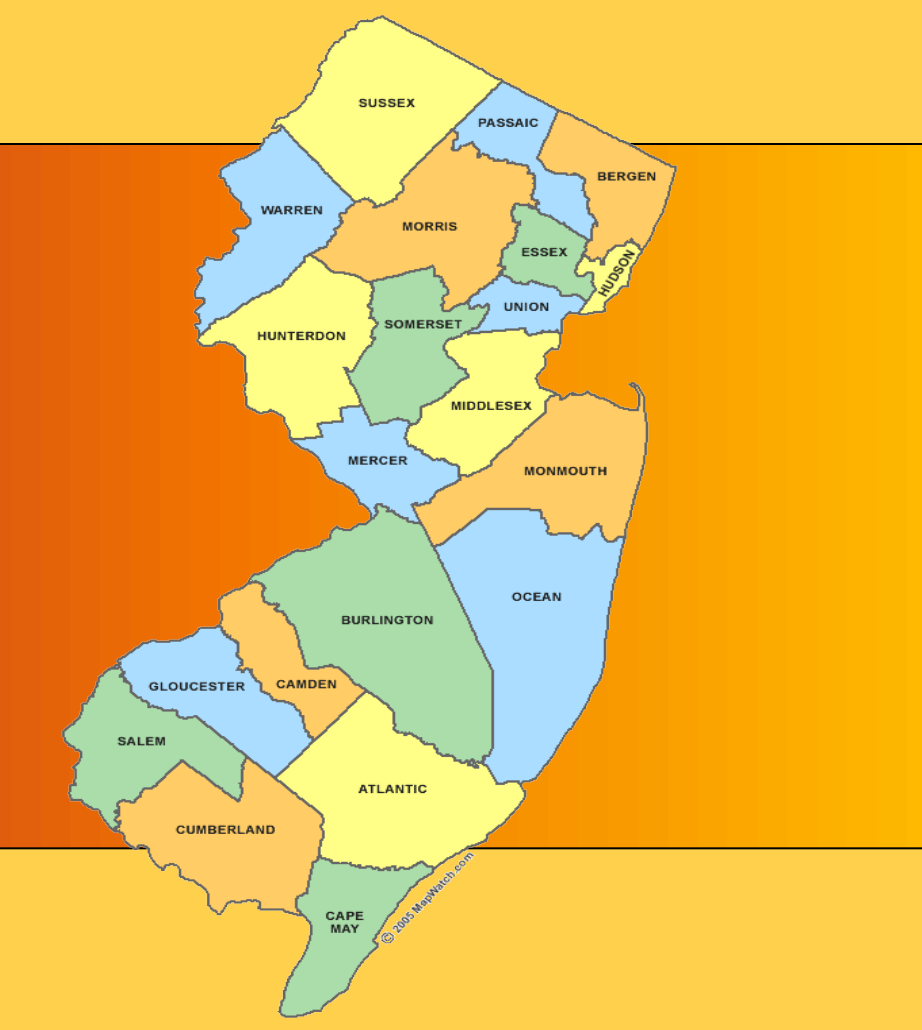


Guidelines for Acute Stroke: An Evaluation of New Jersey's Current Practices

Erica Frangione, DNP, RN-BC, Bayonne Medical Center, Stroke Program Coordinator



ABSTRACT & BACKGROUND

Lack of adherence to the established protocols for care of the acute stroke patient may significantly affect the outcomes of care. Literature on the processes and guidelines for care recommend specific time sensitive measures to be followed. Evaluation and diagnosis according to guidelines will yield and direct the stroke healthcare professional to the appropriate treatment options and level of care required for the acute stroke patient.

There is a lack of literature on the statewide guideline compliance for acute stroke

- ❖ Goldstein, Hey, and Laney (1998) - North Carolina, the "Stroke Belt" region of the United States. An investigation on the availability of stroke prevention and treatment services throughout the state to determine how widely t-PA was used.
- ❖ Camilo and Goldstein (2003) - investigated the changes in stroke treatment and prevention in North Carolina stroke services (follow-up to initial 1998 study)

PURPOSE & PROJECT DESCRIPTION

This study was conducted to determine the effectiveness of processes and guidelines (evaluation, diagnosis & treatment) for the acute stroke patient receiving care in New Jersey acute care hospitals

- ❖ 35 Joint Commission designated stroke center
- ❖ 41 New Jersey state licensed stroke centers
- ❖ 22 dual designation TJC/NJDHSS
- ❖ 12 Comprehensive Stroke Centers
- ❖ 13 hospitals with no stroke center designation

