

CES-P&CH Progress to date

Overall:

A/Prof Margo Barr, CPHCE, UNSW

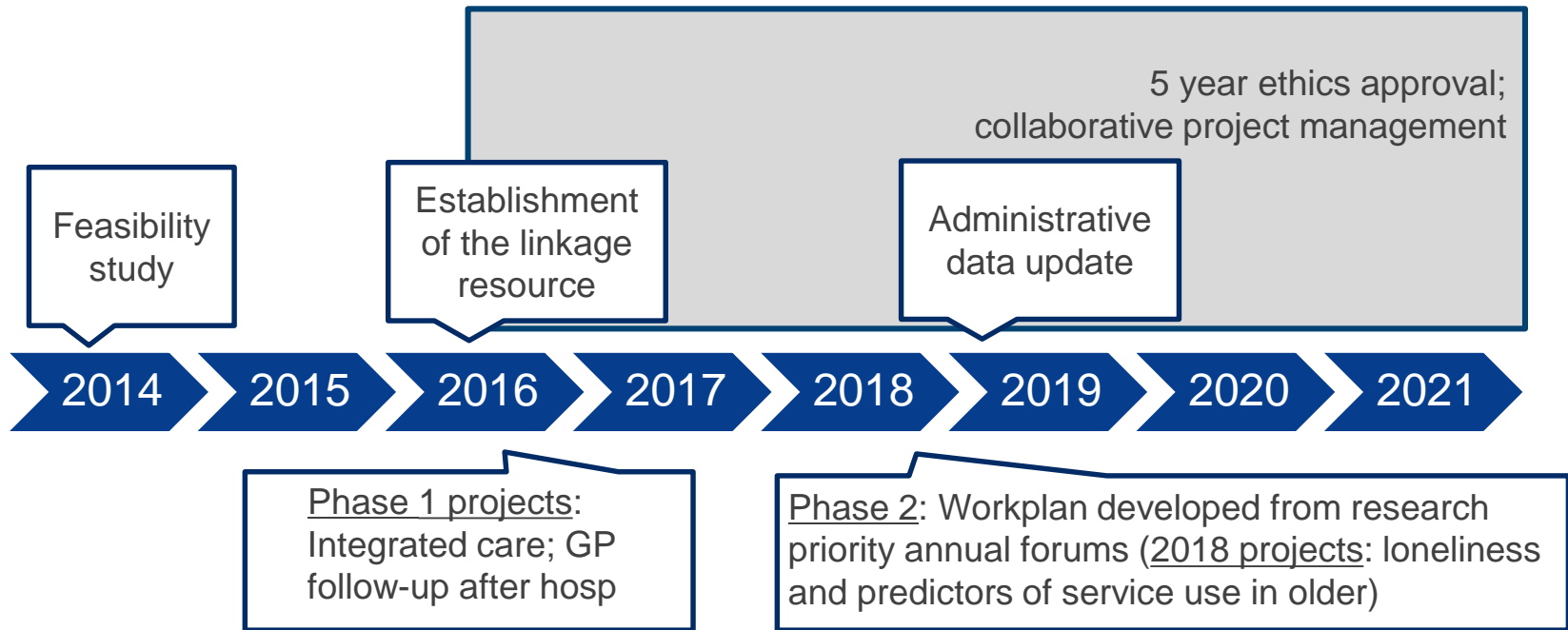
Conference presentation summaries:

Prof Mark Harris, Dr Sonia Van Gessel, Ms Lou-Anne Blunden

Date: Tuesday 16 July 2019

Time: 9.30am-1.30pm (including lunch)

Venue: Hugh Dixon Room, AGSM Building, UNSW



Linkage Resource

- **Partnership:** between SLHD, SESLHD, CESPHN and CPHCE
- **Research:** health service relevant
- **Cohort:** over 250k NSW residents; 30,645 in CES (20,337 in SES and 10,308 in Sydney)
- **Resource:** 10 datasets; over 26 million records; 2006 onwards.



