Māori Nursing) offered by Te Whare Wānanga o Awanuiārangi.
Appendix One – Analysis of data

- Aged Residential Care
- Data and analytical approach
- A national dataset of aged residential care utilisation was provided that included derived DHB of domicile and age of resident for the 2009/10 year
- This data was used to create a national average age standardised utilisation rate by 5 year age band for each of the four ARC service levels and these standardised rates were applied to DHB populations for 2009/10 as projected by the Ministry of Health.
- Please note that there is client number data and event number data, with some clients having more than one event, so here will be a difference between the two.

Results

- Comparative rate of ARC utilisation

<table>
<thead>
<tr>
<th>Region</th>
<th>Ratio of Total Beds to National Age Standardised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auckland</td>
<td>1.19</td>
</tr>
<tr>
<td>Bay of Plenty</td>
<td>1.19</td>
</tr>
<tr>
<td>Canterbury</td>
<td>1.19</td>
</tr>
<tr>
<td>Counties-Manukau</td>
<td>1.19</td>
</tr>
<tr>
<td>Hawkes Bay</td>
<td>1.19</td>
</tr>
<tr>
<td>Hutt</td>
<td>1.19</td>
</tr>
<tr>
<td>Lakes</td>
<td>1.19</td>
</tr>
<tr>
<td>MidCentral</td>
<td>1.19</td>
</tr>
<tr>
<td>Northland</td>
<td>1.19</td>
</tr>
<tr>
<td>Otago</td>
<td>1.19</td>
</tr>
<tr>
<td>South Canterbury</td>
<td>1.19</td>
</tr>
<tr>
<td>Southland</td>
<td>1.19</td>
</tr>
<tr>
<td>Tararider</td>
<td>1.19</td>
</tr>
<tr>
<td>Taranaki</td>
<td>1.19</td>
</tr>
<tr>
<td>Waikato</td>
<td>1.19</td>
</tr>
<tr>
<td>Waikato</td>
<td>1.19</td>
</tr>
<tr>
<td>Waikato</td>
<td>1.19</td>
</tr>
<tr>
<td>West Coast</td>
<td>1.19</td>
</tr>
<tr>
<td>Whanganui</td>
<td>1.19</td>
</tr>
<tr>
<td>Grand Total</td>
<td>1.19</td>
</tr>
</tbody>
</table>

Otago and Southland have the same ratio of beds at close to 20% higher than national age standardised average. There are only two DHBs with higher overall rates.

Most of this difference is driven by rest home utilisation as shown below.
Dementia bed utilisation is also high as follows:

Notably dementia bed utilisation is higher for Otago region residents. While this data is based on DHB of domicile (where the person lived prior to entry), the availability of beds may have an impact on relative utilisation (i.e. if capacity is available it gets used).

Hospital bed utilisation is much more consistent with national averages as follows:
Psycho geriatric beds have historically been purchased differently in parts of the country so comparisons are less meaningful. However Southern utilisation is again higher.

Elsewhere these beds may be purchased as standard hospital or in some cases as dementia level care.
Application of national average rates shows the following financial impact for the DHB

