

Heart failure readmission-free period varies by primary payer

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Introduction

- Heart failure (HF) is the most common discharge diagnosis in the U.S, and patients with HF are at a high risk for readmission.
- Major predictors for readmission include having comorbidities such as diabetes, chronic lung disease, among others.
- In addition to comorbidities, readmission rates also defer by sex, age, SES, and **primary payer**.
- The 30-day and 90-day readmission rates for HF by primary payer type has been extensively published. However, there is a lack of knowledge in the medical literature regarding the readmission rate 3 months post-index admission.
- In our study, we retrospectively follow subjects for 1 year and report on differences in readmission free period by primary payer.

Materials and methods

- We used the 2017 National Readmission Database (NRD) to address our research question.
- NRD contains nationally representative and comprehensive patient-level, hospital-level, and district-level data.

Results

Table 1 - Baseline characteristics of the cohort (n = 191,116)

Patient characteristics	n (%)
Age (years) by quintile	
18-58	35509 (18.6)
59-68	38121 (19.9)
69-76	37930 (19.8)
77-84	34483 (18.0)
85-90	45073 (23.6)
Sex	
Male	99444 (52)
Female	91672 (48)
Comorbidity	
1	190995 (99.9)
2	190657 (99.8)
3	189854 (99.3)
>=4	186989 (97.8)
Primary payer	
Medicare	146358 (76.6)
Medicaid	21152 (11.1)
Private insurance	16641 (8.7)
Self-pay	3242 (1.7)
No charge	439 (0.2)
Other	3057 (1.6)

Table 2 - Unadjusted and adjusted Cox regression model

	Univariate analysis			Multivariate analysis		
	HR	95% CI	p-value	HR	95% CI	p-value
Primary payer						
Private insurance	Ref			Ref		
Medicare	1.06	(4.5, 8.0)	<0.0001	1.05	(2.6, 6.3)	<0.0001
Medicaid	1.08	(5.7, 10.1)	<0.0001	1.06	(3.9, 8.4)	<0.0001
Self-pay	0.98	(-5.9, 2.4)	0.41	1.01	(-3.1, 5.3)	0.60
No charge	0.92	(-20.2, 2.6)	0.13	0.94	(-17.0, 5.5)	0.32
Other	1.05	(0.6, 8.7)	0.02	1.03	(-1.1, 7.3)	0.15

The multivariate analysis adjusts for the following covariates: age, sex, Elixhauser Comorbidity Index, weekend admission, elective admission, hospital bed size, and teaching status of the hospital

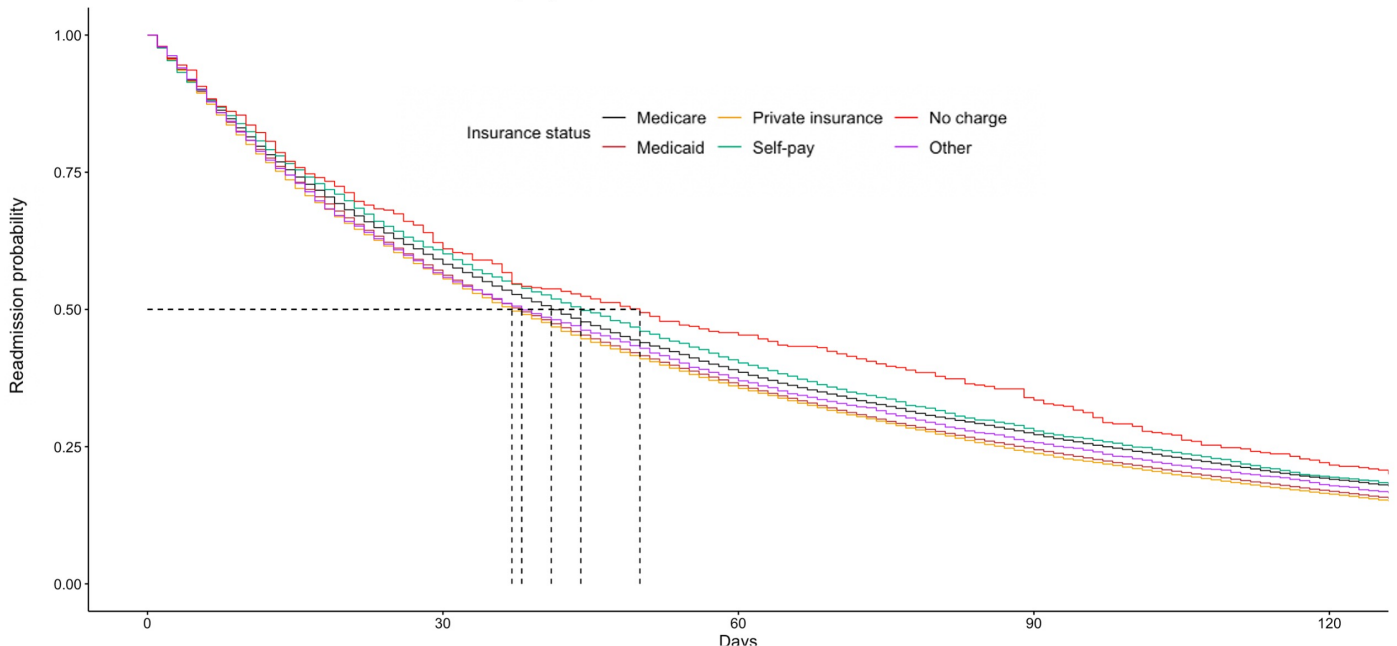


Figure 1 – Readmission-free period stratified by primary payer

Conclusions

- In the multivariate analysis, known covariates of readmission for HF such as age, sex, comorbidity, weekend admission, elective admission, hospital bed size, and teaching status of the hospital were adjusted for when obtaining estimates of the hazard ratio.
- Relative to those on private insurance, those on Medicare and Medicaid had a 5% ($p < 0.001$) and a 6% ($p < 0.001$) increase in hazard of readmission, respectively.
- There was no statistically significant difference in hazard of readmission between those on private insurance, other insurance, self-pay, and those who were not charged for services.
- More research needs to be done to understand the disparity in the readmission-free period by primary payer.

Literature cited

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