

Stroke Education for APNs: How can they improve the Care Process?

Erica Edfort^{1*} and Varsha Singh²

¹DNP, NVRN-BC Retired, RN-BC Retired, FASRN, FAHA, USA

²DNP, APN, CT-CP, NEA-BC, FAHA, FAANP, USA

Citation: Edfort E, Singh V. Stroke Education for APNs: How can they improve the Care Process? *J Integrated Health* 2024;3(1):170-172. DOI: doi.org/10.51219/JIH/erica-edfort/29

Received: 04 February, 2024; **Accepted:** 21 February, 2024; **Published:** 23 February, 2024

***Corresponding author:** Erica Edfort, DNP, NVRN-BC Retired, RN-BC Retired, FASRN, FAHA, USA, E-mail: telenurss1@gmail.com

Copyright: © 2024 Edfort E, et al., This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

1. Introduction

The 1st state-wide study investigating the effectiveness of the processes & guidelines for the care of an acute stroke patient in New Jersey hospitals (Primary, Comprehensive, or no Stroke Center designation) was conducted in 2010¹. A convenience sample of stroke healthcare professionals consisting of members of the New Jersey Stroke Coordinators Consortium (NJSCC) was utilized. This study investigated the stroke health care professional's perception of care along with their satisfaction with their facilities' guideline compliance. The results of this study recommended implementing processes to address the deficiencies in stroke guideline compliance. Some items that were identified as affecting guideline compliance were: lack of technological or administrative support, lack of knowledge of management of stroke issues or lack of knowledge of stroke healthcare professional's role.

A follow-up state-wide stroke study was conducted implementing recommendations for improving stroke core measure compliance (Singh, 2017). This study identified the necessity of educating Advanced Practice Nurses (APNs) in stroke core measure management. The Stroke Clinical ORDER Pathway Education session (SCOPE) was developed as an education tool for Advanced Practice Nurses as an educational tool identifying the importance of providing specialized stroke care and the benefits of maintaining core measure compliance during the patient's hospital stay. The educational initiative and goals were shared with NJ Stroke Advisory Panel & NJ Stroke Coordinator's consortium.

Attending a stroke specific education program, attendees reported increasing their knowledge of managing stroke patients as well as increasing their proficiency level in care processes.

Providing an education program focusing on the core measures provides an advantage to our patients as well as keeping the health care facility in compliance with stroke management protocols.

Caring for acute stroke patients can be a truly difficult endeavor for nurses in all aspects of care at every level of practice. Guidelines established by the American Stroke Association (ASA) and the Brain Attack Coalition (BAC) for care of the patient with acute stroke exemplify the exceptional care that can be provided by healthcare professionals around the country. Stroke centers undergo rigorous evaluations to gain the disease-specific care designation either as a primary or comprehensive stroke center. Improvements in outcomes are evident in greater percentages when hospital staff accepts and adheres to guidelines, which provides improvement of care for the acute stroke patient. Because of the heightened importance of stroke care in the US, CDC included sixteen objectives in Healthy People 2010 that were dedicated to stroke care². But what must be done to assure the staff understand the protocols for care and carry them out appropriately? This review article is a compilation of two studies completed in New Jersey, USA, to address stroke guideline compliance and to identify a method to improve the care of stroke patients.

In the 1st study¹, all hospitals within the state were invited to participate (those designated as Primary and Comprehensive Stroke Centers as well as those with no designation but following protocols for care. A convenience sample was utilized- members of the New Jersey Stroke Coordinators Consortium (NJSCC). NJSCC is a professional nursing organization representing stroke healthcare professionals from hospitals, rehabilitation facilities, and the American Heart Association/ASA within the state of New Jersey. The NJSCC members consisted of nurses

(stroke coordinators) and other healthcare professionals such as nurse educators; performance improvement coordinators; advance practice nurses (APNs); and managers, directors, and/or administrators of stroke programs. Respondents provided information on level of education, average time in position, duties, issues impeding job performance, information related to hospital practices, and stroke core measure compliance within 30 days before the survey. Study results allow designated and non-designated centers to address issues identified and change or revise protocols accordingly¹. This study delved into the specific processes that were followed throughout the state of New Jersey and investigated perceptions of stroke care by staff members caring for stroke patients.