Southern DHB
Impact from shifting to national average age standardised bed rate

<table>
<thead>
<tr>
<th></th>
<th>Beds</th>
<th>Av DHB cost per annum</th>
<th>Financial Impact DHB</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Otago</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dementia</td>
<td>-</td>
<td>37</td>
<td>27,743</td>
</tr>
<tr>
<td>Hospital</td>
<td>22</td>
<td>45,080</td>
<td>1,007,946</td>
</tr>
<tr>
<td>Psychogeriatric</td>
<td>-</td>
<td>40</td>
<td>54,077</td>
</tr>
<tr>
<td>Resthome</td>
<td>-</td>
<td>191</td>
<td>24,379</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>-</td>
<td>245</td>
<td>27,891</td>
</tr>
<tr>
<td><strong>Southland</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dementia</td>
<td>-</td>
<td>12</td>
<td>27,754</td>
</tr>
<tr>
<td>Hospital</td>
<td>-</td>
<td>4</td>
<td>45,414</td>
</tr>
<tr>
<td>Psychogeriatric</td>
<td>-</td>
<td>7</td>
<td>53,736</td>
</tr>
<tr>
<td>Resthome</td>
<td>-</td>
<td>99</td>
<td>23,316</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>-</td>
<td>122</td>
<td>26,277</td>
</tr>
<tr>
<td><strong>Combined</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dementia</td>
<td>-</td>
<td>49</td>
<td>27,746</td>
</tr>
<tr>
<td>Hospital</td>
<td>-</td>
<td>19</td>
<td>45,015</td>
</tr>
<tr>
<td>Psychogeriatric</td>
<td>-</td>
<td>48</td>
<td>54,024</td>
</tr>
<tr>
<td>Resthome</td>
<td>-</td>
<td>289</td>
<td>24,015</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>-</td>
<td>367</td>
<td>27,354</td>
</tr>
</tbody>
</table>

The predominant difference is at rest home level of close to $7m per annum. If hospital and psychogeriatric levels are combined as they are in other parts of the country, this shows a smaller difference (under $2m)

Discussion

Higher levels of utilisation of ARC can be impacted by unusual patterns of client need and relative numbers of private payers but most commonly reflect available capacity of beds and historical patterns of access. Access reflects historical decisions of the needs assessment and coordination service function. These may be based on the level of need at which people are assessed as needing residential care and the availability of alternative options. It is likely that both effects will apply.

A cross check has been completed regarding the potential level of private payers. In the available dataset (partial private payers) the national average client contribution is $34.67 per day; in Otago this is $34.82 and Southland $36.35. While this does not completely capture private payers it suggests there is no effect for Otago and little for Southland. There is also nothing to suggest that the average need of people across the Southern district would be higher.
Comments received during the review process would support the conclusion that there is an absence of flexible alternative services, in particular post discharge. The Community FIRST service in Otago is the exception to this. There is significant potential to develop alternative service responses across primary and community care that would enable more people to be supported in their own homes.

**Home support utilisation**

- **Data**
- Data was provided from October 2003 to December 2010 including client numbers and utilisation of household management and personal care.
- Recent data in this series is of particular interest given changes in access to home based support and the dataset was examined to identify any pattern of people returning to access services after discharge

**Results**

The number of clients receiving household management (HM) shows a predictable drop associated with the recent changes.

![Client trends](image)

In the data series available there is no corresponding increase in personal care (PC). It may however be too early to see any reactive trends.
Volume trends show an expected reduction in household management hours.

There has been a recent flattening in average PC hours per client per month and a slight drop in Household Management hours per client per month. Again there is no evidence of a reactive pattern to changes at this stage.
The percentage of clients receiving HM or PC prior to residential care entry is unchanged. This suggests that HM has not been removed from clients at risk of residential care. It is however too early post the changes to determine if there is a consequential impact over time.

**Discussion**

At this point there is no evidence of any reactive change to service utilisation following the review of people receiving household management. It is possible that there could be a consequential change over time however it is too early to review this. It is recommended that follow up analysis is undertaken 12 months post changes to identify any patterns.

**Other Supports**

Data provided shows a reduction in use of respite care and carer support alongside a small increase in use of day programmes.
Some data was also provided for district nursing and short term services. This shows a reduction in patient numbers and contacts across all areas between 2008 and 2009.

