Building a Sustainable Integrated Stroke System of Care:
A population-based approach to bundled care

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Toronto Stroke Networks
North & East GTA

Toronto Stroke Networks
Toronto West

Evaluation

For the **Provincial Stroke Rounds Planning Committee**:

- To plan future programs
- For quality assurance and improvement

For **You**: Reflecting on what you've learned and how you plan to apply it can help you enact change as you return to your professional duties

For **Speakers**: The responses help understand participant learning needs, teaching outcomes and opportunities for improvement.

Online Evaluation Code: https://www.surveymonkey.com/r/D62GFMB

Please take 2 minutes to fill out the evaluation form, either online or in the room.

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Thank you!

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Disclosure of Affiliations, Financial Support, & Mitigating Bias

Beth Linkewich
Affiliations: *I have no relationships with for-profit or not-for-profit organizations*

Nicola Tahair
Affiliations: *I have no relationships with for-profit or not-for-profit organizations*

Financial Support: *This session/program has not received financial or in-kind support.*

Mitigating Potential Bias (Provincial Stroke Rounds Committee): *The Provincial Stroke Rounds Committee mitigated bias by ensuring there was no Industry involvement in planning or education content.*

Objectives

- Identify the value of utilizing a population-based approach to support sustainable integration of stroke care
- Describe key learnings and enablers for system level bundled care planning
- Discuss considerations for the broader application of a population-based approach to stroke bundled care, including in rural settings

Where Did We Start?

Overview of current system in Toronto and how we could tailor our approach to integrated stroke care:

- Developed and implemented a self-assessment tool for organizations to understand their performance relative to Canadian Stroke Best Practice Recommendations
  - ***Standards of Care***
    - Acute
    - Rehab
    - Community
    - Secondary prevention

- Leverage learnings when considering spread
  - The Integrated Funding Model pilot
  - Provincial Integrated Outpatient and Community-Based Rehabilitation Working Group

Stroke Bundled Care

CorHealth Ontario:

- Coordination for efficient and high-quality care
- Acute ‘bundle holder’ is responsible for post-acute services
- Ten post-acute stroke pathways
- Best practice implementation
- Shared accountability across the continuum

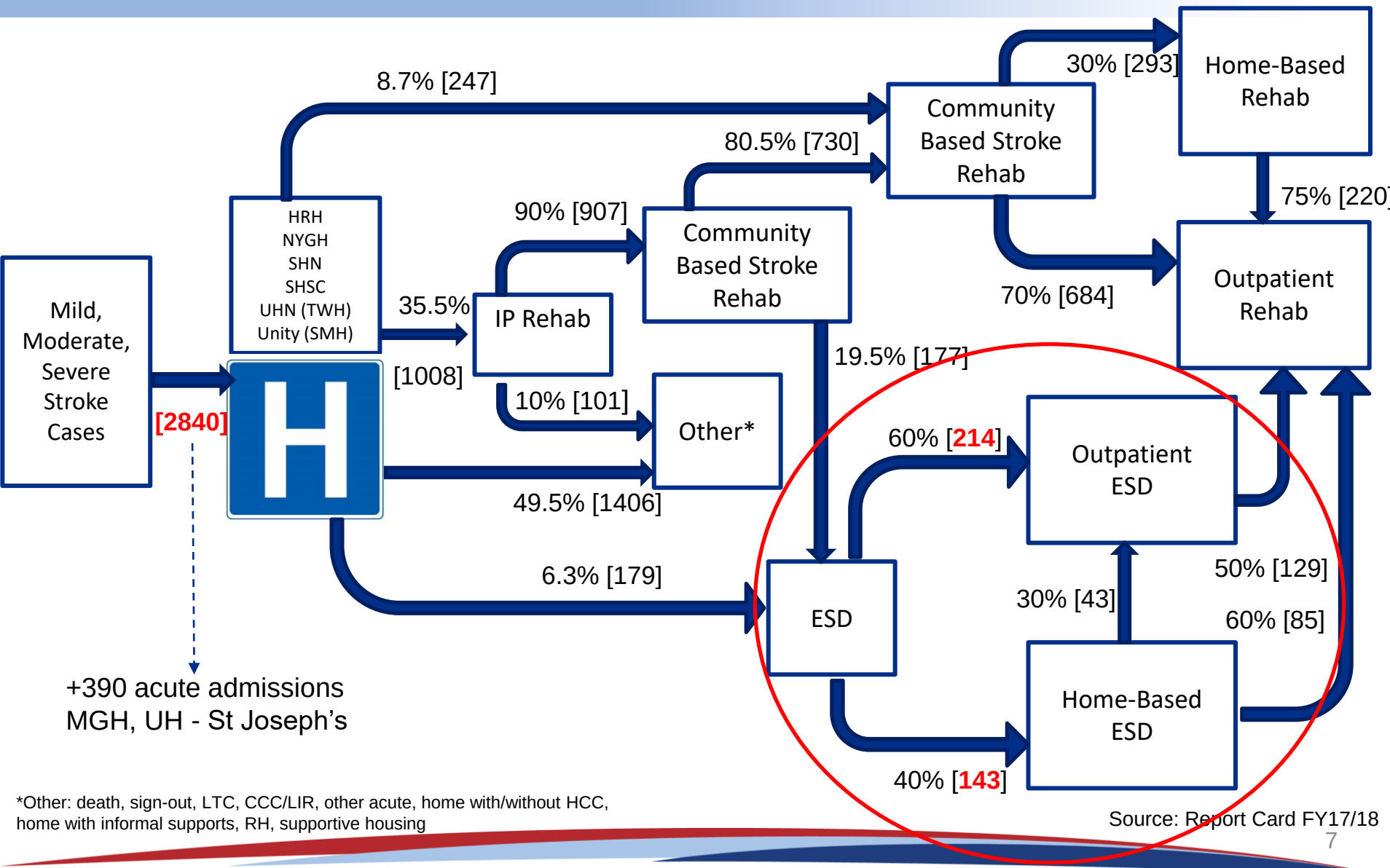
Integrated care drives performance, improves communication, and ensures individualized patient care plans are followed [1]

In Toronto, bundled care services align within geographical hubs, utilizing population data to support sustainable and equitable delivery of stroke services closest to home.