Modified from figure in Bureau of Health Information. Data Matters – Linking data to unlock information. The use of linked data in healthcare performance assessment. Sydney (NSW). 2015; BH

Research question development process

Forum Report



Management meeting

Synthesis



Research Priorities Forum

Annual Research Project Development

post-forum meetings



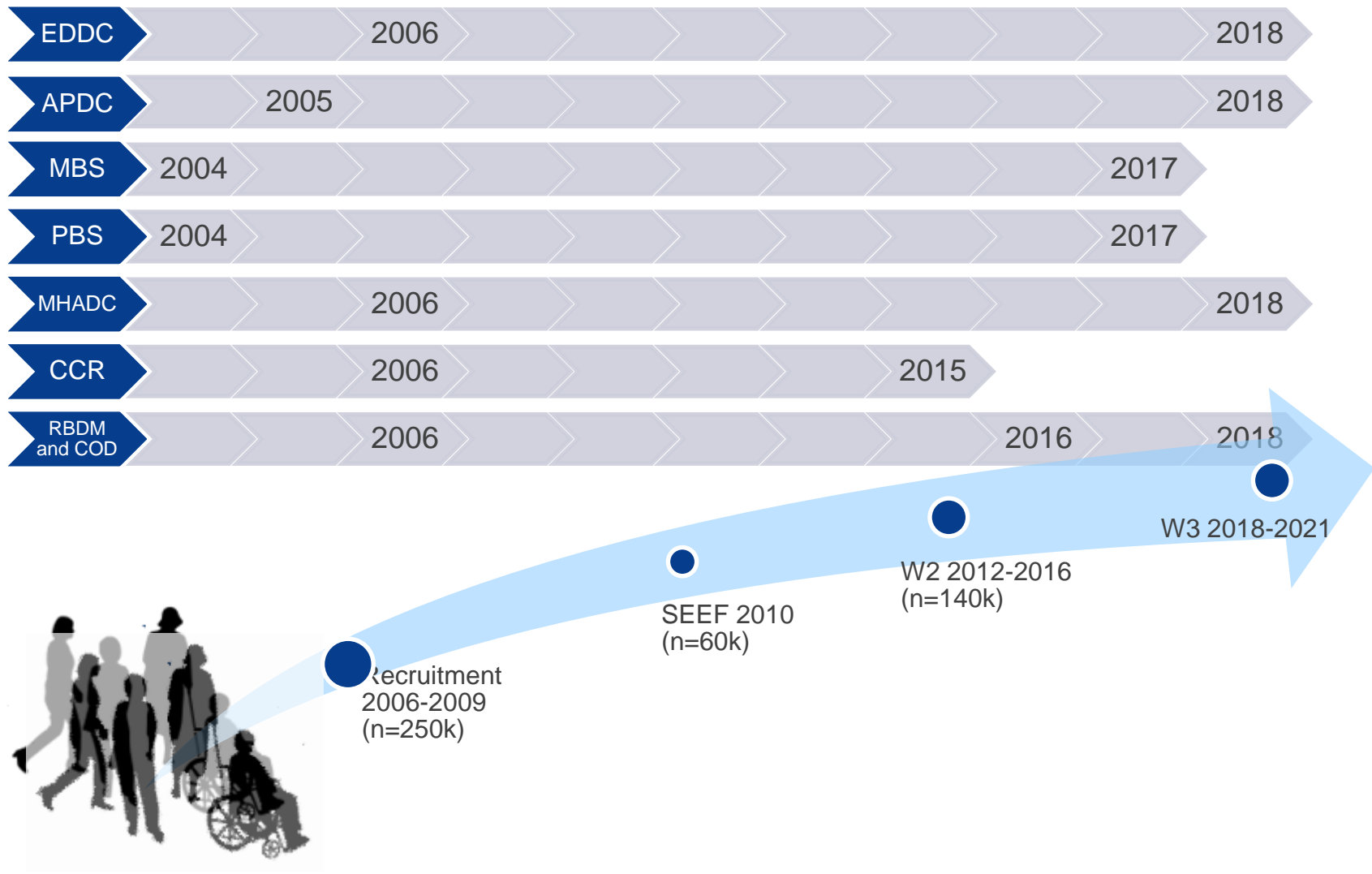
Review

Project reports
Publications
Presentations
Inform policy or programs





Project

2016 Research Forum (projects)	2018 Research Forum (projects)	2019 Research Forum		
		Presentations	Discussion	Selected
Chronic disease care (Do GP visits reduce re-hosp)				
Medications	Medication Use			
	Aged Care (Predictors of service use)			
	Social Isolation (impact on outcomes and service use)			
	Physical/mental health (Service use/gaps; SLHD)			
Care Systems (Use and impact of care plans)	Care Coordination			
	Carers (Exploring health and wellbeing; SESLHD)			
Falls				

