Title: Waitemata DHB and Residential Aged Care Integration Project

Operational Area: Helen Frances, GM Services for Older People; Leanne Catchpole, Funding Team; Marsha Marshall, CSOA Service Manager; Dr Michal Boyd, Nurse Practitioner Clinical Leader, CSOA.

Contact: Dr Michal Boyd, Northshore Hospital Community Building, Ext. 2808,
Mobile Phone: 021 784 050

EXECUTIVE SUMMARY

This is a business case to gain long term funding for systematic support and intervention for residential aged care residents in the Waitemata area.

a) Purpose:
The aim of this project is to increase the integration of services for older adults across the DHB Home and Older Adult Services and residential aged care. Principally, this proposal seeks to increase the capability of Residential Aged Care Facilities (RACF) to proactively identify and intervene for common geriatric issues, thereby reducing the incidence of preventable acute care admissions. The specific aims include the following:

- Provide Gerontology Nurse Specialist (GNS) outreach to residential aged care to increase integration and coordination of across services and to increase access to the WDHB older adults specialist services.
- Develop protocols and guidelines for common geriatric issues that may contribute to health and functional decline for those in residential aged care.
- Provide targeted gerontology education and clinical coaching for residential aged care nurses and caregivers by advanced gerontology nurses employed by WDHB.
- Provide targeted specialist wound care intervention and coaching aimed at preventing complications of chronic wounds.

In Waitemata DHB area, there are currently 2852 residential aged care beds, representing 5% of total population over 65 years of age. The population of those 85 years and older (29% of who are in residential aged care) will rise 6 fold over the next 45 years (Ministry of Health (MOH) 2001).

By the very nature of the care they require, patients residing in aged care are at high risk for chronic illness exacerbation and health decline, and therefore are at increased risk of admission to secondary care. Additionally, the acuity of patients in residential aged care has increased dramatically in the last 15 years (Ministry of Health, 2002; Ashton, 2000).

The residential aged care population greatly impacts WDHB acute services. A review of WDHB hospital admissions from residential aged care from October 2005 through September 2006, demonstrated the following:

- The average acute hospital length of stay for all people over 65 years is 3.5 days, compared to 4.9 days for those over 65 years admitted from residential aged care. For those patients being admitted into residential aged care directly from an acute hospital stay, the length of stay is 8.6 days.
- On average, there are approximately 24 acute care beds utilised daily by all subsidised and non-subsidised RACF residents. This represents roughly three quarters of the beds of one acute care ward and converts to a cost of $5,256,000 annually.

b) Alignment with DHB strategies and priorities:

This project aligns with the Health of Older People's Strategy from the New Zealand Ministry of Health and Waitemata DHB Health of Older People's Implementation Plan and District Annual Plan through:

- Integration of care across the health continuum.
- Implementation of specialist services for older people with high and complex needs.
- Targeted Waitemata District Health Board interventions to support residential aged care.

c) Clinical Benefit:

- Decreased hospital admissions from residential aged care to acute care beds.
- Protocol development and clinical coaching for residential aged care by Gerontology Nurse Specialists.
- Increased specialized wound care expertise available to aged care residents, including evaluation and implementation of compression dressings for venous stasis ulcers.
- Improved coordination and integration of multi-disciplinary team care for residential aged care patients.
- Decreased polypharmacy.

d) Summary table of costs and benefit (please also refer to attached spreadsheet:

($000's)							
Investment	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Total**
interRAI RAI 2.0	-33						
PCs	-4	-4					
Total Cash Outflow	-37	-4					
Potential Future Capital Cost Savings		526	788	1,051	1,051	1,051	4,466
Costs							
Gerontology Nurse		-150	-225	-300	-300	-300	-1,275
Wound Care Specialist		-60	-60	-60	-60	-60	-300
Project Manager		-30	-30	0	0	0	-60
O/Head Expenses – 10% of salaries		-24	-32	-36	-36	-36	-164
Traveling Expenses		-30	-40	-50	-50	-50	-220
health Alliance charges		-6	-9	-12	-12	-12	-51
Annual IT vendor costs		-5	-5	-5	-5	-5	-25
Wound care products		-10	-10	-10	-10	-10	-50
Cash Inflow	0	210	377	578	578	578	2,323
Net Cash flow	-37	210	377	578	578	578	2,286
Cumulative	-37	173	551	1,129	1,708	2,286	
							Net Present Value: 1,732.4
FTE's							
Gerontology Nurse Specialist		2.0	3.0	4.0	4.0	4.0	
Wound Care Specialist		1.0	1.0	1.0	1.0	1.0	
Project Manager		1.0	1.0	0	0	0	
Total FTE's		**4.0**	**5.0**	**5.0**	**5.0**	**5.0**	

e) Consequences of not proceeding:

- Escalation RACF admissions and costs at least 3-fold over the next 20 years.
- Care inequalities continue because older people at home have greater access to specialist care than those in residential aged care.
- Potential increase in indirect costs due to increased prescribing.

f) Affect on other Services:

- Reduction in preventable ECC and hospital admissions from residential aged care.
- Improved coordination with the multi-disciplinary team in primary and secondary care.
- Enhanced residential aged care nurses and caregivers skills through clinical coaching of by Gerontology Nurse Specialists.
- Improved systematic geriatric assessment for Needs Assessment and Service Coordinators (NASC).

