Older people in retirement villages: unidentified need & intervention research

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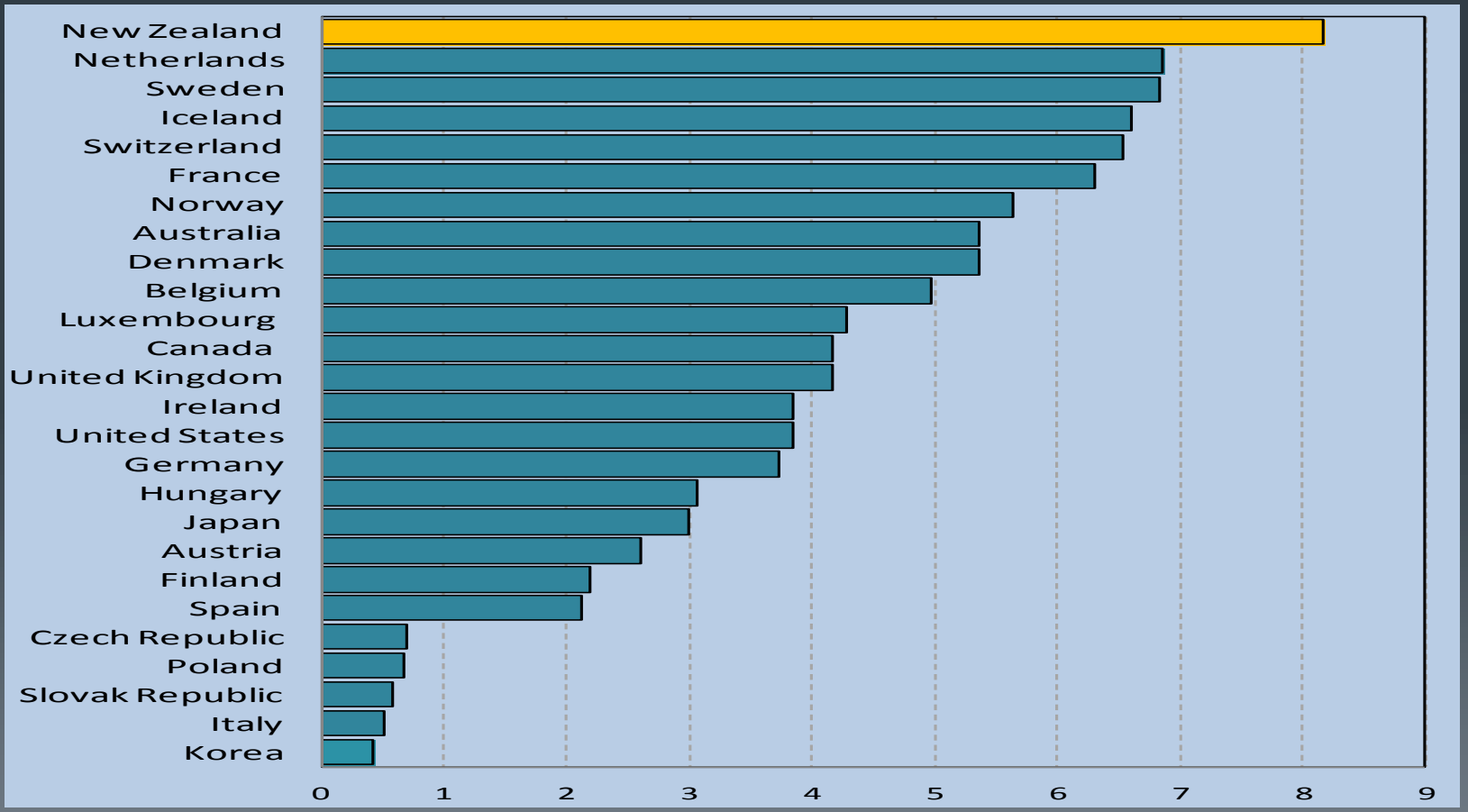
Strands: All strands but mainly Strand 1 (Maintain wellness, independence & autonomy) and Strand 4 (Reduce disability and impact of disability)

