Life After Stroke: New solutions for stroke management and rehabilitation

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Learning objectives:

- Understand and describe how persons with stroke transition from acute care to home.
- Describe how persons post stroke and hospitalization integrate back into the community.
- Discuss interventions the clinician implements in dealing with behavioral changes after stroke.
- Understand the role and importance of family education.
- List major lifestyle and prevention strategies to reduce stroke.
American Heart Association

- National Goal for 2020:
- “By 2020, improve the cardiovascular health of all Americans by 20 percent while reducing deaths from cardiovascular diseases and stroke by 20 percent. The novel focus of the new goal will be preventing heart disease and stroke, most notably by helping people identify and adopt healthier lifestyle choices”.(1)
Discharge from the hospital
Early Recovery

- 10 percent of stroke survivors recover almost completely
- 25 percent recover with minor impairments
- 40 percent experience moderate to severe impairments requiring special care
- 10 percent require care in a nursing home or other long-term care facility
- 15 percent die shortly after the stroke (2)
Discharge from: Hospital

- Physician/ Team recommendation
- Team/ Family/Caregiver conference
- Assistive device equipment needs are: location-dependent, and severity-dependent
- Rehabilitation needs are: severity-dependent
Depending on the severity of the stroke, rehabilitation options include:

- A rehabilitation unit in the hospital
- A sub acute care unit
- A rehabilitation hospital
- Home therapy
- Home with outpatient therapy
- A long-term care facility that provides therapy and skilled nursing care
Managing stroke in acute care and transitioning to the home environment
Inpatient Rehabilitation

- Physician on-site
- 3 hours of therapy a day (physical, occupational, speech therapy)
- Nursing, Dietician, psychological, chaplain services
- Time: Average length of stay is 2 weeks
- Discharge: home health, community (meaning no services), or outpatient clinic
Robot Arm
Robot–assisted Gait Training
Acute Care: Managing Stroke

Home Health
- Physician order
- Home setting
- Caregiver/Family support present
- Services: nursing, physical, occupational, speech
- Adaptive/Assistive devices
- Time: 2 weeks to 3 months
- Discharge: community (meaning no services), or outpatient clinic
Outpatient Rehabilitation

- Community setting
- Clinic environment
- Exercise equipment: bikes, treadmills, weight machines, parallel bars, therapeutic balls, mats.
- Exercise intensity: varies
- Time: 1 month to one year
Assessment of the home environment
Assessment of home environment involves:

- Physical aspects
- Supportive aspects
- Safety in the home
Physical aspects:

- Stairs
- Location of bathrooms/bedrooms
- Wheelchair accessibility
- Walker accessibility
- Furniture type/and arrangement
- Carpet, throw rug type
- Location of lighting
- Pets
Discharge to: Home

Supportive aspects:

- Availability of caregivers/family
- Paid caregivers
- Home assistance services
- Spiritual support
- Financial support
Discharge to: Home

Safety in the home:

- Medications
- Physician follow-up
- Fall prevention
- Level of care
Utilization of resources in the community
Utilization of: Community Resources

- Caregiver assistance services
- Community Support groups (psychological, spiritual support)
- Remaining active
- Maintaining healthy diets
- Adjusting to new life change/role
Utilization of: Community Resources

Community Support groups (physical, emotional, social, spiritual support):

- Hospitals
- Outpatient rehabilitation centers
- Community centers
- Religious locations
Role of healthcare provider during the transition
Role of the Healthcare Provider

- Physical therapy
- Occupational therapy
- Nursing
- Case Management
- Nutrition
- Social Work
Role of the Healthcare Provider

Physical Therapy
- Increase strength
- Improve mobility (transitions, transfers, gait, stair climbing, wheelchair mobility)
- Pain management (manual techniques)
- Implement fall prevention plan
- Teach appropriate utilization of assistive devices
- Recommendation of appropriate assistive devices
- Caregiver/ family training
Role of the Healthcare Provider

Occupational Therapy

- Increase strength
- Increase independence with activities of daily living (eating, bathing, dressing, toileting, driving).
- Pain management (prescription of adaptive equipment, or orthotics)
- Improve cognition
Role of the Healthcare Provider

