Stroke Rehabilitation:
local services & primary care connection

Reconnecting over Stroke - a Primary Care Update –

Stroke Network of Southeastern Ontario

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Stroke Network of SEO
www.strokenetworkseo.ca

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Objectives

"JOIN US FOR AN OPPORTUNITY TO LEARN ABOUT:"

- "The roles of **local / tertiary stroke care centres** in the region"…
  - ***Stroke Rehabilitation - what we do & how we connect***
  - *Inpatient, Outpatient, Community Rehab (& services)*
  - *few topics: 1) spasticity/hemiplegic shoulder pain & 2) transition planning/education*

- "What (new) **supports** are **available** to patients in your community"…
  - *Inpatient, Outpatient (& future), Community Rehab (& services)*
- "Discuss **challenges and opportunities** with your colleagues and specialists in your area…"
  - *Questions, further discussions*

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Stroke – Impact & Recovery *(in Canada)*

- Epidemiology: stroke is **common**
  - >400,000 Canadians *(& increasing)* living with the effects of stroke

- stroke is the **leading cause of adult disability**
  - **~60%**: **some** persistent disability
  - **>40%**: **moderate to severe** disability that requires more intense rehabilitation and support in the community
  - ~19% of people with stroke accessed inpatient rehabilitation services in 2016 *(aiming for greater accessibility)* and 10% were admitted to LTC

Canadian Stroke Best Practice Recommendations

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Stroke Rehabilitation – Background

- **Definition/Concepts**
  - **progressive**, **dynamic**, **goal-orientated** process
  - aimed at enabling a person with stroke-related impairment to reach their **optimal** physical, cognitive, emotional, communicative, & social **functional level**
  - a **process**, NOT a setting

- **Evidence**
  - continues to grow
    - e.g., estimated 2400 RCTs (as of 2020); motor focus
  - challenges
    - e.g., RCT size & site #; implementation (including intensity)

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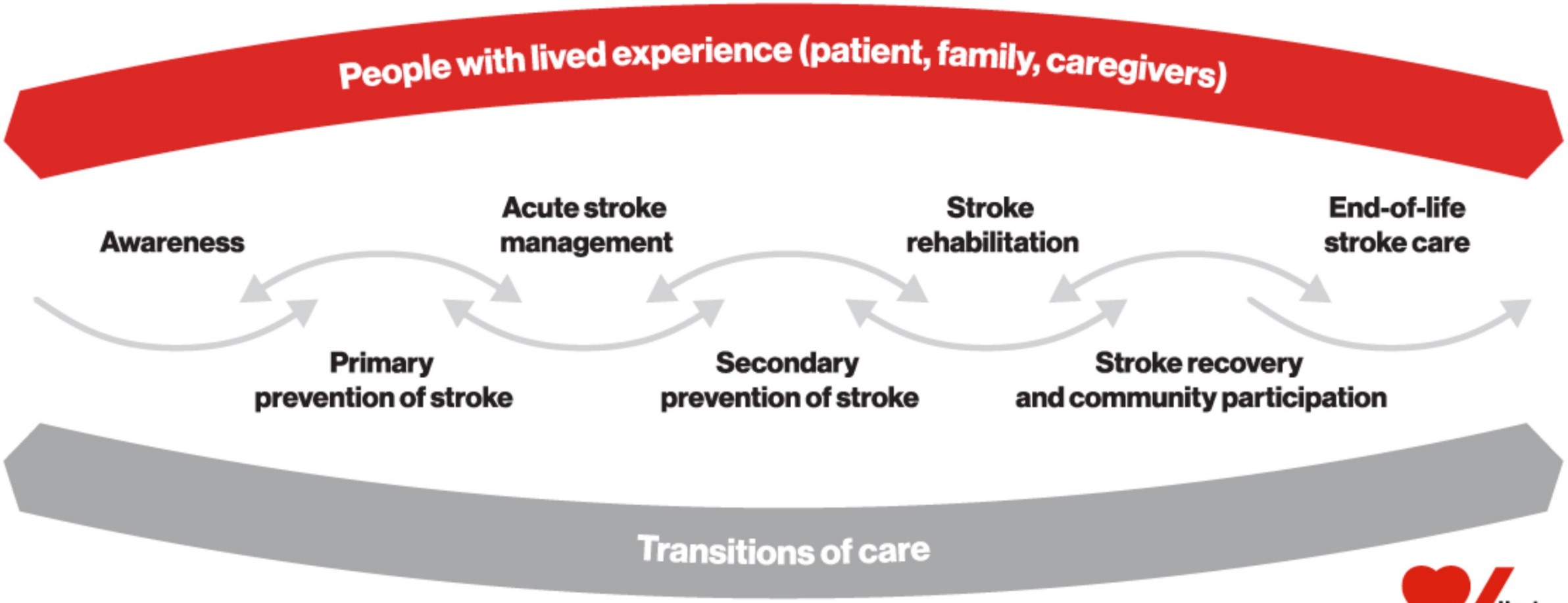
Stroke Rehabilitation – Context