Definitions

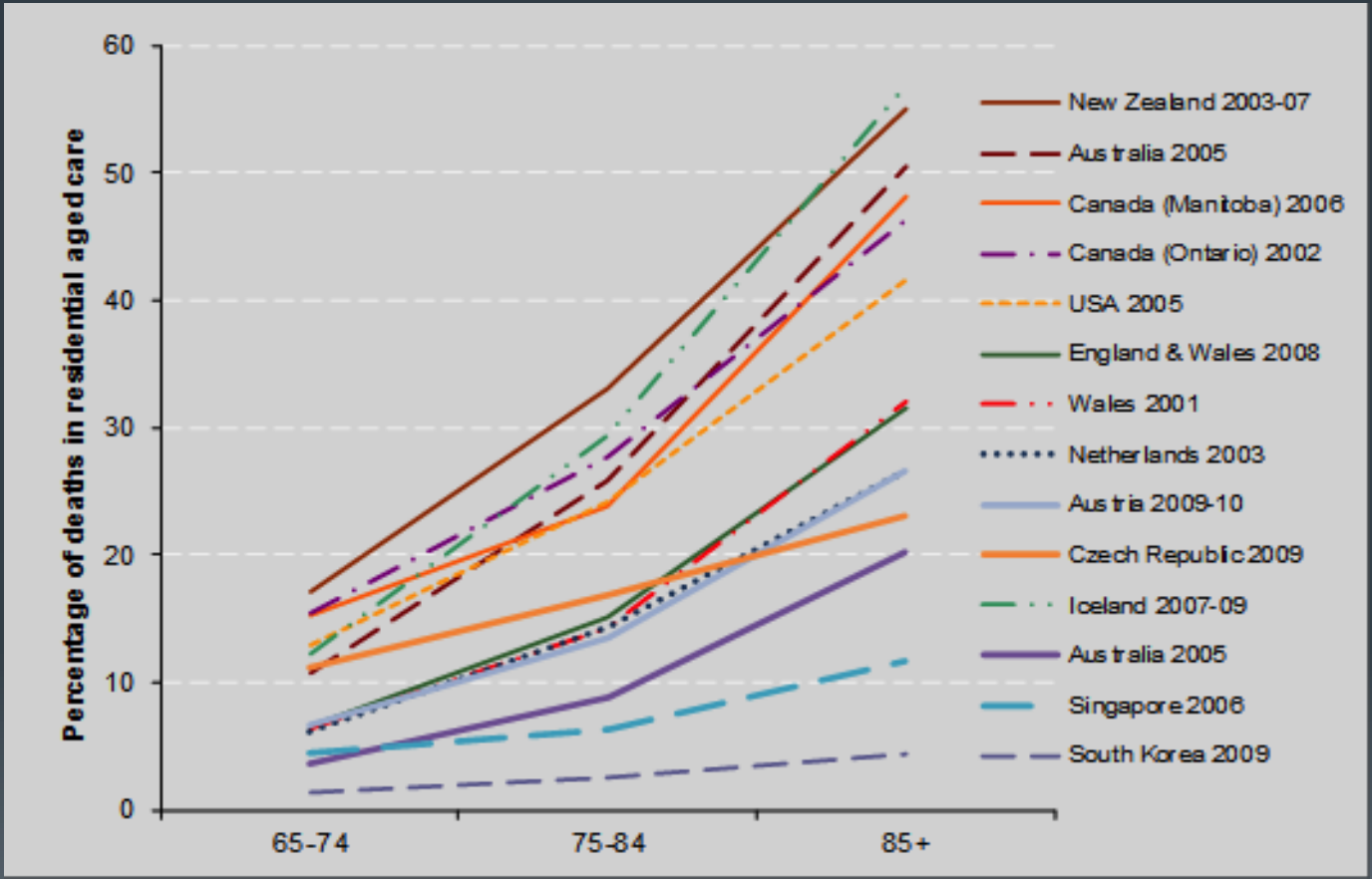
- **Residential Aged Care (RAC):** 24–hour supervised residential care for older people requiring assistance with everyday activities
  - Rest Homes/ Dementia Care Units
  - Private Hospitals/ Psychogeriatrics Units
  - Across OECD

- **Retirement Villages:** Independent ‘Units’ (in a complex) for (older) people who remain independent:
  - Includes “3 levels of care”
  - NZ/Australia/USA/Canada/some others in small number

RAC rates in 65+s as in OECD reports (2006)