DESCRIPTION OF THE INVESTMENT

a) Aim

- Prevent hospital admissions and decrease the length of stay where hospital admissions are unavoidable.
- Increase early, proactive assessment and intervention of common geriatric issues in residential aged care.
- Promote partnership and improved integration across primary and secondary services for residential aged care residents and those discharged from hospital to residential aged care.
- Promote an increased alliance between Gerontology Nurse Specialists and residential aged care nurses and caregivers.
- Promote interdisciplinary care for older adults in residential aged care.
- Promote workforce development for residential aged care nurses and caregivers.
- Develop care protocols and guidelines for common geriatric issues in residential aged care based on "Palliative Care Approach to Residential Aged Care".
- Promote a palliative care approach in residential aged care.
- Trial systematic assessment in residential aged care using the interRAI assessment system which includes polypharmacy assessment.

b) Proposed Approach

Two GNSs will engage with approximately half of the district's RACFs during the first year of the project (approximately 30 facilities of a total of approximately 60 facilities), then two more GNSs will engage with the other half of the district's RACF during the second and third year of the project. At the end of the third year, all RACF will have access to a GNS. These GNSs will perform the following interventions:

- Provide advanced gerontology assessment of residents.
- Act as clinical coach to develop nurses and caregivers assessment ability.
- Coordinate with the multi-disciplinary team that will include as necessary:
    - the patient's GP, facility nursing and caregiver staff
    - PHO staff including pharmacists
    - WDHB community services for older people staff
    - Integration of care with local hospice organisations and WDHB palliative care specialists.
- District wide development of protocols and guidelines for common older age health issues in residential aged care.
- Promote the development of a palliative approach to care.
- Trial systematic assessment systems, such as the interRAI assessment system.
- Promotion of flu vaccination to both residents and staff (Hayward, Harling & Wetten, et al., 2006).

A District Nurse Wound Care specialist will work in the facilities in collaboration with the Gerontology Nurse Specialist to provide specialist wound care to:

- Prevent avoidable hospital admissions for wound exacerbation.
- Educate the caregivers and nurses in the facilities related to prevention and follow up for specialised wound care needs, such as compression bandaging.

JUSTIFICATION

Drives for Change

The current population of people over 65 in the Waitemata district is estimated to be 55,200. It is estimated that the older adult population has increased by 14% in the last 5 years (median estimate projection).

In the last five years, the proportion of private hospital beds has increased at approximately the same rate as the rise in the number of those over 85 years (24%). Aged Concern and the Ministry of Health have reported the following trends:

- The largest single group of residents coming into residential care are over 85 years.
- On average in New Zealand, 20% of people admitted to residential care survive less than three months, and 40% survive less than 12 months (MOH, 2002).
- Those that enter residential aged care are older and more frail than previously (Ashton, 2000)

In Waitemata DHB area, there are currently 2852 residential aged care beds, representing 5% of total population over 65 years of age. The population of those 85 years and older (29% of whom are in residential aged care) will rise 6 fold over the next 45 years (MOH, 2001).

The residential aged care population impacts on WDHB acute services. A review of WDHB hospital admissions from residential aged care from October 2005 through September 2006, demonstrated the following:

- The average acute hospital length of stay for all people over 65 years is 3.5 days, compared to 4.9 days for those over 65 admitted from residential aged care. For those patients being admitted into residential aged care directly from a hospital stay, the length of stay is 8.6 days.
- On average, there are approximately 24 acute care beds utilised daily by all subsidised and non-subsidised RACF residents. This represents roughly three quarters of the beds of one acute care ward.
- There is 10% hospital mortality for older people admitted from residential aged care, compared with 1% hospital mortality of all people over 65 admitted to acute care services (see Table 1).
- Acute care utilisation by aged care residents converts to an approximate annual cost of $5,256,000.

Table 1: **Inpatient Deaths for Pts aged 65+ years Oct 05 to Sep 06 by Residential Type**

Resident Type	Admissions	In-Patient Deaths	% of admissions ending in death
Admitted From Subsidised Residential Care	994	97	10%
Other	21,011	510	2%

An audit completed by the Assessment, Treatment and Rehabilitation (AT&R) gerontology nurse specialist of admissions in August 2006 from residential aged care found the most common primary reason patients were admitted to hospital was shortness of breath and pneumonia, followed by dementia/delirium, falls, and COPD (see Figure 1). Admission diagnosis data for those admitted from

residential aged care indicates similar trends such as pneumonia, fractures from falls, urinary tract infection, COPD (chronic obstructive pulmonary disease) and CHF (congestive heart failure). It is clear from these diagnoses that some hospital admissions may be avoided with timely intervention (Table 2). Often, the eventual severity of these issues can be influenced with early identification and targeted, proactive care. Home and Older Adult Services is planning to develop a service to address the needs of those with COPD in the community as well, and this service will be integrated with this project.

Figure 1: Gerontology Nurse Specialist Audit of the main issues for older adults admitted from long term care.

