Nursing’s Role in Successful Stroke Care Transitions Across the Continuum: From Acute Care into the Community

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Objectives

Discuss stroke nursing care across the continuum

Identify cross-setting issues in stroke care transitions

Describe recommendations to leverage the impact of nursing in the health care delivery system

Stroke

TOPICAL REVIEW

Section Editors: Janice L. Hinkle, RN, PhD, CNRN, and Elaine Miller, PhD, MN, BSN

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Michelle Camicia, PhD, RN, CRRN, CCM, NEA-BC; Barbara Lutz, PhD, RN, CRRN, PHNA-BC; Debbie Summers, MSN, RN, ACNS-BC, SCRn, CCRN; Lynn Klassman, MSN, APN, CCRN, CCNS, CNRN; Stephanie Vaughn, PhD, RN, CRRN
Background

Figure 12. Post-Acute Care Discharges and Acute Care Readmissions

- 35% of Hospital Discharges are Admitted to Post-Acute for Additional Care ("Post-Acute Admissions")
- 48% of Post-Acute Admissions go Home after Receiving Post-Acute Care
- 29% are Transferred to a Secondary Post-Acute Venue for Additional Care

Source: RTI International and Cain Brothers’ analysis.
Background

Stroke Systems of Care

"Time for a Paradigm Shift"

2005

2019

2021

Comprehensive Stroke system of Care

Time for a Paradigm Shift

To transform comprehensive stroke care

Broaden the focus of acute care guidelines to promote anticipatory guidance for patients with stroke and families about rehabilitation-related PAC options

Expanding the Get With the Guidelines Stroke program to include metrics related to rehabilitation readiness and 90-day post-discharge outcomes

Enhanced focus on prevention of recurrent stroke and optimizing functional recovery and participation in meaningful activities
Nurses performing care management, care coordination, & transitional care helps to:

- decrease fragmentation
- bolster communication
- improve care (quality and safety)

A care management approach is particularly important for people such as those who have survived a stroke, with complex health and social needs, who may require care from multiple providers, medical follow-up, medication management, and assistance in addressing their social needs.
Nurse-Driven Acute Stroke Care

Prehospital
- Stroke Recognition
- Pre-hospital screening
- Stroke severity scoring
- Appropriate level of care
- Outreach education
- Tele-stroke
- Mobile stroke unit

Nurse RN, APN
- Guideline development – Evidenced Based
- Future of Nursing 2020-2030 – practicing to full extent of education
- Nurse navigators /Case Management
- Educators – competency
- Stroke GWTG Data collection
- Quality and Outcome
- Stroke Center Designation

ED
- Code Stroke
- Protocol and order set development
- Time is Brain

In Patient Care
- Radiology
- ICU
- Stepdown
- Stroke Unit

Process
Postacute Stroke Care

24% Inpatient Rehab Facility (n=37,064)
- 5% IRF only
- 20% IRF & HH
- 16% IRF & OP
- 16% IRF & SNF
  - 8% IRF, HH, & OP
  - 6% IRF, HH and Readmit
  - Plus SNF or HH after Readmit

27% Skilled Nursing Facility (n=41,547)
- 30% SNF only
- 19% SNF & HH
- 12% SNF & OP
  - 21% SNF & Readmit
  - 6% SNF, HH & Readmit
  - +SNF or HH/OP post Readmit
  - + SNF post Readmit

## IRF v. SNF

<table>
<thead>
<tr>
<th></th>
<th>IRF</th>
<th>SNF</th>
</tr>
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<tbody>
<tr>
<td>MD Oversight</td>
<td>At least 3x/week</td>
<td>Seen by MD day 14; then every 30 days</td>
</tr>
<tr>
<td>RN Coverage</td>
<td>24 hours/day</td>
<td>8 hours/day</td>
</tr>
<tr>
<td>Therapy Provided</td>
<td>“Intensive” 3 hours per day</td>
<td>Varies; ¾ of days get at least 2.4 hours per day</td>
</tr>
</tbody>
</table>