Frangione-Edfort¹ identified multiple issues as affecting outcomes of stroke care. Compliance with stroke care guidelines revealed hospitals, both certified and non-certified as stroke

centers, followed appropriate and recommended care for acute stroke only 87% of the time (**Table 1 and Table 2**). The issue identified as a reason for the missed measures at some hospitals was related to lack of documentation for care provided or reasons for lack of provision of care. Lack of documentation reflects missed core measures. This stroke study recommended that hospitals implement processes to address the deficiencies in stroke guideline compliance. It was identified that process changes may be necessary to improve compliance on these core measures to improve stroke outcomes of care. For stroke patients, APNs may be the initial contact for stroke care. APNs can expedite as well as determine the accurate course of treatment. APNs are identified as front-line staff in most acute care hospitals with prescribing capabilities. APNs may function as an expert and an educator for a new hire or another team member to ensure the same quality of care.

Table 1: Guideline compliance: First 10 minutes of acute stroke care.

	Certified centers (n = 32)		Non certified centers (n = 2)	
	Yes	No	Yes	No
Assess ABCs (airway, breathing, circulation) and vital signs	100.0%	0.0%	100.0%	0.0%
Provide oxygen if hypoxemic	100.0%	0.0%	100.0%	0.0%
Obtain intravenous access and blood specimens	81.3%	18.8%	100.0%	0.0%
Check glucose, treat if indicated	87.5%	12.5%	100.0%	0.0%
Perform neurologic screening assessment	100.0%	0.0%	100.0%	0.0%
Activate stroke team	100.0%	0.0%	50.0%	50.0%
Order emergent computed tomography scan of brain	93.8%	6.3%	100.0%	0.0%
Obtain 12-lead electrocardiogram	62.8%	37.5%	100.0%	0.0%

*Significant at 0.05 level. **Significant at 0.01 level.

Table 2: Stroke Performance measure guideline compliance 2010.

Stroke performance measure	QuadraMed/Nuance Benchmark 1Q2010	Certified Centers (n = 32)	Noncertified Centers (n = 2)	Pearson Correlation	P Value
Deep vein thrombosis prophylaxis	79%	87.64%	95.0%	95.0%	0.000
Discharge on Antithrombotic	96%	93.00%	83.5%	83.5%	0.005
Patients with atrial fibrillation receiving anticoagulation	91%	92.00%	92.00%	50%	0.000
Antithrombotic before the end of day 2	91%	91.71%	91.71%	100%	0.000
Lipid panel by the end of day 2 and stain if low-density lipoprotein is greater than 100	88%	86.36%	86.36%	75%	0.000
Screen for dysphagia before oral intake	a	78.79%	78.79%	75%	0.005
Stroke prevention education provided	72%	89.36%	89.36%	100%	0.000
A plan for rehabilitation considered	92%	91.71%	91.71%	100%	0.000

*Not abstracted for the joint commission data analysis.

*Significant at 0.05 level, **Significant at 0.01 level.

For stroke patients, APNs may be the initial contact for stroke care. Having a provider on the front line in the Emergency Rooms or as hospital staff, enables the stroke core measures to be instituted at the first sign of stroke or on arrival to the emergency dept. In the 2nd study, Singh (2018) looked at the outcomes of the initial study in the state of New Jersey, highlighting the need for educating APNs, emphasizing the importance of utilizing stroke clinical order sets to improve quality of care for stroke patients and to clearly define the role of APNs. Singh noted in a 2017 survey conducted by the NJSCC, only 17% of the hospitals utilized Licensed Independent Practitioners (LIP) such as Advanced Practice Nurses to determine the thrombolytic treatment for stroke patients³. Singh identified APNs as front-line staff in most acute care hospitals and have prescribing capabilities which enabled care processes to be initiated in a timelier manner.

