



DISABILITY IN STROKE SURVIVORS

A FRESH LOOK AT CURRENT CARE



STROKE CARE NETWORK

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OBJECTIVES

Upon completion of this activity, participants will be able to:

1. Define disability as it relates to stroke
2. Understand the continuum of care for patients with disability following stroke in both the acute and chronic phases
3. List some of the “hidden” disabilities that affect stroke survivors



DISCLOSURES

- No financial disclosures or conflicts of interest with materials discussed in this lecture today



DISABILITY

WHAT DOES IT MEAN?

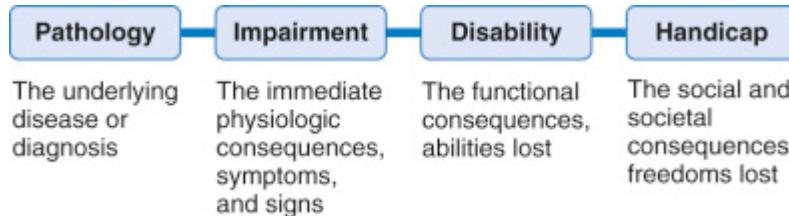


DISABILITY

- Disability *previously* ranked as the largest public health problem in the US (*thanks COVID-19*)
- Public health model has 3 categories of disability prevention
 - Primary (healthy people avoid onset)
 - Secondary (reduction of risk factors/assistive tech)
 - Tertiary (stop progression of further disability)



WHAT IS DISABILITY?



World Health Organization Definitions

Impairment

Any loss or abnormality of body structure or of a physiologic or psychological function

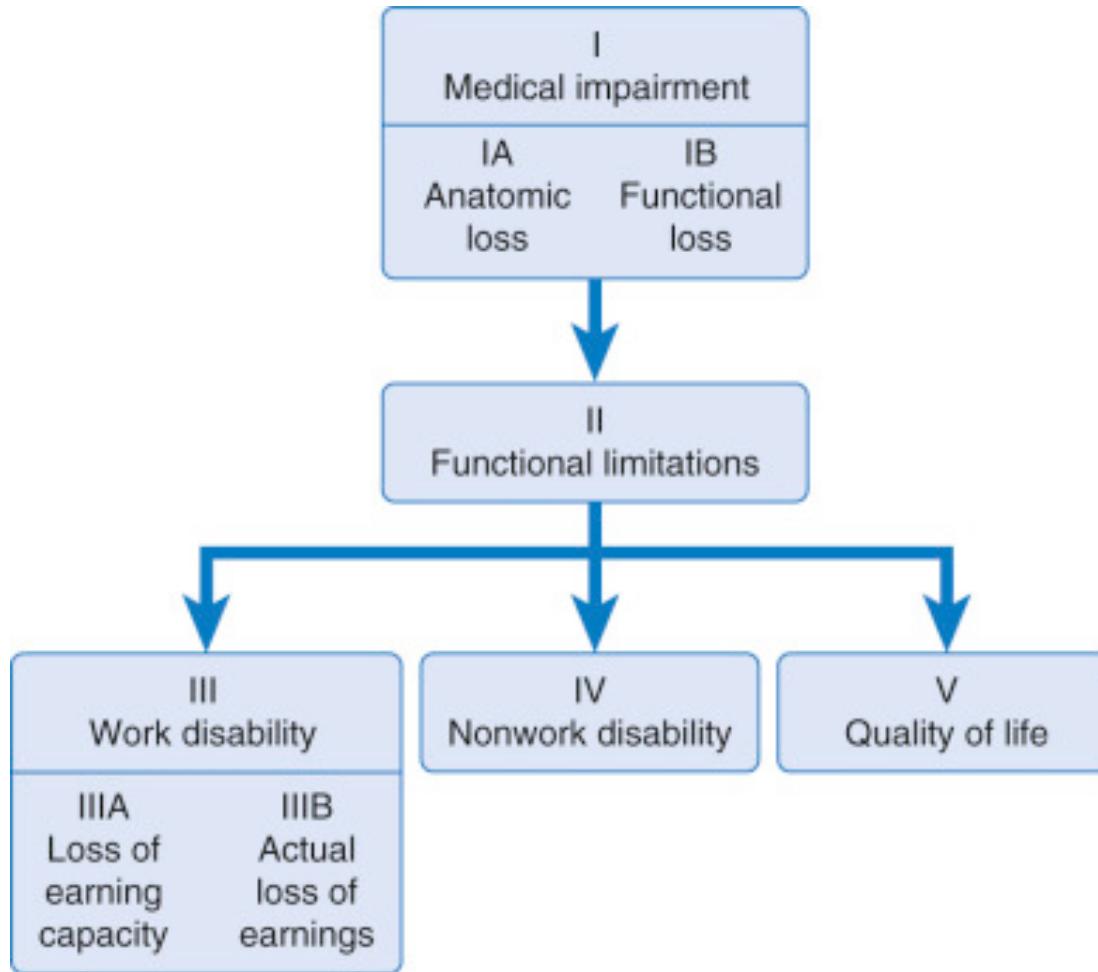
Activity

The nature and extent of functioning at the level of the person

Participation

The nature and extent of a person's involvement in life situations in relationship to impairments, activities, health conditions, and contextual factors