Guidelines for Adult Stroke Rehabilitation and Recovery

A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association

Endorsed by the American Academy of Physical Medicine and Rehabilitation and the American Society of Neurorehabilitation

The American Academy of Neurology affirms the value of this guideline as an educational tool for neurologists and the American Congress of Rehabilitation Medicine also affirms the educational value of these guidelines for its members

Accepted by the American Speech-Language-Hearing Association

Carolee J. Weinstein, PhD, PT, Chair; Joel Stein, MD, Vice Chair; Ross Arena, PhD, PT, FAHA; Barbara Bates, MD, MBA; Leora R. Cherney, PhD; Steven C. Cramer, MD; Frank Deruyter, PhD; Janice J. Eng, PhD, BSc; Beth Fisher, PhD, PT; Richard L. Harvey, MD; Catherine E. Lang, PhD, PT; Marilyn MacKay-Lyons, BSc; MScPT, PhD; Kenneth J. Ottenbacher, PhD, OTR; Sue Pugh, MSN, RN, CNS-BC, CRRN, CNRN, FAHA; Mathew J. Reeves, PhD, DVM, FAHA; Lorie G. Richards, PhD, OTR/L; William Stiers, PhD, ABPP (RP); Richard D. Zorowitz, MD; on behalf of the American Heart Association Stroke Council, Council on Cardiovascular and Stroke Nursing, Council on Clinical Cardiology, and Council on Quality of Care and Outcomes Research

IRF v. SNF Outcomes

Discharge to Community

- IRF > SNF Deutsch et al. (2006)
- Patients in IRF had ↑ odds of D/C to home compared to SNF Hoenig et al. (2001)

Functional Gain

- Functional gains IRF > SNF Deutsch et al. (2006); Hong et al. (2019)
- Gain in ADLs IRF > SNF at 12 months Kane et al. (2000)
- Mobility, self-care, & cognition gains IRF > SNF Chan et al. (2013)
Does Postacute Care Site Matter? A Longitudinal Study Assessing Functional Recovery After a Stroke

Leighton Chan, MD, MPH, a M. Elizabeth Sandel, MD, b Alan M. Jette, PhD, PT, c Jed Appelman, PhD, b Diane E. Brandt, PhD, PT, a Pengfei Cheng, MS, d Marian TeSelle, MD, a Richard Delmonico, PhD, b Joseph F. Terdiman, MD, PhD, d Elizabeth K. Rasch, PhD, PT a

From the aNational Institutes of Health, Mark O. Hatfield Clinical Research Center, Rehabilitation Medicine Department, Bethesda, MD; bKaiser Foundation Rehabilitation Center, Vallejo, CA; cBoston University Medical Campus, School of Public Health, Health & Disability Research Institute, Boston, MA; dDivision of Research, The Permanente Medical Group, Kaiser Permanente Northern California, Oakland, CA; and eKaiser Permanente Capital Service Area, Sacramento, CA.
IRF v. SNF

**Readmissions**
- SNF readmission ~2-3 % > IRF up to 1 year Bettger et al. (2015)
- Predicted probabilities of readmit IRF < SNF in all racial groups Kind et al. (2010)

**Mortality**
- Higher IRF vs SNF up to 1 year Bettger et al. (2015)
- IRF mortality ↓2.6% compared to SNF Buntin et al. (2010)
- Death in IRF < SNF in each racial/ethnic group Kind et al. (2010)
- Patients in IRF died at rate <1/2 of SNF Wang et al. (2011)
Transition to Home

- One of the most vulnerable times for stroke survivors and caregivers
- Smooth/seamless transitions optimize health and QOL outcomes
- However...
  - Quality of transitions is widely variable
- Understanding of influence of culture/ethnicity/race/religious preferences/gender identity
- Requires clear and frequent communication across IP team
- Can be facilitated by a transition specialist or stroke nurse liaison/navigator
Transition to Home: Evidence-Based Interventions