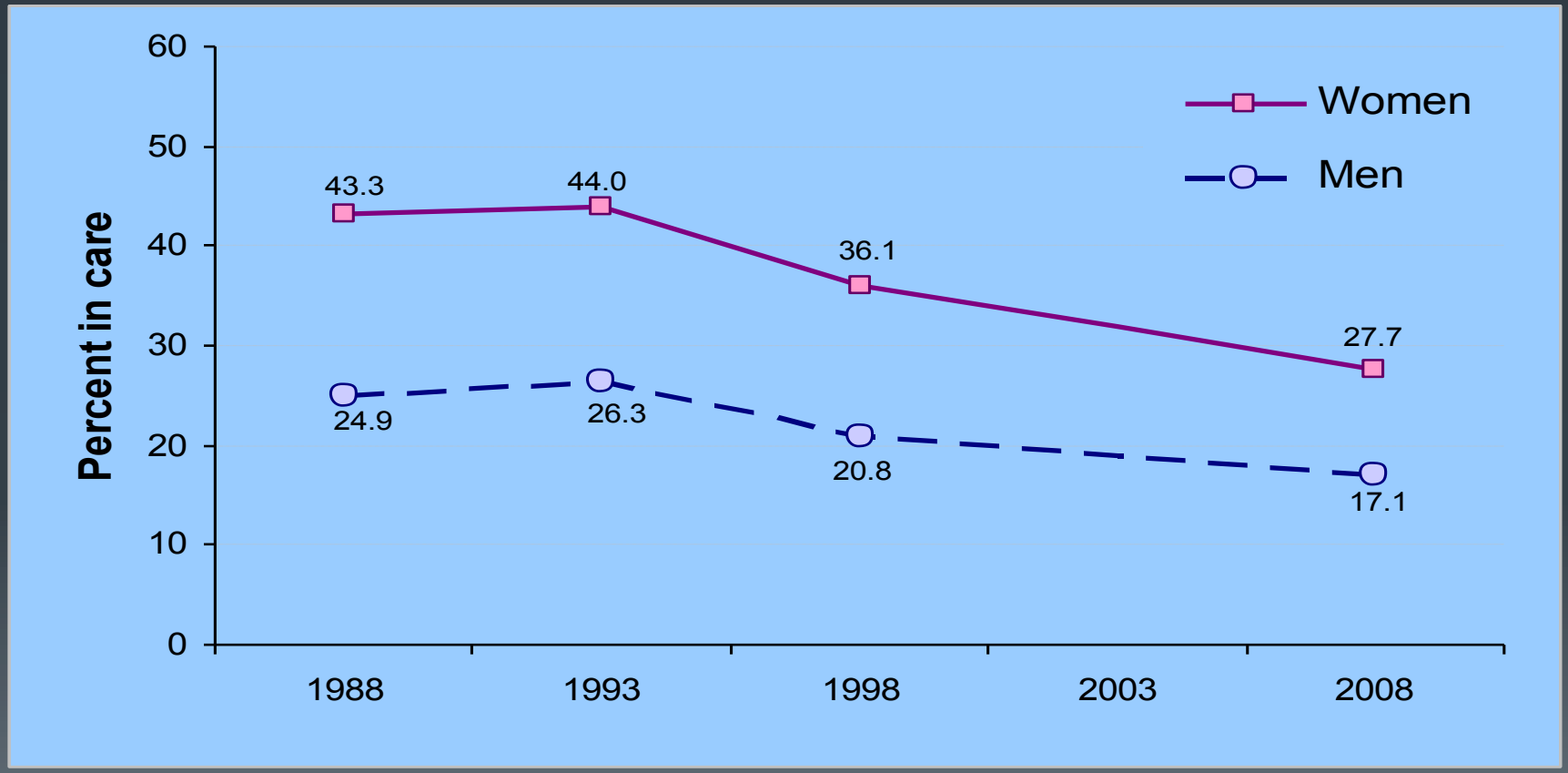


International comparison of death in RAC – by age



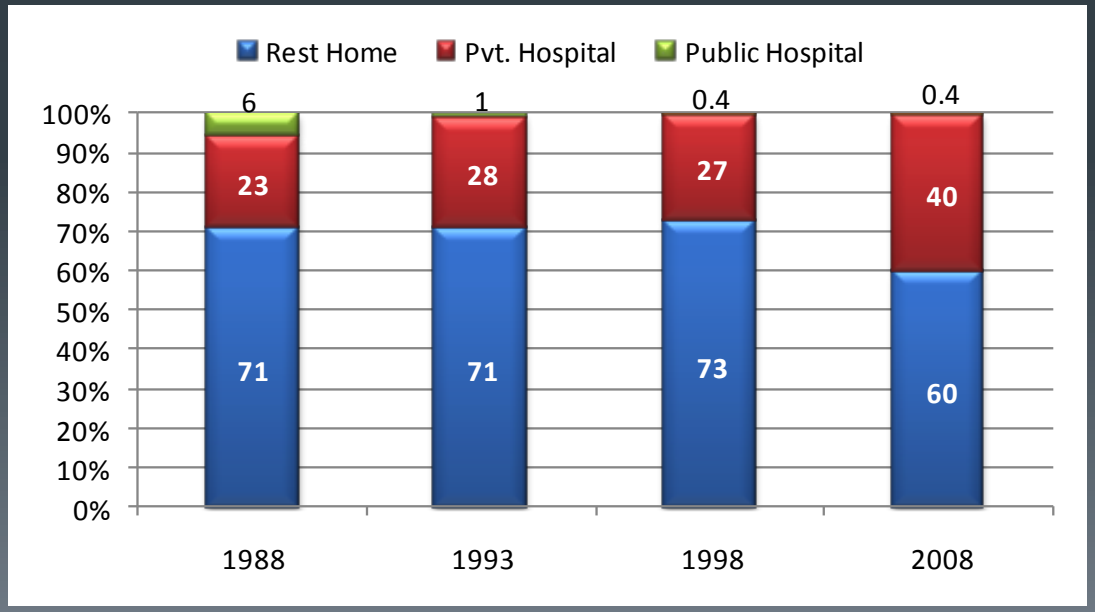
Broad JB, Gott M, Kim H, Boyd M, Chen H, Connolly MJ. Where do people die? An international comparison of the percentage of deaths occurring in hospital and residential aged care settings in 45 populations, using published and available statistics. *Int J Public Health* 2013;58:257-67.

OPAL Study: Greater Auckland trends in residential care rates: 85-94 age group. Broad, Boyd, Connolly et al 2009

