PBMA Business Case
DRAFT
February 06

Title:	**Enhanced Community Care of Older Adults – Taking a Proactive Approach**
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Executive Summary

This business case proposes that the PBMA process of reinvestment into the HOAS service be by way of additional Gerontology Nurse specialist positions which are targeted to specific population groups as yet unattended to specifically by WDHB under the Health of Older Persons Strategy. These population groups include the frail elderly clients currently residing in rest homes and private hospitals, and the frail elderly populations managed out of primary care, who can be sustained there with additional input from a community based clinical expert who works with the GP and other parts of the Primary Care sector. This business case proposes that the resource be applied to community settings, and managed in conjunction with the current community Gerontology Nurse Specialist service under Community Services for Older Adults. The purpose of these roles is to enhance the quality of service to frail elderly clients in these environments in an effort to keep them independent and optimally well in their community environments for as long as possible. Ultimately, this proposal is about acknowledging that we need additional capacity in the system for this population. This is in keeping with the Health of Older People strategy, and the intent of facilitating "aging in place" within a population based approach. Prevention of admission to hospital and facilitating continuous care through the health care system and its various settings to ensure people are in their communities for as long as possible is the aim. This proposal is suggesting that instead of putting that capacity into an acute environment, that it be placed in the community for a greater overall system efficiency gain.

Investment

The investment proposed in this case is 2.0 FTE Community Gerontology Nurse Specialist positions, to be sourced from the reinvestment component the PBMA. The amount required to fund these 2 positions would be roughly $150,000 for salaries and an additional $50,000 to take into account overhead and support costs such as cars, travel, office space, administrative support, professional development and supervision. 1.0 FTE would be directed towards creating efficiencies and health gain within the residential care sector, and 1.0 FTE would be directed toward working in the Primary Care sector.

JUSTIFICATION

Drives for change

The fundamental drive for change is the need to implement the Health of Older peoples strategy, and the need to consider this in the context of the Ministerial directions also contained in the Primary Health Care strategy. There is increasing pressure, and a philosophical commitment by both governments and DHB's to keep populations well in their communities, for the benefit of the larger societal health gain, but also to keep a grip on the burgeoning resource required to sustain our acute care services. Keeping people well in a community setting by attention to what happens

to them in the Primary Care setting, and other community settings such as residential care, decreases the pressure on acute services and allows these resources to be applied with increased efficiency. Currently attention focuses on managing the spend in acute services, without adequate attention to preventing people from getting there in the first place, and/or ensuring that their use of this resource is as limited as possible. The current resource for Gerontology Nurse Specialists in community setting is inadequate to commit to the environments proposed, being residential care, and primary care, where significant change can influence health gains. The need has been identified by these nurses, but simply cannot be met due to inadequate resource.

Health Gains to be met
The health gains which will be met include optimizing health and wellness for the elderly populations in these settings for whom some rehabilitation and optimization is identified as possible. It is particularly relevant when the prevention of an acute hospitalization, which in this population tends to worsen rehabilitative potential, is possible. Specific examples for these settings are:

Example 1: A client who is in a residential setting such as a rest home who has co morbidities, polypharmacy, and a complex social situation who is deteriorating in mobility due to a complex leg ulcer and a variety of exacerbating clinical conditions could be prevented from being admitted to hospital by being visited by the Gerontology Nurse Specialist. This person could provide a case managed approach to the situation which may include a care plan and links to community and health resources to aid the rest home staff to manage the situation and enable the client to stay there. This saves the system the cost of an acute admission. Alternatively, if the client was admitted to hospital, the GNS could visit and assess the situation in the acute environment and develop a care plan with the rest home staff to enable the discharge to occur, with a short stay as the result.