[1] Health Quality Ontario: https://www.hqontario.ca/Portals/0/Documents/evidence/clinical-handbooks/community-stroke-20151802-en.pdf

Estimated Demand for Post Acute Services in Toronto

Toronto Stroke Networks



*Other: death, sign-out, LTC, CCC/LIR, other acute, home with/without HCC, home with informal supports, RH, supportive housing

Source: Report Card FY17/18

Principles for Planning

Vision: A sustainable integrated stroke care system

Principles:

- Equitable access to post-acute rehabilitation across geographies
- Patient-centred – based on patient need
- Ensure sustainability of best practices

Three Levels of Analysis: Post Acute Services

Toronto Stroke Networks

1) Acute Geography

Based on acute care admission volumes in a region

2) Referral Patterns

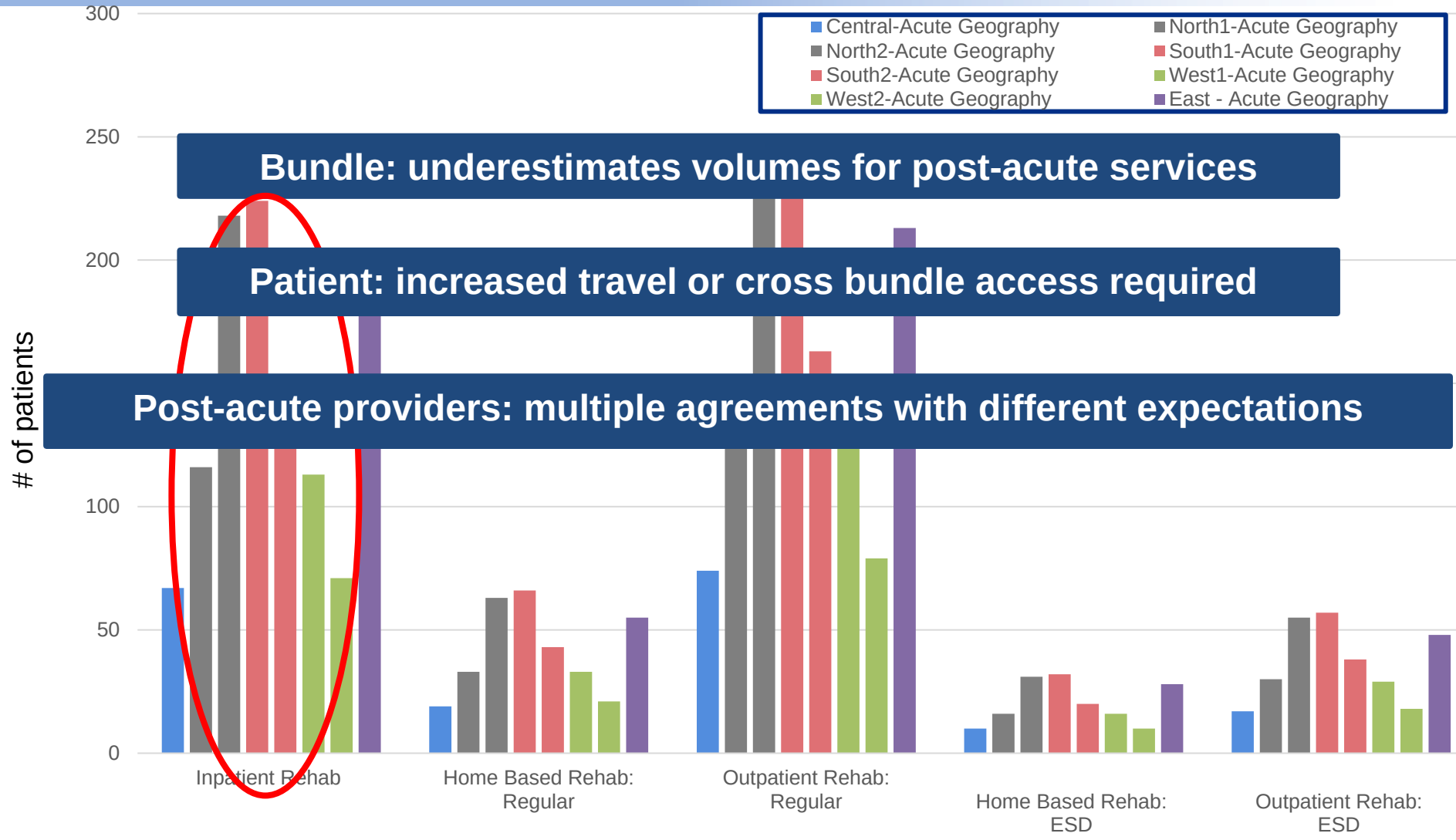
Based on inpatient rehab admission patterns

(E-Stroke)