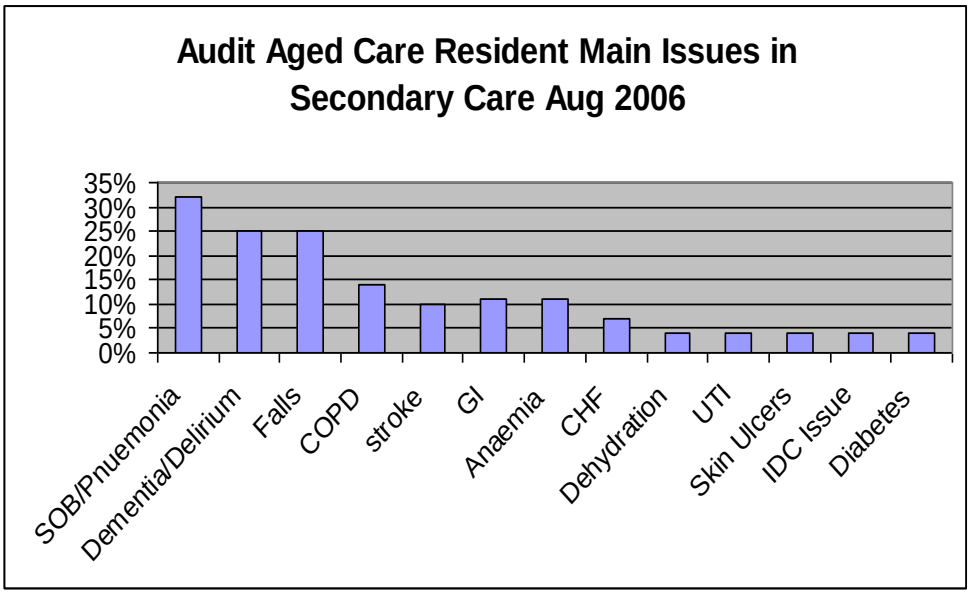


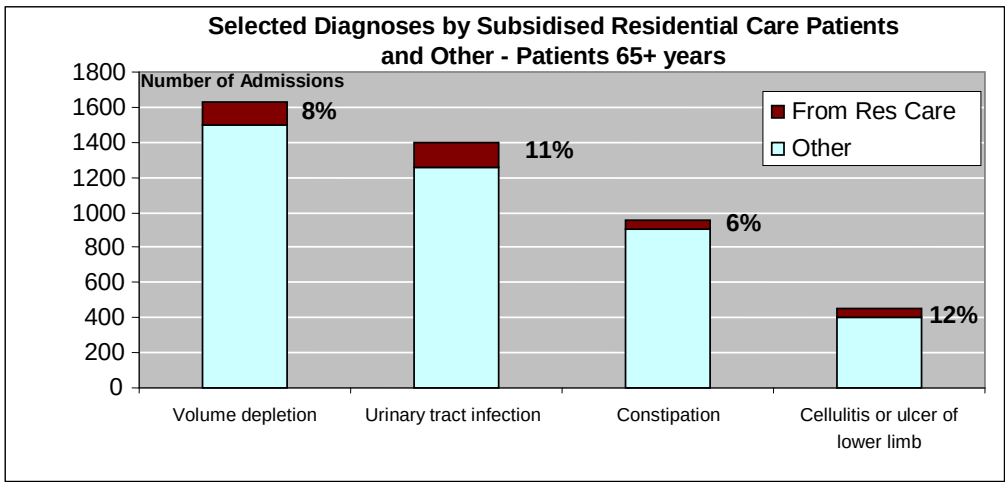
Table 2. Top 10 Primary Diagnoses for Hospitalised Subsidised Residential + 80 year old Aged Care Patients (September 2005 to October 2006).

Top Diagnosis for Hospitalised RACF Patients + 80 years old
Pneumonia, unspecified
Fracture of intertrochanteric section R femur
Chronic obstructive pulmonary disease
Fracture of subcapital section of femur
Urinary tract infection, site not specified
Acute subendocardial myocardial infarction
Congestive heart failure
Syncope and collapse
Anaemia, unspecified

When all secondary diagnoses are considered for those admitted from RACF, common preventable conditions are over-represented when compared to all people admitted aged 65 years or over. Aged care patients represent 5% of the total population aged 65 years and above, yet 8% were diagnosed with volume depletion (dehydration) and 11% were diagnosed with a urinary tract infection, 6% with constipation, and 12% with lower limb cellulitis. These statistics were calculated from only subsidised aged care patients (62% of the total residential aged care population), and therefore are a conservative estimate. (See Figure 2). If these common elderly conditions are addressed early, more severe

