

Frequency and Timing of Emergency Department Visits and Hospital Admissions Following Common Stone Procedures

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Disclosures

- BD, Franklin Lakes, NJ, supplied the license fees in support of the IBM® MarketScan® database.



Background and Objective

- Emergency department (ED) visits and hospital admissions (HA) following urologic procedures are a concern for payers, providers and patients.¹
- We seek to quantify ED visits and HA after percutaneous nephrolithotomy (PCNL), ureteroscopy (URS), or shockwave lithotripsy (SWL), at 30, 60, 90 and 120-day intervals, based on site of treatment.

¹Scales CD, Saigal CS, Hanley JM, et al. The impact of unplanned postprocedure visits in the management of patients with urinary stones. *Surgery*. 2014;155(5):769-75.



Methods

- Retrospective analysis using the IBM® MarketScan® Commercial and Medicare Supplement databases
 - Present analysis included data from January 1, 2012 to December 31, 2017 representing over 100 million persons.
 - An individual-level healthcare administrative claims database.
 - Longitudinal database capturing place of service, diagnoses, procedures, and costs.



Methods

All patients in the analytic sample are required to have codes for
Kidney Stone Diagnosis, a Urologic Stone Procedure, and Ureteral

Kidney Stone Diagnosis

- At or within 30 days prior to the Urologic Stone Procedure



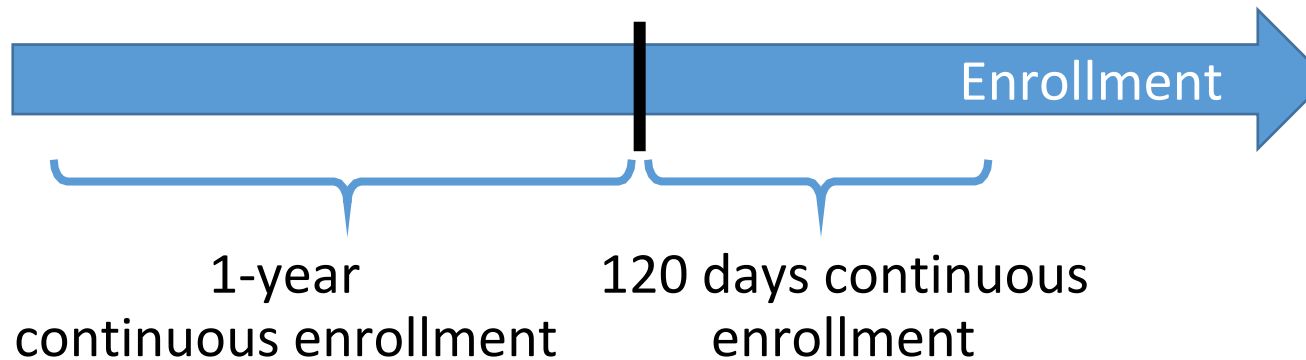
Urologic Stone Procedure

- PCNL, URS or SWL
- Stone location in the ureter or kidney



Ureteral Stent Placement

- CPT 52332 on same day as stone procedure
- Alternatively, the stone procedure must specify placement of a ureteral stent (i.e. CPT 52356)