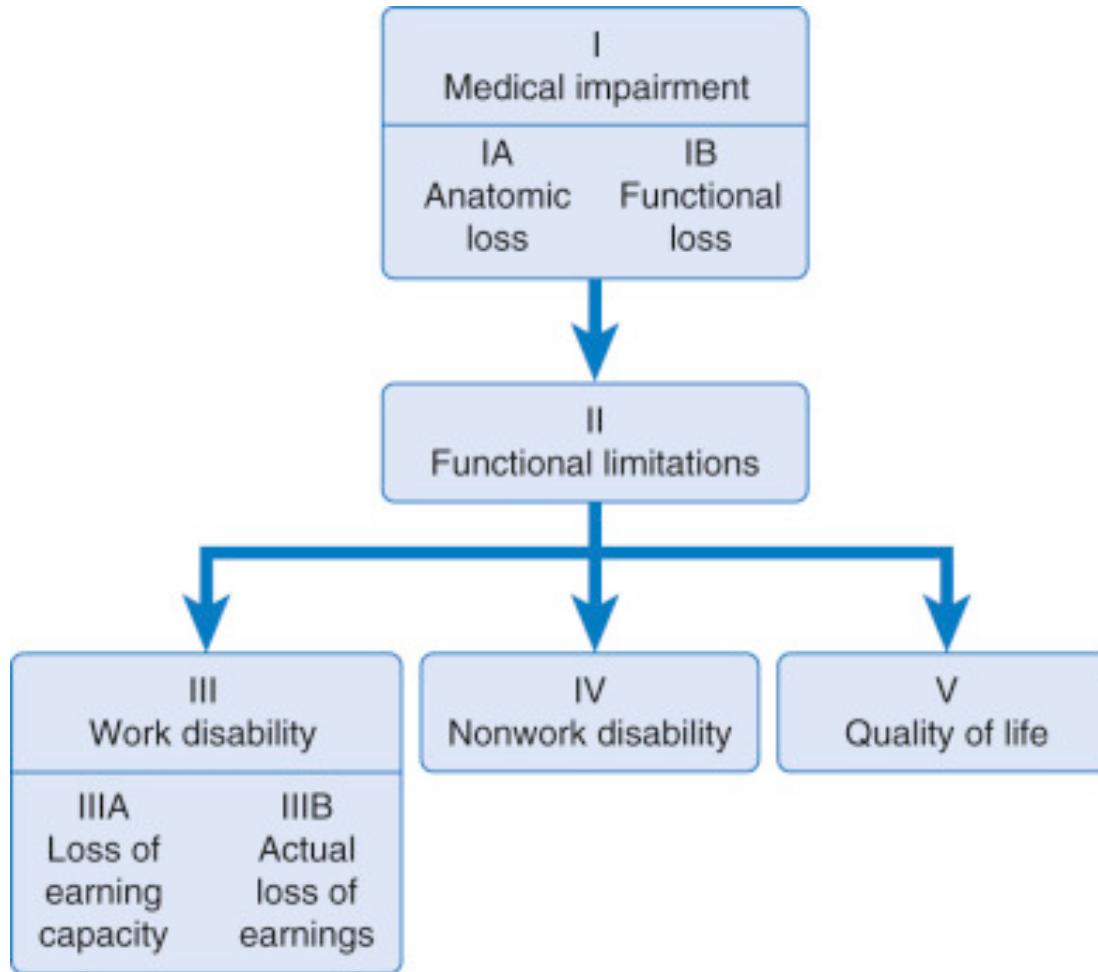




COST OF STROKE

- 2016-17: total cost (direct and indirect) of stroke in the US = \$49.8 billion
 - Direct costs (hospital stays, outpatient visits, ED visits, meds, home health) = \$30.8 billion
- Projected to more than double to \$94 billion by 2035





MOST COMMON IMPAIRMENTS

- Motor deficits
- Urinary incontinence
- Dysphagia
- Mini Mental Status < 24
- Dysarthria

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TABLE 2. Prevalence of Acute Impairments and Disability in First-in-a-Lifetime Stroke for 1259 Patients

Impairment	n	%	Unable to Assess, n (%)
Gaze paresis*	219	18.4	142 (11.9)
Visual field defect	328	26.1	271 (21.5)
Visual neglect	249	19.8	298 (23.7)
Sensory inattention*	231	19.4	393 (33.1)
Upper limb motor deficit	975	77.4	39 (3.1)
Lower limb motor deficit	911	72.4	39 (3.1)
Ataxia	91	7.23	316 (25.1)
Upper limb sensory deficit	381	30.3	255 (20.3)
Lower limb sensory deficit	342	27.2	254 (20.2)
Dysphagia	563	44.7	91 (7.2)
Dysarthria*	494	41.5	280 (23.5)
Dysphasia	290	23.0	206 (16.4)
Urinary incontinence	607	48.2	80 (6.4)
Urinary catheterisation*	427	35.9	62 (5.2)
MMSE <24*	522	43.9	400 (33.6)
GCS <15	563	44.7	34 (2.7)
GCS <9	235	18.7	34 (2.7)
BI <20†	835	79.4	48 (4.6)
BI <15†	680	64.7	48 (4.6)
BI <10†	512	51.1	48 (4.6)

*For gaze paresis, sensory inattention, dysarthria, urinary catheterisation, and MMSE were not assessed for 70 patients.

†For BI, 208 died by day 7.



DISABILITY = LOSS OF FUNCTION

- What functions can be impaired following a stroke?



ACTIVITIES OF DAILY LIVING

- Eating
- Bathing and Showering
- Bowel and Bladder Management
- Dressing
- Personal Hygiene and Grooming
- Sexual Activity
- Sleep/ Rest
- Toilet Hygiene



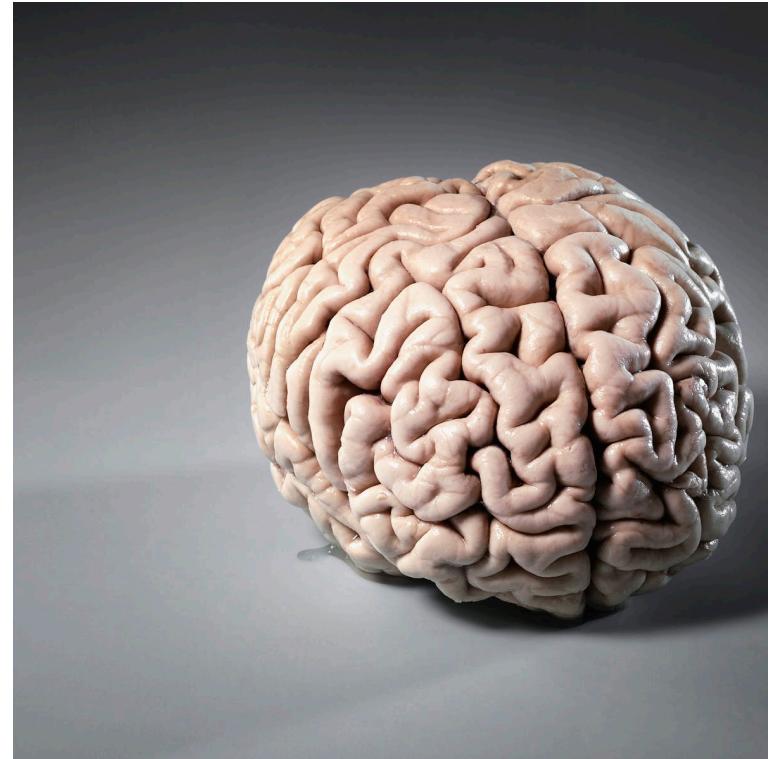
INSTRUMENTAL ACTIVITIES OF DAILY LIVING

- Care of Others
- Care of Pets
- Child Rearing
- Communication Device Use
- Financial Management
- Health Management and Maintenance
- Home Establishment and Management
- Meal Preparation and Clean-up
- Safety Procedures and Emergency Responses
- Shopping
- Community Mobility