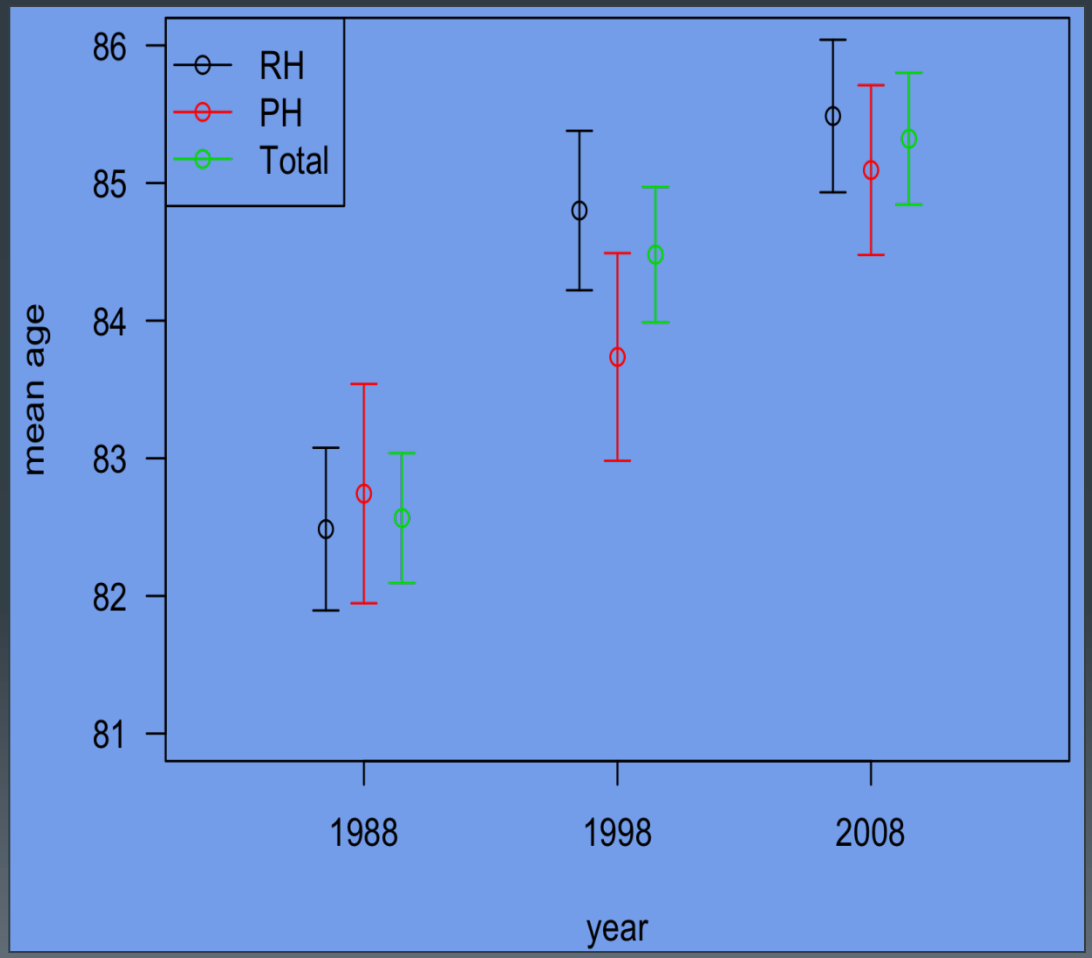


OPAL: Auckland Residential Aged Care Beds 1988-2008

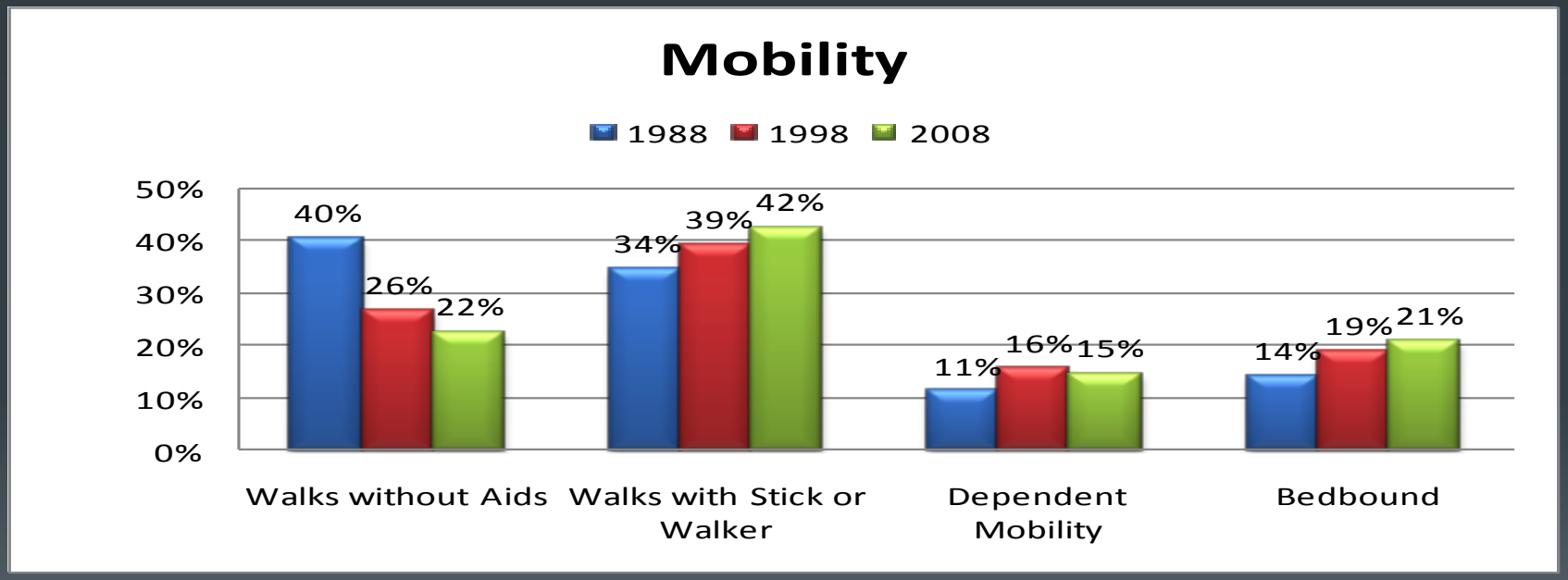
	1988* (n)	%	1993* (n)	%	1998* (n)	%	2008** (n)	%
Rest Homes	6036	**71%**	6575	**71%**	6331	**73%**	4706	**54%**
Dementia Care							519	**6%**
Private Hospital	1963	**23%**	2539	**28%**	2312	**27%**	3418	**39%**
Psychogeriatric							82	**1%**
Public Hospital	490	**6%**	43	**1%**	38	**0.4%**	38	**0.4%**
Total	**8489**		**9189**		**8681**		**8763**	