Example 2: For the Primary Care setting, a pilot project could be developed to assist with managing the frail elderly population enrolled in a specific PHO. For example, the GNS could work out of a set of identified practices to contact the enrolled population who are over 75, with multiple co morbidities, who have attended more than twice in the previous 6 months. A home visit could be done to assess how the person is coping and what might be required to keep them optimally functioning at home. This approach could be combined with the availability of the GNS to visit clients identified by the GP's involved, either in the practices or at home, who present with highly complex and labile situations, particularly when the situation is a combination of clinical, social and psychological variables. A case management approach could be taken to facilitate sustained coping and optimization of the clients life in the community or at home.

Link to Strategic Priorities
The proposal is closely linked and aligned to the strategic priorities outlined in the Health of Older Peoples Strategy, the Positive Aging Strategy, the Disability Strategy and aligns with the objectives in the Primary Health Care strategy.

Further, this proposal links directly with the District Annual Plan for Home and Older Adults Services. The service managing this potential resource, Community Services for Older Adults and Home Health views itself strategically and aims to be a part of the continuum of Primary health care. The DAP states:

"This structure encourages us to focus on the key relationships between specialist services for older people and other components of the system, and to seek ways of working across settings that improve services for older people."

The DAP focuses, in alignment with the Primary Health Care Strategy, on developing relationships and working partnerships with GP networks and PHO's at all levels in the CSOA service. Further, it states:

"The development of case finding, care coordination and assessment capability for older people will continue to be a priority. The Assessment Guideline for Older People will need to be progressively implemented over the next several years, in partnership with primary care, and in association with closer working relationships between GPs and geriatricians and the development of gerontology nursing roles that work across the primary care/CSOA boundary."

And

"The interface between residential care and the DHB will be a strategic priority in the coming years. There is scope to prevent transfer from residential to acute care, and to improve the timing and quality of transfer from acute to residential care settings. CSOA and Home Health will work with the funder to develop specialist input to residential care, and to bring the residential care sector in Waitemata into the continuum of care for older people."

Additionally, the directive and requirement to seek efficient use of resources at a strategic level is supported by this proposal in that it aims to reduce the use of expensive inpatient environments in the ongoing care of frail elderly clients across the continuum of care.

Financial Benefits

Whilst the financial benefits of this proposal are perhaps not overtly robustly quantifiable, the relative cost of maintaining population wellness in the community is well established as being less, both in dollar terms and in quality of life terms, than admitting clients to an inpatient environment. It is clear that capacity in the system needs to be increased, and the data we have to date on the efficiency of this service demonstrates that building capacity in a community context is much more cost effective than "adding beds". Below are some current illustrations of this.

A data "slice" for the first year of the current GNS service on the efficiency of this approach is illustrated in the graphs below. There are several points to consider in analysing this data:

- This is a sample of the clients seen in the first year – not the entire caseload of the GNS service. These clients were those seen by the Nurse Practitioner and/or the Gerontology Nurse Specialist.
- The data has been adjusted for mortality – when the patient died they were removed from the sample.
- The inpatient admissions can be quite confidently compared to each other because the population in question, according to the criteria for the service (See Appendix A), is the frail elderly who have multiple co-morbidities. Thus any inpatient admission will need to consider a similar range of treatments, considerations and interventions, regardless of the particular reason for admission.

- Efficiency is assumed to be a part of the work, based on the criteria that the intervention must “make a difference” to the client outcome. This means that clients who will not improve are explicitly not eligible for service – for example palliative care clients.