- Early supported discharge
- Pre-discharge home visits
- Discharge checklists
- Comprehensive stroke education
- Identification of transition barriers/challenges
- Linkages to community resources / networks
- APN-led models can reduce readmissions
Components of Transition Plan

- Comprehensive assessment of stroke survivor AND family caregiver (e.g. PATH-s)
- Identify gaps in readiness
- Tailor discharge plan to address gaps and prioritize needs

Secure equipment & supplies

Provide information & training
- Skills training
- Med. management
- Secondary stroke prevention
- Linkages to CB resources
- Transportation, meals, etc
- Follow-up appts & OP therapy
Cross-Setting Issues in Stroke Care Transitions
Assessing & Addressing CG Needs: National Recommendations

Home Alone Revisited: FAMILY CAREGIVERS PROVIDING COMPLEX CARE

AARP Public Policy Institute
Valuing the Invaluable 2019 Update: Charting Path Forward

Alzheimer’s Disease and Healthy Aging
Caregiving for Family and Friends — A Public Health Issue
Assessing & Addressing CG Needs: National Recommendations

Home Alone Revisited: FAMILY CAREGIVERS PROVIDING COMPLEX CARE

AARP Public Policy Institute

Valuing the Invaluable 2019 Update: Charting Path Forward

by Susan Reinhart, Lynn Fries Feinberg, Ari Hozer, Rita Choura, Molly Evans, Public Policy Institute, November 14, 2019

Recognize, Assist, Include, Support, & Engage (RAISE) Family Caregivers Act
Initial Report to Congress
Prepared by RAISE Family Caregiving Advisory Council
With assistance from: Administration for Community Living, an operating division of the U.S. Department of Health and Human Services

Alzheimer’s Disease and Healthy Aging

Caregiving for Family and Friends — A Public Health Issue
Assessing the Needs of Family Caregivers

- Development of the PATH-s © Instrument
  Preparedness Assessment for the Transition Home after Stroke
  Available @ www.rehabnurse.org/pathtool

- 25-item instrument
- Assesses caregiver readiness to provide care post-discharge
- Guides development of discharge care plan
- Completed during inpatient care
- Grounded in the Improving Caregiver Readiness Model
- Scoring: 1-4
Developing a Tailored Care Plan

1. How much do you understand about how the patient’s recovery over the next 6 months?
   - Discuss medical and functional prognosis per MD. Support hope -- PM&R

4. How much do you understand about what assistance the patient will need with personal care (such as bathing, using the toilet, dressing, and moving around) when she goes home?
   - Discussion of deficits and functional limitations. -- Therapy

5. How much experience have you had providing physical help with personal care (such as bathing, using the toilet, dressing and moving around) for someone who has a disability?
   - Assist them with scheduling their time during rehab so can be present for observing care and attend to self-care and other personal required activities/commitments (e.g. outstanding physician visits and other personal needs/obligations) -- CM

6. How prepared are you to provide the patient assistance with personal care (such as bathing, using the toilet, dressing and moving around) when she goes home?
   - Suggest observe therapy and nursing staff providing assistance with mobility and other ADL care -- CM
Community Resource Networks: Key to Smooth Transitions

Includes:
- Outpatient therapies
- Home-delivered meals
- Transportation
- Financial assistance
- Assistance with household tasks
- CB exercise programs
- Support groups

Can be formal or informal

Goes beyond giving SS and CGs a list

Requires REAL connections with CB service providers
### Resources for Patients and Family Caregivers

