# Stroke Nurse Navigator: Transitions In Care

Darren Larsen, RN, BSN, CNRN, SCRN
Providence Brain and Spine Institute
Providence St. Vincent Medical Center
October 16, 2020

# No Disclosures

# Objectives

- Understand the role of the stroke nurse navigator within the interdisciplinary team.
- Recognize key elements of stroke transitional care.
- Recognize barriers to successful stroke follow up care.

# History of Patient Navigation

- American Cancer Society National Hearings on Cancer in the Poor conducted in 1989.
- American Cancer Society issued a report that highlighted disparities in cancer care for the poor with substantial barriers in seeking and obtaining cancer care.
- Concept began in cancer with the first patient navigation program in 1990 by Dr. Harold Freeman in Harlem, New York.
- Program initially designed to save lives by eliminating barriers to timely care from initial findings through diagnosis and treatment.
- Scope of navigation subsequently expanded across the entire healthcare continuum from outreach and prevention through survival and mortality.
- Harlem Breast Cancer Experience showed better survival rates post navigation implementation.

[1] Freeman & Rodriguez

# Varying Models of Navigation

- Models for patient navigation vary across disciplines and settings.
- Hospital based versus outpatient.
- Private patient navigators and advocates.
- Purpose is varied, i.e. better healthcare utilization, decision making, reduced readmissions, improve functional outcomes.
- Stroke programs focused on transitional care navigation.

# What Is Transitional Care

- Transitional Care is defined as a set of actions designed to ensure the coordination and continuity of health care as patients transfer between different locations or different levels of care within the same location.

American Geriatrics Society, 2003

# Providence St. Vincent Stroke Transitional Care

- The nurse navigator (Stroke Transitional Care Navigator) role began at St. Vincent in January 2017.
- Role had been desired for several years. Loosely modeled after other disease specific navigator roles such as heart failure and cancer with improved satisfaction and outcomes. [2,3]
- Purpose is to bridge the gap between acute care and the outpatient setting by acting as a resource for newly discharged patients, impact the patient experience and reduce recurrent stroke and readmission.

# Stroke Transitional Care Process

Admission

Navigator PreDischarge Visit and Education

(Day prior or day of DC)

Discharge

Navigator Follow Up Call

(Within 7 days)

PCP Follow Up

Stroke Clinic Follow Up

(4-8 weeks)

# Stroke Nurse Navigator Role

- Point of contact prior to discharge to coordinate follow up stroke care, educate on etiology, treatment and prevention.
- Perform early post discharge screening (within 7 days) for symptom recurrence, medication complications/compliance, and follow up on needed diagnostic testing and imaging.
- Complete 90 day phone follow up for treatment patients and select non treatment patients.

# Pre-Discharge Contact and Education

OUR MISSION
As people of Providence,
we reveal God's love for all,
especially the poor and vulnerable,
through our compassionate service.

OUR CORE VALUES
Respect, Compassion, Justice,
Excellence, Stewardship

Providence Brain and Spine Institute
9135 SW Barnes Road, Suite 363
Portland, OR 97225
503-216-1055

Providence.org/brain

PROVIDENCE
Brain and
Spine Institute

PROVIDENCE
Brain and
Spine Institute

## Nurse Navigator:

Guiding care for patients with strokes

We understand that a stroke diagnosis for you or your loved one can be scary and overwhelming. Providence is here to help you every step of the way.

### You are not alone

As part of your care, Providence Brain and Spine Institute provides you with a nurse navigator to help guide you when leaving the hospital and with your follow-up care. This service is provided at no added cost to you. Your navigator is a specially trained, caring expert who can help when you have questions about your diagnosis, test results, treatment plan, emotional support or recovery.

Your nurse navigator will help you receive the very best care, using all available resources, and will ensure you have the support and information you need.

### Your nurse navigator will:

- Provide support and can be your point of contact to connect you and your stroke providers
- Help provide more information about your diagnosis, test results, and medications, as well as answer other questions
- Provide education and written material about strokes, including treatment and prevention
- Help you prepare questions for your physician before appointments and treatments
- Work together with your health care team to make sure you have a coordinated care plan
- Help you understand information you receive at key doctor appointments
- Identify additional help, such as support groups, financial services or other community assistance
- Provide long-term support for you and your family

For more information about our nurse navigator, call 503-216-8125.

