

# Research Translation Webinar: Predictors of service use in older people

5 May 2021

## Summary

- The Centre for Primary Health Care and Equity (CPHCE), UNSW, held a research translation webinar to: highlight research findings, issues, successes and gaps in research and services; explore ways to maximise use of the research findings to inform policy and practice; and explore opportunities or activities to improve integration and coordination of care.
- Associate Professor Margo Barr summarised the latest findings from the research of health service use in people over 75 years of age using the Central and Eastern Sydney Primary and Community Health Linkage Resource (CES-P&CH).
- Dr Stephanie Ward presented work being conducted to translate research evidence in intergenerational contact to improve the physical and mental health of older people.
- Through small group discussions, participants explored ways to maximise use of the research findings to inform service provision, integration and continuity of care.
- These discussions highlighted examples of how research can be translated into practice to strengthen collaborations between health services, primary care and the community.

*“The generation and deployment of evidence in healthcare is an evolving field, and bridging the ‘gap’ between research evidence and the policy and practice is an ongoing challenge.” [Professor Harris]*

## Purpose of the research translation webinar

The research translation webinar was organised by the CPHCE, UNSW, in collaboration with Sydney Local Health District (SLHD), South Eastern Sydney Local Health District (SESLHD) and Central and Eastern Sydney Primary Health Network (CESPHN). The webinar aimed to encourage discussion to facilitate improvement in policy and practice, and to explore opportunities or activities to improve integration and coordination of care in people over 75 years of age.

The Webinar was attended by 35 people, with 18 from UNSW and 16 from the health sector partner organisations. The webinar consisted of two presentations followed by small groups discussions. The first presentation reported the findings on the predictors of service use in older people within the CES-P&CH cohort, while the second focused on the findings from an intergenerational care research project (which resulted in an award winning TV series) and the challenges of translating these findings into practice.



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Professor Mark Harris, Webinar Chair and Executive Director, CPHCE

*“So great to have forums like this that bring together academics, clinicians and policy makers where there is a shared area of interest and important real-life examples.”*



## Latest findings – Associate Professor Margo Barr



A/Prof Margo Barr, CPHCE

It is anticipated that by 2030 the number of older people and people living with long term conditions will have significantly increased. At the same time, it is expected that there will be a shift to providing more health care in the community. Although only 6.7% of the population are aged over 75 years, 12.4% of all unplanned emergency department (ED) presentations are from this age group.

Associate Professor Margo Barr from the CPHCE, presented findings from a recent study to explore predictors of frequent health service use (including GP and medical specialist attendance, ED presentations and overnight hospitalisations) in this age group to inform the provision of quality cost effective health care and to improve health outcomes.

The research used data for participants residing in Central and Eastern Sydney (CES) from CES-P&CH. The data included questionnaire (45 and Up Study managed by the Sax Institute) and administrative data (primary care, ED, hospitalisations and deaths). The cut off points for each of the services were based on the literature and the data; with high GP use being 20 or more visits per year (27% of the participants), high specialist use being ten or more (28.1%), high ED use being two or more (12.5%) and high hospitalisations being two or more (10.0%).

Generalised linear models with Poisson family and log link functions, were used to identify statistically significant factors associated with frequent health service use. Cox proportional hazards regression models were used to generate hazard ratios to compare mortality for participants who were frequent and less frequent users of health services.

The research included 6,327 participants in CES who were aged over 75 years at recruitment (around 2008).

Table 1 summarises the findings for the factors associated with frequent service use. Factors more likely to be associated with frequent service use that were common across the health services (GP, specialist, ED and hospital) were, being ex-smokers, having at least one fall in the last 12 months and ever having been diagnosed with cardiovascular disease. Common factors less likely to be associated with frequent service use were, adequate physical activity, reporting good quality of life and drinking up to two alcoholic drinks a day.

Associate Professor Barr stated that it was important to identify factors associated with frequent service use, as participants who were frequent service users were, even after controlling for all statistically significant socio-demographic and health factors, around 50% more likely to die in the following seven years (Table 2). These findings may inform targeted lifestyle and other interventions that seek to reduce health service use and improve the health of older people.

**Table 1: Predictors of service use**

Service	More likely
High GP	LOTE, PHI, HCC, ex-smoker, HBP, CVD
High Specialist	PHI, ex-smoker, recent fall, CVD, osteo, cancer, diabetes
High ED use	Over 85 years, recent fall, CVD
High hosp use	Over 85 years, ex-smoker, recent fall, CVD, cancer, diabetes
Service	Less likely
High GP	University quals, high income, drinks alcohol, good QOL
High Specialist	Over 90 years, physically active, good QOL
High ED use	Female, PHI, physically active, drinks alcohol, good QOL
High hosp use	Female, LOTE, HCC, physically active, drinks alcohol, good QOL

LOTE=language other than English  
 PHI=private health insurance  
 HCC=health care concession  
 HBP=high blood pressure  
 CVD=cardiovascular disease.  
 QOL=quality of life

Link to CES-P&CH webpage:

<https://cphce.unsw.edu.au/research/central-and-eastern-sydney-primary-and-community-health-cohort>