COGNITION/COMMUNICATION

- Memory/ Orientation
- Insight
- Executive Functioning
- Spoken Language
- Ability to read/write
- Math/calculation



MOBILITY

- Bed Mobility
- Transfer Mobility
- Wheelchair Mobility
- Ambulation
- Driving





POLLING QUESTION

- Identify this device:



- A) Fizzy lifting drink
- B) Trapeze lift
- C) Fully motorized power lift
- D) Hoyer lift





POLLING QUESTION

- Name the following:



- A) Beezy board
- B) Sliding board
- C) Sit-n-spin
- D) Scooting over device



HOW CAN WE MEASURE DISABILITY?

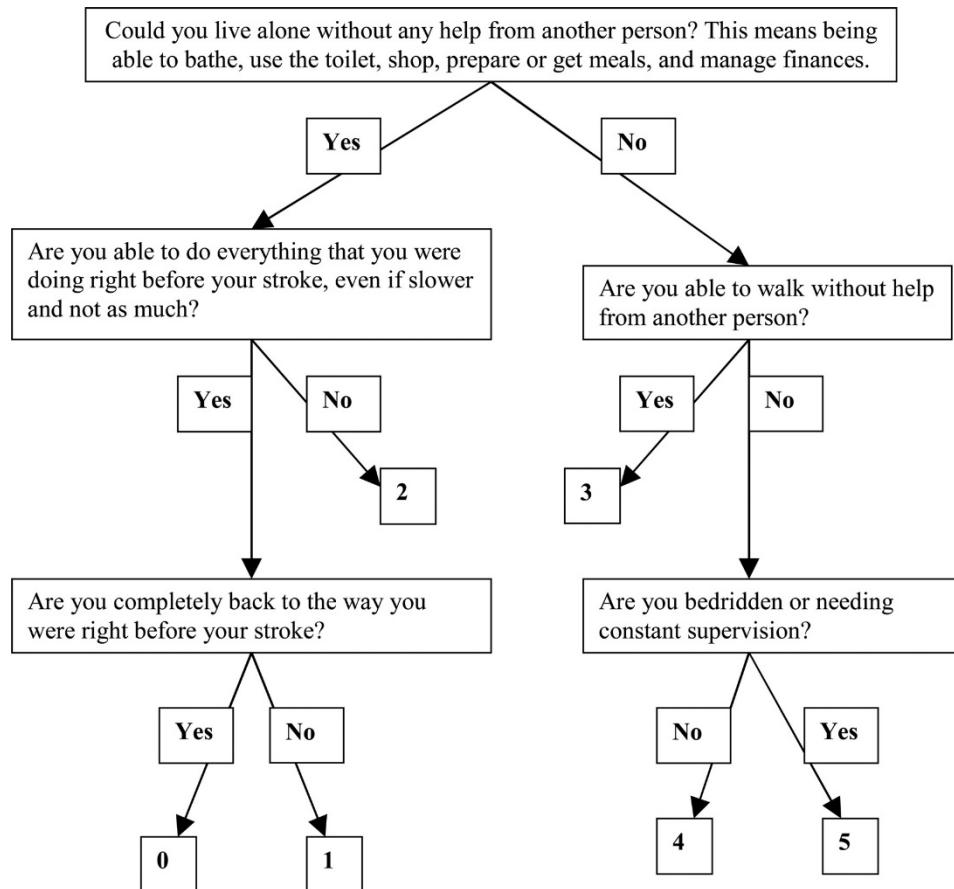
- Measures of Disability
 - Modified Rankin Scale
- Measures of Function
 - Barthel Index
 - Functional Independence Measure (FIM)
 - Activity Measure for Post Acute Care (AM-PAC)



Modified Rankin Score

Score	Definition
0	No symptoms
1	No significant disability. Able to carry out all usual activities, despite some symptoms
2	Slight disability. Able to look after own affairs without assistance, but unable to carry out all previous activities
3	Moderate disability. Requires some help, but able to walk unassisted
4	Moderately severe disability. Unable to attend to own bodily needs without assistance, and unable to walk unassisted
5	Severe disability. Requires constant nursing care and attention, bedridden, incontinent
6	Dead

MODIFIED RANKIN FOR STROKE



Barthel Index Scoring Form

Patient Name: _____ Rater Name: _____ Date: _____

FEEDING

0 = unable
5 = needs help cutting, spreading butter, etc., or requires modified diet
10 = independent

BATHING

0 = dependent
5 = independent (or in shower)

GROOMING

0 = needs to help with personal care
5 = independent face/hair/teeth/shaving (implements provided)

DRESSING

0 = dependent
5 = needs help but can do about half unaided
10 = independent (including buttons, zips, laces, etc.)