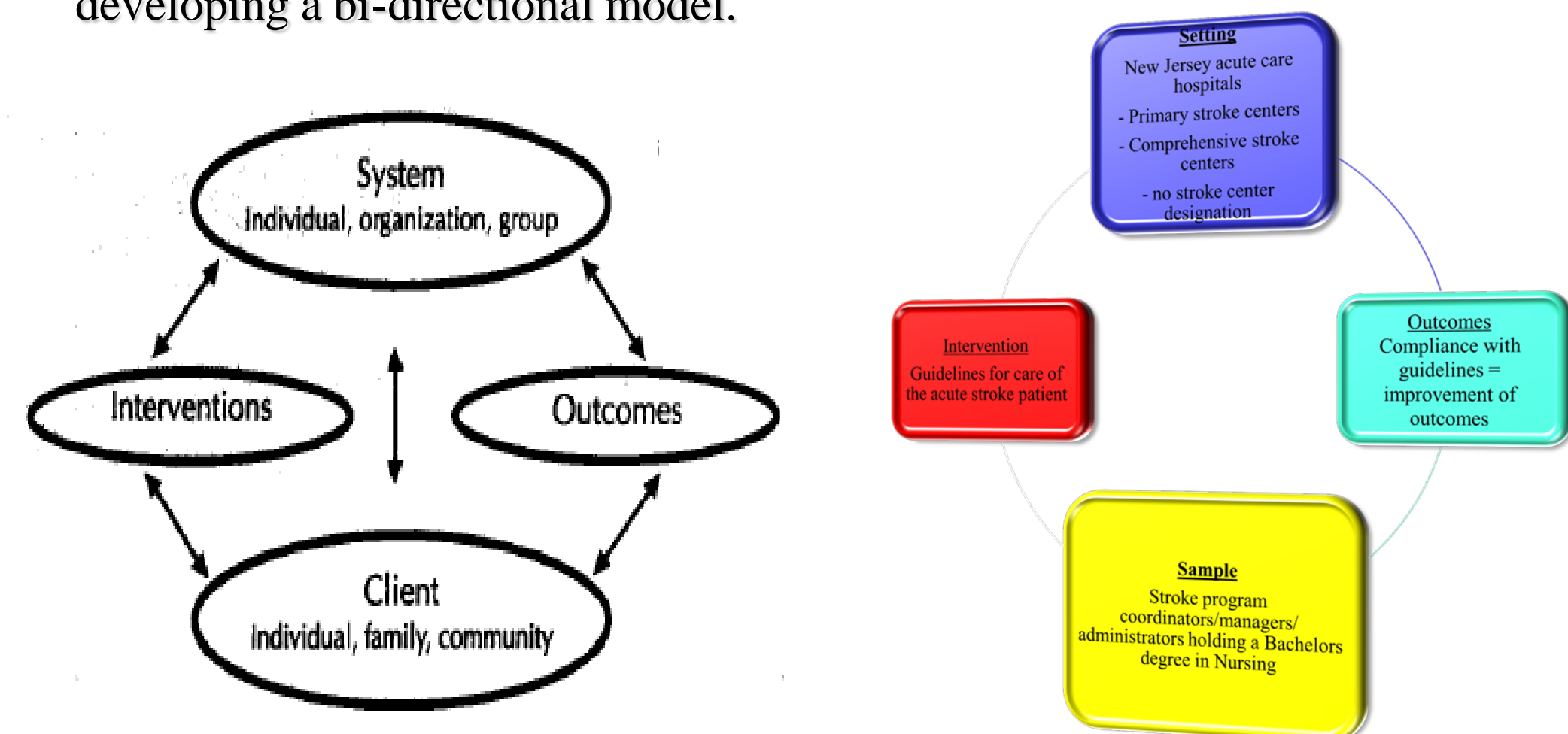
This is a descriptive project conducted to:

- ❖ Identify designation as a Stroke Center
- ❖ Evaluating provider practices = compliance with acute stroke guidelines for care
- ❖ Determining stroke health care professionals perceptions of care and satisfaction with current practices
- ❖ Assess the need for improvement with guideline compliance

THEORETICAL FRAMEWORK

Quality Health Outcomes Model (QHOM)- Avedis Donabedian (1968)

- ❖ Introduced the concepts of structure (having the right things), process (doing the right things) and outcome (having the right things happen) for the evaluation of the quality of health care
- ❖ Mitchell (1998) elaborated on Donabedian's earlier model adding the client developing a bi-directional model.



