

Quality Improvement Project: Post-acute Care Discharges for Patients Post Burns

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Increased burn severity and complexities of acute care in IRF patients demonstrate appropriate discharge site for needed medical and rehabilitation services.

Introduction

Patients who have sustained burns should be appropriately admitted to an inpatient rehabilitation facility (IRF) to receive all needed post-acute care. This quality improvement project was to determine if, in a single academic institution, patients post-burns are receiving appropriate services (IRF vs. skilled nursing facility [SNF]) based on patient characteristics and complicating factors.

Methods

A retrospective chart review was conducted of patients treated for burns in 2019, who were discharged for post-acute rehabilitation services. Data points include patient characteristics, injury details, hospital care, and acute care therapy services. Descriptive statistics and statistical comparisons by discharge site are reported.

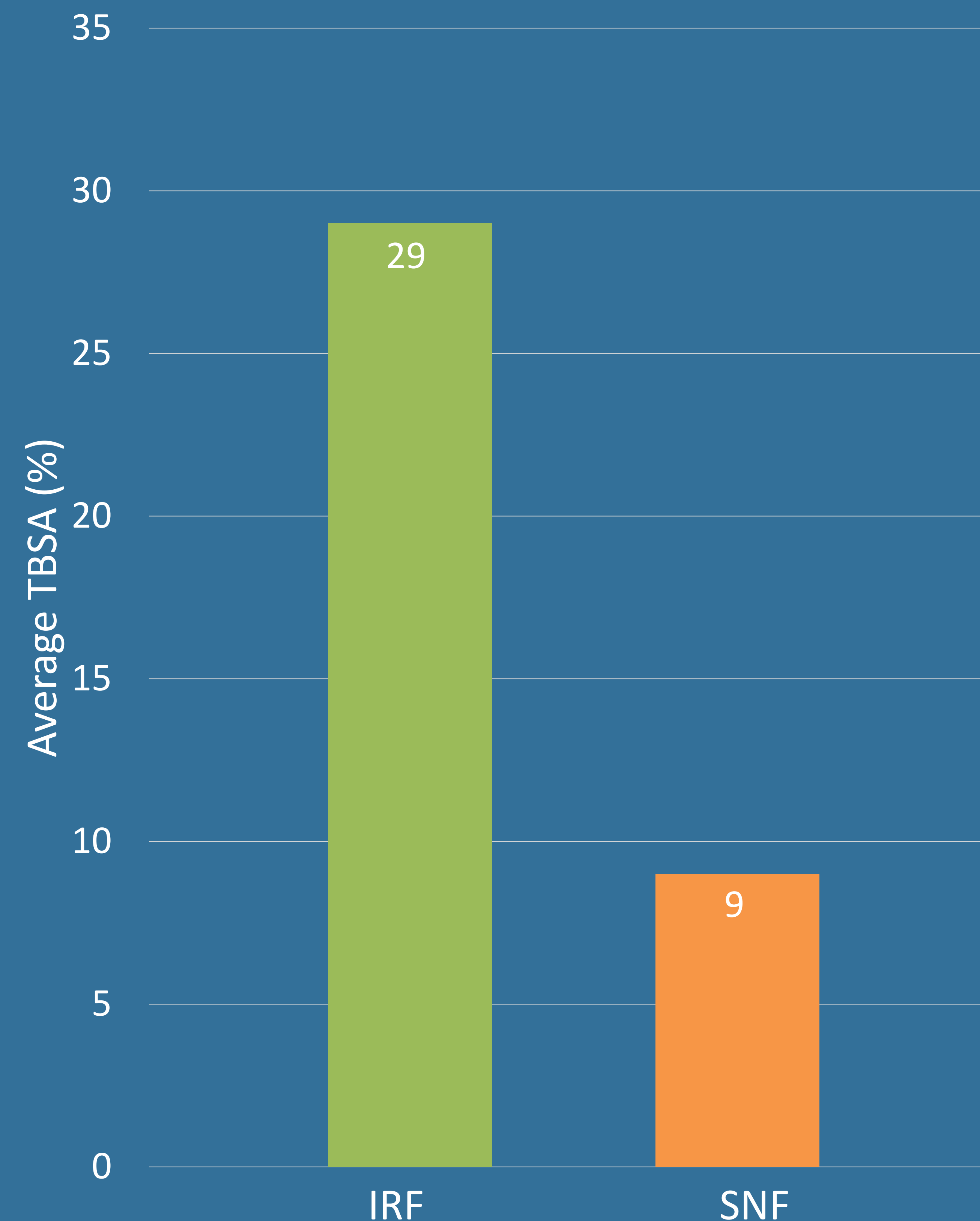
Results

23 patients were included (IRF=10, SNF=13).