**Table 2: Effect of service use on seven-year mortality**

Service		n	Deaths (7-year follow-up)	Mortality rate per 1000 PY	Adj. HR (95% CI)
GP	<13	2726	825	42.5	1
	14-20	1609	551	45.1	1.17 (1.03, 1.32)
	>20	1645	727	62.3	1.47 (1.30, 1.64)
Specialist	<10	4302	1398	46.1	1
	10+	1678	705	58.6	1.47 (1.32, 1.63)
ED	<2	4176	1260	42.3	1
	2+	982	53	93.0	1.95 (1.73, 2.19)
Hospital stays	<2	4692	1435	42.8	1
	2+	1288	668	83.8	1.67 (1.50, 1.86)

## Research translation – Dr Stephanie Ward

Dr Stephanie Ward leads the geriatric outreach service at Prince of Wales Hospital and is the expert geriatrician for ABC's TV series, *Old People's Home for 4 Year Olds*. Dr Ward provided an inspirational presentation on the highlights and challenges of translating evidence into practice and the physical and mental benefits of bringing together the young and old.

Dr Ward stated that geriatricians are interested in the interplay between physical health, cognitive function and social, economic and psychological well-being. Most people want to remain living in their own home for as long as possible, but ageing in the community can present challenges, including physical frailty, social isolation and loneliness – which can “impact quality of life, confidence and independence”. Dr Ward discussed how a collaboration of researchers and clinicians used intergenerational research evidence to co-develop and evaluate a series of local pilot programs.

The evidence base to date has been patchy but is evolving, with the evidence suggesting that effective intergenerational programs can lead to an increased sense of mood and sense of self in older people living with dementia. She highlighted that there have been some studies that suggested an improvement in behavioural and psychological symptoms of dementia, and an increase in social engagement. Other studies have looked at the effects on children and how it might positively change perceptions of age and ageing and be associated with reduced anti-social behaviour.

A team from the Griffith University Intergenerational Care Project co-developed an intergenerational program with aged care and childcare staff, which ran for one hour per week over 16 weeks. Preliminary results found some improvements in well-being (not significant), and improvements in engagement, enjoyment, sense of well-being and sense of purpose from the older participants. Participants reported that low energy activities such as one-on-one time together, reading together, painting and colouring, were good for bonding between older adults and children. Medium energy activities such as singing, dressing up and cooking, were good for reminiscing, and high energy activities like dancing and games, were really good for inclusiveness and bonding, but often resulted in fatigue for the older participants.

A short video was shown of the first season of *Old People's Home for 4 Year Olds*, which first aired on television in 2019. Eleven older adults from a combined retirement aged care village, and 10 four-year old preschoolers participated in an intergenerational program which ran four days a week for six weeks. At the start of the intergenerational program, three out of four older participants screened positive for depression using the Geriatric Depression Scale, and only one out of four were positive at the end of the program. There were significant improvements in physical activity, gait speed (a predictor of health outcomes) and balance. There was an unexpected effect with increases in childcare centres and schools visiting aged care homes.

Given the popularity of the program, a second season ‘*Old people's home for 4 year olds*’, was developed with older people living in the community. As there was a need for more rigorous evidence, more comprehensive pre-and post-clinical assessments were conducted during the six weeks of the program. The researchers tracked mobility, balance, physical strength and mood and measured quality of life and cognitive ability. They had a particular interest in ‘frailty’ as increased frailty increases the risk of hospitalisation, falls, transfer into residential aged care and death. To measure frailty, the researchers looked at how physically active the person was, their muscle strength, how fast they walked, if they were losing weight without wishing to, and energy levels or levels of exhaustion based on the Fried Phenotype. There were positive changes in self-reported quality of life, frailty, depression and executive function. The program was intense, 4 days a week for 6 weeks, and demanding for all the involved.



Dr Stephanie Ward

*“Intergenerational contact is the purposeful bringing together of different generations for the benefit of all.”*

[Intergenerational Learning Program Operational Guidelines and Toolkit, Griffith University](#)

*“We really wanted to help make some positive changes for the participants, in terms of confidence, in terms of physical function and mood, but also in terms of providing new opportunities for friendships to develop.”*

## Research translation – Dr Stephanie Ward

### Systematic review:

Peters R; Ee N; **Ward SA**; Kenning G; Radford K; Goldwater M; Dodge HH; Lewis E; Xu Y; Kudrna G; Hamilton M; Peters J; Anstey KJ; Lautenschlager NT; Fitzgerald A; Rockwood K, 2021, 'Intergenerational programmes bringing together community dwelling non-familial older adults and children: a systematic review', *Archives of Gerontology and Geriatrics*, vol. 94, pp. 104356 – 104356

*"We were really happy with the effects the experiment had for the participants."*

*"It was also really lovely to see the children and hear from the parents about how the experiment has affected the [kids]."*

The researchers wondered how the learnings from these rather intense intergenerational programs could be translated into more practical activities based on evidence that could be more widely implemented in the community.

