Improving Stroke Patient and Family Education Through Nursing Research
Heather Turner, RN, BSN, CNRN
Stroke Program Coordinator, UVA
September, 18th, 2012

Background:

- Patient and family education regarding the signs and symptoms (s/s) of stroke and the need to call 911 when symptoms occur is a key component of stroke education. This knowledge is crucial for the acute treatment of recurrent stroke.
- Current practice at UVA is to provide each patient/family a Stroke Education Packet once the diagnosis of stroke is made. The nurse reviews this packet with the patient/family, including the s/s of stroke and the need to call 911.
Question

Does the placement of a stroke education poster at the foot of the patient’s bed with the s/s of stroke and the need to call 911 improve patient and family knowledge of this information?

Let’s Do a Study!

- 6 Central Nursing Research group:
  - April Burns, RN, ADN
  - Cloe Morris, RN, ADN
  - Beth Patterson, RN, ADN
  - Christina Salidis, RN, ADN
  - Heather Turner, RN, ADN, BSN

- Study exempted by the Institutional Review Board
Hypothesis:

- Patient and family knowledge of the symptoms (s/s) of stroke and the need to call 911 will be significantly better at time of discharge if the patient was in a room with a stroke education poster at the foot of the bed.
- Patient and family knowledge of the symptoms of stroke and the need to call 911 will be significantly better at 6-8 weeks after discharge if the patient was in a room with a stroke education poster at the foot of the bed.
- The more hours a patient and or family member spent in the room with the poster, the better their knowledge of symptoms of stroke and the need to call 911.

Sample

- Sample Size: 83 patients and family members
  - 45 patients, 38 family members
  - 33 with posters in the room
  - 49 without posters in room
- Inclusion criteria:
  - Patient was diagnosed with an ischemic stroke or TIA.
  - Patient/family received standard stroke education.
  - Patient - must have been in the room for at least 20 hours.
  - Family member - must have been in the room for more than six hours.
- Exclusion criteria:
  - unable to read.
  - cognitively impaired or aphasic.
Methods

- Stroke education posters, including the s/s of stroke and the need to call 911 were placed at the foot of the bed in half of the rooms on the Stroke Unit.
- Patients and family received standard stroke education packet.
- At discharge, patients and families were given a stroke knowledge survey regarding the signs and symptoms of stroke and the need to call 911. (Poster covered at that time.)
- At 6-8 weeks after discharge, patients and families were called and given the same survey over the phone.

Stroke Knowledge Survey

Hi,

We are doing a study to evaluate the effectiveness of the stroke teaching we are doing here in the UVA Stroke Unit. Please take your time in filling out this short questionnaire.

Are you the:
- o patient (in room for at least 20 hours) How many days were you in your room? _____
- OR o family member (in the room more than six hours) About how many hours were you in the room? _____

We would like to call you one time in the future to ask you these two questions again. If it is okay for us to call you, please tell us your first name. Please give us the best phone number at which to reach you.

Questions:

1.) Signs and symptoms of stroke (check all that apply):
- o arms swelling
- o both feet hurting
- o confusion
- o difficulty breathing
- o sudden/blurry vision
- o funny taste in your mouth
- o one side of your face drooping
- o slurred speech
- o sudden/struggling walking
- o bleeding/bruising easily
- o chest pain
- o diarrhea
- o dizziness/room spinning
- o fever
- o difficulty using one arm
- o rash
- o sudden severe headache
- o vomiting

2.) What would you do if you or someone you know experiences any signs or symptoms of stroke (circle one):
- a) Wait and see if the symptoms go away
- b) Call 911 or go to the nearest hospital
- c) Make an appointment with your primary care doctor
- d) Drink a glass of water and lie down to rest
Data Elements

- Poster in room or no poster in room
- Patient or family member
- Amount of time spent in room
- Score on the s/s question at time of discharge and at 6-8 weeks after discharge (scores ranged from -3 to 8)
- Correct or incorrect answer on the need to call 911 question at time of discharge and at 6-8 weeks after discharge

Results

- Patients and families with stroke information posters in the room had a significantly better mean score on the stroke knowledge survey than patients and families without posters in the room. (p-value < 0.001)
- Even after adjusting for other factors (patient or family, hours in room) the difference in scores at discharge is significant.
Results

- All of the patients and family members who had posters in the room knew to call 911 with stroke symptoms. 4/49 patients and family members without posters missed the 911 question (not statistically significant).
- There was still a difference between survey scores at 6-8 weeks, but it was not statistically significant.
- There was no correlation between survey score and amount of time spent in the room.

Similar Findings

Stroke

The Impact of the Extended Parallel Process Model on Stroke Awareness: Pilot Results From a Novel Study
Stephen M. Davis, Diana Martinelli, Brian Braxton, Kyle Kutrovac and Todd Crocco

Stroke 2009, 40:3857-3863: originally published online September 24, 2009
doi: 10.1161/STROKEAHA.109.559427
Stroke is published by the American Heart Association. 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2009 American Heart Association. All rights reserved. Print ISSN 0039-2499. Online ISSN: 1524-8579
Similar Findings

- Study comparing two different stroke education posters
  - Standard American Stroke Association education poster
  - Revised Poster using the extended parallel process model
- Posters included signs and symptoms of stroke and the need to call 911
- Both poster groups did significantly better at a stroke knowledge survey after exposure to a stroke education poster
- 6 weeks later, there was still an increase in stroke knowledge

Implications for Practice

- Posting of the signs and symptoms of stroke and the need to call 911 at the foot of the patient’s bed is key in increasing patient and family knowledge at the time of discharge.
- This could be extrapolated to mean that the posting of important patient education information within constant sight of the patient and family, at least temporarily, increases the patient and family knowledge of that information.
- Stroke information posters were placed at the foot of each bed in the Stroke Unit.