Mitchell et al. (1998)

Frangione's Adopted QHOM

NEED FOR IMPROVEMENT WITH GUIDELINE USE

Lack of documentation affecting compliance: APN's and PA's play a major part in increasing guideline compliance

RESULTS

Respondent demographics (n=34)

- ❖ 59% are Masters prepared, and 22% are Advance Practice Nurses
- ❖ Stroke Coordinators (70%), Stroke Program Administrators (21%), Stroke Program Managers (9%)
- ❖ The average length of time in their positions is 3.3 years
- ❖ Twenty respondents have certifications in their field (i.e. Medical/Surgical, CNRN, CCRN, CEN, CWOON, CRNI, GCNS-BC, NEA-BC, Nursing Administration, Assisted Living Administrator Health Educator, and AACN Nurse Executive)
- ❖ 15% oversee stroke care at more than one facility

Hospital Demographics

- ❖ 49% community setting, 43% urban setting and 17% suburban setting.
- ❖ 65% Northern New Jersey, 21% Central and 14% Southern New Jersey.
- ❖ 21% receive grant funding.
- ❖ Stroke Center designation
 - ✓ 32 Primary Stroke Centers; 6 Comprehensive Stroke Centers
 - ✓ 2 non-certified centers

Brain imaging studies = recommended timeframe is 45 minutes from order entry to results reported

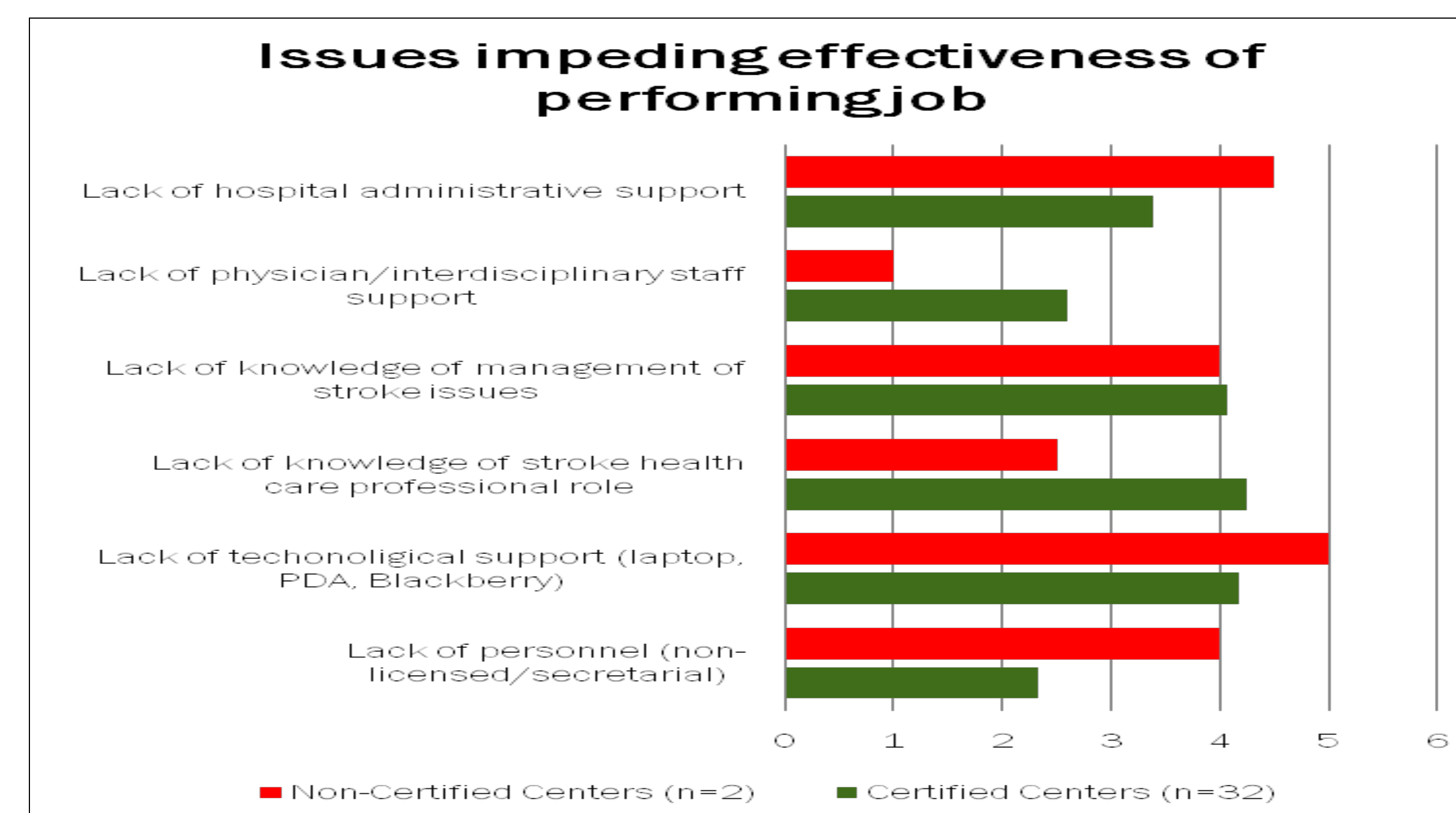
- ❖ Certified centers = 96.4%; non-certified centers = 37.5%

Hyperglycemia Management = initiating protocols between glucose levels 140-185 mg/dL