- Reinforce role of navigator.
- Contact information.
- Discuss treatment, etiology.

# Pre-Discharge Contact and Education

**Stroke Discharge Instructions**

I have been instructed on the following guidelines:

**I have been diagnosed with a {Stroke Diagnosis:30420394}**

**Call 911 immediately if you experience the sudden onset of any of these Stroke warning signs. Recognize and Respond to STROKE:**

- Sudden severe headache with no known cause
- **B** is for BALANCE - Does the person have a sudden loss of balance?
- **E** is for EYES - Has the person suddenly lost their vision, have double vision or blurry vision?
- **F** is for FACE - Does the person's face suddenly look uneven?
- **A** is for ARM - Is one arm suddenly weak or hanging down?
- **S** is for SPEECH - Is the person suddenly having trouble speaking, slurred speech, or a hard time understanding?
- **T** is for TIME - TIME to call 9-1-1 now!

**Stroke Risk Factors:**

☐ High blood pressure
☐ Atrial fibrillation (irregular heart beat)
☐ Smoking
☐ Diabetes (A1C >= to 6.5)
☐ High cholesterol
☐ Being overweight (having a body mass index or BMI of 25 to 29) or obese (having a BMI of 30 or higher). Ask your nurse what your BMI is.
☐ Physical inactivity
☐ Excessive alcohol consumption (more than 2 alcoholic drinks per day)
☐ Age >55
☐ Family History
☐ Previous Stroke or TIA
☐ Use of birth control pills or hormone therapies that include estrogen
☐ Drug abuse
☐ Carotid or other artery disease/narrowing
☐ Migraine
☐ Unhealthy diet
☐ Chronic Kidney Disease
☐ Heart disease or Patent Foramen Ovale (PFO)
☐ Sleep Apnea
☐ Other:

**80% of strokes are preventable**

- I should know my blood pressure numbers and treat if necessary
- I should know my cholesterol numbers and treat if necessary
- If I have diabetes, I should know my A1C and control my diabetes
- I should get exercise every day
- I should work to keep, or get within a normal weight range

**Smoking: For assistance quitting:**
https://www.quitnow.net/programLookUp/EnrollNow/ or call 1-866-QUIT-4-LIFE (1-866-784-8454). Para inscribirse en español, llame al 1-866-784-8454 y oprima 2.

**Diet:**
Choose a healthy diet based on your doctor's recommendations.

**Medications:**

- I should always take medications as directed
- I should never stop a medication without asking my doctor or practitioner first
- I should keep a current medication list with me at all times

**Follow up appointments:**
It is important your follow up with your primary care provider after you are discharged from the hospital to talk about ways to reduce your risk for stroke

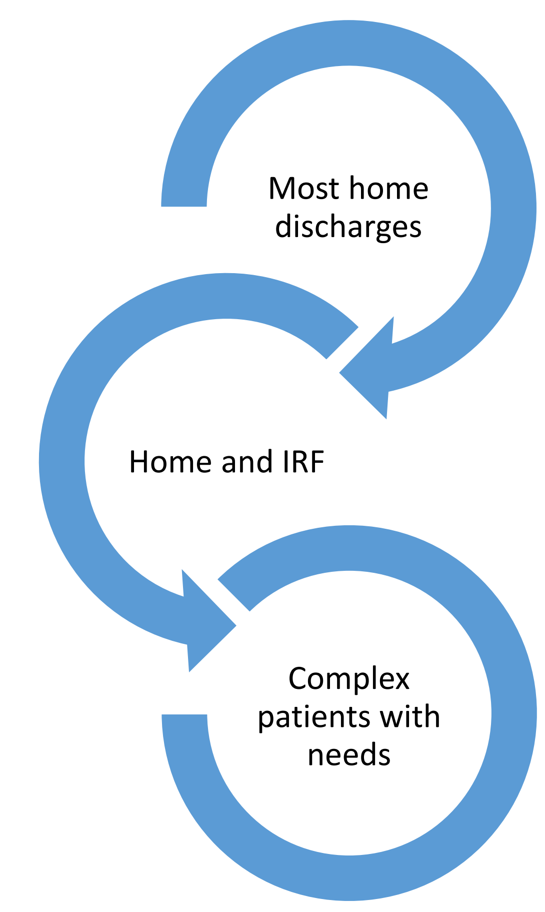
**Stroke Resources:**
National Stroke Association: http://www.stroke.org/
1-800-STROKES (787-6537), menu option 3
American Stroke Association: http://www.strokeassociation.org/STROKEORG/
1-888-4-STROKE
1-888-478-7653
1-888-474-VIVE
Brain Aneurysm Foundation: http://www.bafound.org/
1-888 272-4602

