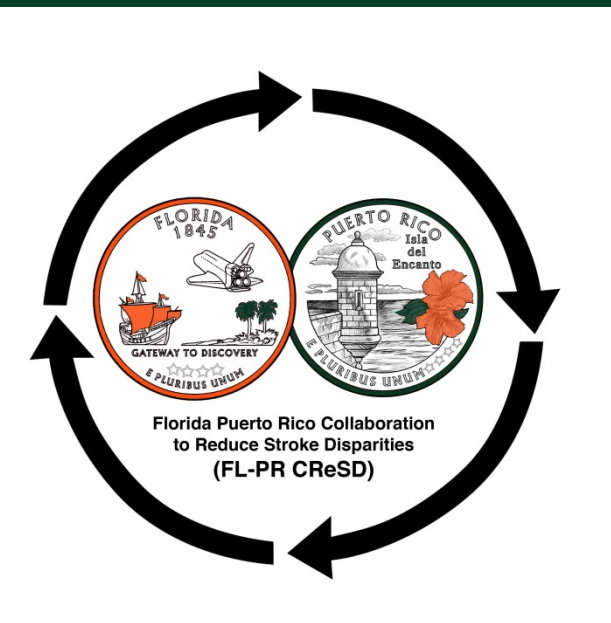


Safety and Outcome of Endovascular Therapy in Patients with Minor Ischemic Stroke: Florida Puerto Rico Collaboration to Reduce Stroke Disparities Study (CReSD)

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INTRODUCTION

- Endovascular therapy (EVT) is an effective method to achieve revascularization in patients with acute ischemic stroke related to a large vessel occlusion (LVO).
- EVT became the standard care in treatment of select patients with acute anterior circulation stroke following the publication of five large randomized controlled trials in 2015.
- However, patients with a low NIHSS were either excluded or under-represented in these trials. The Role of EVT in this subpopulation of patients with mild ischemic stroke and LVO is therefore unknown.

METHODS

- The FL-PR CReSD Registry has compiled GWTG-S data on 58, 204 Ischemic stroke patients within 24 hours of onset were prospectively included from 82 sites (69 FL; 13 PR) from January 2010 to April 2017.
- Among 57,750 cases (total study cohort) Acute ischemic stroke patients within 24 hours of symptom onset, 2845 patients received EVT
- Multivariable logistic regression with generalized estimating equations evaluated independent predictors of endovascular therapy in patients with mild ischemic stroke.

RESULTS

- A total of 2845 patients received EVT from January 2010 to April 2017
- 12% (n=347) of patients who received EVT had mild stroke (NIHSS≤5)
- Table shows the clinical, hospital and arrival characteristics of EVT treated patients based on NIHSS severity.

