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.

Please take 2 minutes to fill out the evaluation form using the online link or QR code below:

https://forms.office.com/r/hbBRR81RKQ

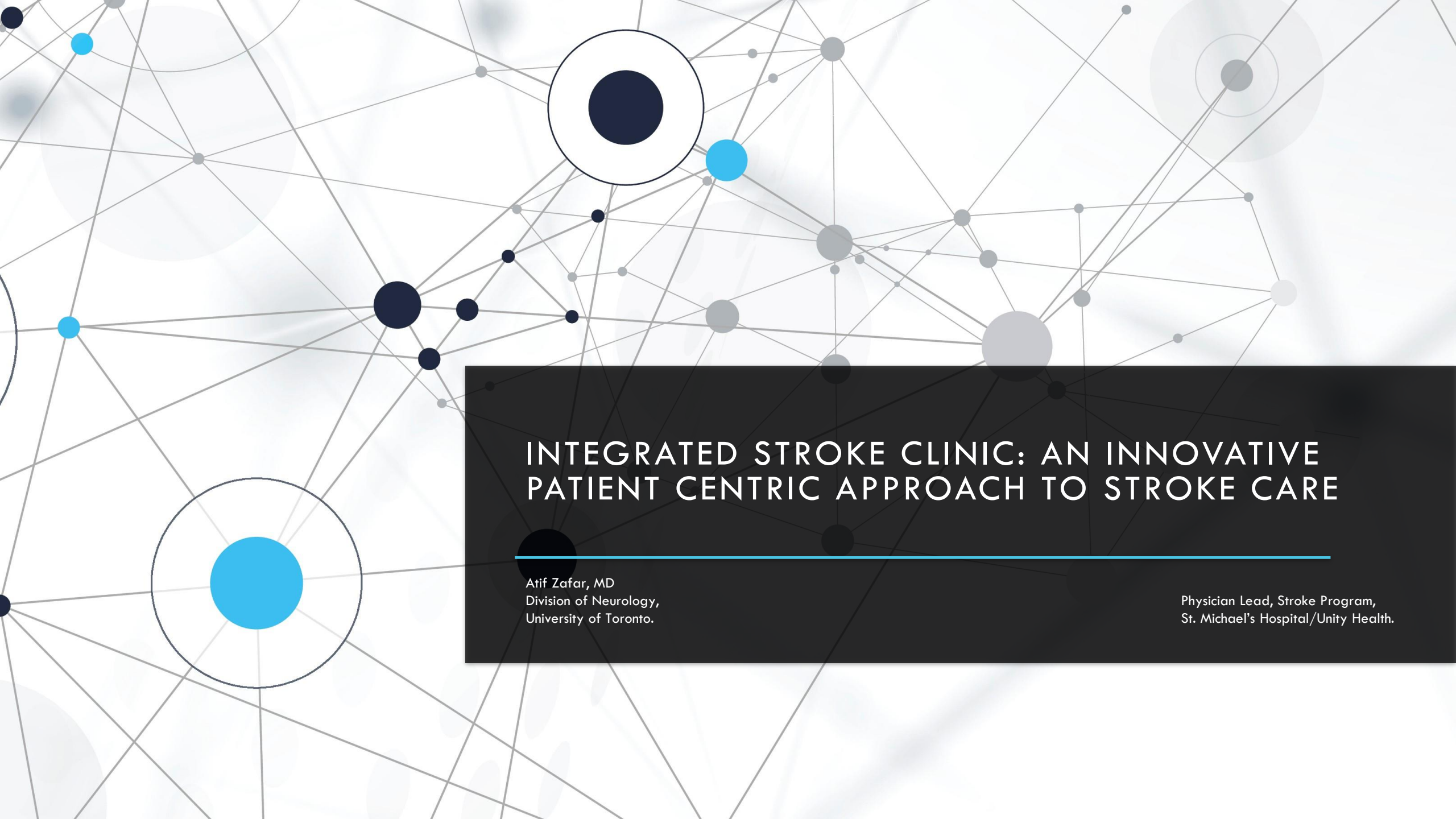
Thank you!

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.

The Ontario Regional Education Group (OREG) host member, on behalf of the Provincial Stroke Rounds Committee, reviewed the initial presentation supplied by the speaker to ensure no evidence of bias.



INTEGRATED STROKE CLINIC: AN INNOVATIVE PATIENT CENTRIC APPROACH TO STROKE CARE

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DISCLOSURE OF AFFILIATIONS, FINANCIAL SUPPORT, & MITIGATING BIAS

Atif Zafar, MD

Affiliations:

I have no relationships with for-profit organizations. I am on the scientific advisory board for Canada's Angioma Alliance with no financial incentives involved.