3) Population Data

Based on postal code data

1) Acute Geography Analysis



Three Levels of Analysis: Post Acute Services

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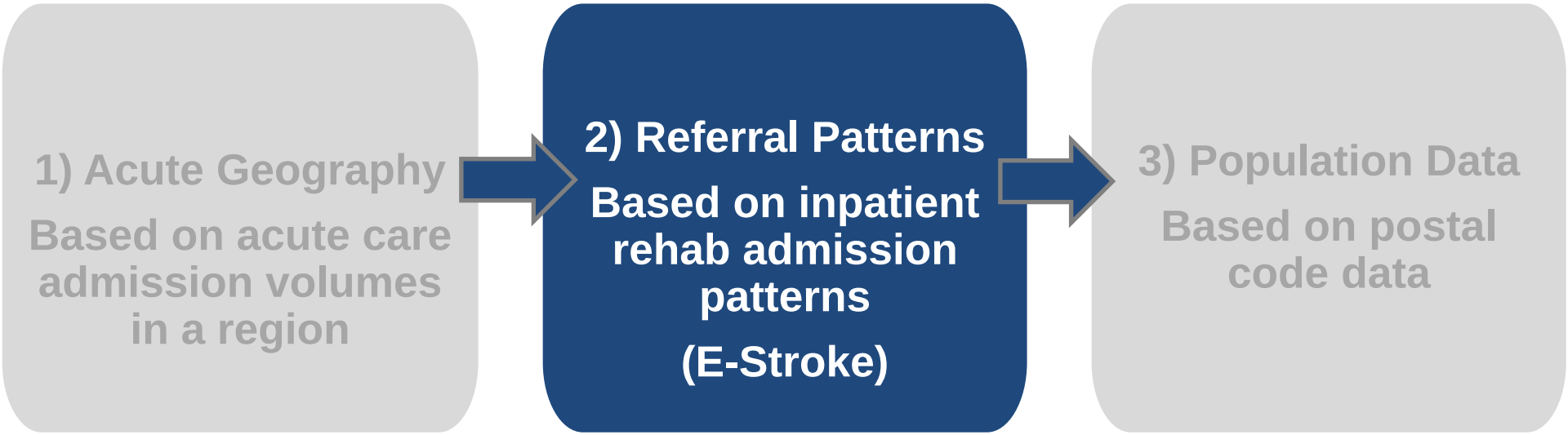
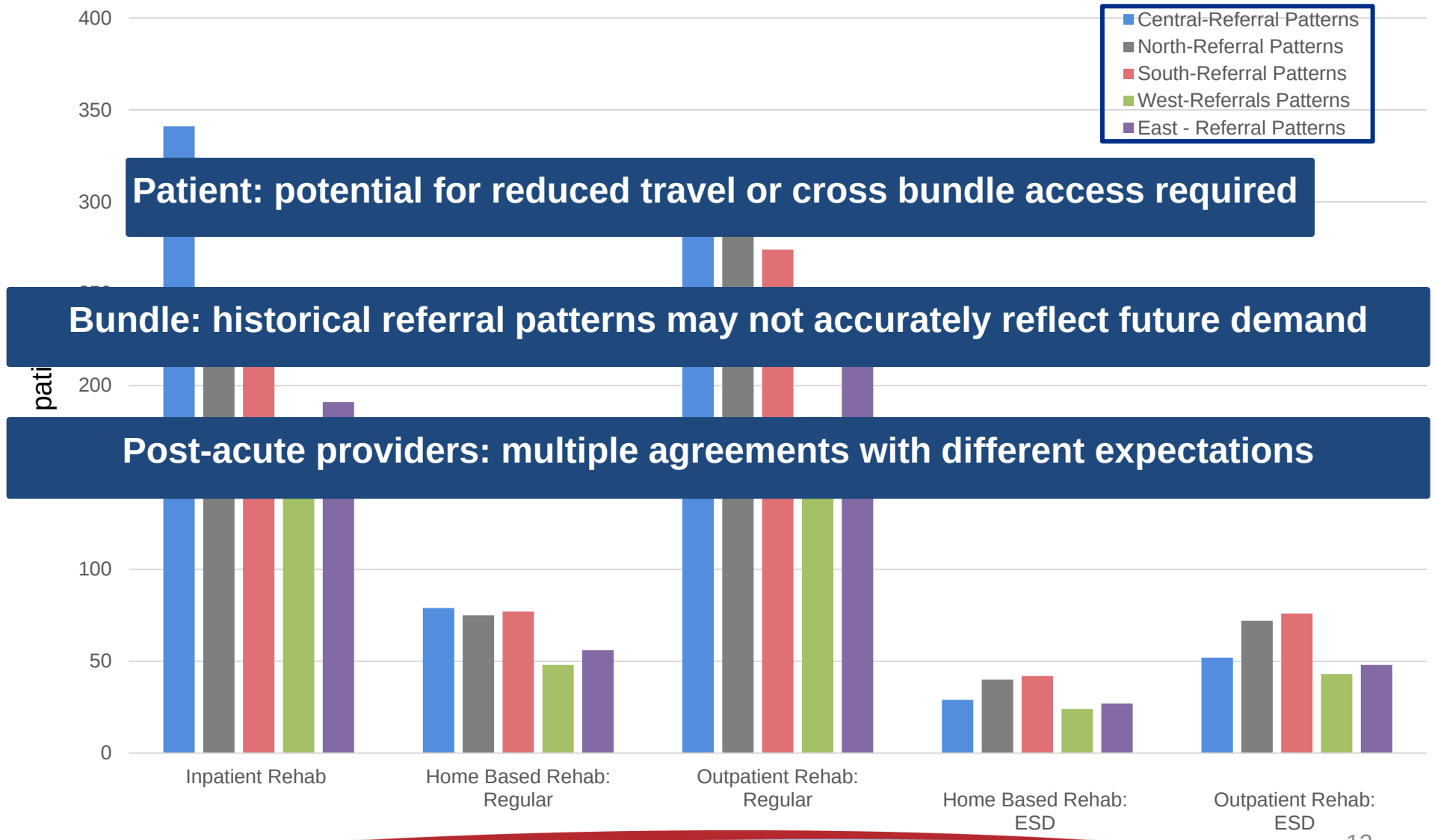


