

## BACKGROUND

- Chronic disease touches individuals at every age and impacts both physical and psycho-social functioning.
- Despite the prevalence of chronic disease *across* the life course, policy and care strategies tend to focus on older adults.
- Less attention has been paid to the medically complex *under 65* population, who often have two or more chronic health problems and require ongoing rehabilitation and supportive care .
- In Ontario, people with complex care needs (many of whom are young and mid-life adults) may receive care in post-acute care facilities called complex continuing care before returning home.
- It is unclear what type of care is used by young and mid-life adults after discharge from complex continuing care and if **community follow-up within one week** impacts ongoing utilization of health care services and mortality.

## OBJECTIVE

- To determine if community follow-up (i.e., homecare, primary care physician visit, or both) within 7 days of discharge was associated with subsequent health service use and survival.

## DATA SOURCES & STUDY POPULATION

- This population-based retrospective cohort study used linked administrative data to identify 1,906 individuals aged 18-64 years and discharged alive from complex continuing care hospitals in Ontario, Canada between April 1, 2005 and March 31, 2006.

## ANALYSES

- Descriptive differences in demographic, health status, functional characteristics and health system use across community follow-up groups were calculated using one-way ANOVA, the Wilcoxon Rank Sum test to compare medians and chi-square tests for proportions.
- Multivariate Cox proportional hazard models were used to examine the effect of community follow-up on time to first hospitalization and emergency department visit.
- Five-year survival was examined using Kaplan-Meier survival curves, which were stratified by type of community-based follow-up.

## RESULTS

Health service use within one year of discharge from complex continuing care, by type of community follow-up within 7 days of discharge						
	Overall	Home Care Visit Only	Primary Care Physician Visit Only	Both	Neither	p-value
Young and midlife adults discharged from complex continuing care, N	1,906	393	631	302	580	
Acute Care & Psychiatric Hospital Admissions						
Any admission, n (%) over 1 year	981 (51.5%)	197 (50.1%)	302 (47.9%)	128 (42.4%)	354 (61.0%)	<.001
Median (IQR)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-3)	1 (1-2)	0.025
Emergency Department Visits						
Any visit, n (%) over 1 year	1,204 (63.2%)	265 (67.4%)	374 (59.3%)	191 (63.2%)	374 (64.5%)	0.055
Median (IQR)	2 (1-5)	3 (1-6)	2 (1-4)	3 (1-7)	2 (1-5)	0.006
Complex Continuing Care Admissions						
Any admission, n (%) over 1 year	389 (20.4%)	55 (14.0%)	160 (25.4%)	32 (10.6%)	142 (24.5%)	<.001
Median (IQR)	4 (2-9)	2 (1-3)	6 (3-11)	1 (1-3)	5 (2-10)	<.001
Primary Care Physician Visits						
Any visit, n (%) over 1 year	1,764 (92.5%)	356 (90.6%)	631 (100.0%)	302 (100.0%)	475 (81.9%)	<.001
Median (IQR)	11 (5-24)	6 (3-12)	20 (9-44)	11 (5-18)	8 (4-19)	<.001
Specialist Visits						
Any visit, n (%) over 1 year	1,425 (74.8%)	307 (78.1%)	447 (70.8%)	230 (76.2%)	441 (76.0%)	0.04
Median (IQR)	4 (2-8)	5 (2-9)	4 (2-7)	5 (2-10)	4 (2-9)	0.003
Home Care Service Use						
Any home care service use, n (%) over 1 year	626 (32.8%)	252 (64.1%)	89 (14.1%)	176 (58.3%)	109 (18.8%)	<.001
Median (IQR)	12 (6-26)	18 (9-31)	7 (3-18)	14 (6-25)	7 (4-14)	<.001