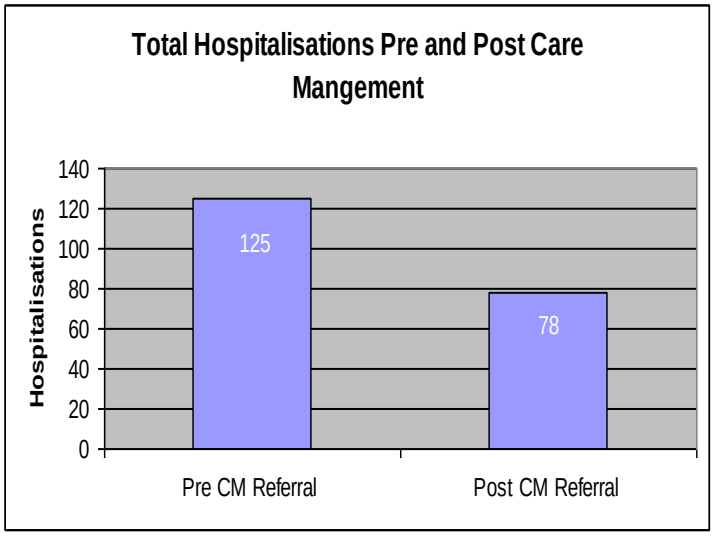

Figure 1: Total number of hospitalisations for the all 67 patients pre care management and post care management intervention.

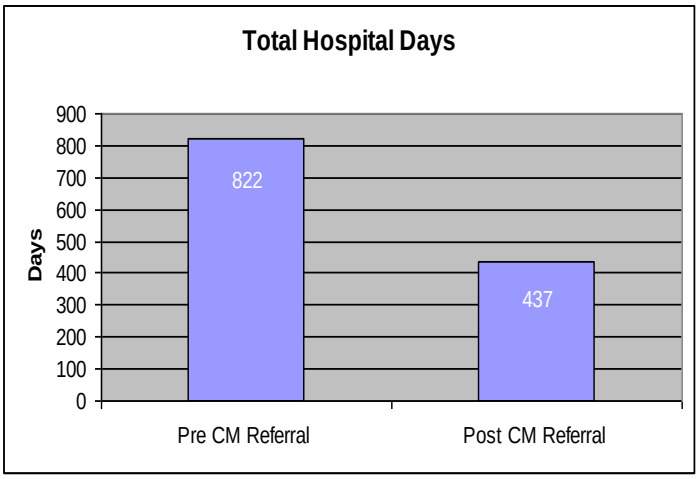

Figure 2: Total acute care hospital days pre and post care management. This does not include AT&R days for these patients.

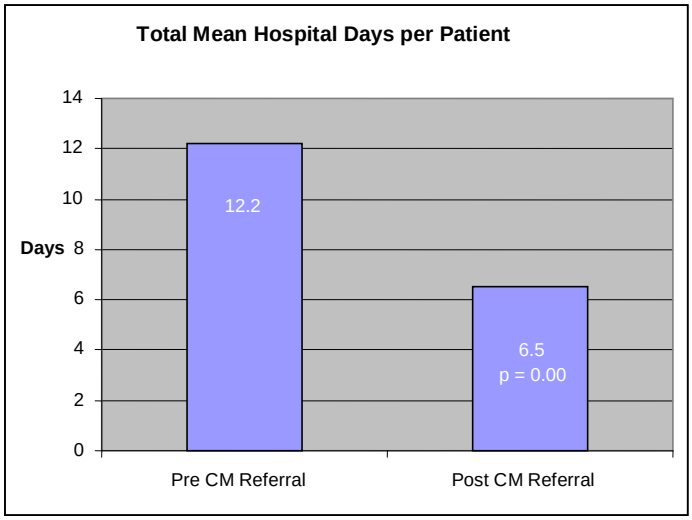

Figure 3: This figure represents the total mean hospital days per care management client pre and post intervention. A statistical significance of p = 0.00 is demonstrated using a single sample T-test.