2) Referral Pattern Analysis



Patient: potential for reduced travel or cross bundle access required

Bundle: historical referral patterns may not accurately reflect future demand

Post-acute providers: multiple agreements with different expectations

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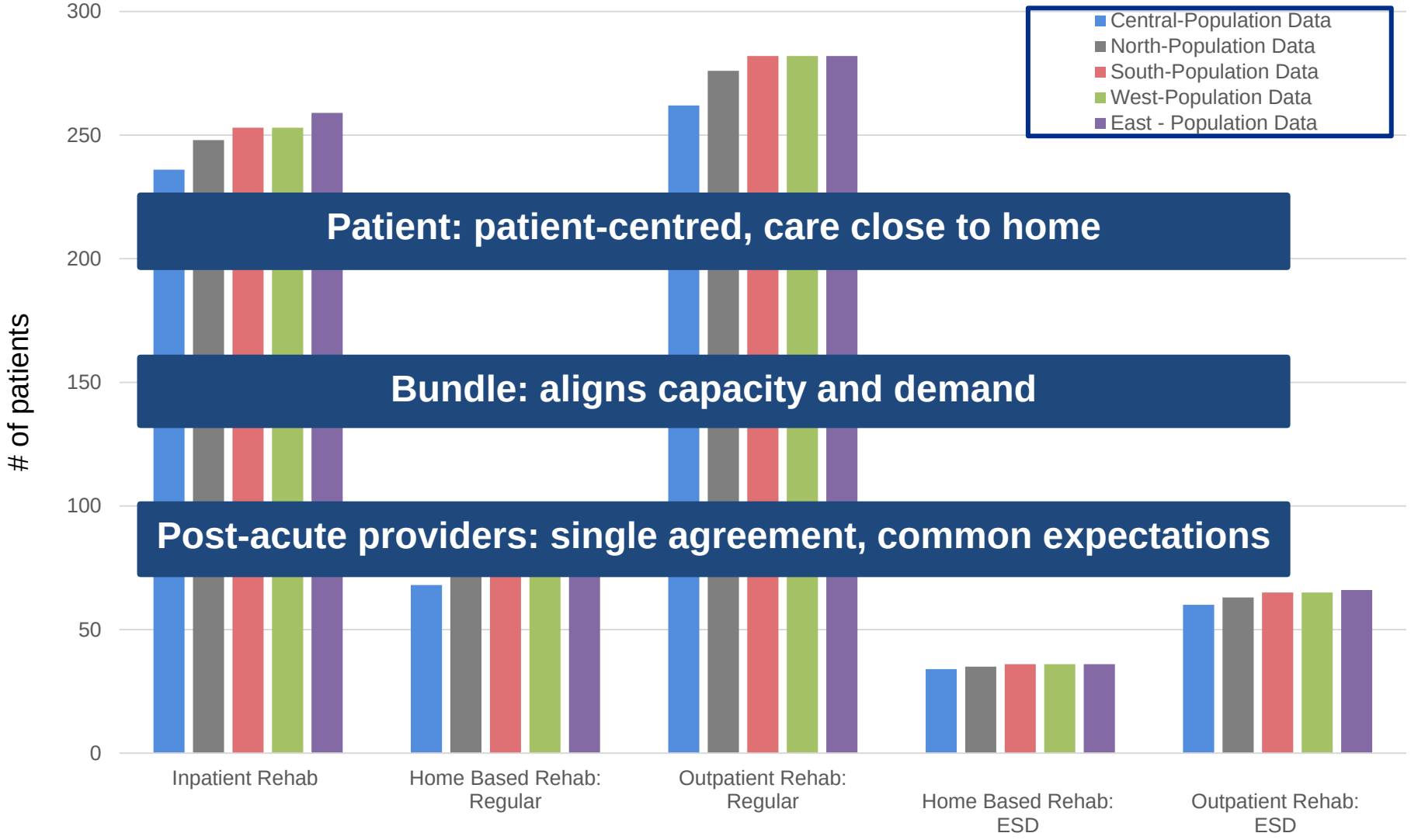
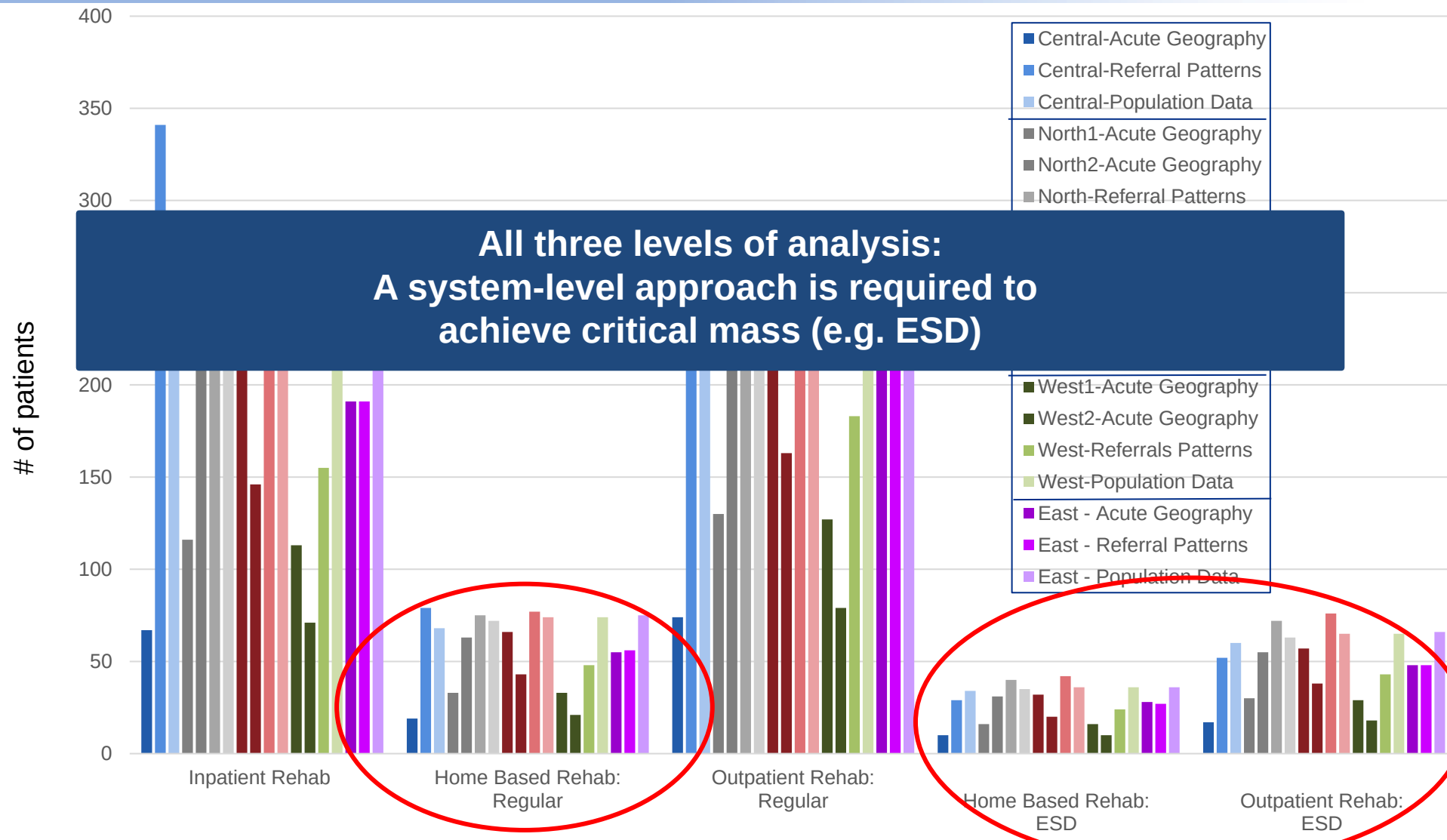
3) Population Level Analysis



