



Predictors of Hospital Readmissions in Adult Patients with Sickle Cell Disease



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Background

- 1 in 2500 births/100,000 individuals in the US are affected by SCD
 - Most common inherited blood disorder
 - Affecting primarily Black and Hispanic individuals
- 2/3 of those hospitalized between 1997-2004 were ages 18-44
- In 2016, 30-day readmissions resulted in:
 - 95,445 extra days of hospitalizations
 - \$152 Million in total hospitalization costs

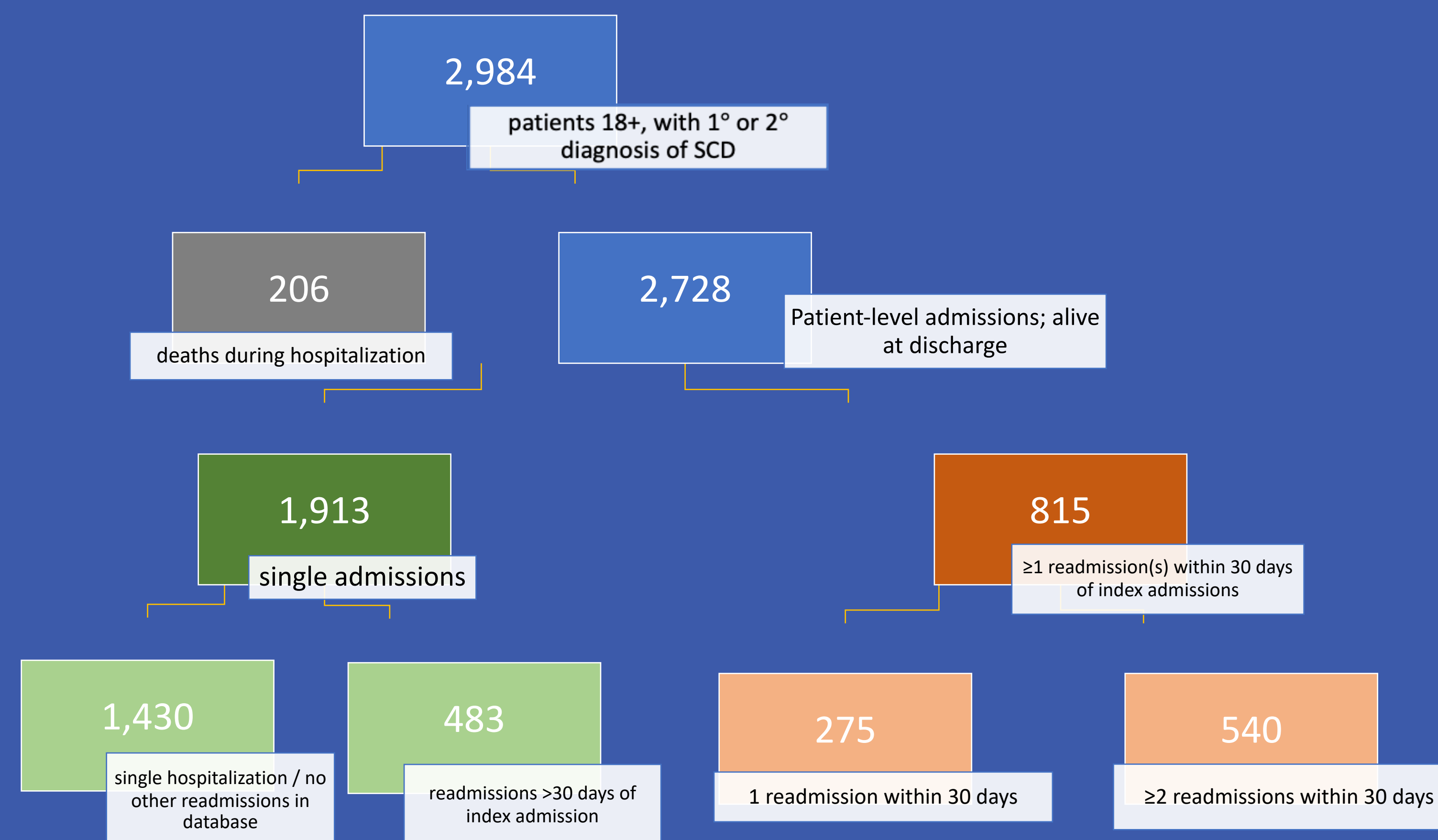
Study Specific Aims

- Report number of hospital readmissions within 30-days in patients with SCD
- Identify factors that are associated with readmission within 30 days in patients with SCD
- Achieving aims can help inform interventions and implement policies to reduce the burden of this disease on patients and health systems