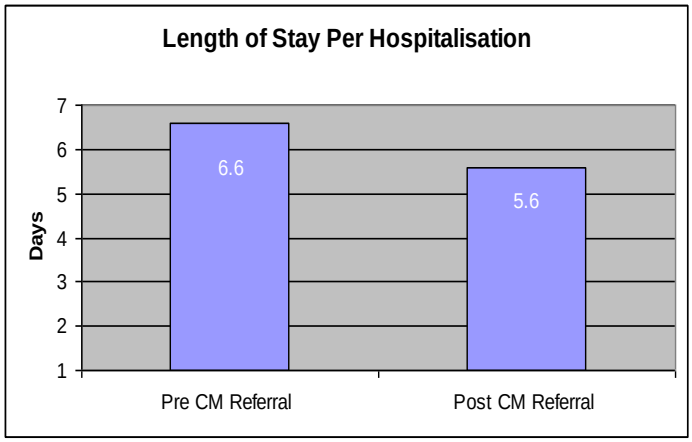

Figure 4: This figure shows the mean length of stay per hospitalisation for care management clients pre and post intervention.

In terms of financial benefits to the DHB in implementation of a similar service for the primary care and residential care sectors, the above efficiencies have been applied to potential outcome and cost benefits which could be achieved by the two proposed positions.

Cost Savings per Episode of Care

To take a top level look at financial benefits, comparing the cost of an inpatient episode of care to a GNS episode of care illustrates significant efficiency of this method of intervention. Assuming maximum productivity for both interventions, comparative costs per episode are shown below. Based on an average length of stay of 4 days, at an average cost of $500 per day, an inpatient episode will cost a minimum of $2,000 per patient admitted (a conservative estimate for this age group) compared to the cost of an episode of care from a GNS, being $632 per patient based on an average of 5 contacts per client per year.

Descriptor	Cost per contact	Number of contact/Length of stay	Total cost per patient per episode
GNS Episode of care	$124	5 contacts	$632
Inpatient Stay	$500	4 days LOS	$2,000
GNS efficiency	**-$376**		**-$1368**

Cost Savings per Patient by Occupied Bed Days saved

When the GNS service does not prevent an admission, the data shows that there is still an efficiency to be realized in terms of the cost per patient and occupied bed days. To assess the benefit in terms of occupied bed days saved and the financial benefit per patient, assuming an average cost of $500 per inpatient bed day, and based on the first year data from the current GNS service, the data illustrates a savings of $2,850 per patient. The table below illustrates this analysis.

COST SAVING PER PATIENT			
Total Mean Hospital Days/Patient			
Pre CM Referral		12.2	
Post CM Referral		6.5	
Total Mean Hospital Days per patient saved		**5.7**	
Est. Cost per Hospital Occupied Bed Day		$500	
Est. Hospital Cost saving per Patient			**$2,850**

Cost savings by Hospital Beds saved

BED SAVING			
Total Mean Hospital Days per patient saved		5.7	
Aggregate Hospital Days per total caseload	1,915		
Occupancy Rate		80%	
Available Hospital days	2,394		
Est. Hospital Beds saved p.a.			**6.56**

The financial benefits from implementation of this proposal are therefore significant – a potential savings of 6 hospital beds per year, per GNS FTE investment illustrates this potential efficiency. If the data is reworked to assume less productivity (5 hours per day clinical productivity instead of 6), the savings still equate to just over 5 hospital beds potentially saved each year.

Legislative requirements

There are no legislative requirements to consider with this proposal – it is simply an enhancement and addition to an already successful service. There are no legislative barriers to prevent its operationalization.

Inequalities addressed

The inequalities addressed by this proposal are those related to access to expert case management services for clients in the residential care sector and primary care sector. These sectors will report being marginalized and under resourced. The Gerontology nursing service operates under a case management model of care,

which navigates the system for the client, facilitating access to the most appropriate care for them and the most appropriate time and place. In most cases this means that it occurs early, and in the community, and prevents the degree of deterioration and complexity that requires an expensive admission to hospital. This proposal is an effort and increasing access to expert gerontology care, while at the same time increasing access to other community based services which will facilitate wellness and optimal functional independence.

Other benefits
Relationship development in both the primary care sector and residential care sector and the consequent ability to enhance services across settings for minimal investment is an anticipated benefit of this proposal. The proposed positions would have the explicit intent of keeping patients well in their community environment, and work work to enhance the relationships across settings to achieve this.