<table>
<thead>
<tr>
<th>SERVICE_TITLE</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISTRICT NURSING SERVICE</td>
<td>1851</td>
<td>1767</td>
</tr>
<tr>
<td>ONCOLOGY</td>
<td>88</td>
<td>76</td>
</tr>
<tr>
<td>HOME HELP SERVICE</td>
<td>545</td>
<td>478</td>
</tr>
<tr>
<td>MEALS ON WHEELS</td>
<td>735</td>
<td>696</td>
</tr>
<tr>
<td>DISTRICT NURSING SERVICE</td>
<td>419</td>
<td>399</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>3638</strong></td>
<td><strong>3416</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SERVICE_TITLE</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISTRICT NURSING SERVICE</td>
<td>2902</td>
<td>2868</td>
</tr>
<tr>
<td>ONCOLOGY</td>
<td>92</td>
<td>79</td>
</tr>
<tr>
<td>HOME HELP SERVICE</td>
<td>559</td>
<td>493</td>
</tr>
<tr>
<td>MEALS ON WHEELS</td>
<td>760</td>
<td>713</td>
</tr>
<tr>
<td>DISTRICT NURSING SERVICE</td>
<td>552</td>
<td>506</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>4865</strong></td>
<td><strong>4659</strong></td>
</tr>
</tbody>
</table>

NASC activity has also reduced over the past 3 years for Southland as outlined below:

<table>
<thead>
<tr>
<th>Assessments</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>1791</strong></td>
<td><strong>1971</strong></td>
<td><strong>1632</strong></td>
</tr>
<tr>
<td><strong>New</strong></td>
<td><strong>552</strong></td>
<td><strong>495</strong></td>
<td><strong>370</strong></td>
</tr>
<tr>
<td><strong>Reassessment</strong></td>
<td><strong>1241</strong></td>
<td><strong>1478</strong></td>
<td><strong>1262</strong></td>
</tr>
</tbody>
</table>

Data for Otago may show a similar trend (see totals) but data appears incomplete:

<table>
<thead>
<tr>
<th>Assessments</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>3072</strong></td>
<td><strong>3006</strong></td>
<td><strong>2668</strong></td>
</tr>
<tr>
<td><strong>New</strong></td>
<td><strong>640</strong></td>
<td><strong>472</strong></td>
<td><strong>1252</strong></td>
</tr>
<tr>
<td><strong>Reassessment</strong></td>
<td><strong>1117</strong></td>
<td><strong>700</strong></td>
<td><strong>3401</strong></td>
</tr>
</tbody>
</table>
NASC Activity

NASC activity data was supplied as outlined below. If this data is accurate it shows drop off in both referral and assessment activity in 2010 and over the three year period for both areas. Service coordination activity has increased for both areas over the three year period and for Southland in 2010.

Southland shows large variation in referrals not assessed over the three years. The Otago pattern is consistent.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Referrals In</td>
<td>3072</td>
<td>3006</td>
<td>2673</td>
<td>2355</td>
<td>2647</td>
<td>2072</td>
</tr>
<tr>
<td>New Assessment</td>
<td>982</td>
<td>884</td>
<td>596</td>
<td>528</td>
<td>487</td>
<td>375</td>
</tr>
<tr>
<td>Reassessment</td>
<td>1682</td>
<td>1714</td>
<td>1662</td>
<td>1237</td>
<td>1448</td>
<td>1240</td>
</tr>
<tr>
<td>Total assessments completed</td>
<td>2664</td>
<td>2598</td>
<td>2258</td>
<td>1765</td>
<td>1935</td>
<td>1615</td>
</tr>
<tr>
<td>Referrals not assessed</td>
<td>408</td>
<td>408</td>
<td>415</td>
<td>590</td>
<td>712</td>
<td>457</td>
</tr>
<tr>
<td>Service Coordinations</td>
<td>6204</td>
<td>6976</td>
<td>6736</td>
<td>5017</td>
<td>5253</td>
<td>5761</td>
</tr>
</tbody>
</table>

Notes

1. Not all referrals in are assessed (referral may be inappropriate or proceed straight to service coordination)

2. Service coordinations include annual and other client reviews where the client does not have an assessment as part of the process.