Stroke Written Information Given: {Stroke Instructions:30424636::"A copy was provided to patient, family or caregiver"}

- Used as a framework for talking points.
- Focused on secondary prevention
- Personalize for each patient.
- Select patients and families who are receptive to education.
- Used to reinforce follow up appointments.
- Saved to EMR.

# Shifting Focus – Who Is Seen?

- Focus was on seeing as many home discharges as possible.
- Home and IRF seen.
- Currently continue to emphasize many home and IRF patients but also closely follow those with specific needs, i.e., imaging, labs, outpatient cardiac monitoring, anticoagulation.
- **All** stroke discharges are reviewed by nurse navigator for follow up needs.



# Post Discharge Follow Up Home

- Most home discharges are contacted within 7 days by phone
  - Screen for recurrent events/symptoms
  - Medication adherence
  - Follow up plan
  - Outpatient needs
  - Satisfaction

**Stroke Navigation Phone Follow Up Post-Discharge**

Discharge Date: ***

Discharge Diagnosis: ***

Date of first phone call attempt: ***

Date of second phone call attempt: ***

Who was reached for follow up: ***

1. Assess current status, ask about recurrent or new stroke signs or symptoms as well as new ED visits or hospital admissions: ***
2. Medication review and compliance: ***
3. Has follow up been scheduled? ***.
4. Brief review of lifestyle modification recommendations. ***
5. Review of stroke warning symptoms - BE FAST and need to call 911: ***
6. Rehabilitation services, home health or case management needs? ***
7. General: ***
8. Satisfaction question, "Anything we could have done differently or better to improve your care, or make your stay more enjoyable?" ***

Time spent on call: ***

# Post Discharge Follow Up IRF

- IRF discharges are tracked and many followed through discharge.
  - Screen for recurrent events/symptoms
  - Medication adherence
  - Follow up plan
  - Outpatient needs
  - Satisfaction

**Stroke Navigation Phone Follow Up Post-Discharge**

Discharge Date: ***

Discharge Diagnosis: ***

Date of first phone call attempt: ***

Date of second phone call attempt: ***

Who was reached for follow up: ***

1. Assess current status, ask about recurrent or new stroke signs or symptoms as well as new ED visits or hospital admissions: ***
2. Medication review and compliance: ***
3. Has follow up been scheduled? ***.
4. Brief review of lifestyle modification recommendations. ***
5. Review of stroke warning symptoms - BE FAST and need to call 911: ***
6. Rehabilitation services, home health or case management needs? ***
7. General: ***
8. Satisfaction question, "Anything we could have done differently or better to improve your care, or make your stay more enjoyable?" ***

Time spent on call: ***

# Key Follow Up Issues

## Short Term

- Identification of urgent issues
  - ICH
  - Abdominal wall hematoma
  - Recurrent symptoms
  - Hypertensive urgency
  - Dissection extension
- Medication clarification
- Therapy referrals
- Clinic follow up: PCP and Stroke

## Longer Term

- Imaging
- Extended cardiac monitoring for cryptogenic stroke
- Anticoagulation start/restart