There is also potential benefit to share both resources, knowledge and expertise to enhance the capability of all settings to meet the needs of this population. This is an opportunity to take a systems view of managing a specific population, and to break down barriers to this at all levels.

Benefits and Outcomes

Objectives

The objectives of these positions are as follows:

Primary Care GNS

- To improve the efficiency of the system as a whole.
- To prevent hospital admissions from the Primary Care Sector
- To reduce readmissions from ECC and the inpatient environments
- To reduce the length of stay for patients who are unavoidably admitted
- To shift capacity for this care from acute environments, to the community
- To reduce the complications from management of co-morbidities, poly-pharmacy and complex social situations to optimize individual patient functional independence
- To enhance quality of life for patients who receive the intervention (qualitative outcome)

Residential Care

- To prevent hospital admissions from Residential Care
- To build capacity for complex nursing interventions in this environment
- To reduce readmissions from inpatient environments of all kinds through the above
- To reduce length of stay for unavoidable admissions
- To shift capacity for this care from the acute environments to the community
- To reduce disruption in care for clients and transfers between settings.

Budget and Cost Analysis

Total investment proposed in this business case is $200,000. A budget overview is detailed below:

Purpose	Amount
Salary GNS Primary Care	$75,000
Overheads, allocations, professional development, etc.	$25,000
Salary GNS Residential Care	$75,000
Overheads, allocations, professional development, etc.	$25,000

Appraisal and Prioritization

The self ranking of this proposal based on the criteria provided is as follows:

Burden of disease
This assessment is based on population projections which show growth in the target population at an extraordinary rate of 9%, compared to an average of 4% in other age groups, and the generally well known fact that the bulk of our admissions to acute settings, ECC and AT&R are for people over 65. (ECC admits here?). While the number of people served annually by this initiative is likely to be much less than 4000, the cost benefit as illustrated above remains significant.

Health gain
This assessment is based on the data that shows inpatient admissions post intervention were reduced by 62%, and current feedback on quality of service (ie: client surveys, anecdotal feedback) illustrates high improvement on quality of life and functional independence.

Access
This assessment is based on the fact that access to this service is currently very limited, despite its efficiency. Additionally, access to this service would enhance access to other health care services, which may be more appropriate to the individual, and more cost effective (ie: not an inpatient stay), because it is based on a case management model of care. Both the residential care sector and the primary care sector are areas where this population is often left to flounder, and are under serviced by any expert preventative intervention.

Appropriateness
This rating is based on the fact that this kind of service initiative, being population focused, needs based and community oriented has long been supported internationally by highly credible bodies such as the World Health Organization under the principles of Primary Health Care. It also solidly supports our own national health system objectives contained in the Health of Older Peoples Strategy, the Positive Aging strategy, the Disability Strategy and the Primary Health Care strategy. WDHB has a strategic mandate to implement these programs, and this proposal fits that mandate perfectly.

Organizational Impact
This assessment is base on the fact that this proposal takes a population view, and has, as an explicit objective, sharing expertise and knowledge across the system. The potential to build system capability in marginalized areas is clearly stated. The benefit to the organization of more efficient use of resource, therefore more appropriate division of workload across the system is also clear.

Risk Assessment

There are very few risks associated with this proposal outside normal operational issues, such as sustaining productivity and managing demand. The most obvious risk will be an increase in costs associated with complex interventions in both settings, however, the cost of maintaining even very complex clinical interventions in the community are far less than the cost of maintaining a hospital bed.

Consultation and Endorsement

This proposal is a result of both internal and external opinion and consultation. The HOP strategy work shops have illustrated the need for more case management roles in the community in these settings. Feedback from the primary care sectors and the residential care sectors in a variety of contexts is that they feel they are under-resourced to adequately care for this population in the community.

The proposal has also been reviewed by clinicians within WDHB and HOAS.