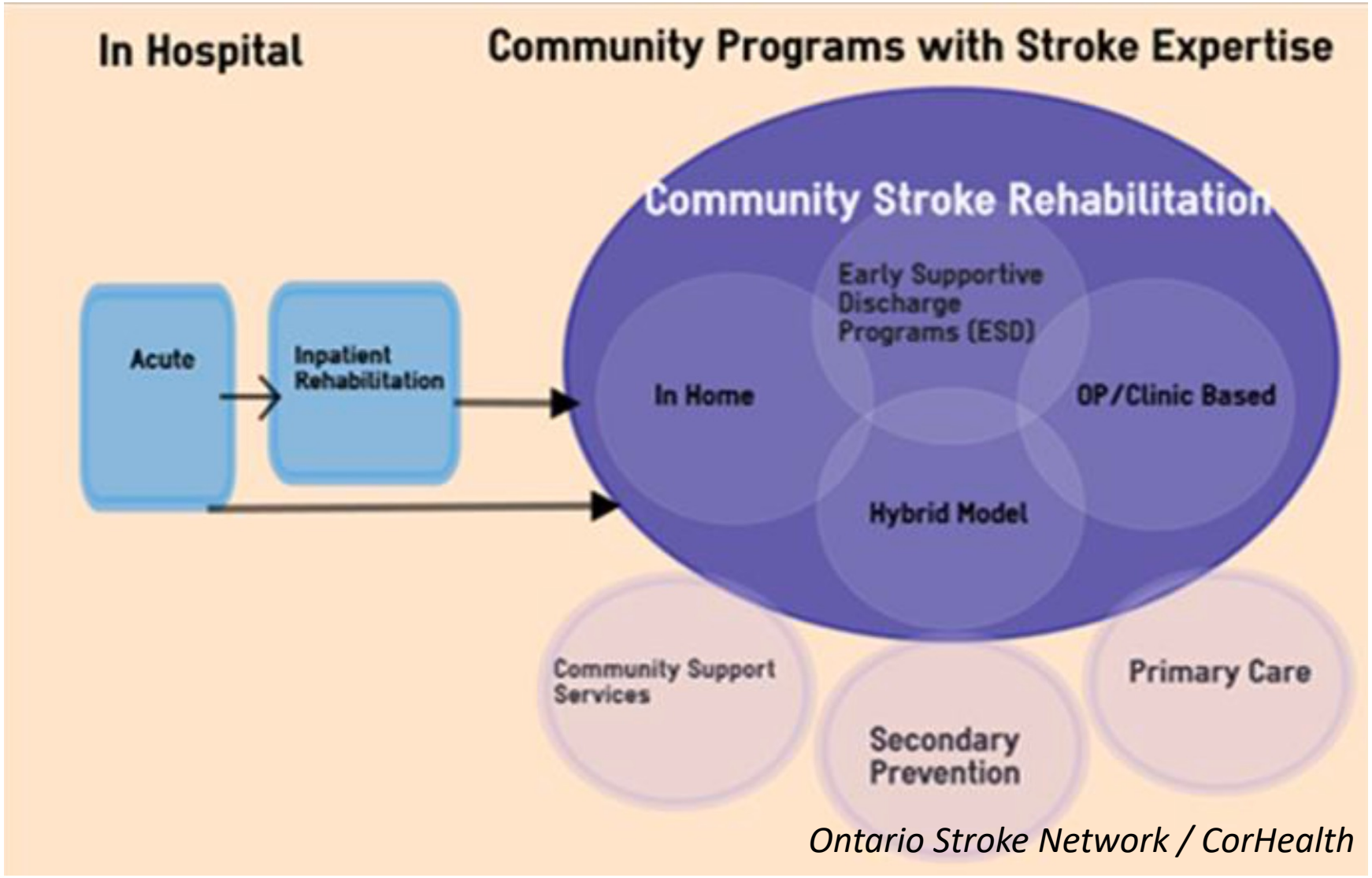


Heart & Stroke / CSBPR

Stroke Rehabilitation

WHERE, WHO, WHAT

- **Inpatient**
- **Outpatient**
- **Community**



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Stroke Rehabilitation – Inpatient

WHERE – Principles

- **Stroke rehabilitation unit care**
  - people who require inpatient rehab following stroke should be treated on a **specialized stroke rehabilitation unit** *(Evidence Level A)*
  - **geographically defined** *(Evidence Level A)*
  - **interdisciplinary rehabilitation team** with **expertise/core training** in stroke rehabilitation *(Evidence Level A)*

Canadian Stroke Best Practice Recommendations

WHERE – Local (KFL&A)

- **Providence Care Hospital (PCH) – Lakeview 1**
  - 30 bed rehab unit
  - primarily Stroke (& MSK – flexibility)
  - **high-intensity** rehabilitation (only such beds at PCH/KFL&A)

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Stroke Rehabilitation – Inpatient

WHERE – Local (KFL&A)

- **Providence Care Hospital (PCH) – Lakeview 1 – DATA** (last 12 months)
  - Volumes
    - ~200 patients / year *(+ other units)* - <u>& ↑ing</u>
    - ~30-35% of acute stroke
  - Referral source: KHSC >97%
    - Others: community hospitals, Quinte-hemodialysis
  - Diagnosis:
    - Ischemic: ~95%
    - Hemorrhagic: ~5%

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Stroke Rehabilitation – Inpatient

WHERE – Local (KFL&A)

- **Providence Care – Other Units**
  - PCH - Complex Care, Brain Injury > Geriatrics, Mental Health units
  - PTCC / restorative care
  - *Patients with greater stroke severity, less activity tolerance, greater medical complexity, or other (e.g., medical or mental health) issues = primary*
  - **interdisciplinary care teams**
    - **& Stroke PM&R** (Dr. Ritsma)
    - *ongoing reassessments*

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Stroke Rehabilitation – Inpatient

WHO – 'Criteria'

- People with **moderate or severe** stroke, who are **ready** for rehabilitation and have **goals amenable** to rehabilitation, should be given an opportunity *(Evidence Level A)*
  - *Considerations:* **disability** (**severity** & **#** of **domains**); **#** of **therapeutic disciplines**; **baseline function**, **tolerance/participation/learning**

WHEN – 'Criteria'

- All patients with stroke should receive rehabilitation therapy **as early as possible** once they are **medically stable** & **able to participate** in active rehabilitation *(Evidence Level A)*

Canadian Stroke Best Practice Recommendations

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Stroke Rehabilitation – Inpatient