Longitudinal data within the resource



Research Projects

Research Projects	Reports	Conferences	Journal articles
	✓	✓✓✓	✓✓✓
	✓	✓✓	✓
		✓✓✓	
		✓	

CES-P&CH Progress to date –

**GP follow-up within 2 weeks of hospital discharge in
a community dwelling population of residents in
Central and Eastern Sydney, Australia**

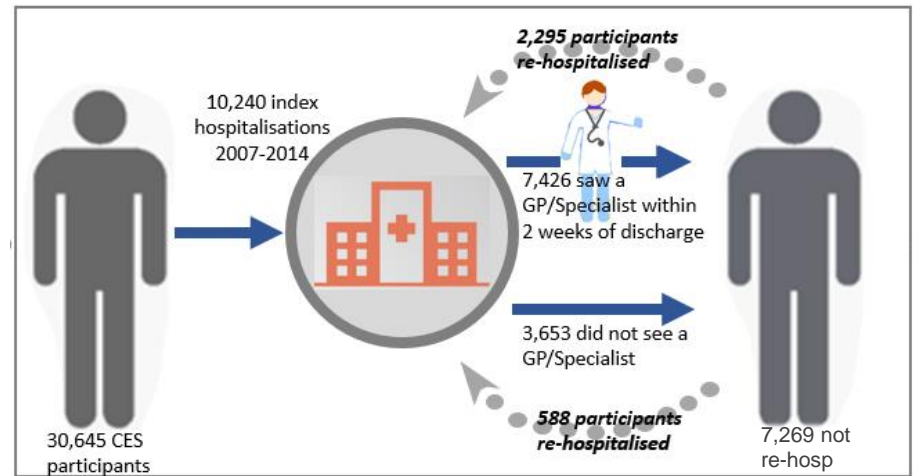
**Prof Mark Harris, Ms Heidi Welberry, A/Prof Margo Barr, Prof John Hall,
A/Prof Ben Harris-Roxas, A/Prof Elizabeth Comino**

Presentation at NAPCRG, Chicago USA, Nov 2018

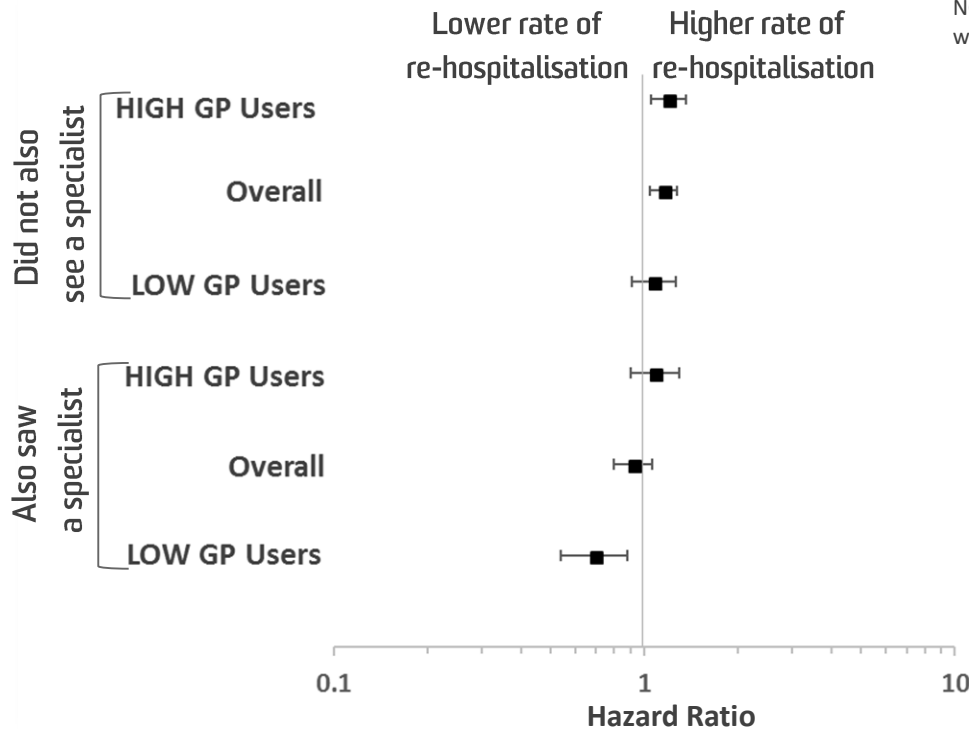
Research objectives

1. Determine the characteristics of patients more likely to see a GP/specialist within 2-weeks of hospital discharge
2. Impact of GP/specialist 2-week follow-up with-in 2 weeks of hospitalisation on subsequent hospitalisations.

