Quality Excellence in the Neurosciences

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The neuroscience service line at Ochsner includes the departments of neurosurgery, neurocritical care, neurology, and physical medicine/rehabilitation. Quality performance has been a focus since service line inception. The service line employs multiple initiatives to ensure success.

34.1 Stroke Center Quality

The most comprehensive quality initiatives relate to our vascular neuroscience program (Table 34.1). As a Joint Commission (JC) Certified Comprehensive Stroke Center, we collect and review data monthly per JC standards [1]. The quality metrics that are monitored for comprehensive stroke centers include data points relating to the care of the acute stroke patient, JC primary stroke measures, JC comprehensive stroke measures, and procedural complications. We also have quality initiatives in place to support performance in our Telestroke and Stroke Mobile programs

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Table 34.1 Ochsner Medical Center monthly vascular neuroscience quality initiatives

Initiative
Multidisciplinary Stroke Committee
Stroke Peer Review Committee
Vascular Neurology M&M
Telestroke Committee
Mortality Review
Stroke Mobile Team meeting
SOS Review Committee
Vascular Neurology Provider meeting
Interventional Neuroradiology meeting

M&M morbidity and mortality improvement conference, SOS safety on site (local designation for safety reporting system)

Ochsner CareConnect 360

Telemedicine Report

Ochsner Comprehensive Stroke Program

Telemedicine News/Updates:

Growth:

Highlight:

TeleStroke

All Hospitals	Calendar Year 2020												CY2020 Grand Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Ischemic Stroke	179	181	111	82	107	110	124	140	140	146	122	139	1,581
Hemorrhagic Stroke	9	3	4	3	9	5	5	5	4	6	3	4	60
TIA	41	37	37	25	39	27	32	33	49	45	41	38	444
Non-Stroke	129	103	91	92	147	142	150	162	137	150	154	157	1,614
Total Consults	358	324	243	202	302	284	311	340	330	347	320	338	3,699
# Times Door to Call w/in 15 minute	144	129	86	79	121	115	133	146	143	154	140	137	1,527
# Times Called [= Total Consults]	358	324	243	202	302	284	311	340	330	347	320	338	3,699
% of calls w/in 15 min	40%	40%	35%	39%	40%	40%	43%	43%	43%	44%	44%	41%	41%
Average of Door to Call (Min)	0:34	0:35	0:42	0:30	0:41	0:33	0:32	0:27	0:33	0:31	0:37	0:38	0:34
Door to Needle w/in 60 min	25	25	22	13	19	19	23	22	18	22	20	19	247
# Times TPA Given	40	40	33	20	33	36	34	43	32	40	32	32	415
% of doses given w/in 60 min	63%	63%	67%	65%	58%	53%	68%	51%	56%	55%	63%	59%	60%
Average of Door to Needle Time (Mi	1:03	1:02	1:12	1:05	0:55	1:06	0:55	1:09	0:59	1:04	1:04	1:05	1:03
# Patients Transfer requested	103	93	65	50	67	66	77	76	85	92	76	88	938
Retention Rate	71%	71%	73%	75%	78%	77%	75%	78%	74%	73%	76%	74%	75%

Fig. 34.1 Ochsner Telestroke program monthly dashboard. (© Ochsner Health)

(see below). The multidisciplinary vascular neuroscience team meets monthly to review all JC metrics. Unit-based reports follow a template and action plans are developed for items of concern. There is a monthly morbidity, mortality, and improvement conference, led by faculty and house staff.

The Ochsner's telestroke network includes one tertiary/quaternary hospital and over 55 spoke sites in the Gulf South. Performance data are reviewed monthly by the Telestroke leadership team. Data include volumes, diagnosis (vascular vs