BOWELS

0 = incontinent (or needs to be given enemas)
5 = occasional accident
10 = continent

BLADDER

0 = incontinent, or catheterized and unable to manage alone
5 = occasional accident
10 = continent

TOILET USE

0 = dependent
5 = needs some help, but can do something alone
10 = independent (on and off, dressing, wiping)

TRANSFERS (BED TO CHAIR AND BACK)

0 = unable, no sitting balance
5 = major help (one or two people, physical), can sit
10 = minor help (verbal or physical)
15 = independent

MOBILITY (ON LEVEL SURFACES)

0 = immobile or < 50 yards
5 = wheelchair independent, including corners, > 50 yards
10 = walks with help of one person (verbal or physical) > 50 yards
15 = independent (but may use any aid; for example, stick) > 50 yards

STAIRS

0 = unable
5 = needs help (verbal, physical, carrying aid)
10 = independent

TOTAL SCORE= _____

The Barthel ADL Index: Guidelines

1. The index should be used as a record of what a patient does, not as a record of what a patient could do.
2. The main aim is to establish degree of independence from any help, physical or verbal, however minor and for whatever reason.
3. The need for supervision renders the patient not independent.
4. A patient's performance should be established using the best available evidence. Asking the patient, friends/relatives and nurses are the usual sources, but direct observation and common sense are also important. However direct testing is not needed.
5. Usually the patient's performance over the preceding 24-48 hours is important, but occasionally longer periods will be relevant.
6. Middle categories imply that the patient supplies over 50 per cent of the effort.
7. Use of aids to be independent is allowed.



FIM™ instrument

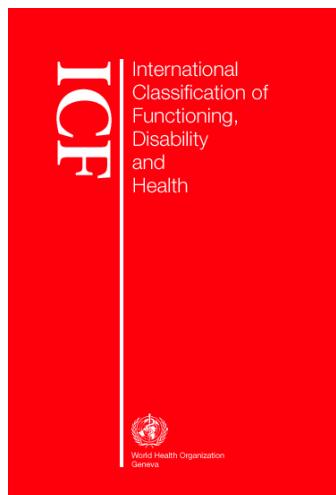
L E V E L S	7 Complete Independence (Timely, Safely) 6 Modified Independence (Device)		NO HELPER		
	Modified Dependence 5 Supervision (Subject = 100%+) 4 Minimal Assist (Subject = 75%+) 3 Moderate Assist (Subject = 50%+)				
	Complete Dependence 2 Maximal Assist (Subject = 25%+) 1 Total Assist (Subject = less than 25%)		HELPER		
			ADMISSION	DISCHARGE	FOLLOW-UP
Self-Care A. Eating B. Grooming C. Bathing D. Dressing - Upper Body E. Dressing - Lower Body F. Toileting		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Sphincter Control G. Bladder Management H. Bowel Management		<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	
Transfers I. Bed, Chair, Wheelchair J. Toilet K. Tub, Shower		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Locomotion L. Walk/Wheelchair M. Stairs		<input type="checkbox"/> <input type="checkbox"/> W Walk C Wheelchair B Both	<input type="checkbox"/> <input type="checkbox"/> W Walk C Wheelchair B Both	<input type="checkbox"/> <input type="checkbox"/> W Walk C Wheelchair B Both	
Motor Subtotal Score		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Communication N. Comprehension O. Expression		<input type="checkbox"/> <input type="checkbox"/> A Auditory V Visual B Both Vocal N Nonvocal B Both	<input type="checkbox"/> <input type="checkbox"/> A Auditory V Visual B Both Vocal N Nonvocal B Both	<input type="checkbox"/> <input type="checkbox"/> A Auditory V Visual B Both Vocal N Nonvocal B Both	
Social Cognition P. Social Interaction Q. Problem Solving R. Memory		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Cognitive Subtotal Score		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
TOTAL FIM Score		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NOTE: Leave no blanks. Enter 1 if patient not testable due to risk					

FIM™ Instrument. Copyright ©1997 Uniform Data System for Medical Rehabilitation, a division of U B Foundation Activities, Inc.
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AM-PAC Activity Domains:

Applied Cognitive	Personal & Instrumental/Daily Activity	Movement & Physical/Basic Mobility
Communication	Grooming and Hygiene	Bend/Stand/Carry
Print Information	Feeding and Meal Prep	Ambulation
New Learning	Dressing	Transfers
Social	Instrumental	WC Skills



Used the WHO ICF as conceptual framework

Number of Items

5-8 per domain.

Inpatient short: 6 per domain.

Outpatient short: 15-18 per domain.

DISABILITY AFTER STROKE

Meta-analysis – ranged from 24% to 49%

- Functional assessments varied

- 31% Modified Rankin Scale
- 19% World Health Organization's International Classification of Functioning, Disability and Health
- 19% Katz' Index of Independence in Activities of Daily Living
- 12.5% London Handicap Scale
- 12.5 % Barthel Index
- 6.25% Functional Independence Measure



RISK FACTORS FOR POST CVA DISABILITY



- Severe stroke with minimal recovery at 4 weeks
- Decreased LOC
- Cardiac disease/EKG abnormalities
- Old age
- Delay in medical care
- Delay in rehab
- Bilateral lesions
- Previous CVA
- Previous functional disability
- Poor sitting balance
- Global aphasia
- Severe neglect
- Sensory and visual deficits
- Impaired cognition
- Incontinence longer than 1-2 weeks

REHAB AFTER STROKE

WHAT DO WE DO AND WHAT SHOULD WE DO?



AHA/ASA Guideline

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*

4 MAY 2016 -STROKE. 2016;47:E98–E169

[HTTPS://DOI.ORG/10.1161/STR.0000000000000098](https://doi.org/10.1161/STR.0000000000000098)

Recommendations: Organization of Poststroke Rehabilitation Care (Levels of Care)	Class	Level of Evidence
It is recommended that stroke patients who are candidates for postacute rehabilitation receive organized, coordinated, interprofessional care.	I	A
It is recommended that stroke survivors who qualify for and have access to IRF care receive treatment in an IRF in preference to a SNF.	I	B
Organized community-based and coordinated interprofessional rehabilitation care is recommended in the outpatient or home-based settings.	I	C
ESD services may be reasonable for people with mild to moderate disability.	IIb	B

Appendix 1. Structure and Organization of Stroke Rehabilitation Care in the United States