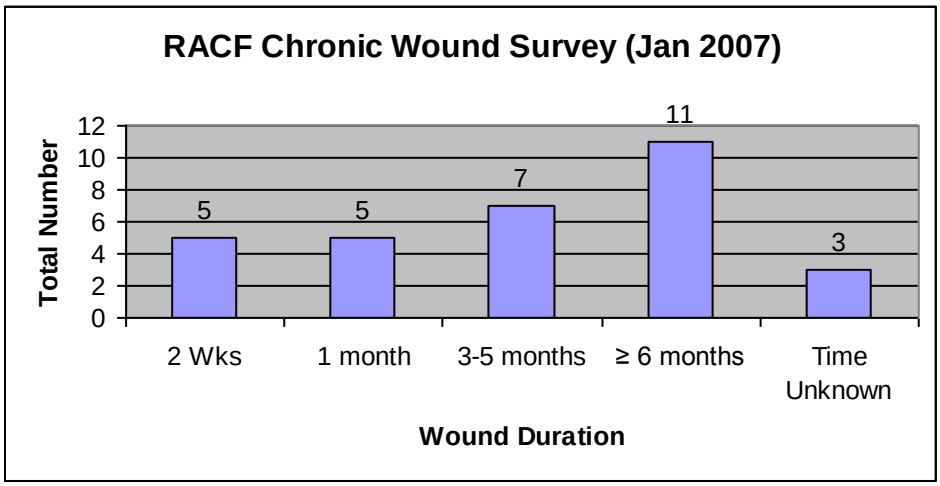
complications that may result in hospitalisation could be avoided (Eaton, Bannister, Mulley, Connolly, 1994; McFadden, Price, Eastwood, Briggs, 1982)

Figure 2: Proportion of aged care patients with selected secondary diagnoses.



Wound Care Specialist: Wound care consultation and products are included in the overall cost in residential aged care contracts, but often chronic wounds do not get the wound care expertise needed to actually heal them completely. In a recent survey of wounds in RACF in WDHB (Jan. 2007, 38% facility response rate), 73% had residents with ulcers and chronic wounds (see figure 3). Chronic wounds from venous stasis ulcers can be healed with the use of appropriate technology such as compression dressings. Without the use of compression dressings, these chronic wounds rarely heal and may be the cause of lower limb cellulitis that can result in acute hospital admissions. Compression dressings require advanced wound care expertise by specialist nurses that have consistent practice with applying these dressings. Compression dressings are quite expensive and facilities do not have the nursing expertise or the wound care budget to supply these dressings. This creates an inequality for those in RACF compared to those older people at home that can access this specialised care through WDHB community services.

Figure 3: RACF Chronic wound survey (38% response rate).



A recent pilot project was implemented with a Nurses Practitioner working with a local RACF. Admissions to hospital, ECC and hospital length of stay were compared for the three months in the previous year to the three months during the pilot. The results showed a decrease in all aspects of acute care utilisation (see table 3)

Table 3: Comparison of three months in the year previous to the Nurse Practitioner pilot project and the three months during the Nurse Practitioner pilot project.

Admissions, excluding AT&R, Mental Health and ambulatory centre:

Period	ECC Visits	Admissions	Avg LOS
1. Nov 05 to Jan06 Pre Pilot	37	26	6.7
2. Nov 06 to Jan 07 Pilot Period	25	20	3.3

The main drivers for this business case are:

- To decrease preventable hospital admissions.
- Increasing older adult population in the Waitemata DHB area.
- Increasing high and complex needs of older adults residing in residential aged care.
- The over-representation of residential aged care residents in acute care representing approximately 24 beds per day in acute care.
- The prevalence of preventable common geriatric issues such as dehydration, urinary tract infection and constipation in residents admitted to hospital from residential aged care.
- The need for a palliative approach to residential aged care to improve the care, comfort and quality of life for those in residential aged care.
- The need for early identification of common and potentially life threatening medical conditions.
- The need to develop and implement evidence-based protocols and guidelines to enhance workforce development and proactive assessment and intervention for common geriatric issues in residential aged care.
- Increased specialized wound care expertise, including evaluation and implementation of needed compression dressings for venous stasis ulcers.
- Improved coordination and integration of multi-disciplinary team care for residential aged care patients
- Isolation of nurses in RACF and poor access to on-going education and clinical coaching.
- Assistance for RACF nurses to meet the requirements for their annual practicing certificates and continuing education needs.
- The need to decrease polypharmacy.

Health Gains to be Made

Clearly, with 40% of RACF residents surviving less than twelve months, the focus of care must be on improving quality of life, comfort and basic nursing care that address issues such as pain, skin integrity, hydration, elimination and nutrition, and early detection of avoidable complications. In Australia, this focus has been viewed as aligning with a palliative care approach for residential aged care and evidenced-based guidelines have been developed that provide an excellent framework for nurses and caregivers to enhance their care in RACF.

The "*Palliative Care Approach for Residential Aged Care*" developed by the Australian Department of Health and Aging cover all major aspects of providing care for residents in Residential Aged Care Facilities. This includes the care spectrum from attending to physical symptoms (e.g. fatigue, dehydration), through spiritual needs, to dealing with the needs of family members. After vigorous scientific evaluation, the National Health and Medical Research Council (NHMRC) approved these guidelines and assure that they are based on the best scientific evidence available at the time of compilation. It is envisaged that these guidelines will be used as a basis for the development of care protocols for residential aged care in the Waitemata DHB district.

The World Health Organization (2003) describes palliative care as:
"An approach that improves the quality of life of individuals and their families facing the problem associated with life-threatening illness." (World Health Organisation, 2003).

Palliative care is not only for patients where death is imminent. It is an approach to overall care that includes the following characteristics:

- providing relief from pain and other distressing symptoms
- affirming life and regards dying as a normal process
- intention to neither hasten nor postpone death
- integrate the psychological and spiritual aspects of patient care
- offer a support system to help patients live as actively as possible until death
- offer a support system to help the family cope during the patient's illness and in their own bereavement
- use a team approach to address the needs of patients and their families
- enhance quality of life
- Palliative care interventions can occur in conjunction with other therapies that are intended to prolong life, including investigations needed to better understand and manage distressing clinical complications. (Australian Dept. of Health, 2006).