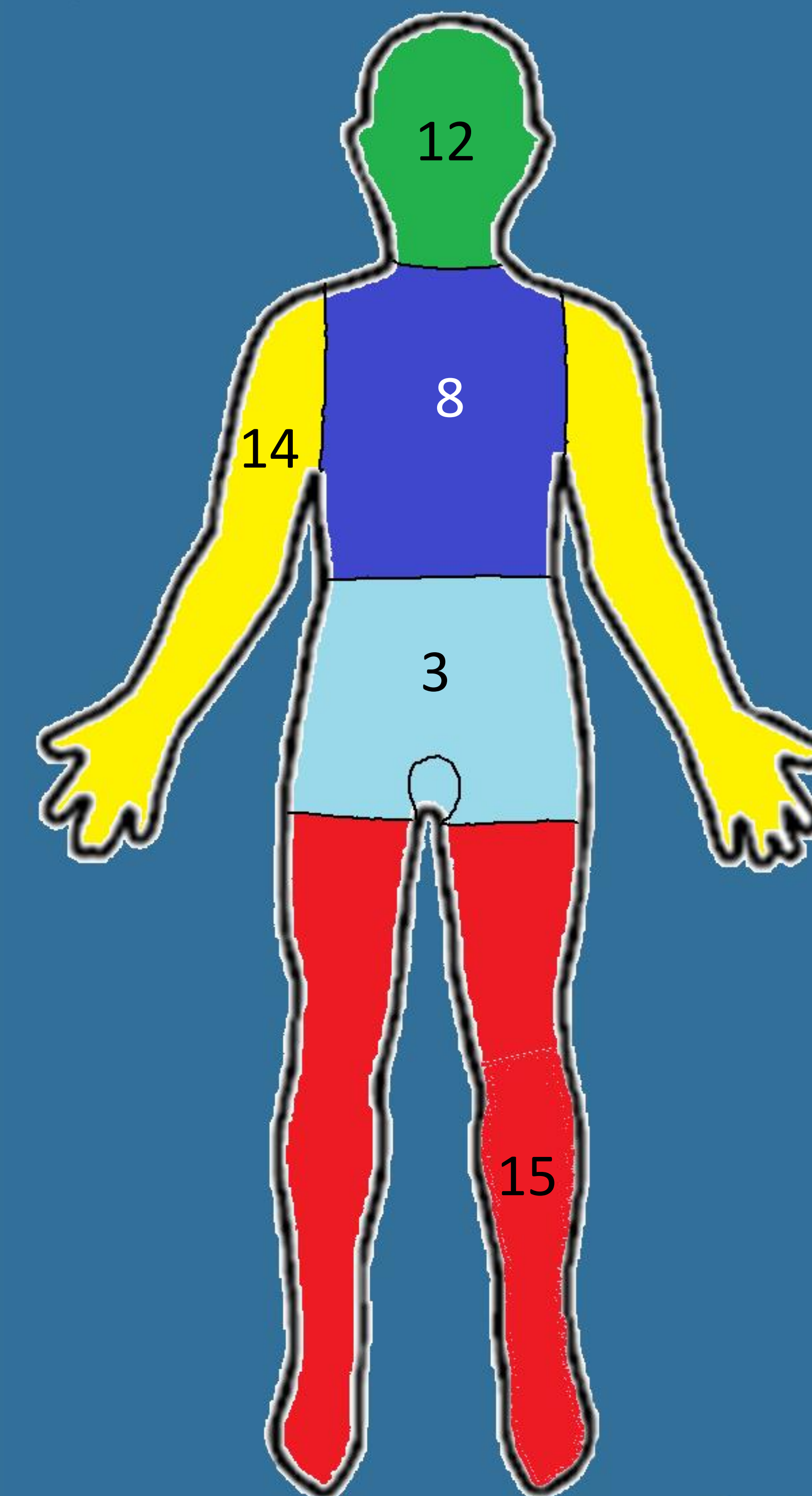
- Overall demographics: 56.5% Male; 78.3% White; mean age: 51.97 (SD=22.75), range: 1.4-87 years; Full-time support post rehabilitation: IRF 66.7%, SNF 8.3%; p=0.02
- Medicare usage: SNF 80%; IRF 20%; $\chi^2(1)=4.07$, p=0.04
- Total Body Surface Area (TBSA) involvement SNF M =9.36; IRF M=29.22; $t(18)=2.94$, p<0.01
- Nephrology conditions are the only comorbid group with significant difference SNF 25%, IRF 77.8% ($\chi^2(1)=5.74$, p=0.02)
- Number of burn locations: SNF M =1.75; IRF M=3.11; $t(19)=2.68$, p=0.01
- Intubation: SNF= 25% IRF =77.8%,
- There were no significant differences between the groups across the specialties consulted/services received acutely.
- Acute hospital length of stay, while not significantly different, was longer among IRF patients (SNF M=21.92; IRF M=38.44).