This analysis suggests some drop off in assessment activity against a pattern of increasing service coordinations. This would mean more people are having services reviewed or initiated without an associated assessment.
Analysis of NASC activity and staffing is outlined as follows

<table>
<thead>
<tr>
<th></th>
<th>Otago</th>
<th>Southland</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current NASC</td>
<td>13.6</td>
<td>8.0</td>
<td>21.6</td>
</tr>
<tr>
<td>Pop over 65 (10/11)</td>
<td>28,900</td>
<td>15,535</td>
<td>44,435</td>
</tr>
<tr>
<td>FTE @ 3000</td>
<td>9.6</td>
<td>5.2</td>
<td>14.8</td>
</tr>
<tr>
<td>FTE @ 2500</td>
<td>11.6</td>
<td>6.2</td>
<td>17.8</td>
</tr>
<tr>
<td>Actual ratio</td>
<td>2,125</td>
<td>1,942</td>
<td>2,057</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Otago</th>
<th>Southland</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 Assessments</td>
<td>2258</td>
<td>1615</td>
</tr>
<tr>
<td>Assmts per FTE</td>
<td>166</td>
<td>202</td>
</tr>
<tr>
<td>Assmts per day</td>
<td>0.83</td>
<td>1.01</td>
</tr>
<tr>
<td>2010 Coordinations</td>
<td>6736</td>
<td>5761</td>
</tr>
<tr>
<td>Coordinations per FTE</td>
<td>495</td>
<td>720</td>
</tr>
<tr>
<td>Coordinations per day</td>
<td>2.48</td>
<td>3.60</td>
</tr>
</tbody>
</table>

Note per day figures based on 40 available work weeks

NASC operation across the two sites is currently under review. In particular Southland currently has separated assessment and service coordination roles and Otago has combined roles

The current rate of assessments and coordinations per FTE is low. No additional staff requirements would be expected to rollout a case management model
Appendix Two – Vetting Tool

Packages of Care Vetting tool: level I and II

Does client require assistance or have difficulty in any of the following: mobility, showering / bathing, dressing, mediation management or have some level of cognitive impairment?

- Yes
  - Proceed to Vetting tool B (Level III, IV & V)
  - No

Is client assessed as being: socially isolated and requires assistance with shopping?

- Yes
  - Continue with TARGET goal facilitation process and development of goal ladder
  - No

- NO

Does the client require assistance with heavy housework (cleaning floors, vacuuming, cleaning toilet and bathroom)

- Yes
  - Establish Level I PoC, with annual reviews (or on exception) by CCC. This is not a restorative PoC and therefore does not require goal facilitation or regular provider reviews
  - No

- NO
  - No Service. (Consider alternative community services as required)

Allocate PoC according to Level II criteria with an automatic Discharge at four months unless indicated otherwise through provider three month review

Does client live alone or live with an individual with a physical / intellectual disability that prohibits participation in housework?

- Yes
  - Establish Level I PoC, with annual reviews (or on exception) by CCC. This is not a restorative PoC and therefore does not require goal facilitation or regular provider reviews
  - No

- NO

CCC Version 1 vettng tool for clients assessed at Level I and II (25th January 2009)
Packages of Care Vetting tool: level III, IV and V

Does client require assistance or have difficulty in any of the following:

Showering and/or bathing

Dressing, medication management and/or has cognitive impairment and/or the carer is reporting significant burden and stress

Yes

Continue assessment using TARGET goal facilitation tool

Allocate PoC according to Level III criteria with an automatic discharge at 12 months unless indicated otherwise through provider three month review

Yes

Continue assessment using MDS-HC and TARGET goal facilitation tool

Allocate PoC according to Level IV criteria with an automatic discharge at 12 months unless indicated otherwise through provider three month review

Does total PoC (including carer support) exceed $448 per week?

Yes

Sign off required by DHB funding and planning and allocate according to Level V criteria

No

Sign off required by Team Leader prior to commencing PoC

Does PoC (including carer support) value less than $300.00 a week?

Yes

Allocate PoC according to Level IV criteria with an automatic discharge at 12 months unless indicated otherwise through provider three month review

No

Allocate PoC according to Level III criteria with an automatic discharge at 12 months unless indicated otherwise through provider three month review

CCC Version 1 vetting tool for clients assessed at Level III, IV and V (23rd January 2009)