Impact of GP/Specialist follow-up within 2 weeks



NOTE: 6,587 (64.3%) saw a GP within 2 weeks of hospital discharge and of those 2017 were re-hospitalised; and 3653 did not see a GP and of those 866 were re-hospitalised.



NOTE: Cox proportional hazards regression models controlling for demographic, lifestyle, wellbeing, and health service utilisations was examined

Findings:

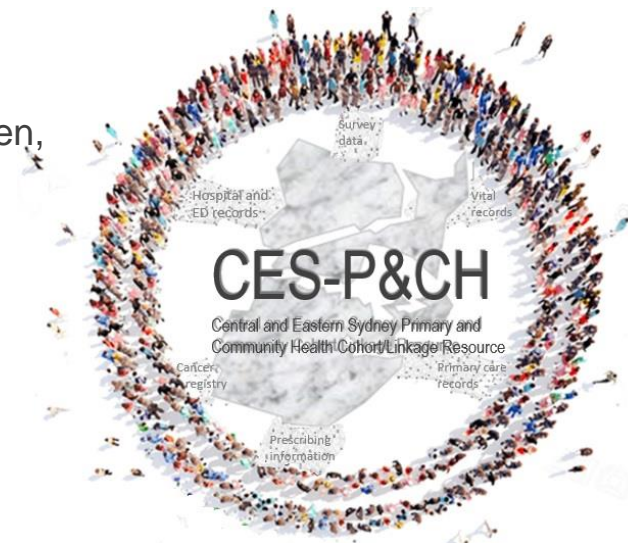
- Those less likely not in the at-risk 30-day re-admission groups (i.e. older, males, low incomes, no insurance)
- seeing a GP and specialist associated with a 30% reduction in 12 month re-hospitalisations (LOW GP users).

CES-P&CH Progress to date –

Understanding the predictors of services use in older people to plan for and provide quality cost effective care

Greg Stewart, Tony Jackson, Kathy Clinch, Margo Barr, Lou-Anne Blunden, Ben Harris-Roxas, Heidi Welberry, Elizabeth Comino, Jane Lloyd, Liz Harris, Mark Harris

Presentation at the ICIC, San Sebastian, Spain, April 2019
summarised by Sonia Van Gessel, SESLHD



Background

Anticipated 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.

Browning et al [1] described three ageing groups (i) ageing well (30%); initially ageing well then deteriorating (50%); and consistently ageing poorly (20%).

Korten et al [2] reported predictors of lower general practice service use were: lower age, fewer medical conditions, restful sleep, good nutrition, decreased stress, being a non-smoker and good social support.

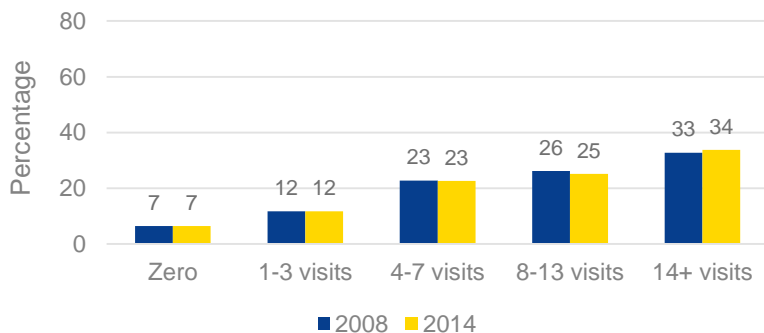
References: 1. Browning C, Enticott J, Thomas S and Kendig H. 2017. Trajectories of ageing well among older Australians: a 16-year longitudinal study. *Ageing and Society*. 2017; 1-22. 2. Korten AE, Jacomb PA, Jiao Z, Christensen H, Jorm AF, Henderson AS, Rodgers B. Predictors of GP service use: a community survey of an elderly Australian sample. *Aust N Z J Public Health*. 1998; 22: 609-615.p