Discussion

Important differences were seen in patient characteristics and burn injury details by rehabilitation discharge setting. Increased burn severity (higher TBSA, number of burn locations) and complexities of acute care in IRF patients demonstrate appropriate discharge site for needed medical and rehabilitation services. Future work may focus on insurance denials and post rehabilitation destination.



Total Body Surface Area



Frequency of burn locations

Table 1 (total N=23, IRF N=10, SNF N=13)

Variables	IRF, n (%)	SNF, n (%)	P	
Race (% white)	7 (70)	11 (85)	0.37	
Gender (% male)	6 (60)	7 (53)	0.45	
Age, mean (SD)	38.2 (28.6)	61.1 (13.3)	0.02*	
Employment	Not employed	0 (0)	6 (50)	0.10
	Part time	2 (33)	2 (17)	
	Full time	3 (50)	1 (8)	
	Disability	1 (17)	1 (8)	
	Retired	0 (0)	2 (17)	
Insurance	Medicare	2 (22)	8 (67)	0.04*
	Medicaid	7 (78)	4 (33)	
Comorbidity	Substance use	3 (33)	10 (83)	0.02*
	Cardiovascular	3 (33)	4 (33)	1.00
	Respiratory	1 (11)	5 (42)	
	Psychiatric	2 (22)	1 (8)	0.37
	Inflammatory	1 (11)	0 (0)	0.24
	Endocrinology	1 (11)	3 (27)	0.37
	Nephrology	7 (78)	3 (25)	0.02*
	Neurology	0 (0)	3 (25)	0.11
Heme/Onc	0 (0)	3 (25)	0.11	
Intubation needed	7 (78)	3 (25)	0.02*	
Inhalation injury	2 (22)	1 (8)	0.37	
TBSA (Mean)	29.22	9.36	0.01*	
Services consulted	Ophthalmology	5 (56)	7 (50)	0.08
	Palliative care	2 (22)	4 (33)	0.58
	Nephrology	1 (11)	3 (25)	0.42
	Wound Care	3 (33)	6 (50)	0.45
	PT/OT	9 (100)	12 (100)	0.51
	SLP	4 (44)	3 (25)	0.35
	ENT	4 (44)	1 (8)	0.05
	Orthopedics	2 (22)	0 (0)	0.09
	Psychiatric	2 (22)	4 (33)	0.58
	Endocrinology	2 (22)	2 (17)	0.75
Infectious disease	3 (33)	2 (17)	0.37	
Community support	24/7 available	7 (70)	1 (8)	0.16*
	Limited or none	3 (30)	12 (92)	

*significant at $\alpha=0.05$

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This study was reviewed and deemed to be exempt by the Upstate Medical University IRB [1633550-1].