Three Levels of Analysis



All three levels of analysis:
A system-level approach is required to achieve critical mass (e.g. ESD)

Value of a Population-Based Approach to Post-Acute Service Planning

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- The majority of a patient's rehab journey is accessed from community/home
  - Care close to home is important
- Aligns with patient need and preference
- Aligns capacity with demand geographically
  - Opportunity to better support community re-integration

System-Level Bundled Care Planning in Toronto: Geographical Hub Model

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Principles for Geographical Hubs

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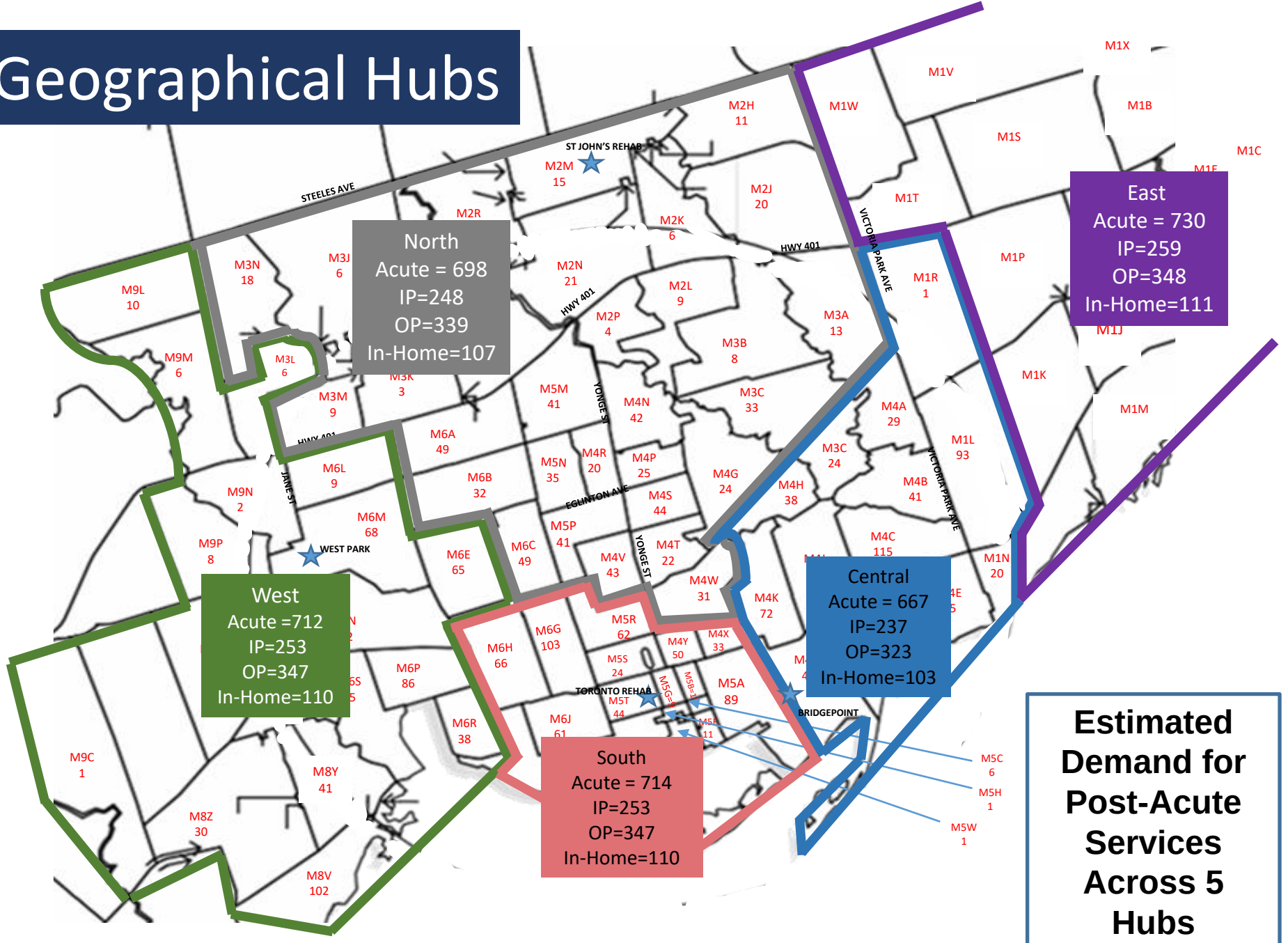
- Identified interprofessional teams with expertise in stroke
- Services and teams integrated across the continuum – working as one team
- Mechanisms of accountability to ensure quality and value
- Flexibility for patient need and patient choice
- Shared accountability for patient and system outcomes
- Equitable distribution of patients to support sustainable service delivery

Geographical Hubs



Estimated Demand for Post-Acute Services Across 5 Hubs

Projected Hub Volumes

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Per Hub - population level data

Hub Services	Approximate Volumes	Total by Continuum
Inpatient Rehab	248	248
Community-Based Stroke Rehab		
○ Home Based		107
Regular Stream	72	
ESD Stream	35	
○ Outpatient		338
Regular Stream	275	
ESD Stream	63	

What's Included in a Hub?

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Acute Stroke Care Hospitals

↓

Centralized Intake & Automatic Acceptance Process

↓

Joint procurement process for all post-acute services in each hub

NORTH

Inpatient Rehab
Community-Based Stroke Rehab
- Outpatient Rehabilitation
  - Regular Stream
  - ESD Stream
- Home-Based Rehabilitation
  - Regular Stream
  - ESD Stream

CENTRAL

Inpatient Rehab
Community-Based Stroke Rehab
- Outpatient Rehabilitation
  - Regular Stream
  - ESD Stream
- Home-Based Rehabilitation
  - Regular Stream
  - ESD Stream

SOUTH

Inpatient Rehab
Community-Based Stroke Rehab
- Outpatient Rehabilitation
  - Regular Stream
  - ESD Stream
- Home-Based Rehabilitation
  - Regular Stream
  - ESD Stream

WEST

Inpatient Rehab
Community-Based Stroke Rehab
- Outpatient Rehabilitation
  - Regular Stream
  - ESD Stream
- Home-Based Rehabilitation
  - Regular Stream
  - ESD Stream

EAST

Inpatient Rehab
Community-Based Stroke Rehab
- Outpatient Rehabilitation
  - Regular Stream
  - ESD Stream
- Home-Based Rehabilitation
  - Regular Stream
  - ESD Stream