Research questions

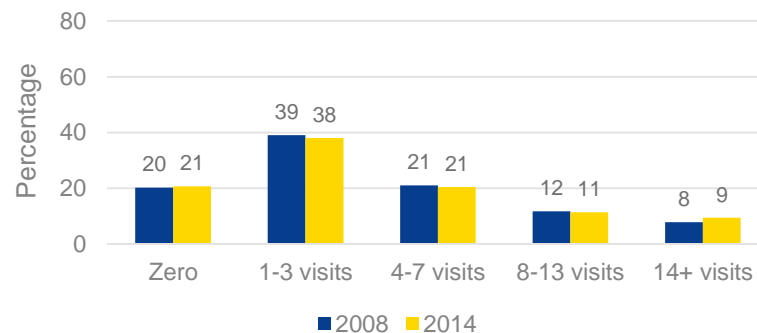
- Is service use (including general practice, specialists, emergency departments, hospitalisations) changing over time amongst people aged 75 years and over?
- What are the predictors of service use amongst people aged 75 years and over?
- Are the predictors of service use amongst people aged 75 years and over changing over time?

Results - Service use over time

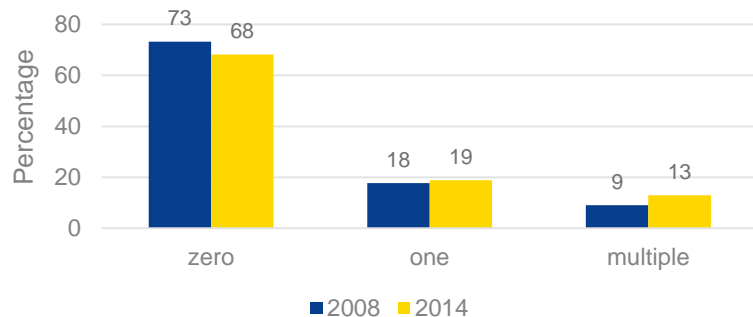
GP Visits



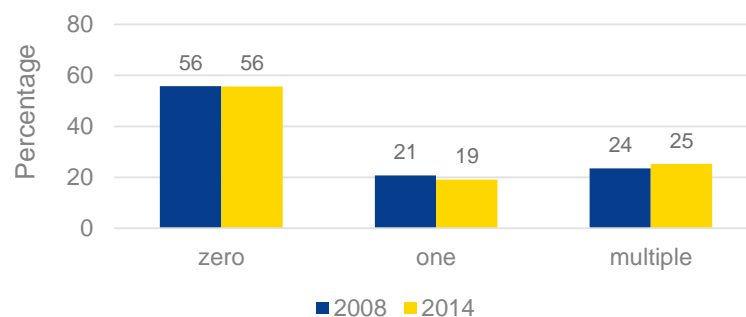
Specialist Visits



ED Visits



Hospital admissions



Analysis - log binomial models

	High GP use	High Specialist use	High ED use	High Hosp use
Define	8 or more visits in a year	4 or more visits in a year	more than one in a year	more than one hospitalisation in a year
Descriptive n (%)	2008: 3580 (59) 2014: 3973 (59)	2008: 2464 (41) 2014: 2782 (41)	2008: 546 (9) 2014: 876 (13)	2008: 1456 (24) 2014: 1684 (25)
Crude	PR (95%CI)	PR (95%CI)	PR (95%CI)	PR (95%CI)
Adjusted*	PR (95%CI)	PR (95%CI)	PR (95%CI)	PR (95%CI)

*Adjusted by all other covariates: age, gender, highest educational qualification, speaks language other than English (LOTE) at home, household income, work status, having private health insurance (PHI), having a healthcare concession card (HCC), currently married, smoking status, adequate physical activity, alcohol consumption, BMI category, being treated for high blood pressure (BP), being treated for high cholesterol, self-reported good health, self-reported good quality of life, reported at least one fall in 12 months, self-reported osteoporosis, self-reported cardiovascular disease, self-reported diabetes, self-reported cancer.