# Nurse Navigator Metrics
# Seen Prior to Discharge

Disposition of Patients Seen Prior to Discharge

Discharge Disposition

Home
SNF
Home Hospice
Inpatient Rehab
LTAC

# Patients Seen Prior to Discharge

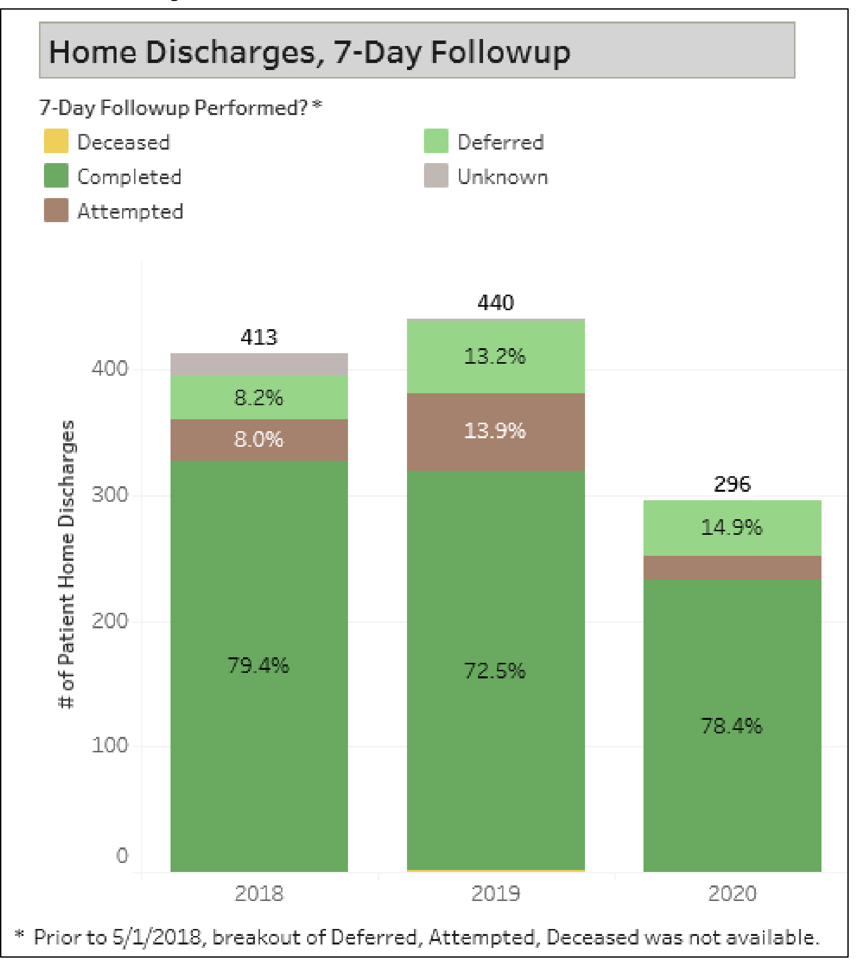
250
200
150
100
50
0

259
5.8%
13.9%
80.3%
2017

219
9.6%
8.2%
81.7%
2018

189
8.5%
19.6%
71.4%
2019

# Nurse Navigator Metrics
# Follow Up 7 Day Phone Call



# What About Outcomes?

- 2015 Puhr & Thompson[4] published a review of 13 articles looking at transitional care models in stroke. About half identified as successful – *"some evidence exists to support positive outcomes using transitional care in patients with stroke"*
- The COMPASS Study[5] published this year was a randomized pragmatic trial of transitional stroke care with over 6,000 patients. Primary outcome was SIS-16. No difference with intervention, but self reported blood pressure monitoring was higher in the intervention group.

# Impact of a Stroke Transitional Care Navigator at a Comprehensive Stroke Center

Darren T Larsen, RN, BSN, CNRN, SCRN; Alexandra Lesko, BS; Elizabeth Baraban, PhD, MPH

## OBJECTIVES

The purpose of this study was to determine whether implementation of a STCN improved compliance with:
1) follow up stroke neurology care
2) reduced unplanned readmissions
3) reduced Emergency Department (ED) visits.

## CONCLUSIONS

- The STCN had a positive impact on patients returning to clinic for follow-up stroke neurology care.
- Unlike previous studies, there was no impact on 30-day unplanned readmissions or ED visits.
- Given the unique, individualized care and coordination provided by the STCN, which is very well received by patients and providers, qualitative measures may be more useful in the future to determine the effectiveness of the STCN.

## BACKGROUND

The Stroke Transitional Care Navigator (STCN), was implemented at our Comprehensive Stroke Center in January 2017 in order to bridge care from the inpatient to outpatient setting. The STCN nurse meets with patients prior to discharge and contacts them via phone after discharge to address secondary stroke risk factors and discuss the follow up plan in an effort to improve patient outcomes.