Shared Communication & Ability for Patient to Move Between Hubs

System-Level Bundled Care Planning in Toronto: Regional Engagement

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Governance Structure

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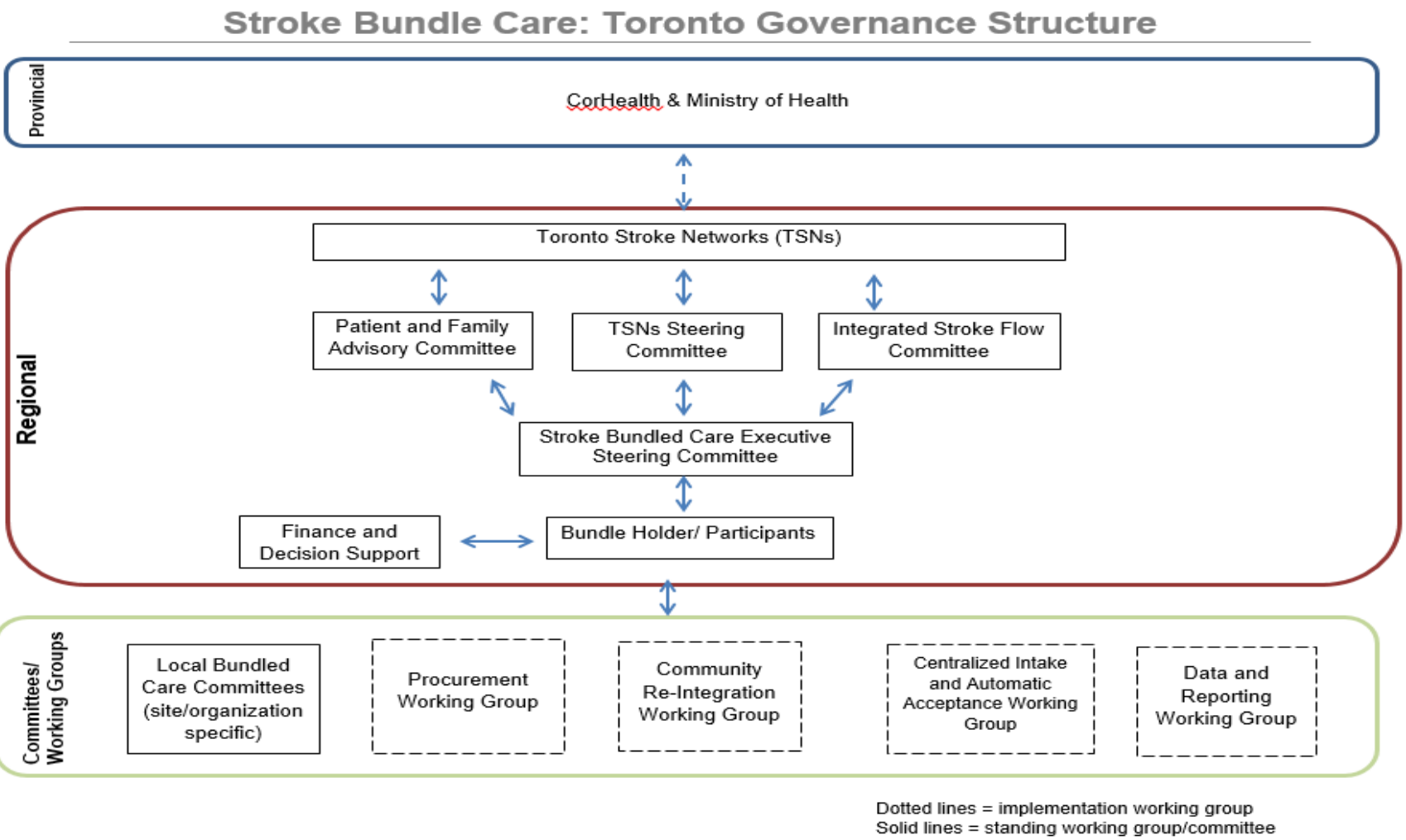

Regional Working Groups

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BUNDLE HOLDER COMMITTEE

- Support consistent system-wide implementation and monitoring of stroke bundled care
- Identify gaps and make recommendations for stroke best practice care provision and standardized data collection
- Share learnings from each organization's stroke bundled care working groups

July 2019

CENTRALIZED INTAKE & AUTOMATIC ACCEPTANCE

- Working towards automatic acceptance to rehab for all patients with rehab goals
- Create a centralized intake process that allows for the timely flow of patients to the most appropriate post acute service pathway in the most appropriate geographical hub

March 2020

COMMUNITY RE-INTEGRATION