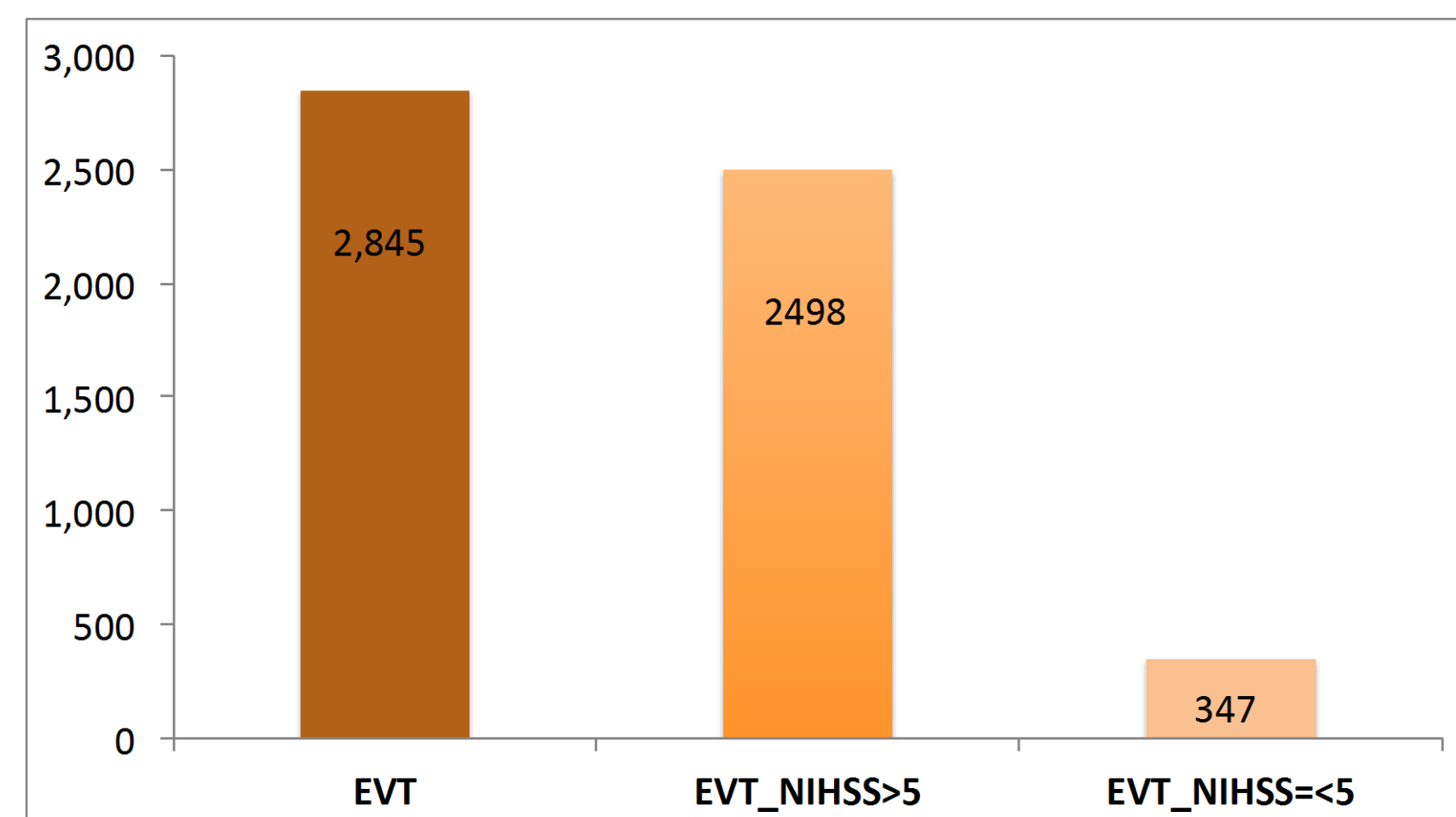


Figure 1. Distribution of EVT Treated Patients based on Stroke Severity

Characteristics	EVT (N=2,845)	EVT NIHSS≤5 (N=347)	EVT NIHSS>5 (N=2,498)	Unadjusted P-value	Adjusted P-value
Age (yrs), mean ± SD	71±14	67±14	71±14	< 0.0001	< 0.0001*
Sex (Male), N %	1414 (49.7)	200 (51.9)	1214 (48.6)	0.002	0.81
Race-Ethnicity, N %				0.38	
NH-White	1713 (60.2%)	216 (62.2%)	1497 (59.9%)		Reference
NH-Black	423 (14.9%)	43 (12.4%)	380 (15.2%)		0.008*
FL-Hispanic	701 (24.6%)	88 (25.4%)	613 (24.5%)		0.31
PR-Hispanic	8 (0.3%)	0	8 (0.3%)		
Current smoker	415 (14.6%)	63 (18.2%)	352 (14.1)	0.04	0.92
Hypertension	1820 (64%)	240 (69.2%)	1580 (63.3%)	0.03	0.02*
Diabetes Mellitus	637 (22.4%)	73 (21%)	564 (22.6%)	0.52	Not included
Dyslipidemia	930 (32.7%)	127 (36.6%)	803 (32.1%)	0.10	Not included
CAD/prior MI	599 (21.1%)	76 (21.9%)	524 (20.9%)	0.68	Not included
Previous stroke/TIA	585 (20.6%)	87 (25.1%)	498 (19.9%)	0.03	0.38
A-fib	1031 (36.2%)	87 (25.1%)	944 (37.8%)	<0.0001	<0.0001*
Time to Arrival (min, IQR)		128 min	102 min	0.02	0.01*
Arrival < 2 hours	1513 (53.2%)	164 (47.3%)	1349 (54%)		
Arrival 2-3.5 hours	440 (15.5%)	52 (15%)	388 (15.5%)		
Arrival 3.5- 4.5 hours	198 (7%)	23 (6.6%)	175 (7%)		
Arrival Time (%)					
On -hours	1331 (46.8%)	177 (51%)	1154 (46.2%)	0.09	0.11
Off- hours	1514 (53.2%)	170 (49%)	1344 (53.8%)		
Hospital IV tPA Volume				<0.0001	0.20
High IV tPA Volume	2458 (86.4%)	268 (77.2%)	2190 (87.7%)		
Low IV tPA Volume	387 (13.6%)	79 (22.8%)	308 (12.3%)		
Teaching Hospital Status				0.001	0.30
Non Academic Hospital	1851 (65.1%)	253 (72.9%)	1598 (64%)		
Academic Hospital	994 (34.9%)	94 (27.1%)	900 (36%)		
Regions in Florida, %				<.0001	
South Florida	55.3	66.9	53.6		REF
East Central	12.1	10.7	12.3		0.8
West Central	22.5	13.3	23.8		<0.0001
North and Panhandle	9.8	9.2	9.9		0.56