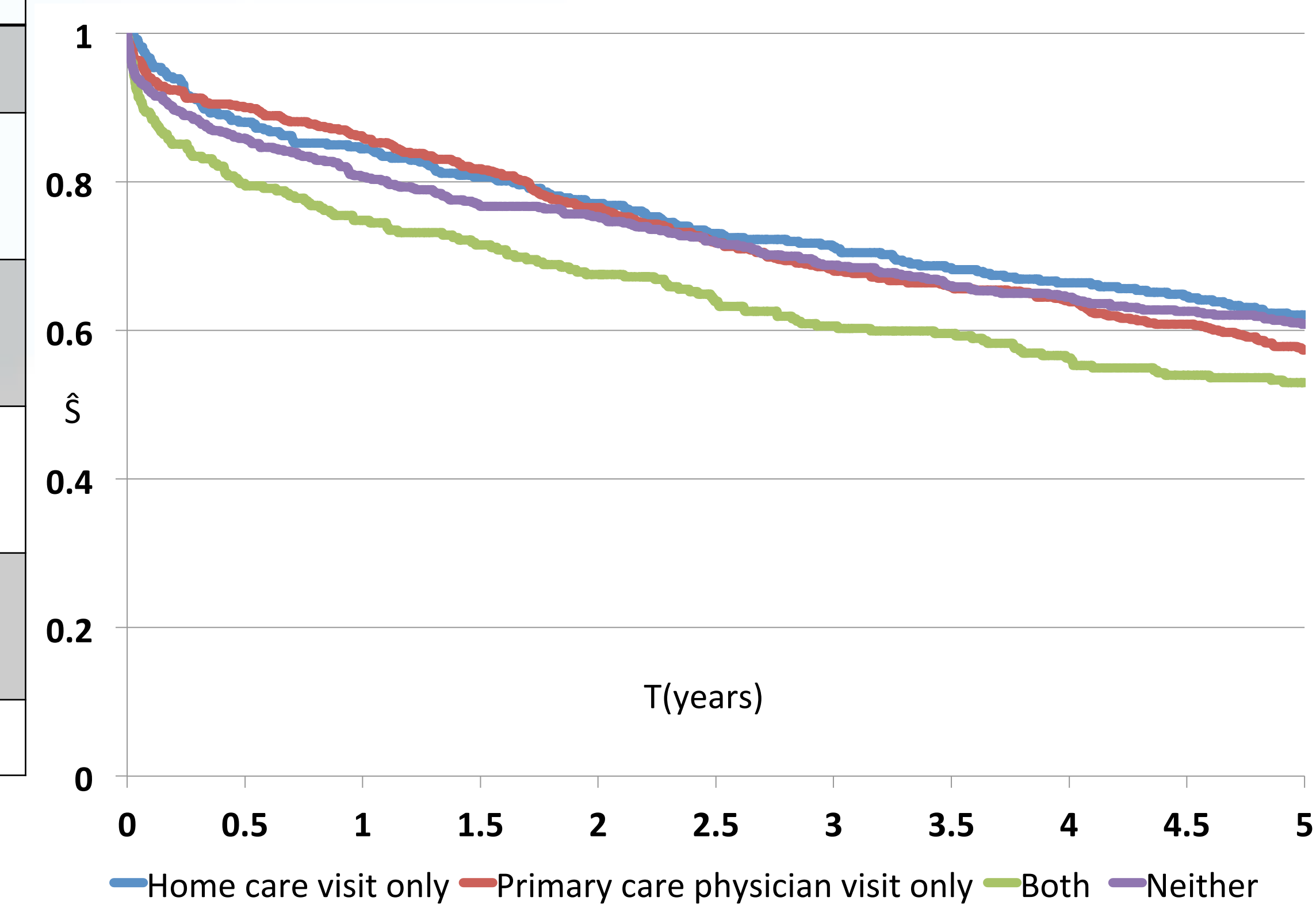
Adjusted risk of acute care hospitalization and emergency department use within one-year of discharge from Complex Continuing Care, by type of community follow-up within 7 days of discharge				
	Inpatient hospitalization		ED visit	
Type of Follow-Up	HR (95% CI)	p-value	HR (95% CI)	p-value
Home Care Visit	0.40 (0.29, 0.54)	<.0001	0.89 (0.72, 1.10)	0.28
Primary Care Physician Visit	0.64 (0.50, 0.80)	<.001	0.82 (0.68, 1.00)	0.05
Both	0.38 (0.26, 0.53)	<.0001	0.95 (0.77, 1.19)	0.68
Neither	1.0		1.0	

Adjusted for age, sex, income, rurality, RUG-III group, number of conditions, type of conditions

### Characteristics of the Cohort at Baseline

- Mean age 52.0 years ± 10.2
- 51.8%- male
- 49% resided in low income neighbourhoods
- 73.2% had activity of daily living impairments
- 26.8% had moderate-severe cognitive impairment
- 54.2% had 3+ diagnoses (most common: neurological)

Kaplan-Meier five-year survival curves for young and midlife adults discharged from complex continuing care by type of community follow-up within 7 days of discharge



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## KEY FINDINGS

- Young and mid-life adults discharged from complex continuing care were characterized by multi-morbidity, functional deficits, and low socio-economic status.
- Young and mid-life adults use a substantial number of health care services following discharge from complex continuing care, particularly hospital, emergency department and primary care practitioner and specialist visits.
- Few young and mid-life adults are referred to professional homecare upon discharge from complex continuing care and even fewer go on to use the service over the course of the year.
- Most individuals received some form of follow-up care within 7 days of discharge; 21% received home care only, 33% had a primary care physician visit only, 16% received both, and close to one third (30%) received neither.
- Receiving community follow-up within one week of discharge was associated with longer times to first hospitalization in the year following discharge.
- Immediate follow-up care did not appear to be protective against emergency services use and mortality. In fact, those who received both types of follow-up care (physician and home care) had the greatest likelihood of mortality at both one and five years following discharge.
- Many patients in this study were re-hospitalized and used the emergency room within the year of discharge (even if connected to follow-up care). These hospital and emergency department visits may be indicative of ongoing health instability post-discharge as well as a lack of access to appropriate care in the community.
- Despite follow-up, mortality in this population is high. Future research should discern the extent to which mortality in this population can be delayed.
- Future research can determine why some people are not connected to post-hospital services, particularly homecare, and whether or not care is integrated, accessible and contain the services most appropriate for young and mid-life adults.