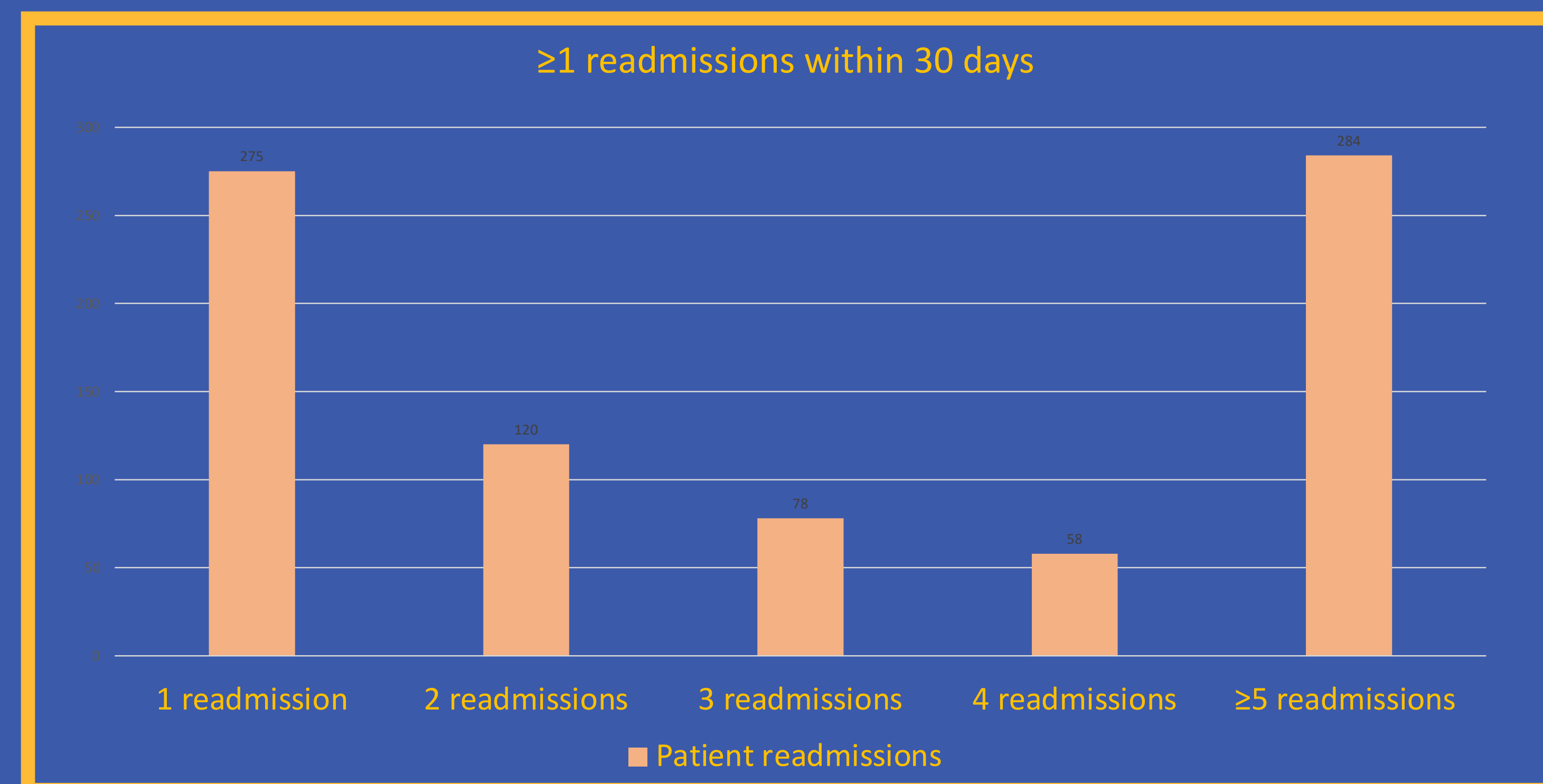
Methods

- Study design: retrospective observational study applying secondary data analysis
- Database: California's Office of Statewide Health Planning and Development
- Years: 2005-2014
- N = 31,627,239 admissions
- Inclusion criteria: Hospitalized adult patients (18+)
- Diagnosis of SCD based on ICD-9-CM code
- Exclusion criteria: Death during hospitalization
- Descriptive analysis and logistic regression models to report findings. Used p value <0.05; 95% CI

SCD Patient Sample



Readmission Outcomes



Results

Adjusted Logistics Regression Model

Characteristics	Zero vs 1 readmission (model 1)		Zero vs ≥ 2 readmissions (model 2)	
	Odds ratio	Confidence interval (95%)	Odds ratio	Confidence interval (95%)
Male	1.37*	1.06 – 1.77	1.43*	1.17 – 1.74
Age	0.99	0.99-1.00	0.97*	0.96-0.98
Black	3.27*	1.71 – 6.27	6.90*	3.41 – 13.97
Hispanic	1.87	0.86-4.05	2.33*	1.05-5.17
Medicare	1.89*	1.30 – 2.75	3.58*	2.68 – 4.81
Medical	1.36	0.98-1.88	1.70*	1.31-2.20
Self-pay	0.80	0.49-1.32	0.32*	0.12-0.54
CCI 3+	0.53*	0.29-0.97	0.96	0.61-1.50

Conclusions

- 30% of our patient sample were readmitted to the hospital within 30 days at least once
- 20% had ≥2 readmissions
- 10% had ≥5 readmissions
- Individuals who are males, Black, or those who have Medicare were more likely to have at least one readmission within 30-days of their index admission
- Our findings support similar studies of readmissions in patients with SCD
- This is the largest analysis for patients with SCD in CA