- Enhance community reintegration, including seamless transitions, for persons with stroke/caregivers into the community

September 2020

March 2020

DATA AND REPORTING

- Develop an accountability framework that includes reporting and monitoring for delivery of quality services that meet stroke best practice recommendations

July 2020

PROCUREMENT

- Oversee the collaborative procurement process for 6 bundle holders with rehab providers (inpatient rehab, outpatient rehab, and home-based rehab)
- Develop list of provider qualifications with a focus on delivery of quality best practice stroke care

Learnings

System-level planning supports shared accountability for patient and system outcomes

COVID-19

- Highlighted the need for system integration
- Competing stakeholder priorities

Determination of number of hubs

- Procurement process

...

Population Based Approach: Broader Application

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Capacity Planning: A rural example

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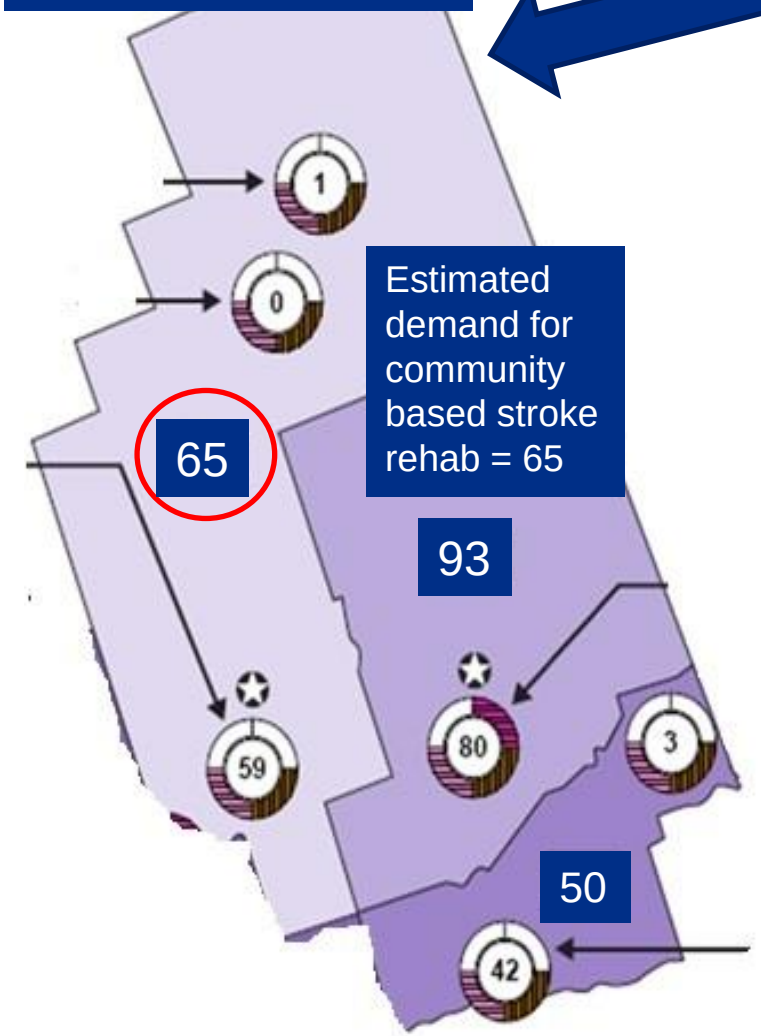
Number of patients in sub-region A = 129