This recent definition and description of palliative care asserts that, contrary to earlier definitions, individuals with diseases other than cancer that have a terminal phase and are progressive in nature would benefit from a palliative approach. These diagnoses include chronic obstructive pulmonary disease (COPD), Alzheimer's disease, and acute massive cerebrovascular accident, to name a few (Kristjanson, Toye, & Dawson, 2003).

Advanced Nursing Practice in Residential Aged Care: Nurses with advanced skills, such as Nurse Practitioners and Clinical Nurse Specialist can enhance the care of older people in residential aged care. A randomised/controlled trial from the United States found that NP's reduced hospital admissions by approximately 50%, and it was estimated that each NP saved $103,000 (Net USD) per year in health care costs (Kane, 2003). Data from a Canadian study of Nurse Practitioners working in residential aged care facilities in Ontario demonstrated that NPs played an important role in preventing unnecessary hospital admissions (Ontario Ministry of Health and Long Term Care, 2002). Results suggest that between 30% and 65% of cases would have been transferred to hospital without the NPs involvement.

Data also suggest that NPs in residential aged care spend more time with facility residents, demonstrate higher levels of patient satisfaction, as well as decreased health care utilisation costs overall than usual care (Aigner et al., 2004; Bourbonniere & Evans, 2002; Fama & Fox, 1997; Small, 1994; Buchanan & Bell, 1990; Kane, et al., 1989). An evaluation of nurse practitioner care in residential aged facilities found that NPs spend a quarter of their time interacting with families and the health care team (Kane, et al., 2001). This resulted in families showing greater satisfaction with GNP care when compared to controls (Kane, et al., 2002). Nurse practitioners can provide crucial co-ordination among clients, families, nursing home staff and the health care team

Research by Kane et al. (2001) and Rosenfeld et al. (2004) further contend that NPs can have a significant impact on RACF facility staff by helping to increase staff confidence in recognizing signs and symptoms of potential problems and in caring for residents in residential aged care. An evaluation of NPs working in a U.S. Medicare Health Maintenance Organization (HMO) serving exclusively nursing home residents found that by simply being present in the residential aged care facility on a regular basis, the NP developed relationships with facility staff that improved identification of early changes in residents' status and monitoring of ongoing treatment (Kane et al., 2002). The study concluded that the NP in residential aged care serves as an extension of primary health care services, providing both medical services and a coordinator/case manager role.

Link to Strategic Priorities

Alignment with District Strategic Plan 2005-10

- To reduce hospital admissions and average length of stay.
- To enhance integration with primary care.

Alignment with Ministry of Health 2005/06

- Alignment with Health of Older peoples strategy.
- Palliative Care Strategy.
- Alignment with continuum of care for people with chronic conditions.

Legislative Requirements

There are no known legislative barriers known that would interfere with this project.

Inequalities addressed

Currently Maori, Pacific Island and Asian residents are underrepresented in residential aged care compared to total population.(Table 3). It is known that Maori and Pacific Island people have a shorter life expectancy than non-Maori and Non-Pacific peoples. The future trend is for Maori, Pacific and Asian older adult populations to greatly increase in the future. The intervention proposed recognises these future trends and will anticipate the increased need for these populations and will work closely with the community to reduce inequalities in the residential aged care sector.

The lack of access to specialised wound care creates an inequality for those in RACF compared to those older people at home that can access this specialised care through WDHB community services.

Table 3: **Admissions Oct 05 to Sep 06 by Residential Type and Ethnic Group**

Ethnic Group	From Res Care	To Res Care	Other	Total	*% in each gp*
Maori	6	4	609	619	*3%*
Pacific Island	13	5	645	663	*3%*
Asian	23	4	693	720	*3%*
Other	952	240	18,811	20003	*91%*
Total	994	253	20,758	22005	*100%*

Any other benefits:

The residential aged care sector has a very high staff turn-over rate. There are many reasons for this trend, but it is envisaged that up-skilling and empowering nurses and caregivers to play an integral part in interdisciplinary teams will enhance their job satisfaction and in turn decrease staff turn-over.

Benefits and Outcomes

Residential Aged Care	RACF Acute Care	Acute Care Total Cost	Projected Acute Care	Annual Operational	Bed saving

		Bed Days/year	$600.00/day per annum	Reduction	Cost Savings	per year
Year 1	Intensive intervention with 2 GNS' and MDT/Protocol Implementation	8760	$5,256,000	10%	$525,600	2.4
Year 2	Intensive intervention with 3 GNS' and MDT/Protocol Implementation	8760	$5,256,000	15%	$788,400	3.6
Year 3 -5	Intensive intervention with 4 GNS' and MDT/Protocol Implementation	8760 (x3 years) = 26280	$15,768,000	20%	$3,153,600/yr On-going	4.8
Total 5 year Future Capital Investment Savings: $4,467,400						

(please refer to the attached spreadsheet)