A research collaboration led by Associate Professor Ruth Peters, Neuroscience Research, Australia, and researchers from UNSW, Griffith University and Canada, began working on the 'Intergenerational Integration Initiative' which included: a systematic review; a survey of community needs and focus groups with parents and older adults; a pilot intervention; and a larger scale randomized controlled trial.

The systematic review, published earlier this year, concluded that there were positive effects in general, but there was neither strong evidence for or against community based intergenerational interventions, and that there was a need for more rigorous studies on the impact of intergenerational programs.

The survey of older adults found that they were interested in helping break down stereotypes through participating in the project. Parents were really interested in giving back to the community, and both parents and older adults were interested in the new experience. How to meaningfully engage two generations requires some thought and is time and resource intensive.

The pilot intervention is currently underway and involves 10 children with 11 community dwelling older adults, combining activities half a day a week. The research team are collecting a broad suite of measures over a school term: cognition, frailty, mood, quality of life and a health economics component.

Dr Ward stated that translating evidence into practice can be challenging. While there is great interest, recruitment is challenging. The people who might benefit the most are lonely, potentially frail, lacking confidence, may have lower mood and may have some cognitive changes, however these people need support to be included. There is a need for a longer lead time for the establishment of the program, and a need to build partnerships with clinicians and those involved in rehabilitation programs. Getting the mix of activities right is also important, ensuring that the activities are focused on the older people as well as the children.

*"We have some real learnings and can propose a practical program to benefit local preschools and help our community and older people living in it."*



See an example of Old People's Home for 4 Year Olds at <https://youtu.be/LxaSyYNJS7w>

## Group discussions

Following the presentations participants went to virtual breakout rooms where they reflected on the presentations and how they could use evidence to improve health and wellbeing for people aged over 75 years. The discussions from the groups were fed back to the larger group by the small group facilitators—A/Prof Ben Harris-Roxas (CPHCE and SESLHD), Mr Tony Jackson (SESLHD), Dr Cathy O’Callaghan (CPHCE and SESLHD) and A/Prof Fiona Haigh (CPHCE and SLHD). The facilitators stated that the group discussions provided ideas and initiatives to improve access, coordination and health care for older people.

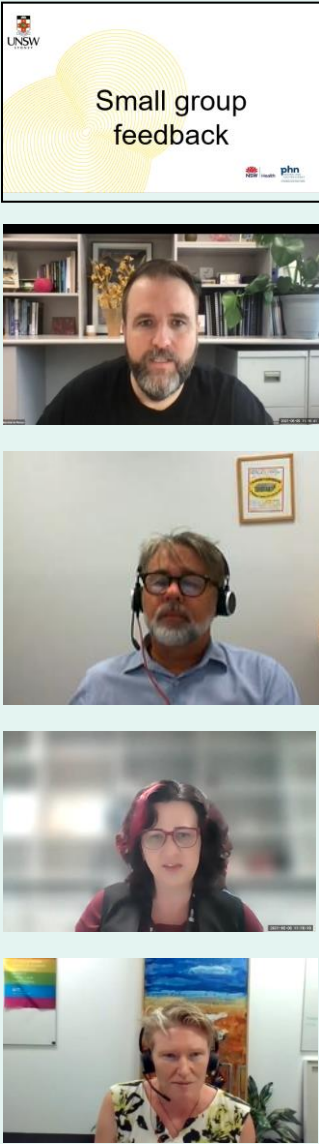
Key points from the small group discussions are summarized below:

- Doing the research isn’t enough to improve health, it needs to be translated to practice.
- An overarching theme was the importance of linking research that addresses the social and physical causes of preventable illness.
- Reducing falls is a major driver for reducing hospitalisations; engaging with GPs to identify and refer patients to falls prevention may enhance the impact of hospital-based programs.
- Primary Health Network commissioned services and general practice in general, may play a greater role in implementing and evaluating evidence-based practice.
- The value of communicating research findings with relevant clinical groups; for example, discussing with cardiac health professionals about what health and related support services are needed for people over 75 years.
- The intergenerational research using social interaction to improve health outcomes, highlighted the importance of being creative and improving person-centred care as we develop new evidence-based programs.
- Some participants emphasized the difficulty in scaling up and implementing successful pilot programs.

Overall, participants thought that the research findings on predictors of frequent health service use in people aged 75 years and over from CES-P&CH were generally known, however some of the findings provided more nuanced information; such as specific information about risks of frequent service users in relation to cardiac patients and falls programs. Participants stated that the sessions generated valuable ideas for future initiatives to improve access to, coordination or integration of care for people age over 75 years of age and their families and/or carers.

## Closing comments

Professor Harris ended the session by acknowledging that the generation and deployment of evidence in healthcare is an evolving field, and that bridging the ‘gap’ between research evidence and policy and practice is an ongoing challenge. However, he stated that having forums such as this one, which brings together academics, clinicians and policy makers with a shared area of interest, can lead to improved co-ordination of evidence-based care across hospital and community settings. He also thanked everyone for attending.



See links below for the presentations, program and summary report on CPHCE website:

<https://cphce.unsw.edu.au/news-events/news/2020/09/2020-research-priorities-webinar-research-priorities-central-and-eastern>