OPAL: Age Distribution of Residents



OPAL: Mobility Changes



Is all this Bad?

- No!
- Residents entering RAC later in life….
- ..and only when more disabled

- i.e. staying independent in their own homes longer
- ..which is where they want to be (Parsons M, 2007)

Why is it happening?

- Healthier ageing
- “Ageing in Place” initiatives
- Needs Assessment (±geriatrician) before RAC entry
- **The growth of retirement villages**

The Growth of NZ Retirement Villages (RVs)

- RV resident numbers rose from almost none (1988) to 27,000 in 2010 in NZ, of which 9500+ are in Auckland

  Cf approx 25,854 in NZ elders in RAC facilities (7600 in Auckland)

- *Latest* estimates (2014) indicate that NZ has 330 registered RVs housing 30,000 people.

- RV *dwelling* numbers increased from 10,000 (1998) to 17,250 (2010) and are projected to rise by c1000pa.

RVs fill a gap for those unable or not wishing to maintain their home but not needing 24-hour RAC care.

The focus of RVs is on quality of life/independence for older people within a business model.

Many RVs do provide a continuum of accommodation/care options - ‘3 levels of care’:

- independent units
- serviced apartment
- rest home/dementia/hospital care

Q: Is RV growth a problem? A: Possibly.

- Data from our own feasibility work indicates that NZ's RV residents are older, more educated, have more financial resources *but* **significantly greater dependency** than those in private dwellings
- UK RV residents have *higher* levels of general/mental health vs. 'private dwellers'
- Much of the (limited) research in the RV sector comes from outside NZ
- Little is known re. social/health/dependency characteristics & needs of NZ RV residents.
- They represent a potentially more vulnerable group in terms of transition to RAC and acute hospitalisation/mortality.
- We thus need to understand the medical acuity & medical/ dependency 'trajectories and primary care provision of residents.
- This will inform health planning to improve quality of life, facilitate independence and reduce service demand

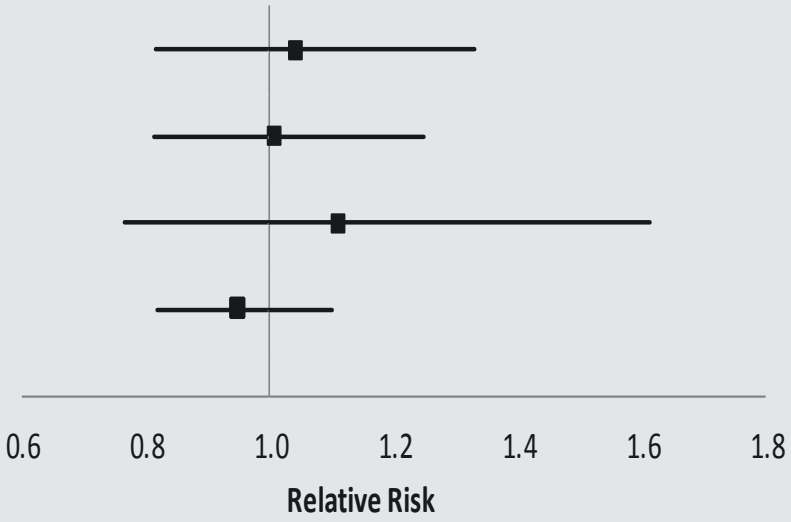
Hospitalisations **from RAC**

Does a multi-disciplinary support from DHB & university reduce hospitalisations from RAC?