***List relationships with for-profit or not-for-profit organizations*:**

Grants/Research Support: University of Toronto, none relevant to this topic.

Speakers Bureau/Honoraria: None

Consulting Fees: None

Other: Co-founder of human health, USA.

Financial Support:

This session/program has not received financial or in-kind support.

Dr. Zafar has NOT received any payments or equities on the topic of this talk or any content shared in this presentation.

Mitigating Potential Bias:

No industry sponsorship or conflicts of interests.

OBJECTIVES:

Upon completion, participants will be able to:

1. State the benefits and mechanism of integrating interprofessional expertise in stroke care.
2. Describe approaches and pathways on improving time to stroke care in outpatient settings.
3. Explain the expectation and implementation of a Personalized Care initiative.

THE WHY: INTEGRATED STROKE CLINIC

- Other industries such as tech, finance, energy, airlines have become integrated better than healthcare. And they are reaping the rewards.

- One stroke every 5 minutes.

- Leading cause of death and disability.

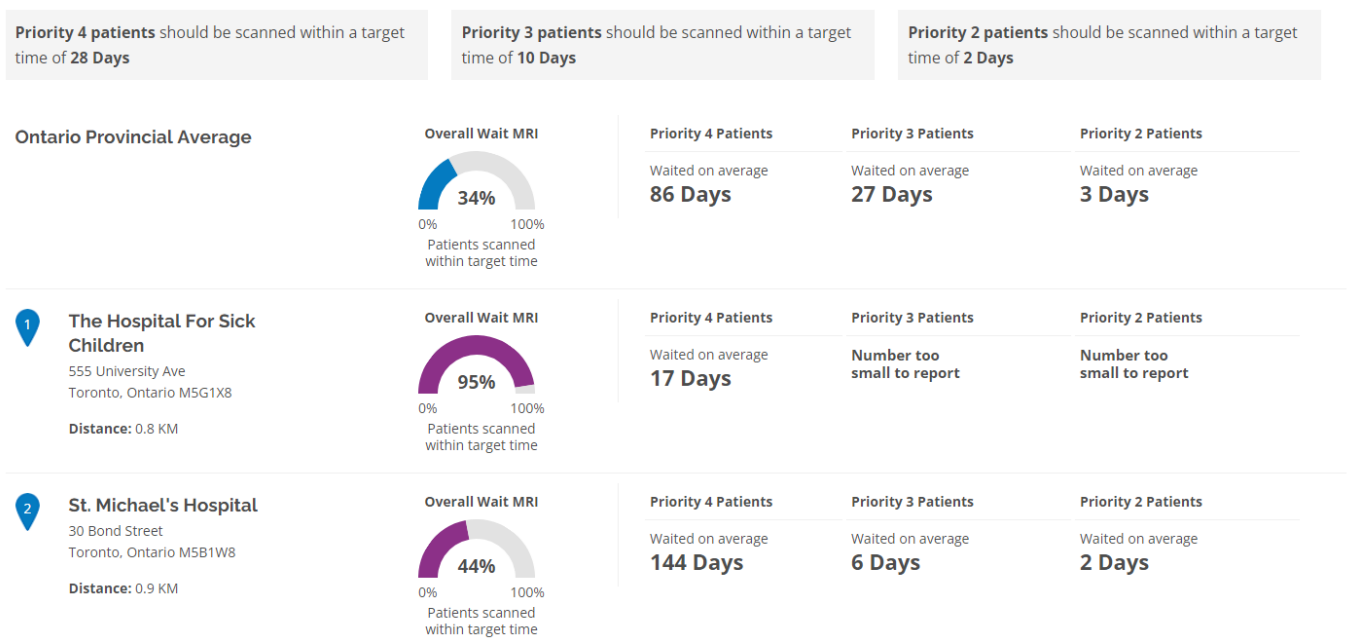
- Stroke is Preventable

- Primary & Secondary prevention happens in clinics, predominantly.

THE PROBLEM WE FACE TODAY:

Patients wait a long time to see their specialists.