Analysis – summary of adjusted models

	2008		2014	
	More likely	Less likely	More likely	Less likely
High GP use	Speaking LOTE, having PHI, having HCC, high BP, recent fall, CVD	University or higher qualifications, higher income, 1-13 alcoholic drinks	Having PHI, having a HCC, osteoporosis	University or higher qualifications, high income
High Specialist use	Having PHI, currently married, being an ex-smoker, recent fall, osteoporosis, CVD, cancer	Older age, university or higher qualifications, higher income, reported good health	Having PHI, high BP, osteoporosis, CVD, diabetes	Older age, speaking LOTE
High ED use	Older age, recent fall, CVD	Being female, working, having PHI, reporting good health	Older age, university or higher qualifications, working and being an ex-smoker, recent fall, osteoporosis, CVD, diabetes	Adequate physical activity
High Hosp use	Having PHI, recent fall, CVD, cancer		Having PHI, having a HCC, recent fall, CVD, diabetes	Being female, speaking LOTE, reporting good health

Discussion

- Little difference between 2008 and 2014 for high GP use, high specialist use or high hospital use, however increase for high ED use (from 9% to 13%)
- The main predictors for high service use in 2008 were having PHI, recent fall, self reported osteoporosis, CVD or cancer. Similar in 2014 except: inclusion of self reported diabetes and exclusion of self reported cancer.
- Analysis shows high health service use is appropriately occurring for people with chronic conditions such as diabetes, CVD, osteoporosis and cancer.
- However, high services use (for GPs, specialists and hospitals) is also being predicted based on the persons ability to pay (i.e. participants with PHI or HCC) whereas predictor of ED high use were older age and no PHI.
- Data supports the theory that participants without PHI or HCC may be using EDs more as a primary health care service.

Conclusions and further research

Understanding the predictors of services use in older people is important in planning and providing quality care.

Strength of the study:

- Large community-dwelling cohort, includes demographic, behavioural, health conditions, and longitudinal health service data
- Being conducted as a collaboration between researchers and service providers.

Limitations:

- Use of existing data limited to participant and health service characteristics that were available
- Preliminary results still need to be checked.

Additional research:

- Updated data linkage to include later years
- Inclusion of additional datasets such as non-admitted patients
- Consider other cut-offs for high service use based on literature.

CES-P&CH Progress to date –

Understanding the medical determinants and health service needs of older people who experience loneliness in Sydney

Lou-Anne Blunden, Jane Lloyd, Margo Barr, Heidi Welberry, Elizabeth Comino, Ben Harris-Roxas, Tony Jackon, Debra Donnelly, Liz Harris and Mark Harris

Poster presentation at the ICIC, San Sebastian, Spain, April 2019

summarised by A/Prof Margo Barr CPHCE, UNSW and Ms Lou-Anne Blunden SLHD





SOCIAL ISOLATION LIVING ALONE AND AGEING

Living alone predicts high service use more than social isolation



Understanding the medical determinants and health service needs of older people who experience loneliness in Sydney

Authors: Lou-Anne Blunden¹, Jane Lloyd^{1,2}, Margo Barr¹, Heidi Welberry¹, Elizabeth Comino¹, Ben Harris-Roxas¹, Tony Jackson¹, Debra Donnelly¹, Liz Harris^{1,2} and Mark Harris¹

Affiliation: ¹, Sydney Local Health District, NSW Health; ², Centre for Primary Health Care and Equity, Faculty of Medicine, University of NSW; ³, South Eastern Sydney Local Health District, NSW Health

Reason for the Research

Prevalence of social isolation, loneliness and living alone among older people in Australia is estimated to be 17%, 19% and 25% respectively and increasing [1,2]. Understanding if and how social isolation or living alone impacts on managing health conditions and use of health services is important in providing quality care and preventing premature mortality.

Research Questions

- What are the factors associated with social isolation and living alone?
- What is the impact of these on health service use over time in Central and Eastern Sydney (CES), Australia?

Methods

- Social, Economic and Environmental Factors (SEEF) questionnaire data linked to MBS claims, ED presentations, and hospitalisations for 6,176 people in CES.
- For those who were/were not socially isolated or did/did not live alone examined:
 - Demographics, social, health behaviours and health status
 - Health service use change over time.
- Lowest quintile from the Duke Social Support Index were defined as socially isolated [3].
- High GP defined as 8 plus visits per year.

Results

Table 1: Factors associated with Social Isolation and Living alone

Parameter	n	%	Adj PIRs	Demographics and social	Health behaviours and status
Socially isolated	1310	18.6%	1.1	Male	Current smoker, poor quality of life, heart disease, anxiety
				Female	Adequate PA, adequate frailty, 4 risk alcohol, smoking with daily activities
Lives alone	1249	20.5%	1.1	Being older, Female, work full-time	Adequate PA, smoking with daily activities, asthma, cancer
				Male	Higher income, fast children, live in safe area

Fig 1: Health Service Use for people who were/were not Socially Isolated



Fig 2: Health Service Use for people who did/did not Live alone



Discussion and Conclusions

After adjusting for all of the other factors working full-time, being a current smoker, having poor quality of life, ever having heart disease or anxiety were all more likely to be associated with social isolation. After adjusting for all of the other factors being older, being female, working full time, adequate physical activity, needing help with daily activities and ever having cancer or asthma were all more likely to be associated with living alone.