- ❖ Certified centers = 73 %; non-certified centers = 50 %

If the patient is not candidate for t-PA, administering ASA and initiating organized protocol for stroke care within 60 minutes of arrival, if no sign of hemorrhage on CT scan

- ❖ Certified centers = 93%; non-certified centers = 87%



- Stroke centers: Lack of knowledge of stroke healthcare professional role
 - ❖ No Stroke Health care professional job description
 - Non-certified centers: Lack of technological support
 - ❖ providing care at more than 1 facility and lack of technological support
- correlation: $r(32) = .466, p=.05$

STROKE PERFORMANCE MEASURE COMPLIANCE	QuadraMed Benchmark 1q2010	Certified Centers (n=32)	Non-certified Centers (n=2)
DVT prophylaxis by end day 2	79%	87.64%	95.0%
Discharge on Antithrombotic	96%	93.00%	83.5%
Patients with atrial fibrillation receiving anticoagulation	91%	92.00%	50%
Antithrombotic by the end of day 2	91%	91.71%	100%
Lipid panel by the end of day 2 AND statin if LDL> 100	88%	86.36%	75%
Screen for dysphagia prior to PO intake	*	78.79%	75%
Stroke prevention education provided	72%	89.36%	100%
A plan for rehabilitation considered	92%	91.71%	100%

MATERIALS AND METHODS

Target Population:

- ❖ New Jersey Stroke Coordinator's Consortium (NJSSC)
- ❖ Stroke health care professionals from non-certified centers
 - ✓ New Jersey acute care hospitals (general acute care, medical/surgical) was obtained from the New Jersey Hospital Association (N=79)
 - ✓ Cross-referenced TJC and NJDHSS listing of New Jersey Primary and Comprehensive Stroke Centers
 - ✓ Calls were made to non-certified hospitals to determine if they followed a specific protocol for the care of the acute stroke patient for inclusion in this project.
 - ✓ 3 followed no specific protocol for the care of the acute stroke patient and were excluded

Data Collection:

- ❖ Survey: Electronic survey- evaluated for face and content validity, to strengthen the survey, determine the appropriateness of the questions & timeframe for completion (20 minutes)
 - ✓ Feedback from the content experts was used to improve the questionnaire items
 - o Respondents & hospital demographics
 - o Information about stroke care at the facility
 - o Compliance with guidelines for assessment, diagnosis and treatment of acute stroke
 - o Stroke Performance Measures
 - o Satisfaction with the use of AHA/ASA guidelines
- ❖ Electronic introduction letters (N=79), non-responders = 3 follow-up e-mails, and a follow-up telephone call
 - ✓ Twenty-four e-mail were undeliverable or the invitee did not respond
 - ✓ 55 surveys received = response rate of 70%
 - ✓ Inclusion criteria eliminated 21 surveys: Hospital = following process for stroke care; Respondent = BSN minimum educational requirement; title of Stroke Coordinator, Stroke Manager, Stroke Administrator
 - ✓ Thirty-four surveys were appraised for this study

SATISFACTION WITH GUIDELINE USE

- ❖ Satisfaction with patient assessment and stabilization within 10 minutes of arrival: 91.7% vs. 100% (certified vs. non-certified). All hospitals claim to follow this guideline; however, certified centers are not 100% satisfied with the process that is currently being performed.
- ❖ Satisfaction with neurologic assessment by a stroke team member or designee within 25 minutes of arrival for all facilities = 100%
- ❖ Satisfaction with brain imaging and results evaluation within 45 minutes of arrival = 100%
- ❖ Satisfaction with t-PA within 60 minutes of arrival: 33% vs. 25% (certified vs. non-certified)
- ❖ Satisfaction with non t-PA candidates receiving aspirin and an organized stroke pathway within 60 minutes of arrival: 75% vs. 50% (certified vs. non-certified)
- ❖ Satisfaction with vital signs assessment post t-PA: 91.7% vs. 100% (certified vs. non-certified)
- ❖ Satisfaction with the AHA/ASA guidelines being followed: 91.7% vs. 50% (certified vs. non-certified).

LIMITATIONS

- ❖ The lack of available literature on prior practices for NJ stroke care prohibits comparison to current practices.
- ❖ Instrument pilot testing did not reveal areas that required modification to establish reliability and validity of the survey.
- ❖ This survey investigated the compliance with guidelines for care at certified and non-certified centers. Non-certified centers (n=2) may not reflect the true findings of non-certified centers through the state. Collecting data on such a small number of facilities does not represent true practices, processes, or outcomes.

IRB APPROVAL & ACKNOWLEDGEMENTS

- ❖ IRB approval was obtained from UMDNJ School of Nursing, Newark Campus
- ❖ I wish to thank the Stroke Health Care Professionals and members of the New Jersey Stroke Coordinator's Consortium for their participation in this study.