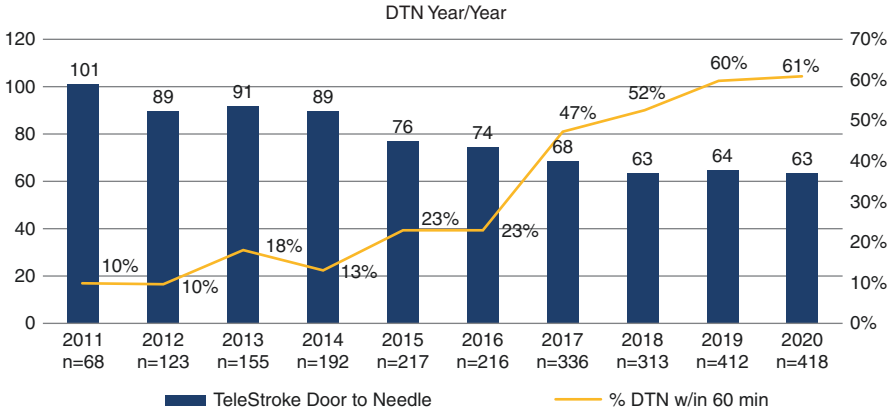

Fig. 34.2 Ochsner Telestroke program door-to-needle (DTN) times by year. (© Ochsner Health)

mimics), spoke site retention rate, and process metrics such as door to call, door to physician online, and door-to-needle times (Fig. 34.1). The program aims to keep care local whenever possible and consistently achieves a 75–80% spoke site retention rate. Individual providers' "door to physician online" data are provided and addressed for performance improvement. Optimal door-to-needle times for tissue plasminogen activator (tPA) administration are a focus of the program. Through data transparency and focused process improvement, we have achieved a steady improvement since program inception in 2011 (Fig. 34.2).

A unique component of the Ochsner Vascular Neuroscience Program is our Stroke Mobile Program. Designed to reduce readmissions and improve adherence to stroke prevention plans, the program emphasizes care navigation and in-home care. Teams consisting of a registered nurse and a lay patient educator travel to the home of patients discharged with stroke and/or transient ischemic attack (TIA). The program was initially funded through a Centers for Medicare and Medicaid Services (CMS) Innovations grant; initially in-home visits occurred monthly for 12 months with the initial visit occurring within 2 weeks of discharge. The program was modified in 2015 to allow for virtual or skipped visits beyond the first 3 months. Twelve-month follow-up data (e.g., blood pressure, modified Rankin Scale) are collected on all patients. The program has had impressive performance with respect to blood pressure control and 30-day readmissions (Figs. 34.3 and 34.4).

Key Concept
A regular rhythm of review of performance data within the structure of a Comprehensive Stroke Center can result in reliable improvement outcomes. Data transparency at both the individual provider level and the program level are key components of success.

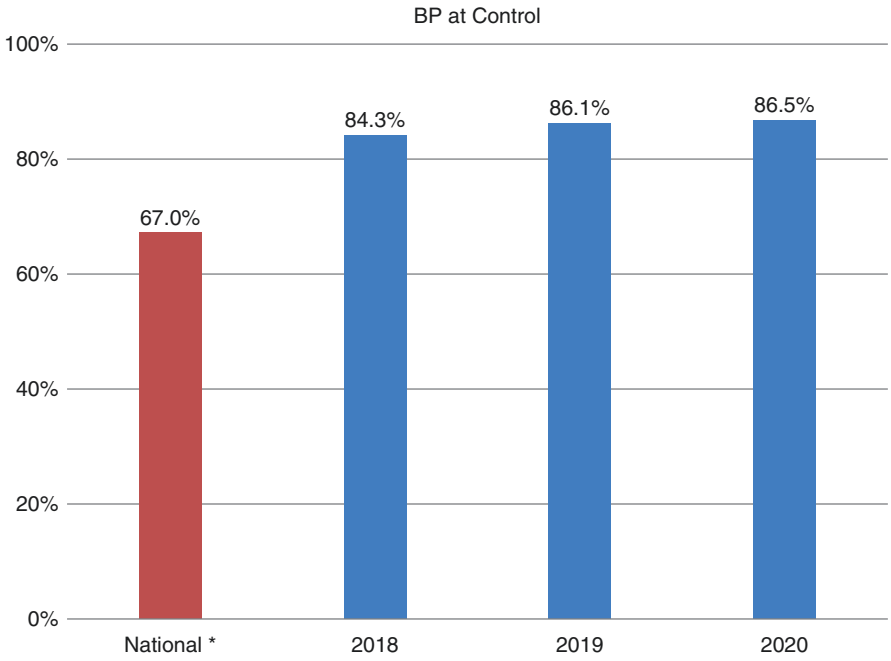

Fig. 34.3 Ochsner Stroke Mobile Program blood pressure (BP) control performance (showing percentage of patients with SBP <140 mm Hg) [2]. (© Ochsner Health)