Setting	Admission	Median Length of Stay	Specialist Involvement
Acute inpatient facility (hospital)	Near onset	4 d for ischemic stroke 7 d for hemorrhagic stroke	Major: MD, RN More limited: OT, PT, SLT, SW
IRF	5–7 d	15 d (range, 8–30 d)	Major: MD, RN, OT, PT, SLT More limited: SW
SNF	5–7 d	Highly variable (maximum, 100 d)	Major: LPN/LVN, NA, OT, PT, SLT More limited: MD, RN
Long-term care (nursing home)	Highly variable	Prolonged and highly variable	Major: LPN/LVN, NA More limited: RN, OT, PT, SLT, MD
Long-term care hospital	Variable	25-d average (required)	Major: RN, MD More limited: OT, PT, SLT
HHCA	Variable (typically 5–30 d)	Maximum 60-d episode	Major: NA, RN More limited: OT, PT, SLT, MD
Outpatient office	Variable (typically 5–30 d)	Variable	Major: OT, PT, SLT, MD

CMS COMPARISON

Characteristic	IRF	SNF
Attending Physician Visit	3 “face to face” visits per week (though typically 5-7 days)	1 visit every 30 days
Multidisciplinary Team	Required	NOT required
RN Oversight	24 hours/day	At least 8 hours/day
Nursing Hours per patient day	Between 6 -7.5 hours	Between 2.5-4 hours
Rehab Specialized Nursing Staff	Yes – CRRN (Certified Rehab RN)	NOT required
Physical/Occupational and Speech Therapy	3 hours per day, 5 days per week required as minimum	NO minimum requirement



Postacute Care and Ischemic Stroke Mortality: Findings From an Integrated Health Care System in Northern California

Hua Wang, PhD, M. Elizabeth Sandel, MD, Joe Terdiman, MD, PhD,
Mary Anne Armstrong, MA, Arthur Klatsky, MD, Michelle Camicia, MSN, CRRN,
Steven Sidney, MD MPH

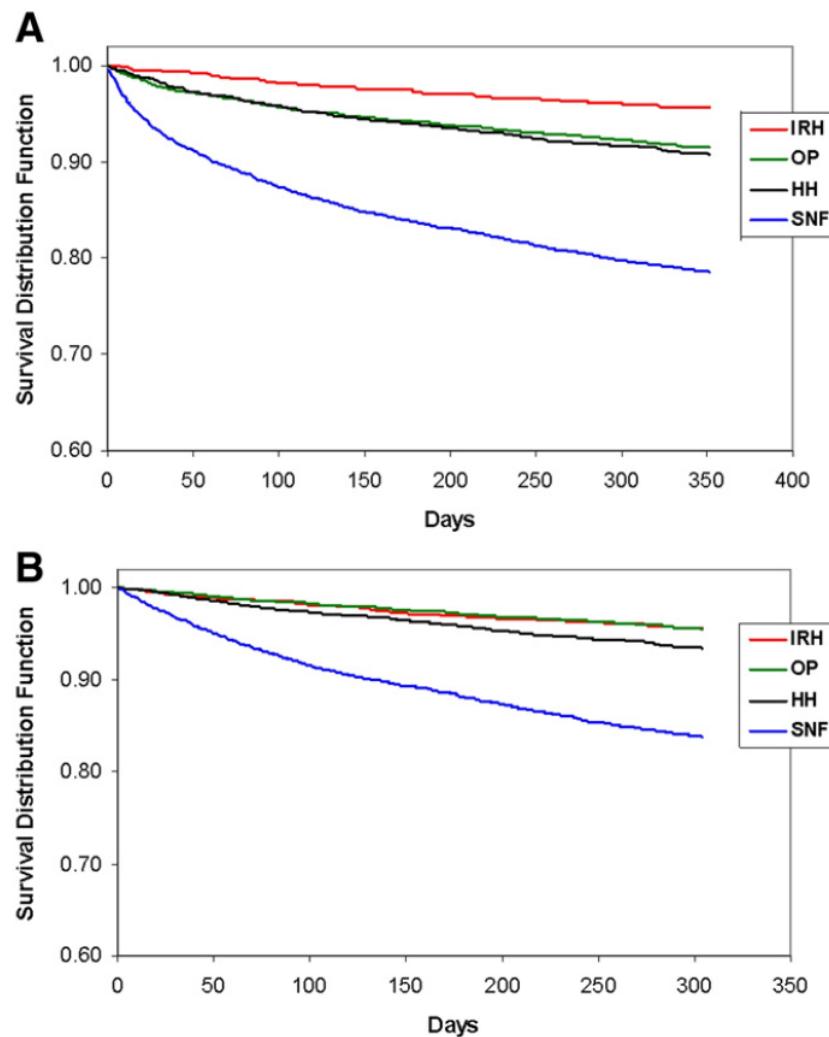


Figure 2. (A) Kaplan-Meier survival curves by highest level of postacute care service received within 14 days of acute care hospital discharge. (B) Kaplan-Meier survival curves by highest level of postacute care service received within 61 days of acute care hospital discharge. IRH = inpatient rehabilitation hospital; OP = outpatient; HH = home health; SNF = skilled nursing facility.

PMR 2011;3:686-694



JOURNAL-BASED CME ARTICLE

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,^e Richard Delmonico, PhD,^b Joseph F. Terdiman, MD, PhD,^d Elizabeth K. Rasch, PhD, PT^a