There was a protective association between living alone and social isolation [Adj PR=0.69, 95%CI:0.57-0.83].

Figures 1 and 2 show health service use increasing over time. Participants who live alone use health services more than those who do not, particularly GP services and Emergency Departments. Health service use does not vary by social isolation.

Living alone has been perceived as a measure of social isolation and lack of support but it can also be a measure of functional independence. Social isolation and living alone, although informative, are not measures of loneliness. Further research, that includes measures of loneliness are planned.

References: 1. Manton P. Is Australia experiencing an epidemic of loneliness? Findings from 18 waves of the Household Income and Labour Dynamics of Australia Survey, 2018. <https://www.abs.gov.au/australian-bureau-of-statistics>; 2. Census of Population and Housing: Reflecting Australia - Stories from the Census; 3. George LK, Blazer DG, Hughes DC, Paulin N. Social support and the occurrence of major depression. *Br J Psychiatry*. 1989;154:679-85.

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This research study was jointly funded by Sydney Local Health District, South Eastern Sydney Local Health District, and Central and Eastern Sydney Primary Health Network and was completed using data collected through the 45 and Up Study (www.45andupstudy.org.au). The 45 and Up Study is managed by the Sax Institute in collaboration with major partner Cancer Council NSW; and partners: the National Heart Foundation of Australia (NSW Division); NSW Ministry of Health; NSW Government Family and Community Services - Ageing, Carers and the Disability Council NSW; and the Australian Red Cross Blood Service. We thank the many thousands of people participating in the 45 and Up Study. We also thank the Centre for Health Record Linkage for the data linkage.



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Factors associated with living alone and social isolation

Parameter	n	%	Adj PRs	Demographics and social	Health behaviours and status
Socially isolated	1213	19.6%	more likely	Work full-time	Current smoker, poor quality of life, heart disease, anxiety
			less likely	Female, have PHI, has children, lives alone	Adequate PA, adequate fruit/veg, drinks alcohol, needs help with daily activities
Lives alone	1263	20.5%	more likely	Being older, female, work full-time	Adequate PA, needs help with daily activities, asthma, cancer
			less likely	Higher income, has children, live in safe area	Adequate fruit/veg, drinks alcohol, treated for HBP, recent fall