## METHODS

- Observational study included retrospective data collected from ischemic stroke, TIA or ICH patients 18 or over who were discharged from February 2017 through February 2018.
- Subarachnoid hemorrhages and hospice patients were excluded.
- The STCN goal was to follow patients who were either discharged home, treated with IV Alteplase or in some cases had specific needs.
- Patients were considered "Followed" if they had documented contact with the STCN prior to discharge and/or received a phone call from the STCN within 7days for home discharges or within 30 days for non-home discharges.
- Not all eligible patients were able to be reached for follow-up.
- Followed patients were compared to patients discharged during the same time period who met inclusion criteria but were Not Followed.
- Outcomes of interest were percentage of patients compliant with attending an outpatient visit with a stroke provider within 45 or 120 days post-discharge and percentage of unplanned readmission and ED visits 30 days post-discharge.
- Analyses comparing the Followed and Not Followed cohorts were performed using Pearson's chi square and Fisher's Exact test, as appropriate.

## RESULTS

- 689 patients that met inclusion criteria with 47.2% (n=325) in the Followed and 52.8% (n=364) in the Not-Followed cohorts.

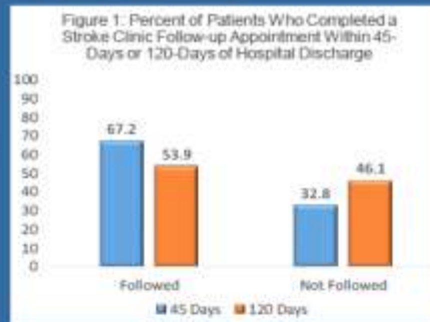



Figure 1: Percent of Patients Who Completed a Stroke Clinic Follow-up Appointment Within 45-Days or 120-Days of Hospital Discharge

| Table 1: Patient Characteristics | Followed (n=325) | Not-Followed (n=364) |
|---|---|---|
| Age, median [IQR] | 67 [19, 99] | 72 [59, 81] |
| Female, % (n) | 53.8 (196) | 49.5 (161) |
| Race, % (n) | | |
| Non-white | 15.9 (58) | 20.6 (67) |
| White | 84.1 (306) | 79.4 (258) |
| Stroke Type, % (n) | | |
| Ischemic | 78.8 (287) | 82.8 (269) |
| TIA | 5.2 (19) | 7.1 (23) |
| ICH | 15.9 (58) | 10.2 (33) |
| Treated, IV Alteplase, % (n) | 62.4 (53) | 37.6 (32) |
| Discharged Home, % (n) | 70.8 (272) | 30.8 (112) |

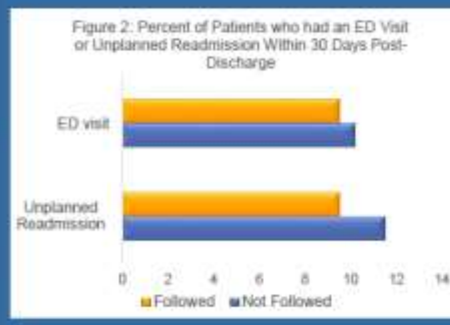



Figure 2: Percent of Patients who had an ED Visit or Unplanned Readmission Within 30 Days Post-Discharge

- Those Followed were more likely to comply with attending a follow-up visit within 45-days (67.2% (n=117) vs. 32.8% (n=57), p<.001) as well as 120 days of discharge (53.9% (n=76) vs 46.1% (n=65), p<.001) (Figure 1).
- Although the percentage of patients who had an ED visit (9.5% vs. 10.2%, p=.783) or an unplanned readmission (9.5% vs. 11.5%, p=.394) were lower for the Followed cohort the differences were not statistically significant (Figure 2).

## REFERENCES

Di Palo, K. E., Patel, K., Assafin, M., & Pina, I. (2017). Implementation of a patient navigator program to reduce 30-day heart failure readmission rate. *Progress In Cardiovascular Diseases, 60*, 259-266.
Poston, K. M., Dumas, B. P., & Edlund, B. J. (2014). Outcomes of a quality improvement project implementing stroke discharge advocacy to reduce 30-day readmission rates. *Journal of Nursing Care Quality, 29*(3), 237-244.

Authors have nothing to disclose.

# What About Outcomes?

- Results vary widely
- Models vary widely
- Interventions vary widely
- This stuff can be hard to measure!!