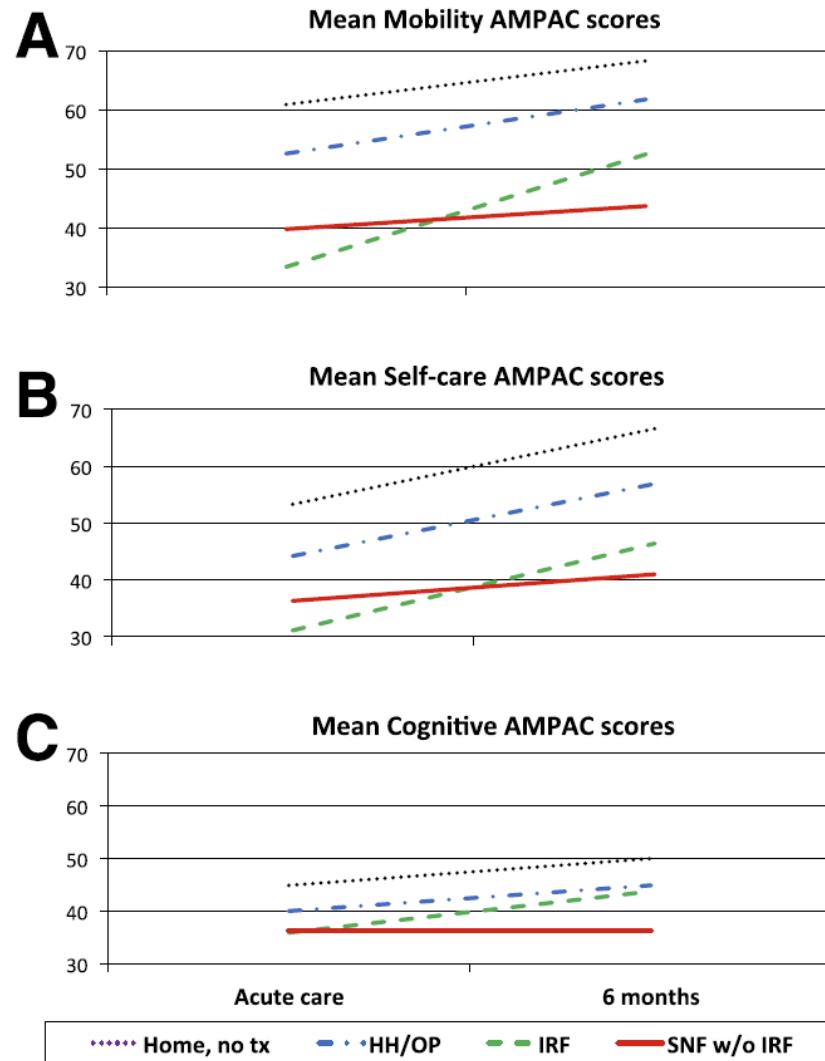


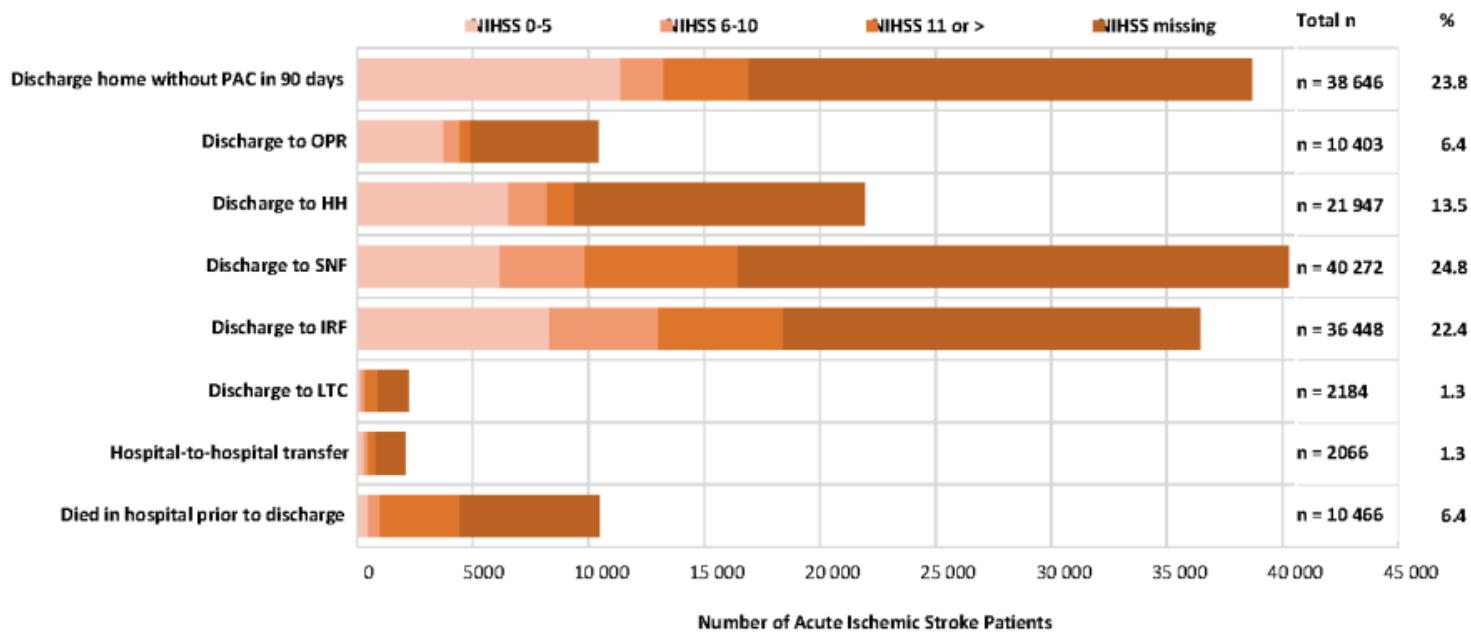
Fig 1 Unadjusted scores across postacute care groups at discharge from acute care and at the 6-month follow-up for the 3 AM-PAC domains. Abbreviations: tx, treatment; w/o, without.

ANALYZING “GET WITH THE GUIDELINES” DATA

- Researchers examined data from 1,192 hospitals enrolled in the American Heart Association’s Get With The Guidelines® (GWTG)-Stroke registry and linked with longitudinal Medicare claims and standardized patient-reported 1-year outcomes from the Adherence eValuation After Ischemic Stroke Longitudinal (AVAIL) study
- 162,432 acute ischemic stroke patients who were ages 65 years or older, had Medicare coverage, and had received acute stroke care.
 - 44% were discharged directly home
 - 22% were discharged to IRFs
 - 25% were discharged to SNFs



Figure 2. First Postacute Service After Index Stroke Hospitalization (N = 162 432)



Abbreviations: HH, home health; IRF, inpatient rehabilitation facility; LTC, long-term care; NIHSS, National Institutes of Health Stroke Scale; OPR, outpatient rehabilitation; PAC, postacute care; SNF, skilled nursing facility.