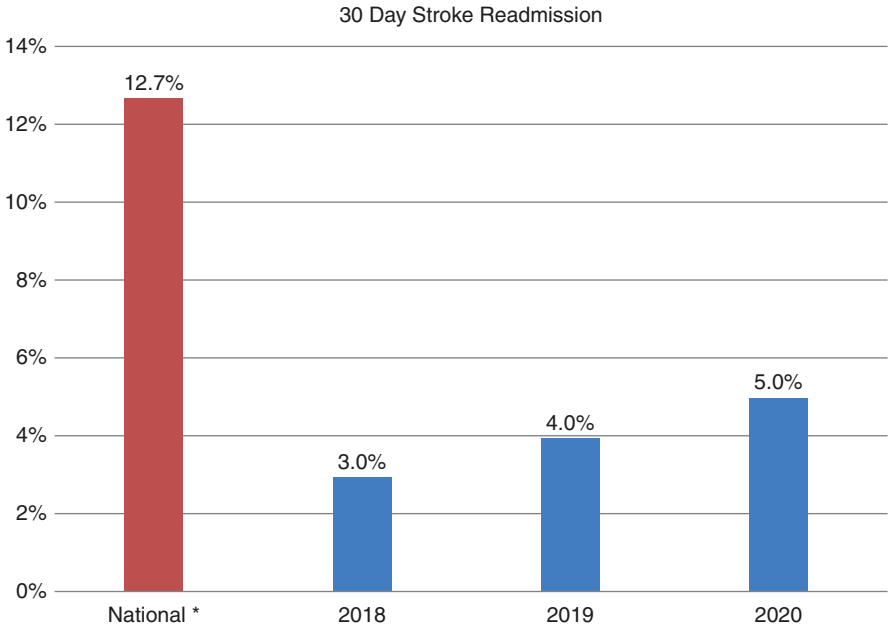

Fig. 34.4 National and Ochsner Stroke Mobile Program 30-day all-cause readmission rates [3]. (© Ochsner Health)

34.2 Neuroscience Safety Program

In 2016, the neuroscience service line initiated monthly safety data reviews. SOS (Safety on Site) is our organization's incident or occurrence reporting system. The Neuroscience SOS Committee has representation from hospital nursing, pharmacy, performance improvement, service line administration, and specialty providers. The majority of SOS reports are about occurrences relating to falls, skin integrity issues, lab specimen collection, and medication/intravenous fluid errors. Targeted performance improvement initiatives have been implemented and have shown sustainable results. Skin integrity is a current area of continuing focus for performance improvement on neuroscience floors and the entire facility. Another example is the improvement work these teams have undertaken to recognize changes in neurological status more timely and reliably, especially as they relate to the early postoperative period.

34.3 Neuroscience Mortality Review Program

In 2017, monthly mortality reviews were initiated with the leaders of neurosurgery, neurology, and neurocritical care. The reviews are conducted by the lead physician for hospital quality and are attended by representatives from the Performance Improvement Department. In 2020, palliative medicine leadership was added to the team. Each department has a designated quality representative who reviews relevant cases. The multidisciplinary input is discussed at these monthly meetings and action plans are developed as appropriate. The process has highlighted opportunities in both clinical care, documentation, and coding. The neuroscience risk-adjusted mortality index (RAMI) has consistently been below an O:E (observed to expected) of 1.0. Despite the challenges of the COVID-19 pandemic in 2020, we were able to achieve a Vizient RAMI of 0.88 for the Ochsner Neuroscience service line.