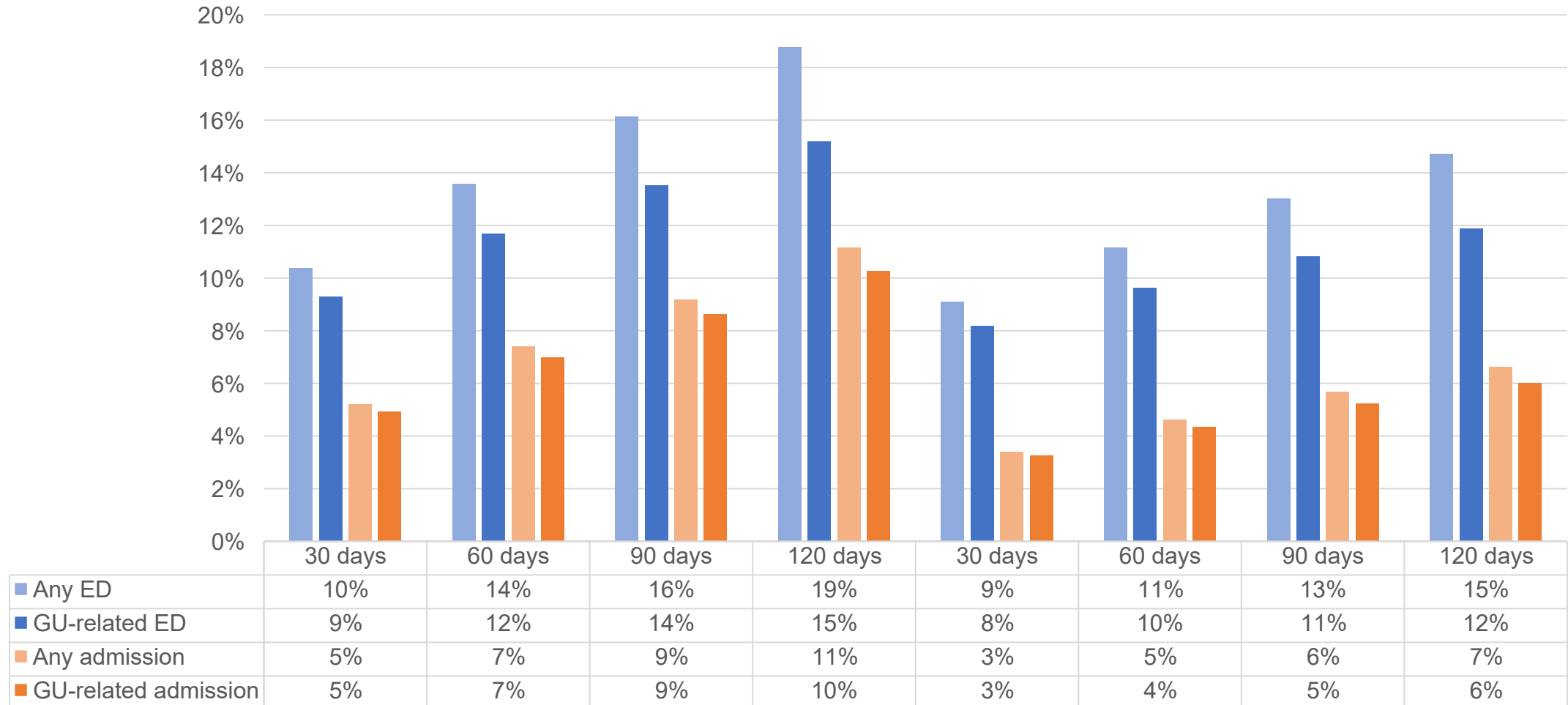


Characteristics of the analytic cohort

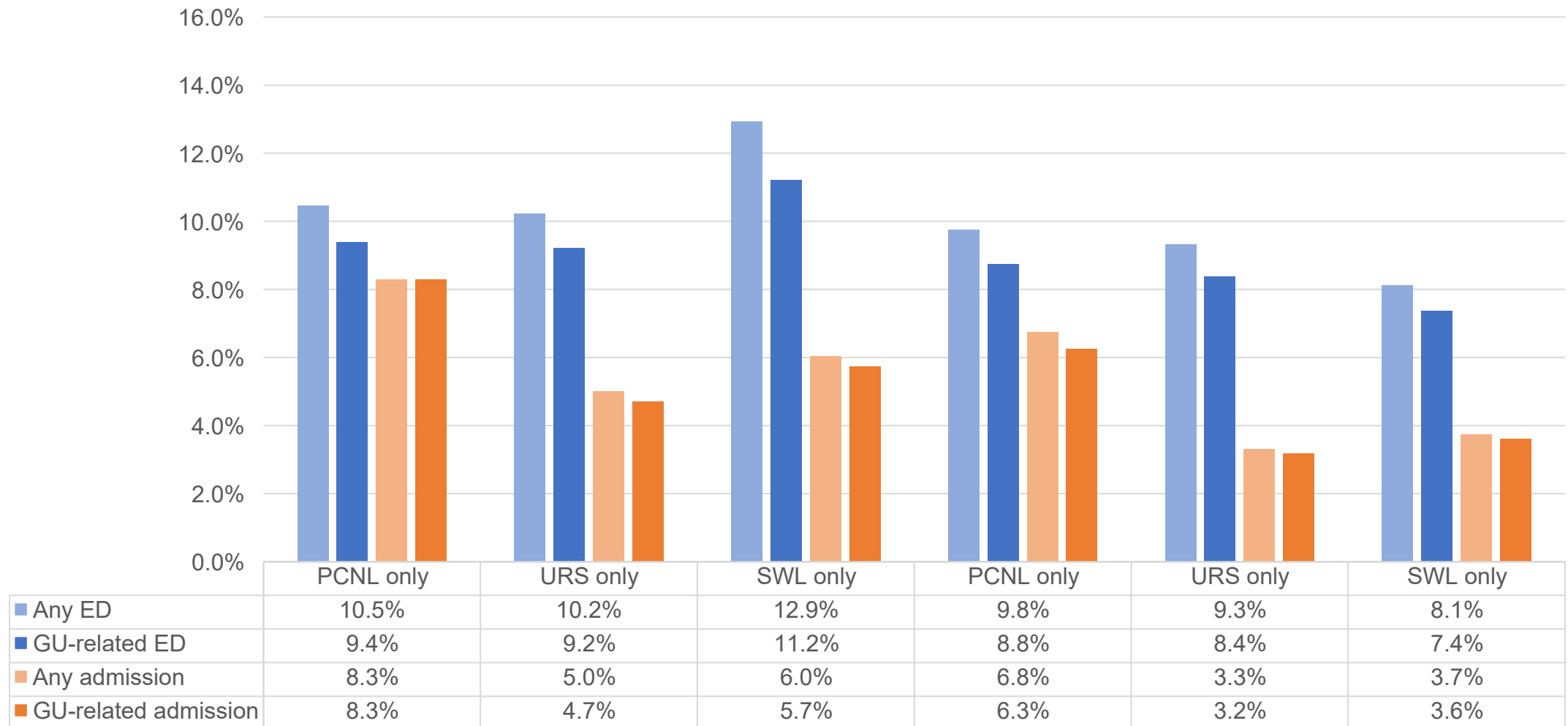
	Overall	Inpatient	Outpatient
	N (% of overall)	N (% of subgroup)	
Overall	88,047	8,924 (10%)	79,123 (90%)
Female	39,134 (44%)	4,529 (51%)	34,875 (44%)
Age, mean (SD)	52.6 (14.0)	54.7 (15.5)	52.4 (14)
Charlson Comorbidity Index 2 or higher	20,411 (23%)	2,582 (29%)	17,829 (23%)
Index urologic stone procedure			
PCNL only	677 (1%)	277 (3%)	400 (1%)
URS only	73,695 (84%)	7,941 (89%)	65,754 (83%)
SWL only	10,880 (12%)	348 (4%)	10,532 (13%)
Multiple	2,795 (3%)	358 (4%)	2,437 (3%)