IRF PATIENTS WITH BETTER OUTCOMES THAN SNF PATIENTS

- **1-year survival:** 82% IRF versus 61% SNF (Risk ratio=0.92; 95% confidence interval [CI]: 0.86, 0.98)
- **Home-time (at 1 year):** an average of 271 days IRF versus 196 days SNF (Risk ratio=1.06; 95% CI: 1.02, 1.09)
- **Rehospitalization (at 1 year):** 54% IRF versus 68% SNF (Risk ratio=0.94; 95% CI: 0.91, 0.98)
- **Institutionalization into nursing home (at 1 year):** 19% IRF versus 32% SNF (Odds ratio=0.54; 95% CI: 0.33, 0.88)



BEST CASE SCENARIO POST STROKE IN KENTUCKY IN 2021

- Acute care hospital stay – 4 days
- Acute inpatient rehab facility stay – 20 days
- Discharge home with strong family support to a handicap accessible home with home health services – home health service has all therapy disciplines needed (PT, OT, and SLP) – HH comes to the house 3 times per week and can stay for longer than 30 minutes – lasts 4-6 weeks
- Patient comes to follow up appointment and is able to transition to outpatient therapy – see all disciplines needed at least twice a week and can afford the therapy co-pays to do so – lasts an additional 4-6 weeks and transitions to home exercises for continued rehabilitation



MORE TYPICAL

The wheels can fall off the cart at every stage along the way

- Acute care stay becomes complicated and lengthens – which then causes superimposed debility or critical care myopathy on top of the initial insult
- Acute inpatient stay is truncated from being deemed “not complex” or from patient being so profoundly impaired that there is minimal progress achieved
- Patient goes directly to SNF and is lost to follow up from everybody – both Neurology and PM&R and complications develop (spasticity/contracture)



FRAGMENTED CARE

- Patient goes directly home and does not receive education on the need for secondary stroke prophylaxis so goes on to have another stroke
- Patient lives in an area where there are no home health providers of a specific discipline (typically nursing and PT always available but there are MANY KY counties without SLP on full time staff and there are often gaps in OT)
- Patient can't afford the co-pays for therapy or does not have support system for transportation



SOCIAL SUPPORTS ARE STRONGEST PREDICTOR OF REINTEGRATION

- “Consistent with previous studies, social support type was correlated significantly with marital status...life partner enhancing self-esteem, mitigating the harmful effects of loneliness, facilitating the adoption of new roles, and providing material resources, which in turn aided in the resumption of normal social activity”

Journal of Stroke and Cerebrovascular Diseases, Vol. 27, No. 4 (April), 2018: pp 1025–1032

Table 2. Items of the CHART social integration subscale

Item number	Item description
1	Living with others
2	Romantic involvement
3	Number of relatives contacted per month
4	Number of vocational associates contacted per month
5	Number of friends contacted per month
6	Number of strangers initiated contact within past month

Abbreviation: CHART, Craig Handicap Assessment and Reporting Technique.



Inadequate Social Support

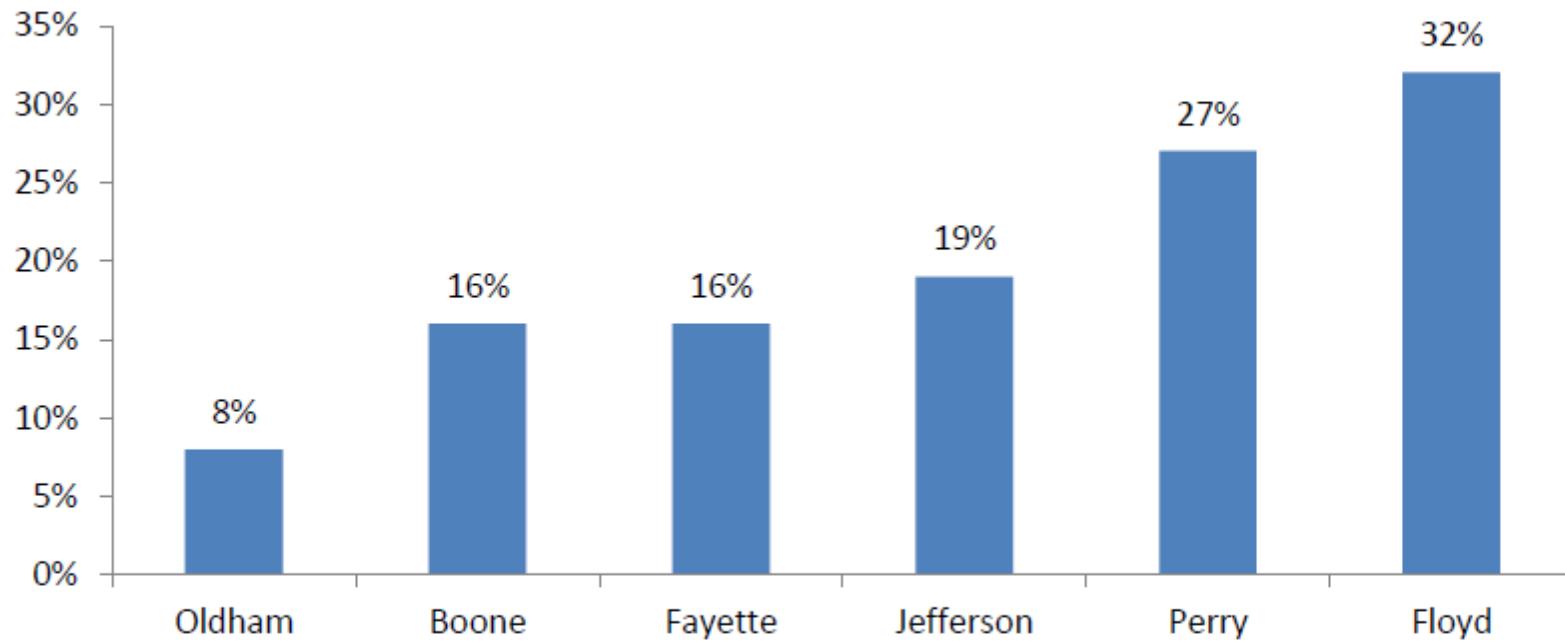


Figure 31. Source: U.Wisc. – County Health Rankings and Roadmaps, 2013

Respondents who “never”, “rarely”, or “sometimes” get the support they need

CHRONIC STROKE SURVIVORS

- Limited options for ongoing therapy
- Home health therapy is not indefinite – many patients may require ongoing nursing/home health aides which then prevents them from doing more aggressive outpatient therapies
- Outpatient therapies also cost money, though “caps” have been eliminated
 - In 2021 Medicare covers up to \$2,110 for PT and SLP combined with another \$2,110 for OT
 - Allows for 20-25 visits annually, depending on medical necessity and the nature of treatment
 - Responsible for 100% of charges thereafter



LACK OF RESOURCES

- IRF Care
 - Not long enough of stay (average LOS 14 days in US)
 - Canada 28 days, Saudi Arabia 48 days, South Africa 62 days
- SNF Care
 - Not enough staff (concerns about nursing ratios)
 - Often transitioned quickly to “restorative” therapy
- Home Care
 - Not enough frequency
 - Not long enough of sessions
- PM&R Care
 - Am I the only one in this half of the state seeing them???