Sub-region A	FTEs				
	ESD OP	ESD in home	OPR	home based	Total FTEs
PT	0.1	0.1	0.9	0.3	1.4
OT	0.1	0.1	0.9	0.3	1.4
SLP	0.1	0.1	0.4	0.2	0.7

Number of patients in 3 sub-regions = 403
Estimated demand for community based stroke rehab = 208

Total 3 sub-regions	FTEs				
	ESD OP	ESD in home	OPR	home based	Total FTEs
PT	0.5	0.3	2.7	1.0	4.5
OT	0.5	0.3	2.7	1.0	4.5
SLP	0.2	0.2	1.4	0.5	2.2

Models of Care

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3 teams

The clinician changes for the patient in all settings

1 team

The same clinician follows the patient in all settings

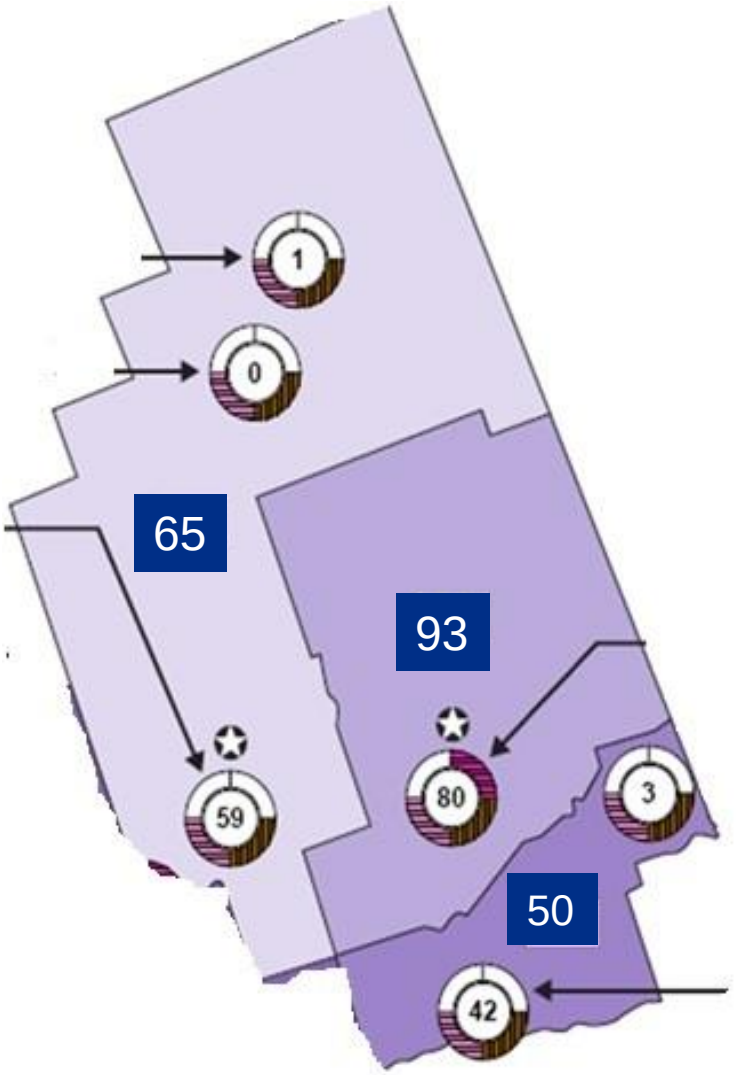
2 teams

The same clinician follows the patient in outpatient and home-based settings

2 teams

The same clinician follows the patient in inpatient and outpatient settings

Using a Population Approach to Inform the Model of Care in a Rural Setting



Considerations:

- Population distribution
  - Integrated stroke units
    - Facility vs population level demand
  - Outpatient location
    - Travel time
    - Replacement with in-home services
- Sustaining expertise of teams
  - FTEs required
  - Integrated cross continuum teams
  - Patient experience
  - Transitions and efficiencies

Other considerations?

Value of a Population Based Approach in a Rural Setting

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- Supports sustainability of expert teams
- Supports retention and recruitment with specialized positions
- Optimizes limited resources

Population Based Approach to Integrated Care: Discussion

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What about this approach resonates with you?

How could this support your integrated care planning?

Conclusion

Taking a population based approach supports:

- Sustainable system planning
- Enhanced patient experience

Enablers of system-level planning:

- Accountability structures
- Formation of smaller working groups with focused objectives

Consideration for application in rural settings and other specialized services

Acknowledgements

We wish to acknowledge all Toronto Stroke Networks' stakeholders and partners who have been instrumental in this work

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Thank you to our Central East Stroke Network partners.

Thank you: Questions

Please visit us at
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www.strokecommunity.ca

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