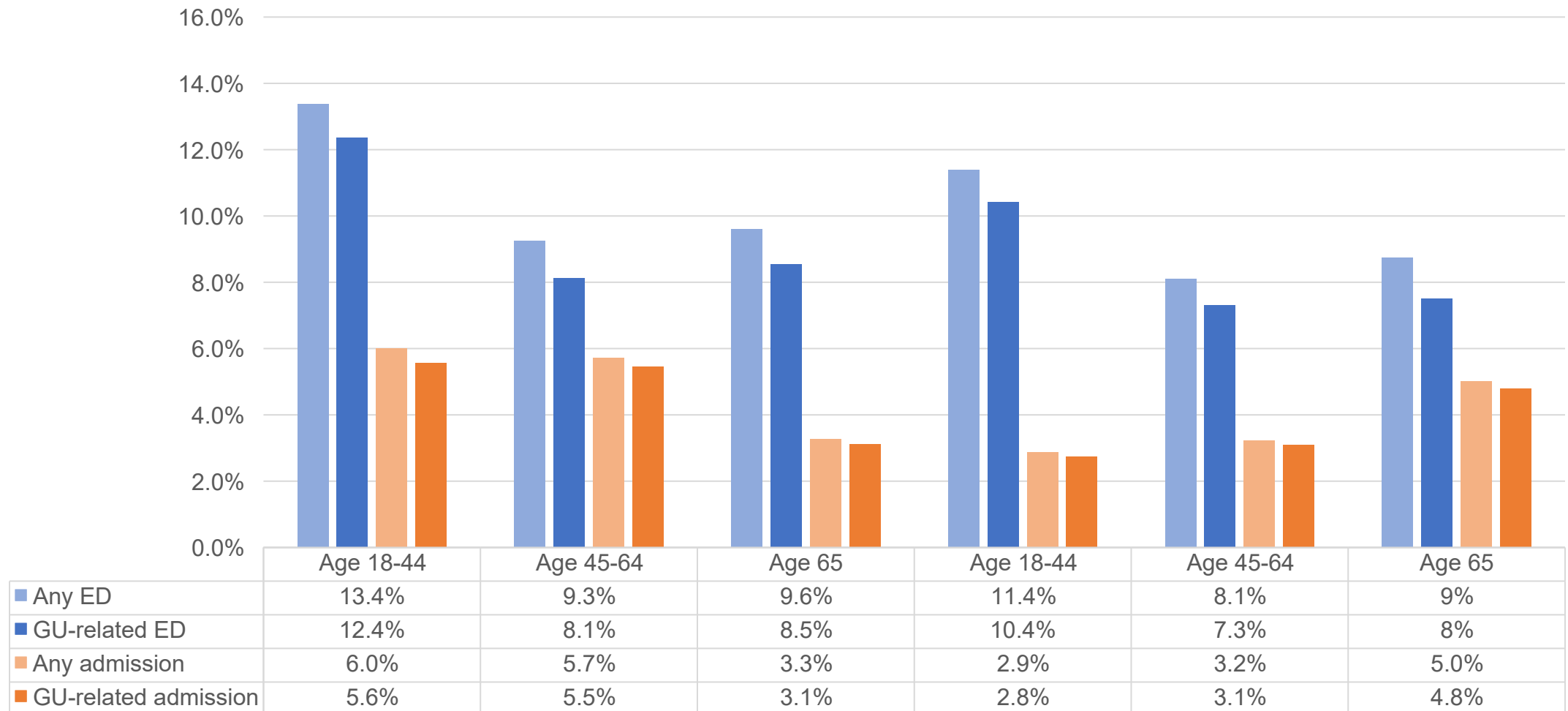
Cumulative ED visit and admission following urologic stone procedure at 30, 60, 90, and 120 days