Our most recent quality initiative was the development of a transfer evaluation unit (TEU) (Fig. 34.5). Rather than representing a physical location, the TEU concept embodies a care pathway whose goals are to maximize alignment between patient and family wishes and clinical prognosis in patients with severe neurological injuries (see also Chap. 28). The pathway is designed to improve transfer efficiency and unnecessary exposure of patients to the discomfort of nonbeneficial acute hospital care. A potential secondary benefit is to avoid the inclusion of patients in the numerator of RAMI whose care would be nonbeneficial. The population this clinical pathway addresses are patients with large intracerebral hemorrhages and poor Glasgow Coma Scale on presentation. Our experience to date has been that approximately three patients a month are evaluated for this clinical care pathway, with beneficial effects on patient experience and hospital mortality.

In summary, we have seen the benefits of a regular rhythm of review of performance data within the structure of a Comprehensive Stroke Center. Over time, with multiple iterations of review and improvement cycles, reliable improvement outcomes follow. Data transparencies at both the individual provider level and the program level are key components of success.

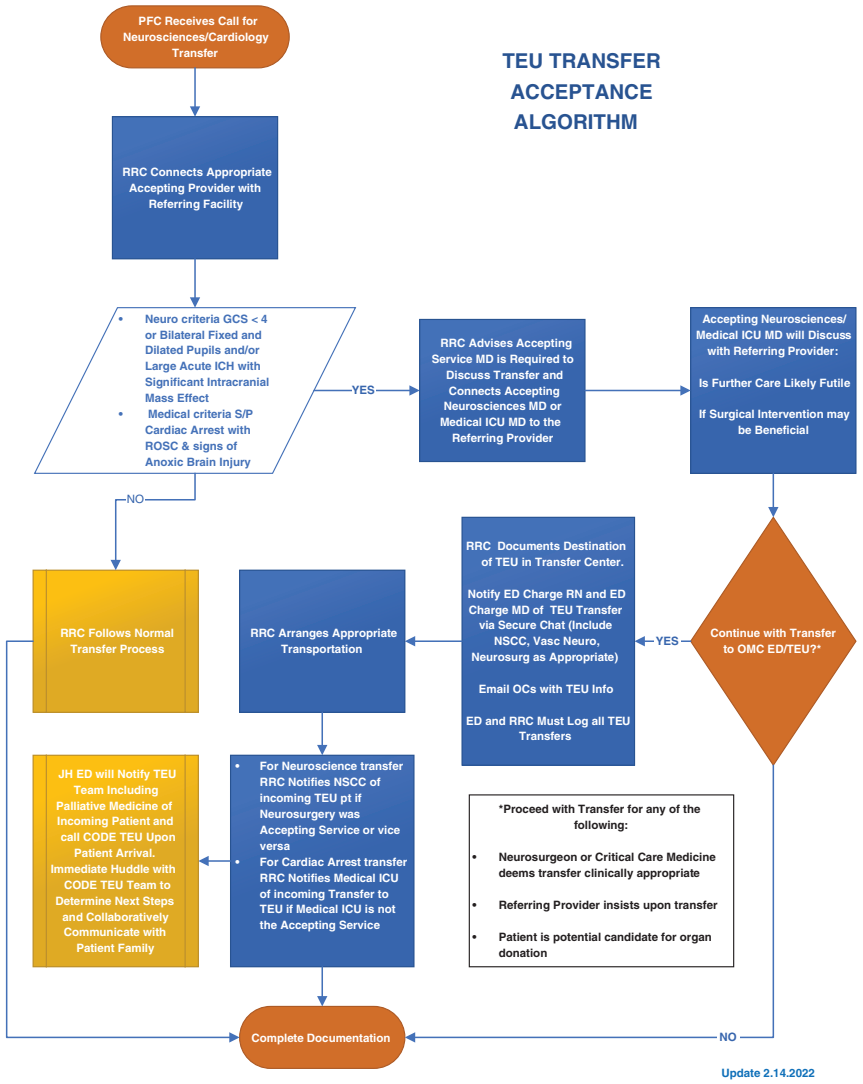

Fig. 34.5 Ochsner transfer evaluation unit (TEU) care pathway. ER emergency room, LOPA Louisiana Organ Procurement Agency, NSCC Neuroscience Critical Care, ICH intracranial hemorrhage. (© Ochsner Health)

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