- ARCHUS trial
- RCT of staff training and clinical support, benchmarking, multi-disciplinary team meeting (with GP, facility nurse, gerontology nurse specialist, geriatrician, & others)
- 9-month intervention in each facility
- 36 facilities randomised, 14 months follow-up
  - 1998 residents included
  - 1071 hospitalisations
  - 419 deaths

Can we reduce hospitalisations from RAC?

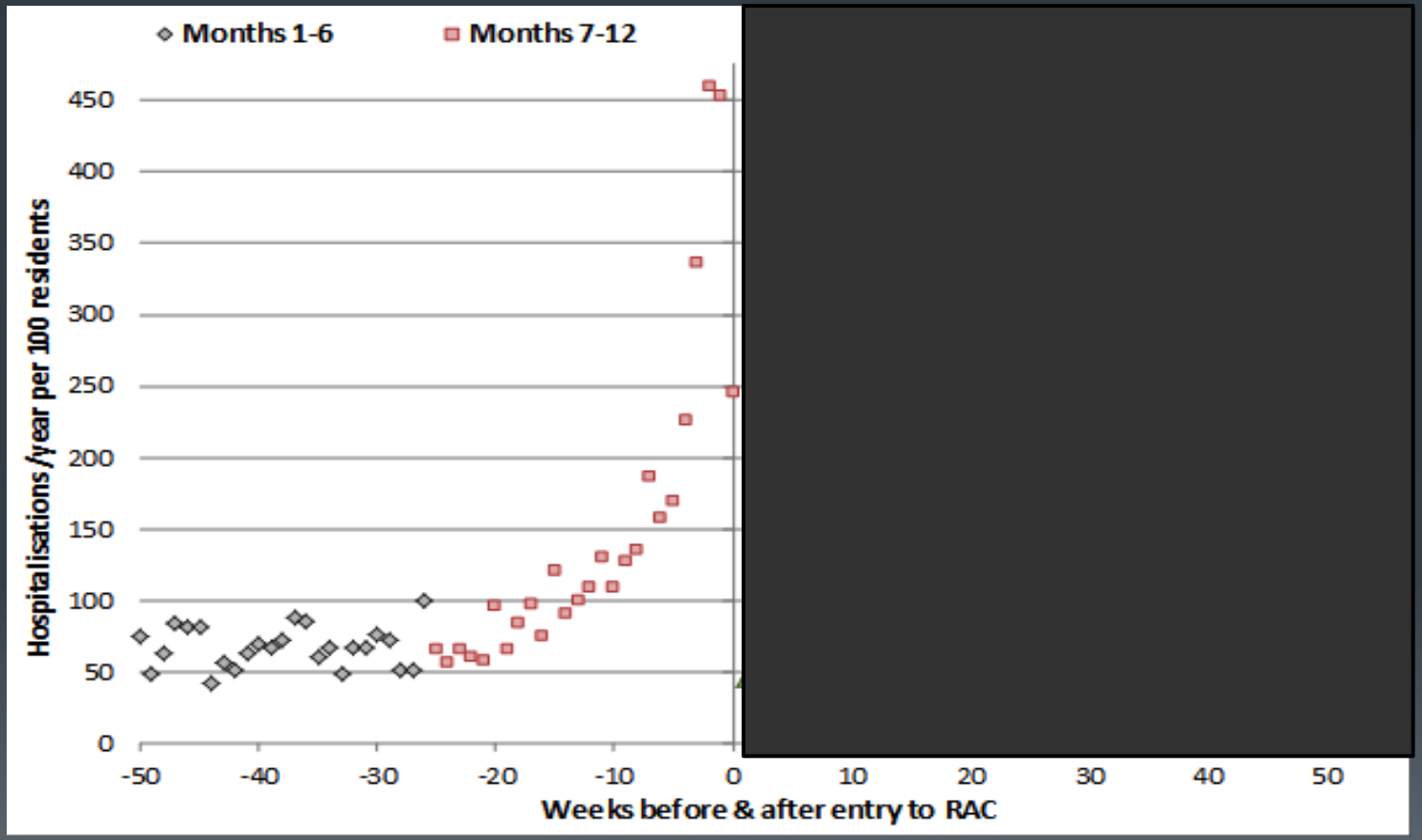
	N		Rate per follow-up year		
	Intv'n	Control	Intv'n	Control	p value
Acute ASH admissions	491	390	0.55	0.53	0.77
All acute admissions	588	483	0.66	0.66	0.96
All deaths	240	179	0.27	0.24	0.62
Acute hospital bed-days	4,344	3,788	4.89	5.16	0.50