WHO – Assessment

- *care & triage*
- **Who**: acute & rehab teams
- **Where**: on-site / electronic / hybrid assessment (rehab assessors/patient flow teams)
  - **Local (KFL&A):** pre- & post-2019 ('Fast-Track' Program…)
- **How:** standardized, validated **tools**… *Canadian Stroke Best Practice Recommendations*
- **What**: **function**-based (esp. ADLs; & communication/cognition, swallowing)
  - ADLs/Activities of daily living (self-care) *Canadian Stroke Best Practice Recommendations*

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Stroke Rehabilitation – Assessment / Tools

AlphaFIM®

- abbreviated version of FIM (Functional Independence Measure) assessment instrument
- literature supported (reliability, validity, projecting FIM ratings) *Stillman et al., 2009*
- **Purpose**: (in acute care hospital setting) consistent method of assessing patient **impairments** & **functional status** (i.e., **stroke severity**)
- **Completion**: by trained & credentialed team member

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Stroke Rehabilitation – Assessment / Tools

AlphaFIM®

- **Content:** 6 Items (N.B.: patient walks < or ≥ 150ft)
- **Scoring / Rating Levels:** 1 – 7 scale

7. **Complete Independence** (no device, timely, safely)
6. **Modified Independence** (device, not timely, or not safely)
5. **Supervision** (patient performs 100% of the effort)
4. **Minimal Assistance** (patient performs ≥ **75%** of the effort)
3. **Moderate Assistance** (patient performs **<50-74%** of the effort)
2. **Maximal Assistance** (patient performs **25-49%** of the effort)
1. **Total Assistance** (or Not Testable) (patient performs **<25%** of the effort)

if can walk <150 ft	*if can walk ≥ 150 ft*
Eating	*Transfers: Bed Chair*
Grooming	*Walk*
Bowel Management	Bowel Management
Transfers: Toilet	Transfers: Toilet
Expression	Expression
Memory	Memory

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Stroke Rehabilitation – Assessment / Tools

AlphaFIM®

- **Stroke Severity**:

AlphaFIM® Score	
Mild	> 80
Moderate	40 to 80
Severe	< 40

- **Use**:
  - informing discharge planning
  - Rehab '**triage'** (aligning rehab services to patient needs)
  - **moderate-severe**: **inpatient** rehabilitative care
    - lower scoring (e.g., <40): consider alternative programs (e.g., restorative care, complex medical)
  - **mild**: consider **outpatient/community-based** rehab
    - *N.B.: only **1 component** for consideration*
  - **Recommendation**: use provincially & nationally *(@ acute Day 3)*

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Stroke Rehabilitation – Assessment

Local (KLF&A) - Stroke Rehab – **'Fast Track' Program**

- partnership – PCH / KHSC / Stroke Network SEO
  - **Fast Track Working Group** (2019-present)
- **no PCH team assessment** …agreed upon 'Rehab' criteria (rehab acceptance)
  - admitted under Stroke Neurology
  - PT/OT (acute care) assessment complete
  - AlphaFIM® (not 'fixed')
  - acute team considers a rehab candidate (e.g., anticipates tolerating 1 hour of therapy)
  - medically stable: e.g., vitals, Tx (&/or Tx plan) for stroke in place
  - if have NG tube: SLPs connected & plan in place

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Stroke Rehabilitation – Assessment

Local (KLF&A) - Stroke Rehab – **'Fast Track' Program**

- Result (*World Stroke Congress 2023*)
  - reduction in time for rehab acceptance
  - reduction in time from acute care admission to rehab referral time
  - reduction in time from to rehab admission [median 18.5 days → 7 days (FT group)]
    - overall volumes ↑ing
    - current: ~90% of stroke rehab referrals = FT
  - patient tracer (patient input)
  - added collaboration (KHSC/PCH)

IMAGE

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Stroke Rehabilitation – Inpatient