Singh's study highlighted the need for educating APNs, emphasizing the importance of utilizing stroke clinical order sets to improve quality of care for stroke patients and to clearly define the role of APNs. This study utilized the American Heart Association national guidelines for stroke management and The Joint Commission criteria for the stroke core measures. Combing these strategies created an evidence-based stroke education initiative for APNs. In this study, the aim of the educational process, SCOPE for APNs, was to improve knowledge regarding emergent care for stroke patients thus decreasing brain cell death and resultant disability or death. The significance of this educational project to both nursing and healthcare organizations was to empower the APNs within the healthcare system to initiate an evidence-based pathway for stroke management, and to become participants and leaders on stroke teams.

With increased knowledge of the evidence-based care of stroke patients and understanding of the urgency of specific stroke care management, APNs would be able to become more proficient in their clinical practice. The increase in confidence supported by a clearly explained clinical order pathway enables an APN to function in a rapid manner and assist the goal of the healthcare organization to meet all the compliance for the Stroke. %).

Results of the SCOPE Educational Initiative revealed over 95% of participants strongly agreed that the program

increased their current knowledge and 95% would recommend it to a colleague (**Table 3**). Several who worked in stroke and emergency care were enthusiastic about using their new knowledge in the clinical setting and sharing this newly identified information with colleagues. Several participants also verbalized that this program had helped them recognize their potential to excel in stroke care. Several participating APNs recognized the opportunities to develop their role as a critical thinker and leader in stroke care. It was also mentioned that the SCOPE for APNs would be an excellent orientation guide or a resource on the stroke unit for new APNs and RNs.

Table 3: Overall educational evaluation summary: Stroke clinical order pathways education (SCOPE) for APN.

	4	3	2	1
1. As a result of my participation in this activity, I am better able to:				
1. Identify and describe the current stroke core measures and guidelines.	91.9%	8.1%	0%	0%
2. Identify and describe current APN role in choosing appropriate pharmacological agent and other orders pertinent to stroke care.	90.3%	10.7%	0%	0%
3. Describe stroke and stroke clinical order pathways including pharmacological choices that can enhance the APN role as leader and critical thinker.	91%	9%	0%	0%
4. Identify and describe the improvement in quality of care and patient outcomes tied to APN practice by using SCOPE.	90.5%	9.5%	0%	0%
2. The teaching methods used were appropriate to the objectives.	98.1%	1.9%	0%	0%
3. Speaker evaluation the following speakers demonstrated experimental knowledge of the topic. Varsha Singh MSN, APN	100%	0%	0%	0%
4. The individual objectives/content topics were cohesive with one another.	98.1%	1.9%	0%	0%
5. The content provided a fair and balanced coverage of the topic.	91.1%	8.1%	0%	0%
6. Speakers fully disclosed any conflict of interest and discussion of off-label usage of medication and/or medical devices at beginning of, or during the presentation.	99.05%	0.95%	0%	0%
7. The content was free of commercial bias.	100%	0%	0%	0%
8. I would recommend this activity to my colleagues	95.2%	2.7% 2.1%	0%	0%
9. This activity enhances my current knowledge base.	95.2%	2.7% 2.1%	0%	0%

4 = strongly agree; 3 = somewhat agree; 2 = somewhat disagree; 1 = strongly disagree

References

1. Frangione-Edfort E. A Guideline for acute stroke: Evaluation of new jersey’s practices. *J Neurosci Nurs*, 2014;46: E25-E32.
2. <https://www.cdc.gov/stroke/facts.htm>
3. Chukwuneka F, Sanfillippo G, Dwyer J, et al. Analysis of acute stroke care in New Jersey. New Jersey stroke coordinator’s consortium, New Jersey, 2017.