Fig 1: Health Service Use for people were/were not Socially isolated

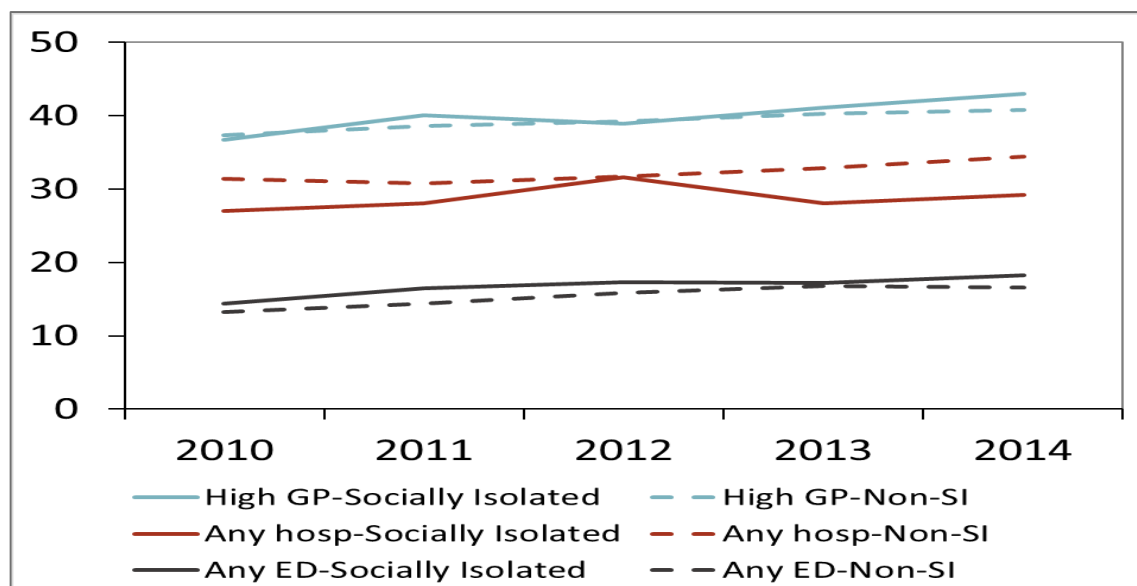
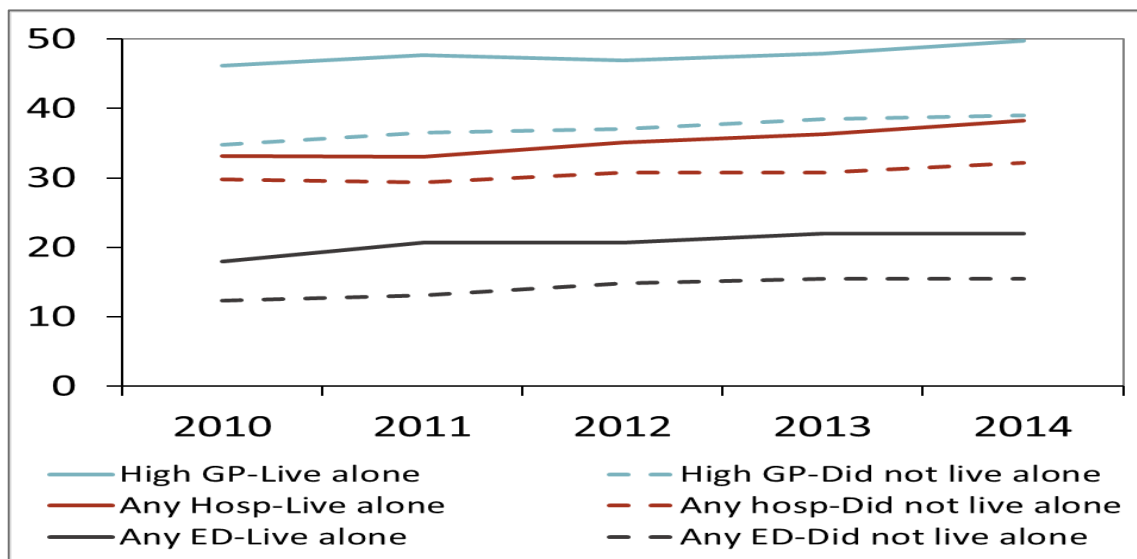


Fig 2: Health Service Use for people who did/did not Live alone



Summary of findings

- working full-time, being a current smoker, having poor quality of life, ever having heart disease or anxiety were all more likely to be associated with social isolation.
- being older, being female, working full time, adequate physical activity, needing help with daily activities and ever having cancer or asthma were all more likely to be associated with living alone.
- protective association between living alone and social isolation (Adj PR=0.69, 95%CI:0.57-0.83).
- Participants who live alone use health services more than those who do not, particularly GP services and Emergency Departments.
- Health service use does not vary by social isolation.
- Living alone has been perceived as a measure of social isolation and lack of support but it can also be a measure of functional independence.



Reflections from the ICIC regarding the poster



Acknowledgments

This research study was jointly funded by Sydney Local Health District, South Eastern Sydney Local Health District, and Central and Eastern Sydney Primary Health Network and was completed using data collected through the 45 and Up Study (www.saxinstitute.org.au).

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Further information

Investigators:

A/Prof Margo Barr (Principal), A/Prof Elizabeth Comino, A/Prof Ben Harris-Roxas, Prof Mark Harris, Mr A.Y.M. Alamgir Kabir, Ms Heidi Welberry (CPHCE), Prof John Hall (SPHCM), A/Prof Elizabeth Harris and A/Prof Jane Lloyd (HERDU and CPHCE), Ms Lou-Anne Blunden, Dr Ann-Marie Crozier, Ms Deb Donnelly (SLHD), Prof Fiona Blyth (USYD and SLHD), Ms Katherine Clinch, Mr Tony Jackson (SESLHD), Dr Brendan Goodger (CESPHN)

Further information:

CPHCE website at <https://cphce.unsw.edu.au/research/health-system-integration-and-primary-health-care-development/central-and-eastern-Sydney>