WHO – Care Team

- **interdisciplinary rehabilitation team** (core & additional disciplines)
- all professional members of the rehabilitation team should have **specialized training** in stroke care and recovery *(Evidence Level A)*
  - core disciplines: **expertise/core training** in stroke rehabilitation
- all professional team members should be **trained** in **supported conversation** to be able to interact with patients with communication limitations *(Evidence Level B)*

Canadian Stroke Best Practice Recommendations

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Stroke Rehabilitation – Inpatient

WHO – Care Team - Local (KLF&A)

- **interdisciplinary care team**: nursing, OT, PT, SLP, SW, spiritual care, therapy assistants, RD, behavioural tech/BT
  - Hospitalists - Division of Hospital Medicine (Department of Family Medicine)
  - Stroke PM&R
  - Other MDs: unit/patient dependent (e.g., Geriatrics, Psychiatry/Geri-Psychiatry etc.)

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Stroke Rehabilitation – Inpatient

WHAT / HOW

- **Principles**:
  - **evidence-based** best practices
  - **goal-oriented**
  - **individualized**, monitored, updated
  - **patient-centred**, family/caregiver inclusion, shared decision-making
- **Elements/Process**:
  - Assessment (medical, stroke/neurological, functional - ADLs / mobility, IADLs) – **standardized, validated**
  - Therapy – function/**task-specific** focus
  - Interdisciplinary **Team Meetings**
  - **Transition** / **Discharge Planning** *(e.g., Family Conference; ongoing)*
  - **Education** *(e.g., Family Conference; ongoing)*

Canadian Stroke Best Practice Recommendations

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Stroke Rehabilita

WHAT / HOW

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  - **patient-centred**, family/
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Canadian Stroke Best Practice Recommendations

Original Research Article

CLINICAL REHABILITATION

Clinical Rehabilitation
1–12

DOI: 10.1177/02692155221146448
journals.sagepub.com/home/cre
SAGE

The virtual family conference in stroke rehabilitation: Education, preparation, and transition planning

Benjamin R. Ritsma[1], Peter J. Gariscsak[2], Aarti Vyas[3], Sophy Chan-Nguyen[3], and Ramana Appireddy[3]

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Stroke Rehabilitation – Inpatient

WHAT / HOW

- **Communication with Primary Care providers**
  - D/C summary from acute care (KGH)
  - D/C summary from rehab admission (PCH) – medical (hospitalist)
  - D/C summary – therapeutic (interdisciplinary team)
    - PM&R (consultation/intervention & follow-up/clinic notes - e.g., spasticity)
  - linkage to community rehab/services (e.g., Community Stroke Rehab, VON etc.)

  - **Communication with Stroke Neurology / Stroke Prevention Clinic**
    - @ transfer & ongoing prn
    - virtual Stroke Prevention Clinic (PCH to KHSC) – OTN (eVisit)

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Stroke Rehabilitation – Inpatient

WHAT / HOW

- **Transition Planning / Community Connections**
  - Communication with primary care
  - Family Conference
  - Pharm - Med Reconciliation
  - Pre-discharge home assessment
  - Community Rehab Planning ('Discharge Link') meeting
    - PCH stroke rehab + Community stroke rehab team + patient/caregiver
  - Outpatient &/or Community Rehab/Service Referrals
- **Research**
  - CanStroke Trials network: NEW…neuroplasticity/recovery trials

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Stroke Rehabilitation – Outpatient / Community

WHERE – Principles *(overlap with Inpatient)*

- People with **ongoing rehabilitation goals** should continue to have access to **specialized stroke services** after leaving hospital *(Evidence Level A)*
  - This should include **facility-based outpatient services** and/or **in-home rehabilitation services** *(Evidence Level A)*
- Outpatient and/or in-home rehabilitation services should be provided by **specialized interdisciplinary team members** as appropriate to patient needs and in consultation with the patient and family *(Evidence Level C)*
- The choice of setting for outpatient and/or in-home rehabilitation service delivery should be based on patient functional **rehabilitation needs**, participation-related **goals**, availability of family/social **support**, patient and family **preferences** *(Evidence Level C)*