($000's)							
Investment	**Yr 0**	**Yr 1**	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Total**
interRAI RAI 2.0	-33						
PCs	-4	-4					
Total Cash Outflow	-37	-4					
Potential Future Capital Cost Savings		526	788	1,051	1,051	1,051	4,466
Costs							
Gerontology Nurse		-150	-225	-300	-300	-300	-1,275
Wound Care Specialist		-60	-60	-60	-60	-60	-300
Project Manager		-30	-30	0	0	0	-60
O/Head Expenses – 10% of salaries		-24	-32	-36	-36	-36	-164
Traveling Expenses		-30	-40	-50	-50	-50	-220
health Alliance charges		-6	-9	-12	-12	-12	-51
Annual IT vendor costs		-5	-5	-5	-5	-5	-25
Wound care products		-10	-10	-10	-10	-10	-50
Cash Inflow	0	210	377	578	578	578	2,323
Net Cash flow	-37	210	377	578	578	578	2,286
Cumulative	-37	173	551	1,129	1,708	2,286	
Net Present Value: 1,732.4							
FTE's							
Gerontology Nurse Specialist		2.0	3.0	4.0	4.0	4.0	
Wound Care Specialist		1.0	1.0	1.0	1.0	1.0	
Project Manager		1.0	1.0	0	0	0	
Total FTE's		**4.0**	**5.0**	**5.0**	**5.0**	**5.0**	

Model Assumptions:

- Investment Year 1 – IT Set up costs and licence fees for interRAI RAI 2.0, 2 PCs.

- Investment Year 2 – 2 PCs.
- Gerontology Nurse Specialists – $75,000 per FTE; 2 in year 1; 3 in year 2 and 4 in year 3.
- District Nurse Wound Care Specialist (1 FTE) – $60,000.
- Project Manager 0.5fte for years 1 and 2.
- Overhead expenses – 10% of salary per fte per annum.
- Traveling expenses at $10,000 per annum for GNSs and Wound Care Specialist .
- Health Alliance charges of $3,000 per PC per annum.
- Annual IT vendor charges based on AIS estimates January 2007.
- Wound care products for residential aged care $10,000 per annum.

Patient Benefits:

- Improved health due to early intervention for common geriatric issues.
- Increased symptom control and comfort care where appropriate.
- Improved multi-disciplinary care.
- Decreased polypharmacy.

Health Care Professional:

- Professional development and clinical coaching.
- Facilitation of a multi-disciplinary team approach.
- Increased clinical support from specialists in geriatrics care, wound care and pharmacy.
- Access to protocols and guidelines to enhance care.
- Decreased professional isolation.
- Clinical coaching in assessment and interventions for common geriatric conditions.
- Greater sense of empowerment and job satisfaction.

Residential Aged Care Providers:

- Workforce development and empowerment.
- Improved employee job satisfaction.
- Improved care for residents.
- Decreased after-hours transfers to hospital.
- Decreased after hours GP visits.
- Improved protocol and guidelines for care.
- Increased coordination with WDHB geriatric specialist services.
- Decreased preventable geriatric exacerbations.
- Systematic geriatrics assessment.
- Increased collaboration with other facilities.

General Practice:

- Increased access to specialist geriatrics consultation.
- Improved coordination with the multi-disciplinary team in primary and secondary care.
- Increased access to pharmacist for medication consultation.
- Enhanced assessment data reported by nurses and caregivers.
- Improved systematic geriatric assessment data.

PHO:

- Enhanced palliative care capability.
- Enhanced coordination with the residential aged care sector.
- Increased specialist geriatric support and education.

WDHB:

- Reduction in preventable ECC and hospital admissions from residential aged care.
- Aligns with the strategic objectives of the "Health of Older People" strategy.
- Better integration of care across residential, primary and secondary care.
- Trial of systematic geriatric assessment integration across health care settings.
- Consistent, district wide approach to residential aged care.

Desired Outcomes	**How these will be achieved**	**How results will be monitored /Timing**
Increased skill and knowledge of residential aged care nurses. Improved palliative approach to care and caregivers.	Implementation of advanced gerontology nursing clinical coaching and care coordination. Common geriatric issues and a palliative care approach protocol development and implementation in all RACF in the WDHB district.	Evidence based protocols and guidelines for a palliative approach for RACF will be developed by year one of the project. Implementation of protocols and guidelines for a palliative approach for RACF district wide by the end of year two. Pre and annual post intervention testing of RACF nurses clinical knowledge of common geriatric issues.
Proactive assessment and early intervention for common geriatric issues. Increased wound care expertise by nurses in RACF.	Implementation of advanced nursing consultation and protocol clinical coaching. GNS Outreach to promote interdisciplinary collaboration across primary and secondary care. Development of a wound care specialist to outreach to RACF.	Decreased avoidable ECC admissions and acute care length of stay evaluated pre intervention and annually post intervention for 3 years. Incidence within individual facilities of constipation and urinary tract infection, wounds and falls pre and post intervention measured annually.
Decreased Polypharmacy.	Interdisciplinary collaboration between GNS, community pharmacist, GP and RACF nurse.	Evidenced by a random sample of residents drug regimes pre intervention and a random sample of 20 patients drug regime post GNS intervention annually for three years.
Trial systematic comprehensive geriatric assessment.	Trail implementation of interRAI assessment system and collaborate with Needs Assessment/Service Coordination (NASC) to facilitate efficient transfer of information.	Assessments and problem lists will be developed from the interRAI assessments for one facility per year.