# Nurse Navigator Barriers

- 24/7 staffing is not available.
- Limited backup coverage.
- Handling multiple priorities with patient visits, i.e. patients at the same time.
- In COVID 19 era difficult to “cold call” all patients with no established in hospital rapport.

# Nurse Navigator Successes

- Well received by providers.
  - Removes burden on providers for follow up.
  - Trouble shooting orders, referrals, etc.
- Higher rates of clinic follow up.
- Clarification of medication issues.
- Monitoring of extended cardiac monitoring results.

# Case Study 1

- 72 yo male with right MCA stroke. At time of stroke EMS evaluated and was in a fib with RVR which self converted. During admission patient had short bursts of a fib with pauses to the 30's with conversion to NSR. Pacer implanted. MRI consistent with multifocal infarcts with petechial hemorrhagic conversion. On ASA with plan to start AC in 14 days.
- Followed up by phone two days post DC. Patient saw VA PCP same day and was told that VA would reach out to PSVMC to discuss anticoagulation plan. No documentation noted. I sent a message to the hospitalist who called patient with plan to start AC and faxed prescription to VA pharmacy.
- Following patient on my "watch list". Saw that patient had syncopal episode (unrelated to a fib) with ED visit. Pacer interrogation showed patient now with sustained periods of a fib. Patient sent message to cardiology over concerns of no AC. Cards holding off on AC per neuro recs
- I contacted our neurologist on service who reviewed imaging and because of clinical course reasonable to start AC two days early.
- I sent information to cardiology who contacted patient, but VA prescription not scheduled to arrive for 2 days.
- Cardiology arranged for patient to pick up samples same day to start AC.

# Nurse Navigator Common Issues

| Issue | Action |
| --- | --- |
| VA patient that lives at the coast and needs follow up MRI with no facility close. | Worked with VA CM to get services approved outside of VA and coordinated telemedicine appt with Prov Seaside clinic. |
| Patient had virtual visit scheduled five days post DC which was not needed. | Discussed with provider, spoke with patient, cancelled appointment and rescheduled in six weeks. Avoided unnecessary appointment. |
| DC summary and transfer orders to SNF indicated AC at 14 days post. Called SNF 17 days out and was not started. | Reviewed with our provider. Discussed with SNF who followed up with house MD. |
| Patient needed to have hCT prior to appointment with stroke provider which was discussed with patient during follow up. Checked two days prior to appointment and imaging was not completed. | Contacted patient and directed him to schedule with diagnostic imaging. Followed up and imaging done day prior to office visit. |

# Conclusion

- Stroke nurse navigator serves an important role as part of the interdisciplinary team.
- Well received by patients and providers.
- Outcomes can be difficult to objectively measure.
- Subjective measures such as success stories may be more effective.

# References

1. Freeman, H. P., & Rodriguez, R. L. (2011). History and principles of patient navigation. *Cancer*, *117*(15 Suppl), 3539–3542. https://doi.org/10.1002/cncr.26262
2. Loiselle, C., Attieh, S., Cook, E., Tardif, L., Allard, M., Rousseau, C., Thomas, D., Saha-Chaudhuri, P., & Talbot, D. (2020). The nurse pivot-navigator associated with more positive cancer care experiences and higher patient satisfaction. *Canadian Oncology Nursing Journal / Revue Canadienne De Soins Infirmiers En Oncologie, 30*(1), 48-53. Retrieved from http://canadianoncologynursingjournal.com/index.php/conj/article/view/1037
3. Di Palo, K. E., Patel, K., Assafin, M., & Piña, I. L. (2017, September 1). Implementation of a Patient Navigator Program to Reduce 30-day Heart Failure Readmission Rate. *Progress in Cardiovascular Diseases*. W.B. Saunders. https://doi.org/10.1016/j.pcad.2017.07.004
4. Puhr MI, Thompson HJ. The Use of Transitional Care Models in Patients With Stroke. *Journal of Neuroscience Nursing*. 2015;47(4):223-234.
5. Duncan, Pamela, PhD, PT, Bushnell, Cheryl, MD, MHS, Jones, Sara, PhD, MPH, et al. (2020). Randomized Pragmatic Trial of Stroke Transitional Care: The COMPASS Study. Circulation: Cardiovascular Quality & Outcomes, 13, e006285. https://doi.org/10.1161/CIRCOUTCOMES.119.006285