Canadian Stroke Best Practice Recommendations

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Stroke Rehabilitation – Outpatient / Community

WHERE – Local (KFL&A)

- **Outpatient Rehab – PCH**
  - To date: no interdisciplinary team (no funding/$)
    - neuro-PT/physiotherapy
  - <u>Future</u>:
    - CorHealth/OH – Community Stroke Rehabilitation (CSR) →

      PCH Outpatient Stroke Rehabilitation Program
      - *interdisciplinary team: OT, PT, SLP, SW*
      - *organization, phased, more news to come*
    - **hybrid** *(outpatient & community)*

CorHealth Ontario

Ontario Health

Providence Care

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Stroke Rehabilitation – Outpatient / Community

WHERE – Local (KFL&A)

- **Outpatient Stroke PM&R/Physiatry Clinic – PCH**
  - e.g., **spasticity** ('tone')

    Canadian Stroke Best Practice Recommendations:
    - **Referral** (PM&R/physician with knowledge of comprehensive Tx options)
    - **Oral pharmacotherapy:** can be **considered** for the Tx of disabling spasticity, **but S/Es** of fatigue/drowsiness are common & benefits appear to be marginal
    - focal therapy – **Chemodenervation (botulinum toxin/BoNT)**:
      - Upper extremity: can increase **ROM** & decrease **pain** (Level A)
      - Lower extremity: can reduce **spasticity**, increase **ROM**, & improve **gait** (Level A)

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Stroke Rehabilitation – Outpatient / Community

WHERE – Local (KFL&A)

- **Outpatient Stroke PM&R**
  - e.g., **spasticity** ('tone')

    Canadian Stroke Best Prac
    - **Referral** (PM&R/physician
    - **Oral pharmacotherapy:** ca
      S/Es of fatigue/drowsiness
    - focal therapy – **Chemoder**
      - Upper extremity: can ir
      - Lower extremity: can re

Providence Care

PHYSICAL MEDICINE AND REHABILITATION
OUTPATIENT CLINIC REFERRAL

PERSONAL HEALTH INFORMATION

Fax Referral to Providence Care Central Intake 613-548-5595
Tex

DATE OF REFERRAL: YYYY/MM/DD

REFERRAL SOURCE:

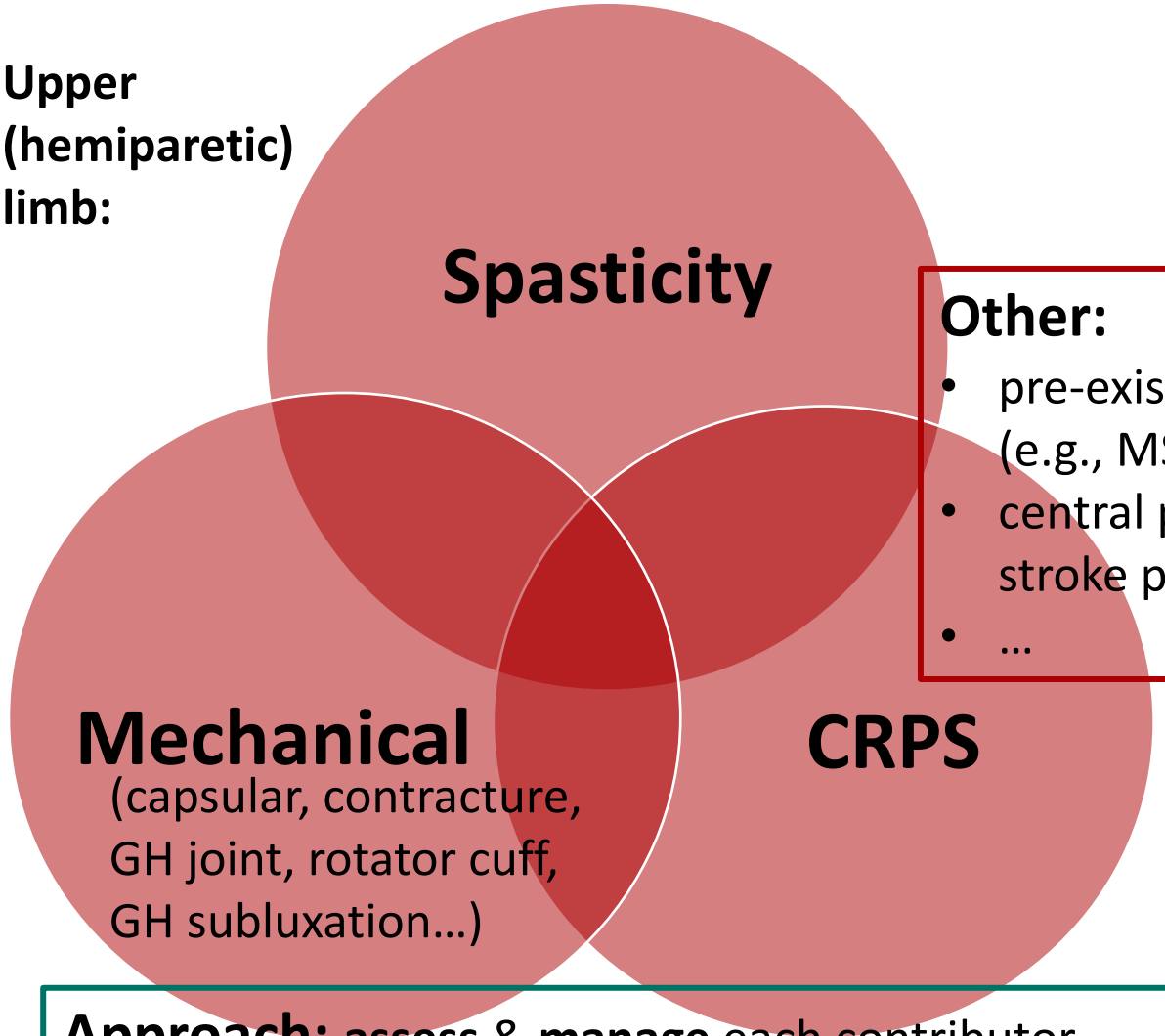
NEUROREHAB:

☐ Stroke ☐ Acquired/Traumatic Brain Injury ☐ Multiple Sclerosis
☐ Spinal Cord ☐ Adult Neuromuscular Clinic ☐ Other neuro:_____
☐ **EMG** (Electromyography)/Nerve Conduction Studies

REASON FOR REFERRAL/REFERRAL QUESTION(S):

Spasticity & …

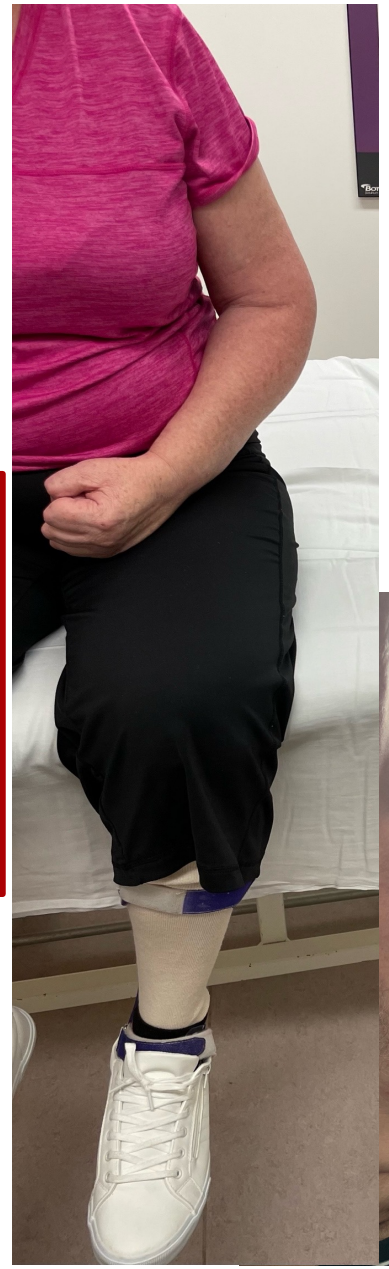
Upper (hemiparetic) limb:

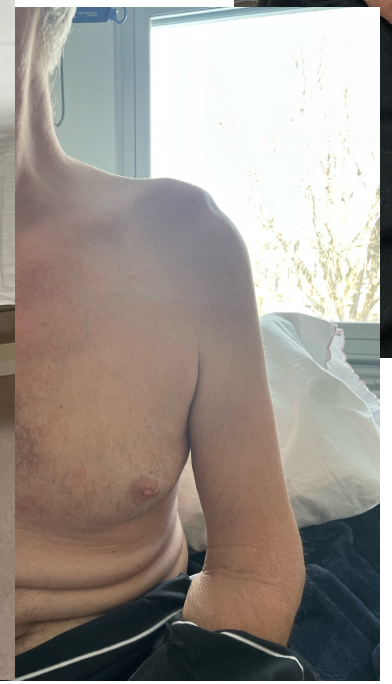


Other:

- pre-existing (e.g., MSK)
- central post-stroke pain
- …

Approach: assess & **manage** each contributor





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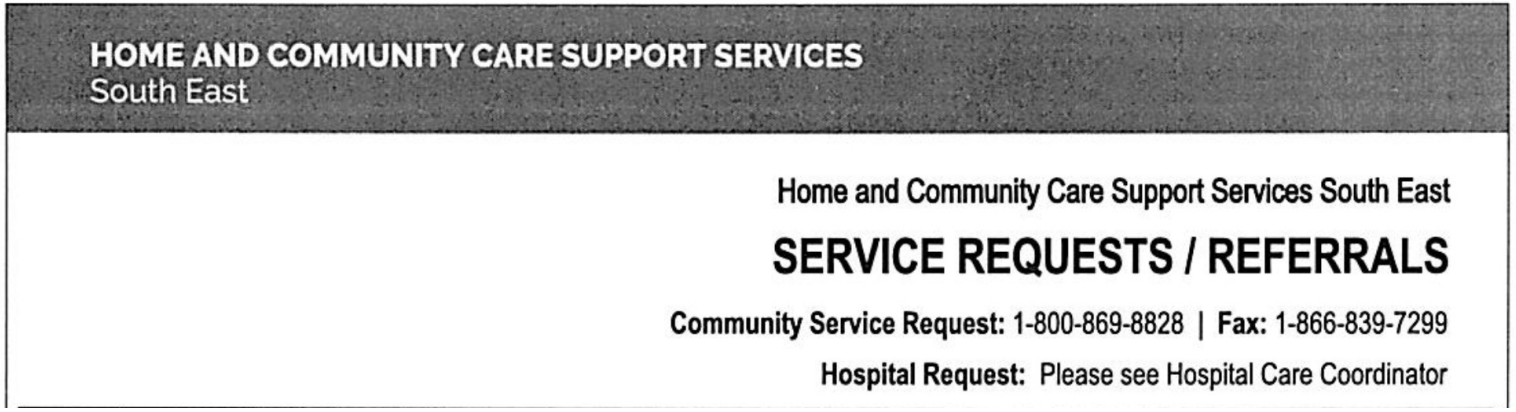
Stroke Rehabilitation – Outpatient / Community

WHERE – Local (KFL&A)

- **HCCSS - Community Stroke Rehab Program (CSRP)**
  - **therapy team (OT, PT, SLP)**
  - & Other HCCSS services: PSW, rapid response nursing, nursing



- **Community Stroke Support Services**
  - **Emilia Leslie…next session**

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Thank you

- Questions?

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