Appraisal and Prioritization: (please see attached scoring sheet and the rationale below)

Scoring Sheet for PHSA Priority Setting – 06-07 **Waitemata DHB and Residential Aged Care Integration Project**				
	Sub-Criteria	Rationale	Rating 1-9	O = Exp. Opinion E = Evidence
Burden of Disease	1) Population Perspective – prevalence of the disease/condition	High prevalence 5% of older adults currently reside in RACF and this will increase in the future	**9**	**E**
	2) Economic Impact – annual national cost of the condition	The annual health care cost projection for older adults is between 2 and 2.5 billion dollars.	**8**	**E**
	3) Target Population - # of clients to be served by initiative	There are currently >2800 older people residing in residential aged care in the district.	**7**	**E**
Health Gain	1) Response Rate	This initiative targets all clients in residential aged care, and therefore has the potential to effect practices across the board.	**9**	**E**
	2) Incremental Health Gain	High Improvement - RCT studies have shown a 50% decrease in hospitalisations and costs	**7**	**E**
	3) Anticipated Impact	High Improvement – Studies have shown increased patient and family satisfaction with care.	**7**	**E**
	4) Early Intervention	High Improvement - RCT studies have shown a 50% decrease in hospitalisations and costs	**7**	**E**
Access	1) Regional Equity	ADHB is currently developing a similar advanced nursing intervention	**5**	**O**
	2) Geographic Equity			**n/a**
	3) Population Equity	Services that are available to those in the community (i.e. specialised wound care) are not available at the same level for those in residential aged care. The ethnic population in residential aged care is estimated to increase in the future and this project will provide appropriate intervention for this changing demographic. Continuum of care isolation and often are not members of PHOs.	**9**	**O**
	4) Timeliness	The basis for this project is to increase the timeliness of specialised geriatric care in the community for residential aged care.	**9**	**E**
Appropriateness	1) Organisation Goals	Alignment with District Strategic Plan 2005-10 to reduce hospital utilisation and enhance integration with primary care.	**9**	**O**
	2) The most appropriate setting/level of service	The purpose of the project is to bring specialist gerontology services to residential aged care in an integrated fashion. This is a new way to deliver services to this population.	**9**	**E**
	3) Represents best Clinical Practice	This programme is based on the National Health and Medical Research Council (NHMRC, Australia) approved guidelines and standardised assessment.	**9**	**E**
	4) Reduces demand for Services	International RCT data and pilot data demonstrate decreased acute care utilisation.	**9**	**E**
	5) Partnership and Collaboration	This project has received enthusiastic support from the residential aged care sector, primary health, and acute services.	**9**	**E**
Organisational Impact	1) Knowledge Generation	There is currently no New Zealand evidence for advanced nursing care in RACF, and the evaluation of this project will be valuable to all involved in this type of care.	**9**	**E**
	2) Impact on workload pressure	This project can decrease ECC and hospital admissions and hospital length of stay.	**7**	**E**
	3) Impact on inter-district flows	Minimal impact.		**n/a**
	4) Builds capability to deliver health gains	Clinical coaching by advanced gerontology nurses for nurses and caregivers can improve the overall care of older people.	**9**	**O**

Risk Assessment

a) Risks Associated with this project.

Description	Impact	Probability	Mitigation	Resp.
Gerontology Nurse Specialists clinical coaching and coordination have little effect on the care provided by RACF nurses and caregivers.	M	L Published data clearly show a likely improvement in outcomes.	A steering group will be established of residential aged care providers to monitor the progress of the project and provide direction for improving the impact of the project.	M. Boyd
Unable to staff the Gerontology Nurse Specialist positions.	M	M	Identification of GNS will occur from the beginning of the project. Internal development of future GNS within WDHB will coordination with Associate Director of Nursing.	M. Boyd M. O'Sullivan
Lack of cooperation from Residential Aged Care Facilities.	M	L	Consultation with Residential Aged Care has occurred prior to starting this project and will continue on a regular basis throughout the project.	M. Boyd L. Catchpole

b) Risks of not proceeding:

Description	Impact	Probability	Mitigation	Resp.
Do nothing more – continue with lack of RACF coordination with WDHB geriatric specialist and acute care services.	H	M	Outreach to RACF by WDHB gerontology services to decrease avoidable acute hospital admissions.	PBMA panel. M. Boyd M. Marshall
Escalation RACF admissions and costs at least 3-fold over the next 20 years.	H	H	Outreach to RACF by WDHB gerontology services to decrease avoidable acute hospital admissions.	PBMA panel. M. Boyd M. Marshall
Decreased RACF workforce development .	M	M	Outreach to RACF by WDHB gerontology services to provide workforce development.	PBMA panel. M. Boyd

Consultation and Endorsement

This project proposal is based upon recommendations from the district wide Health of Older People Strategy consultation process that occurred September 2005 to June 2006.

These recommendations included the need for better integrated care across all care settings, and improved residential care nursing and caregiver education and training.