POLLING QUESTION

- Name the following:

- A) Walking stick
- B) Straight cane/single point cane
- C) Quad cane
- D) Trident





POLLING QUESTION

- Identify this device:

- A) Platform walker
- B) Standard walker
- C) Magic leg support
- D) Pyramid walker



WALKING WOUNDED

NOT JUST A MILITARY CONCERN



SOMETIMES DISABILITY IS VISIBLE



BUT SOMETIMES THERE'S THIS...



Rick Warren @RickWarren

6d



Why is it...if any other organ in your body
breaks you get sympathy, but if your
brain breaks, you get secrecy and
shame?



“ADJUSTMENT REACTION” IS PUTTING IT MILDLY

- Loss of independence
 - Can’t move
 - Can’t walk, can’t go to the bathroom, dress/shower, care for themselves
 - Can’t play sports, play music, sew, hike, have sex
 - Can’t swallow
 - Can’t eat foods they once enjoyed – purees reminiscent of baby food
 - Can’t communicate
 - Truly most frustrating thing to happen
 - Can’t write
 - Can’t see
 - Can’t read, watch TV, drive, work, etc.





POLLING QUESTION

- What is this used for?



- A) Avoiding drooling/excess salivation
- B) Preventing spills due to shaky hands
- C) Easier grasp for poor strength
- D) Measuring small volume boluses to swallow



DYSPHAGIA

- Disorder of swallowing
- People forget that your oropharynx and esophagus are made of muscles that can get paralyzed
- Swallowing studies evaluate efficacy of swallow
- Aspiration is highly likely
 - Can be silent and patients/families don't understand our worry



DYSPHAGIA

- Overall prevalence of 25-65% in CVA patients
 - 67% brainstem
 - 28% left hemisphere
 - 21% right hemisphere
- More common in bilateral hemisphere and large vessel lesions
- Delay in pharyngeal phase is most common



I have Aphasia

Aphasia affects my ability to SPEAK and can also affect reading, writing and understanding. My *intellect is not affected* -- only language!

Please take time to communicate with me:

- Speak SLOWLY & Clearly
- Use SHORT sentences
- Give me TIME to respond
- Ask YES/NO questions
- Shouting doesn't help
- Keep it SIMPLE

Thank you for your patience & understanding!



APHASIA

- Recovery:
 - Greatest amount of improvement is in first 2-3 months post onset
 - After 6 months, big drop in rate of recovery
 - In majority, no further recovery after 1 year



VISION IMPAIRMENT

- May be blurred or double vision
 - Inability to focus
- Could be loss of visual field



Hemianopia



Quadrantanopia



NEUROGENIC BOWEL AND BLADDER

- Normally continent adults can struggle with both incontinence or retention of urine – not to mention bowel loss or constipation
- Adult undergarments are not conducive to high self esteem
- Toileting schedules can help retrain your skills but still can have accidents
 - People avoid social outings/leaving home = more and more isolation



BLADDER DYSFUNCTION

- Urinary incontinence = 50-70% in first month, reduced to 15% after 6 months
- Retention can occur (areflexia, spastic bladder, outlet obstruction) – ISC program
- Multiple factors: neurogenic bladder, UTI, impaired ability to transfer to toilet, impaired mobility, confusion, communication disorder/aphasia, perception deficits (lack of awareness of full bladder)
- Treatment: treat UTI, regulate fluid intake, transfer training, patient/family education, timed toileting (“TIAN-toilet in advance of need”), medications
- May need urodynamic studies if no improvement



BOWEL DYSFUNCTION

- 31% rate of incontinence following CVA – usually resolves in first 2 weeks
- Multiple factors: neurogenic -unable to inhibit urge centrally, impaired peristalsis, impaired mobility, confusion, communication disorder/aphasia, perception deficits (lack of awareness of need to void or having just voided)
- Treatment: transfer training, patient/family education, timed toileting (“bowel program”)



POST STROKE DEPRESSION

- Most common neuropsychiatric sequela following CVA
- Prevalence
 - 9% to 34% in first 3 to 6 months
 - 30% to 50% within the first year
- Negatively influences functional recovery
- TCAs and SSRIs both effective for treatment, SSRIs w/ less side effects



POST STROKE DEPRESSION

- Risk factors:
 - Prior psych history
 - Severe ADL impairment/deficits
 - Female
 - Nonfluent aphasia
 - Lack of social support
- Etiology:
 - Organic: related to catecholamine depletion in lesion induced damage
 - Reactive: grief for physical and personal losses, loss of control due to disability



SEXUAL DYSFUNCTION

- Elderly people continue to enjoy active sexual relationships; in addition, CVAs are occurring at a younger age
- Marked decline in sexual activity following CVA
- Korpelainen et al 1999 found 79% of patients had sex at least once/month pre CVA – after CVA this dropped to 45%, and 33% had stopped having intercourse altogether
- Many reasons: emotional factors (fear, anxiety, self-esteem), medications started that worsen fx (antidepressants, anticholinergics, opioids)
- Tx: supportive psychotherapy/counselling, urology consult



IN CONCLUSION

- Disability from stroke remains a formidable challenge to overcome
 - Impairments impact function in work life, home life and affect overall quality of life
- Post acute care of stroke survivors varies widely
 - The more therapy one receives following CVA improves recovery outcomes
 - Inpatient rehab facilities have multidisciplinary team to aid in family and patient education
- Hidden disabilities can remain after obvious physical manifestations from the stroke resolve



Thank you for your time and attention!

QUESTIONS?