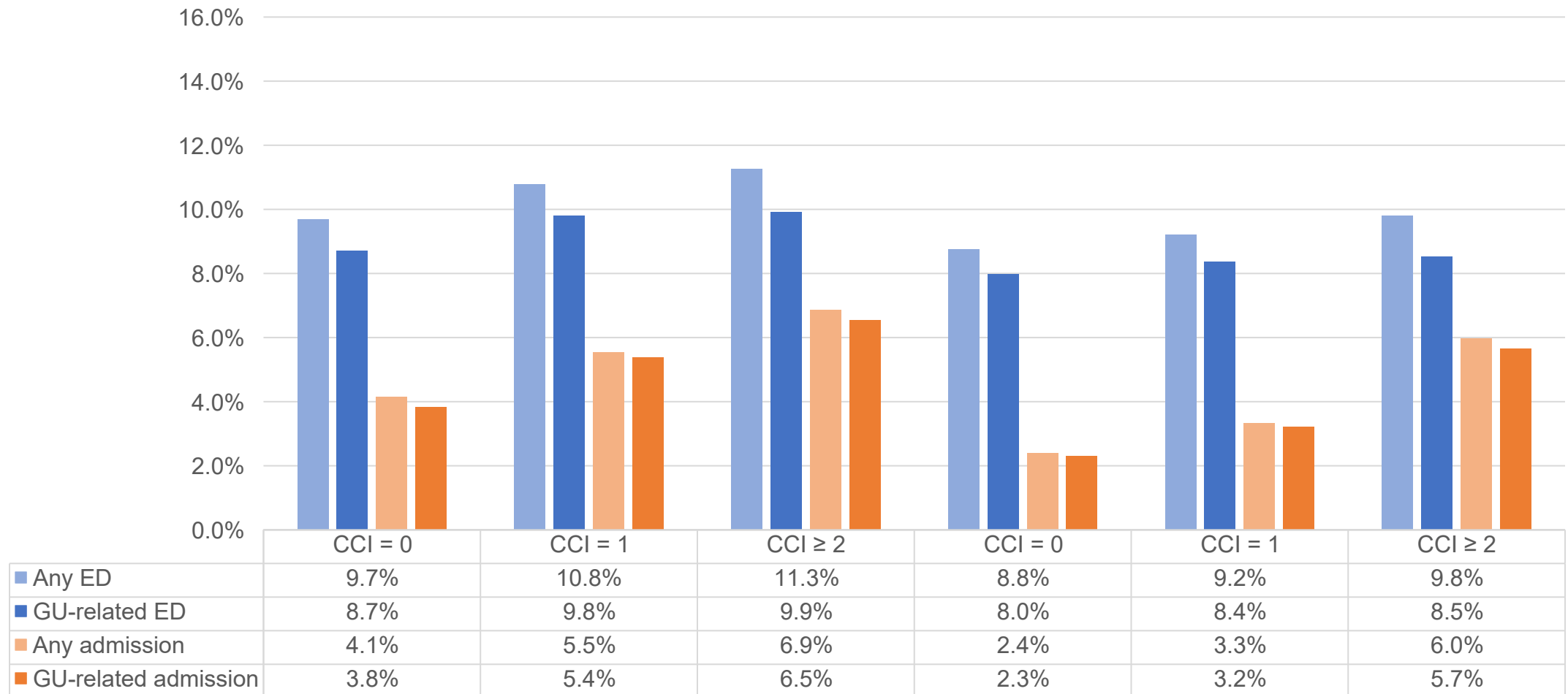
30-day ED visit and admission following urologic stone procedure by stone procedure and setting



30-day ED visit and admission following urologic stone procedure by age and setting



30-day ED visit and admission following urologic stone procedure by CCI score and setting



Top 5 GU-related diagnosis codes during the 30-day follow-up period

Code	Code description	Diagnosis code was present in % of GU-related ED visits*
5920	Calculus of kidney	31.5%
78909	Abdominal pain other specified site	30.6%
5921	Calculus of ureter	27.3%
4019	Hypertension not otherwise specified	22.1%
7880	Renal colic	17.6%

* Each emergency room encounter may have multiple codes



Conclusions

- A large proportion of patients either visit the ED or are admitted after procedures for nephrolithiasis
- Further study is needed to determine causation and guide future projects