This process was a district wide consultation process that included Residential Aged Care, Older Adult Consumers, and all service providers for older adult health. A draft of this project proposal was discussed at a district wide meeting of Residential Aged Care providers and received enthusiastic support (October 2006).

This project proposal has also been discussed with, and endorsed by, WDHB Acute Care representatives and the WDHB Residential Aged Care Advisory Group (December 2006).

Internal endorsements:

Rachel Haggardy, General Manager, Adult Health Services

Leanne Catchpole, HOP Programme Manager, Funding Team

Attachments:

1. Financial spreadsheet
2. Criteria assessment
3. Letters of endorsement by residential aged care

REFERENCES:

Achtenberg, W.P., vanCampen, C., Pot. A.M., Kerkstra, A., Ribbe, M.W. (1999). Effects of the Resident Assessment Instrument on the care process and health outcomes in nursing homes: A review of the Literature. *Scand. J. Rehab Med, 31*(3), 131-7

Ashton, T. (2000). New Zealand: Long-term care in a decade of change. *Long Term Care Systems, 19*(3), 72-85.

Aigner, M., Drew, S. & J. Phipps. (2004). A comparative study of nursing home resident outcomes between care provided by nurse practitioners/physicians versus physicians only. *Journal of the American Medical Directors Association, 5*, 16-23.

Australian Department of Health and Ageing (2006). Guidelines for a Palliative Approach in Residential Aged Care. Retrieved 24/01/07 from http://www.health.gov.au/internet/wcms/publishing.nsf/Content/palliativecare-pubs-workf-guide.htm

Bourbonniere, M. & L. Evans. (2002). Advanced practice nursing in the care of frail older adults. *Journal of the American Geriatrics Society, 50*, 2062-2076.

Buchanan, J. I., Bell, R.M., (1990). Assessing cost effects of nursing-home based geriatric nurse practitioners. *11*(3). Retrieved 13 February 2003 from http://80-web10.epnet.come.ezproxy.aut.ac.nz.

Eaton D., Bannister P, Mulley GP, Connolly MJ. (1994). Axillary sweating: an important physical sign in the clinical assessment of dehydration in ill elderly patients. Brit Med J 1994;308:1271.

Fama, T. & P. Fox. (1997). Efforts to improve primary care delivery to nursing home residents. *Journal of the American Geriatrics Society, 45*, 627-632.

Hayward AC, Harling R, Wetten S, Johnson AM, Munro S, Smedley J, Murad S, Watson JM. (2006). Effectiveness of an influenza vaccine programme for care home staff to prevent death, morbidity, and health service use among residents: cluster randomised controlled trial. BMJ, 333(7581):1229-30

Hyatt, L. (1997). A Collaborative Practice Success Story. *Nursing Home Long Term Care Management*, 46(6).

Kane R.L., Keckhafer, G., Flood, S., Bershadsky, B., and Siadaty, M. S. (2003). The effect of Evercare on hospital use. *Journal of the American Geriatrics Society, 51*(10):1427-1434.

Kane, R. L. (2002). Nursing home residents covered Medicare risk contracts: early findings from the EverCare evaluation project. *Journal of the American Geriatrics Society. 50*(4), 719-729.

Kane, R. L. (2001). How EverCare nurse practitioners spend their time. *Journal of the American Geriatrics Society. 49*(11), 1530-1537.

Kane, R. L., Garrard J., Buchanan, J. L. et al. (1989). Effects of a geriatric nurse practitioner on the process and outcomes of nursing home care. *American Journal of Public Health, 79*, 1271-1277.

Krichbaum, K., Pearson, V., & Hanscom, J. (2000). Better Care In Nursing Homes: Advanced Practice Nurses' Strategies for Improving Staff Use of Protocols, *Clinical Nurse Specialist. 14*(1):40-46

Kristjanson, L. J., Toye, C. T. & Dawson, S. (2003). New dimensions in palliative care: a palliative approach to neurodegenerative diseases and illness in older people. *Medical Journal of Australia*, 179, (Suppl. 6), S42–44.

McFadden JP, Price RC, Eastwood HD, Briggs RS. (1982). Raised respiratory rate in elderly patients: a valuable physical sign. *Brit Med J, 284*, 626-7

Ministry of Health. (2002). *Health of Older People in New Zealand: A Statistical Reference*. Wellington, New Zealand.

Ministry of Health, (2001). *Health of Older People's Strategy*. Wellington, New Zealand.

Onatrio Ministry of Health and Long Term Care. (2002). The Ontario Nurse Practitioner in Long-Term Care Facilities Pilot Project. Ontario, Canada. Retrieved 24 January 2007 from http://www.health.gov.on.ca/english/public/pub/ministry_reports/nurseprac02/nurseprac02_mn.html

Rosenfeld, P., Kobayahsi, M., Barber, P. & M. Mezey. (2004). Utilization of nurse practitioners in long-term care: Findings and implications of a national survey. *Journal of the American Medical Directors Association, 5*, 9-15.

Small, N. (1994). The Role of the Gerontological Nurse Practitioner. *Nursing Homes Long Term Care Management, 43*(4).

World Health Organization. (2003). *WHO definition of palliative care*. Retrieved October 3, 2006, from World Health Organization Web site: http://www.who.int/cancer/palliative/de.nition/en/print.html