<table>
<thead>
<tr>
<th>Organization</th>
<th>Resources</th>
</tr>
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<tbody>
<tr>
<td>Association of Rehabilitation Nurses</td>
<td>Making the Right Decision for Rehabilitation Care: <a href="https://restartrecovery.org/uploads/ARN_Consumer_Trans_Brochure_final.pdf">https://restartrecovery.org/uploads/ARN_Consumer_Trans_Brochure_final.pdf</a></td>
</tr>
<tr>
<td></td>
<td>Stroke Support Network: <a href="https://supportnetwork.heart.org">https://supportnetwork.heart.org</a></td>
</tr>
<tr>
<td>Heart and Stroke Foundation of Canada</td>
<td><a href="https://www.strokebestpractices.ca/resources/patient-resources">https://www.strokebestpractices.ca/resources/patient-resources</a></td>
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</tr>
<tr>
<td>VA Rescue Stroke Caregiving</td>
<td><a href="https://www.stroke.cindrr.research.va.gov/">https://www.stroke.cindrr.research.va.gov/</a></td>
</tr>
<tr>
<td>World Stroke Organization</td>
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### Patient and Family Education

**Stroke Survivor Top Educational needs**
- Stroke signs, symptoms, and prevention
- Treatment modalities and medications
- Stroke recovery and return to work
- Causes of stroke
- Providing physical care to the stroke survivor, including transfers, lifting, and personal care

**Critical Stroke Survivor Educational Needs**
- Functional needs (eg, cognitive changes, depression, pain, and fatigue)
- Activity and participation (eg, walking, driving, and leisure activities)
- Environmental concerns (eg, safety/falls prevention; medication administration; communicating with providers)
Use the teach-back with all patient populations across the spectrum of health literacy.
Standardized Patient and Family Education

Patient and Family Education: Health Literacy

The capacity to obtain, process, and understand health information.

Goal: To provide information in ways that are:

• Meaningful
• Understandable
• Timely
• with the appropriate amount of content based on the learner’s readiness

Validated Tools: Health Literacy Toolshed

• Rapid Assessment of Adult Health Literacy in Medicine
• Test of Functional Health Literacy in Adults
• The Newest Vital Sign
Patient Education Material Assessment Tool (PEMAT)

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<tr>
<th>Understandability</th>
<th>Actionability</th>
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<td>Patient education materials are <em>understandable</em> when consumers of diverse backgrounds and varying levels of health literacy can process and explain key messages</td>
<td>Patient education materials are <em>actionable</em> when consumers of diverse backgrounds and varying levels of health literacy can identify what they can do based on the information presented</td>
</tr>
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Patient and Family Education—Health Coaching

Partnering with patients and caregivers to provide support and establish goals for recovery and self-management of activities of daily living

- Developing problem solving skills
- Increasing capacity for managing chronic health conditions
- Improving patient and caregiver confidence

- Improved stroke survivor quality of life and functional status
- Reduced depression at 3 months
- Reduced health care costs and readmissions

https://www.ahrq.gov/health-literacy/improve/precautions/index.html
Between sending and receiving providers to ensure patient’s key clinical and psychosocial issues across the care trajectory. The National Transitions of Care Coalition recommends that sending and receiving provider should be a case manager or transition specialist (Nurse Navigator).

<table>
<thead>
<tr>
<th>Empathetic language and gestures</th>
<th>Anticipating the patients and caregivers needs to support self care at home</th>
<th>Collaborative discharge planning</th>
<th>Providing actionable information</th>
<th>Providing uninterrupted care with minimal handoffs</th>
</tr>
</thead>
</table>

*Miller KK et al. ArFrom hospital to home to participation: a position paper on transition planning poststrokech Phys Med Rehabil. 2019;100:1162–1175*
Role of the Stroke Nurse Liaison

• Nurses the one role across all health settings – expand to a Stroke Nurse Liaison

Access to care and resources

• Education
• Barriers to self management
• Build relationship
• Trust

Facilitate self management

Assist with chronic disease

• Develop and evaluate transitional plans

Eliminate barriers

• Promote positive outcomes
• Identify readmission risk factors

Assist with chronic disease

Access to care and resources
Developing Standardized Outcomes Measures

AHA/ASA “Get with the Guidelines” & Joint Commission

- Standardized measures for hyperacute and acute stroke
- Primary and Comprehensive stroke programs