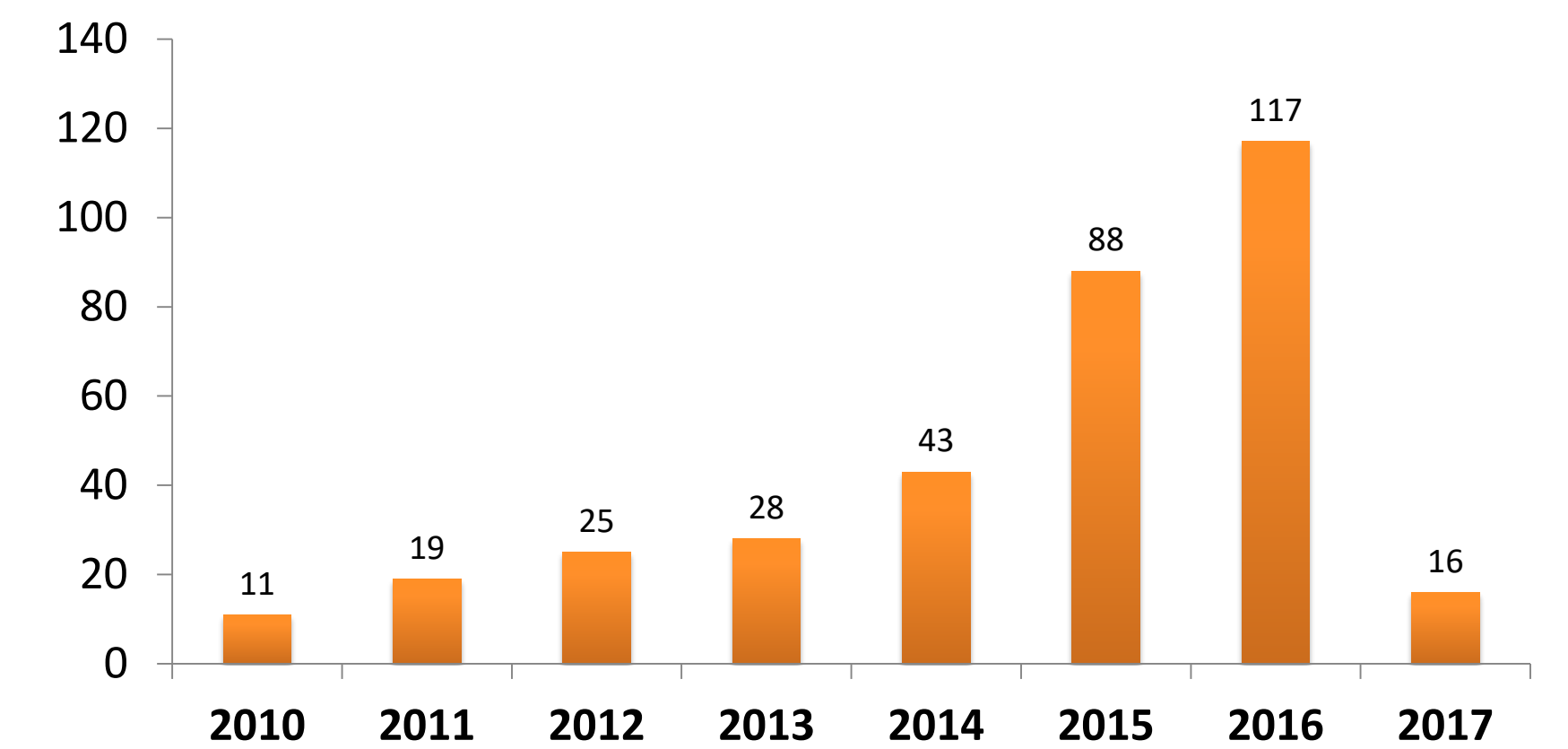


Figure 1: Trends in EVT USE in Patients with NIHSS ≤5

CONCLUSIONS

- Patients with mild stroke who received EVT were younger, were more likely to arrive during work hours to a large center in South Florida
- Many factors including hospital expertise and time of presentation affect the use of EVT in mild stroke.
- Despite the lack of clear evidence for efficacy of EVT in patients with mild ischemic stroke over 10% of cases that received EVT in this large registry had mild neurological symptoms.
- The use of EVT has increased by 10 folds from 2010 to 2016
- Randomized trials of EVT in mild stroke is feasible.

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