- Benefit established for 5 conditions: heart attack, stroke, heart failure, obstructive pulmonary disease, & pneumonia (further trial [ARCHIP] in progress)

Connolly MJ, Boyd M, Broad JB, Kerse N, Lumley T, Whitehead N, et al. The Aged Residential Care Healthcare Utilisation Study (ARCHUS): a multidisciplinary, non-disease-specific, cluster randomised controlled trial designed to reduce avoidable hospitalisation from long-term care facilities. J Am Med Dir Assoc 2014;16(1):49-55.

Hospitalisations before & after entry to RAC in Auckland ~2008



Connolly MJ, Boyd M, Broad J, Zhang X, Kerse N. Acute hospitalisation of older people before and after entry into residential long-term care (LTC) in Auckland, New Zealand (NZ). European Geriatric Medicine 2014; 5 (Suppl 1):S214.

Research question - Current Study

- **Hypothesis:** RV residents have multiple unmet needs & high healthcare use, and targeted intervention will decrease RAC entry & acute hospitalisation**.**

- Aims:
- 1) Describe demographic, clinical & functional characteristics, healthcare use, self-rated health & QoL of RV residents.
- 2) Examine residents' 'cohort trajectory' (3 years)
- 3) Assess (Cluster-randomised controlled trial) effect on trajectories of multidisciplinary integrated care package led by GNP for 'high risk' residents with multiple co-morbidity over 3 years
- 4) Extend follow up of (2) and (3) to six years (subject to further funding).

Study Design

- **Population:** Random selection of RVs (30 of the 60 complexes in Auckland/ Waitemata DHBs) -stratified by DHB.
- Random selection of residents aged 65+ will be approached. We will approach 2250 units, and anticipate 1500 residents will agree to participate/ supply NHIs.
- ***Exclusions*:** Refuse consent; ACER (cognitive score) <70 or if GNP/GP feels lacks capacity – relative/NOK asked to complete questionnaire about resident.
- ***Ethics*:** HDEC approval/ written informed consent/assent.
- **Phase 1:** Residents' (self-complete) questionnaire incl. demographic, social engagement, decision making paradigms (eg. re. move to RV, any putative move to RAC), views on RV environment, health/ function - informed by feasibility study
- Primary purpose is to describe social, health and functional needs of residents.

Study Design (Phase 2)

- Social engagement and healthcare trajectories for all participants will be followed for at least 3 years from survey date using MOH routinely collected service utilisation data (RAC admission, hospitalisation) and mortality.
- Abbreviated survey interviews will be repeated at 12, 24 and 36 months.
- *Primary Outcome (Phase 2):* to describe trajectories of healthcare utilisation and identify resident clusters by baseline characteristics and trajectories.
- Further follow-up: 6 years - subject to separate grant application.
- *Power (Phase 2):*
  - Hospitalisation: 94% power to show 4% difference in proportion in any category (12 months)
  - RAC entry or Mortality: 92% power to show a 3% difference in the proportion (12 months).

Study Design (Phase 3: Cluster-RCT)

- Based on validated criteria – resident sub-sample 'at high risk' of health/ functional decline.
- GNP-led MDT complete comprehensive assessment & develop/implement intervention plan
- GNP will meet regularly with MDT: GPs will be invited to attend
- Intervention (≥5 months) - person-specific, followed by open-ended *clinical* GNP support.
- Intervention and control groups will have assessments repeated at the end of 1 and 3 years. Healthcare use (MoH databases) evaluated at 1 year **pre-** and at 1 & 3 (and ?6) years
- ***1º outcome (Phase 3)*** *: acute hospitalisation assessed (time to event analysis)*
- *2º outcomes (Phase 3)*: *RAC admission or death*, *functional ability, QoL (TTE analysis)*
- *Power (Phase 3):*
  - 93% power for 20% difference in hospitalisation (3yrs)
  - 80% power for 30% difference in RAC admission or death (3yrs).