Joint Commission & CARF

- Performance measure standards for IRFs
Current Stroke Guideline
Community

Acute Care

- 2014 Prevention of Stroke in Women
- 2012 Management of Aneurysmal SAH
- 2015 Management of Spontaneous ICH and Management of patients with unruptured intracranial Aneurysms
- 2017 Treatment and Outcome of Hemorrhagic Transformation after IV Alteplase in AIS
- 2019 Acute Ischemic Stroke
- 2021 Updated Nursing Scientific Statement (Prehospital and Acute) Endovascular and ICU Post Hyperacute and Prehospital discharge

Postacute Care

- 2016 Adult Stroke Rehabilitation and Recovery

Guideline Search
Stroke - 5991 results found in 663 article(s)
Developing Standardized Outcomes Measures

NO standardized outcomes measures outside of acute care & no national quality database

Next Step:
To develop standardized outcome measures for post-acute care

Stroke
Volume 52, Issue 1, January 2021, Pages 365-363
https://doi.org/10.1161/STROKEAHA.120.029678

SPECIAL REPORT

Comprehensive Stroke Care and Outcomes
Time for a Paradigm Shift
Pamela W. Duncan, PhD, PT, Cheryl Bushnell, MD, MHS, Mysha Sissine, MSPH, Sylvia Coleman, MPH, RN, BNS, CLNC, Barbara J. Lutz, PhD, RN, Anna M. Johnson, PhD, MSPH, Meghan Radman, MPH, Janet Pyru Bettger, ScD, MS, BA, Richard D. Zorowitz, MD, and Joel Stein, MD
Impact of Social Determinants of Health (SDOH)

- Culture, ethnicity, financial hardship can influence outcomes
  - May limit access to follow-up care & community resources
  - Can influence stroke recovery and impact stroke care
  - Informs individual on health behaviors and stroke prevention
- Need to understand cultural beliefs and other SDOH on diet, exercise, self-management, neighborhood safety, access to HC and resources
- Tailored discharge plans and follow-up care to address SDOH can improve stroke risk factors. Feldman et al showed that NP and health coach tailored sensitive interventions improved outcomes as compared to usual home visits

Competencies Related to Care Transitions

Nurses must
- Identify current stroke guidelines
- Use resources for nurses
- Possess knowledge of and share resources for patients and family caregivers

Leveraging Technology

- Video recordings of the skills that will be required of the family caregiver
- Telehealth family conferences, and follow-up consultation
- Virtual caregiver training
- Video recordings of progress
- Digital health platforms
<table>
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<tr>
<th><strong>Table 1. Resources for Nurses</strong></th>
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<td><strong>National Transition of Care Checklist:</strong> <a href="https://static1.squarespace.com/static/5d49b6eb75823b00015db708/t/5d49bc833b48f80001f154bc/1565113475856/TOC_Checklist.pdf">https://static1.squarespace.com/static/5d49b6eb75823b00015db708/t/5d49bc833b48f80001f154bc/1565113475856/TOC_Checklist.pdf</a></td>
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Future Directions

Define standardized metrics to evaluate patient and caregiver outcomes across the continuum and the trajectory of recovery.

Implement regulatory and policy changes to incorporate these metrics into the stroke care delivery system.

Establish a system of coordinated and seamless comprehensive stroke care across the continuum and into the community by reframing the paradigm to include the PAC delivery system.

Use a comprehensive evidence-based stroke discharge checklist for post-stroke education (including physical, mental and emotional health promotion, stroke prevention education, and discharge resources).

Establish an APN-led stroke follow-up clinic visit as a standard of care 7- to 14-day postdischarge.
Implement a stroke nurse liaison role

A family/share plan with tailored interventions based on assessed needs of the stroke survivor and family caregiver and monitors quality outcomes.

Implement a validated caregiver assessment to systematically identify gaps in caregiver preparedness and develop a tailored caregiver/family care plan

Use evidence-based teaching and communication methods to optimize stroke survivor/caregiver learning to
Summary

Discuss stroke nursing care across the continuum

Identify cross-setting issues in stroke care transitions

Describe recommendations to leverage the impact of nursing in the health care delivery system

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THANK YOU

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