Nursing
- Medication management
- Pain management
- Monitor medical status (vital signs, side effects)
- Patient/Caregiver education
- Wound care/pressure ulcer prevention
Role of the Healthcare Provider

Case Management

- Coordination of community resources
- Facilitate treatment plans created by physician and healthcare team
Role of the Healthcare Provider

Nutritionist

- Analyze current diet, eating patterns
- Developing dietary plan
- Patient/Caregiver education on healthy eating habits
Role of the Healthcare Provider

Social Work

- Improve the quality of life of individuals
- Identifying physical, psychological, emotional, or verbal abuse.
- Make appropriate referrals to address the above.
- Provide community resources (meal services, transportation, and home assistance).
Clinician’s Role in Dealing with Behavioral Changes After Stroke
Study: “Delivering an evidence-based outdoor journey intervention to people with stroke: Barriers and enablers experienced by community rehabilitation teams”

- **Purpose:** identify barriers and enablers as perceived by allied health professionals
- **Method:** data collection via interviews
The Clinician’s Role in Dealing with Behavioral Changes After Stroke

It is recommended to therapists to do the following:

- Identify social influences for each patient
- Review and interpret beliefs and capabilities
- Provide re-orientation on restrictive attitudes of family member or caregivers
- Provide access to resources
- Utilize occupational/speech services to address memory and attention deficits

1. Provide referrals for support groups or psychological services as appropriate.
Aphasia Round table
The Clinician’s Role in Dealing with Behavioral Changes After Stroke

Additional Recommendations for therapy is:

- Treatment approach
- Treatment location
- Family training/education
Role and Importance of Family Education
The Role and Importance of Family Education

- **Purpose:** To assess caregivers' stroke-related knowledge, perceived needs, satisfaction with services received, and sense of burden after stroke.
- **Method:** Record telephone interviews
- **Results:** Female caregivers, those with prior care-giving role; significant burden at 3 months compared to 1 month post discharge.

(12)
The Role and Importance of Family Education

- Conclusion:
- Partnership to work with stroke families
- Provide network of services
- Care plans (12)
The Role and Importance of Family Education

- **Purpose:** Examine demographic differences on long-term stroke outcomes.

- **Method:** Interviewed first time stroke survivors (13)
Results:

Absence of caregiver increases patient’s likelihood to develop multiple deficits in the first year of surviving a stroke. (13)
How to Prevent a second stroke
How to Prevent another stroke

1. Eat a healthy diet
2. Exercise daily
3. Know your blood pressure
4. Stop smoking (14)
Prevention Strategies: Healthy Diet

Recommendations of the American Stroke Association:

1. Select leaner cuts of meat
2. Choose seafood at least twice a week
3. Cook fresh vegetables
4. Lower dairy fat
5. Increase fiber and whole grains
6. Reduce sodium

These strategies reduce saturated fat in the diet. (14)
Healthy Diet
Prevention Strategies: Daily Exercise

Remaining active

- Benefits: lowers blood pressure, lowers cholesterol, lowers resting heart rate, decrease severity of diabetes.

- Intensity
- Duration
- Frequency (17)
Prevention Strategies: Blood Pressure

- Purchase blood pressure cuff
- Take blood pressure daily
- Keep record of readings
- High blood pressure reading that is a medical emergency: 180/110 (17)
Prevention Strategies: Stop Smoking

- Harm heart and blood vessels
- Increase risk of developing atherosclerosis (17)
Normal cut-section of artery

Tear in artery wall

Fatty material is deposited in vessel wall

Narrowed artery becomes blocked by a blood clot

ADAM
Atherosclerosis
Lifestyle and Behavior changes

Family Education

- Select a series of short-term goals
- Short-term goals must lead to ultimate goal
- Reward success but not with food
- Self-monitor behavior (21)
Closing Remarks

- By improving cardiovascular health risk for another stroke can be reduced
- Making lifestyle changes is a process
- Patients need long-term support
- Empower patients to actively participate in their own health care.
Questions?
Thank you!
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