Scans take even longer:



Priority 4 patients should be scanned within a target time of **28 Days**

Priority 3 patients should be scanned within a target time of **10 Days**

Priority 2 patients should be scanned within a target time of **2 Days**

Ontario Provincial Average

Overall Wait MRI: 34% (0% – 100%) Patients scanned within target time

Priority 4 Patients	Priority 3 Patients	Priority 2 Patients
Waited on average **86 Days**	Waited on average **27 Days**	Waited on average **3 Days**

1 **The Hospital For Sick Children**
555 University Ave
Toronto, Ontario M5G1X8
Distance: 0.8 KM

Overall Wait MRI: 95% (0% – 100%) Patients scanned within target time

Priority 4 Patients	Priority 3 Patients	Priority 2 Patients
Waited on average **17 Days**	**Number too small to report**	**Number too small to report**

2 **St. Michael's Hospital**
30 Bond Street
Toronto, Ontario M5B1W8
Distance: 0.9 KM

Overall Wait MRI: 44% (0% – 100%) Patients scanned within target time

Priority 4 Patients	Priority 3 Patients	Priority 2 Patients
Waited on average **144 Days**	Waited on average **6 Days**	Waited on average **2 Days**

THE INSPIRATION?

- An example of integrated inpatient stroke care is the presence of Stroke Unit.

- Where clinicians, administrators, patients and families collaborate towards one goal = stroke recovery.

- Why can't we do some doable experiments to create a similar integrated program on the outpatient side?

WHAT IS INTEGRATED STROKE CARE?

COLLABORATIVE & COORDINATED

CONTINUUM

MULTIDISCIPLINARY

THE STORY:

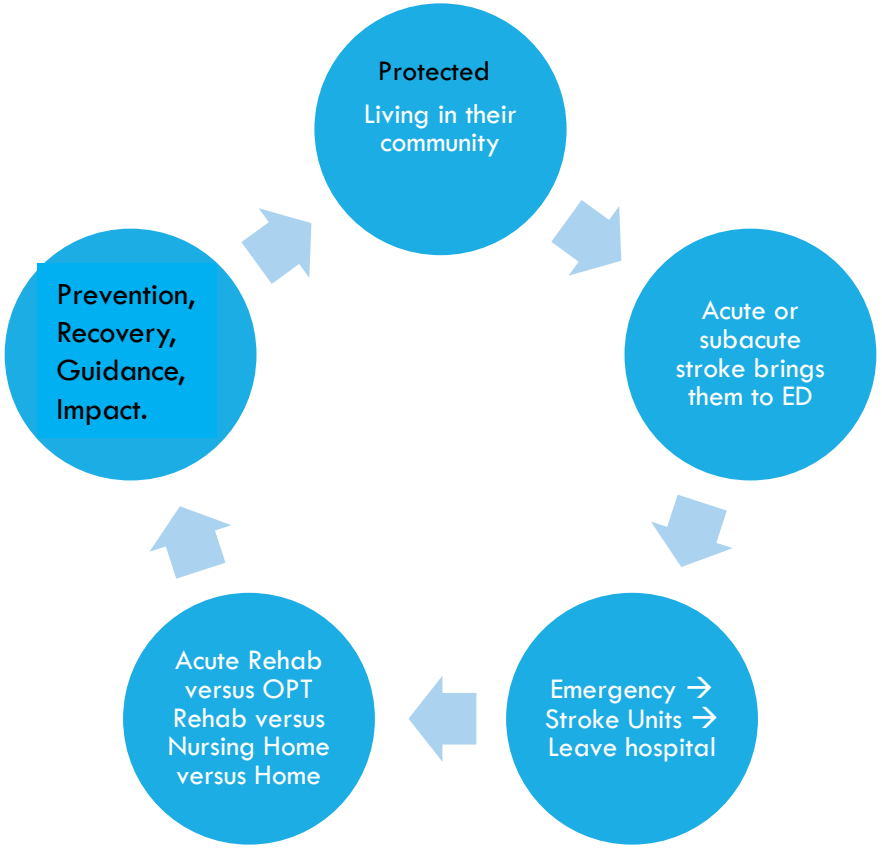
A 55 year old man who had 3 strokes and was seen in every hospital in the province. Including multiple times by myself.

He had resources and connections to travel. He said he blindly trusts the health system in Canada.

He eventually died from on-going recurring strokes.

One of his words before he gave up was: Even if there was no cure, I wish you all could figure it out sooner.

THE JOURNEY OF OUR PATIENTS



WHY NOW AND WHY ONTARIO?

- Healthcare is changing, not just evolving.

- Governments and private organizations globally are realizing: aging, resource limitations, burnout, etc.

- Ontario is considered to be a leader in integrated care: Regional stroke networks, emphasis on stroke unit, separate committees focusing on integration.

PATIENT SELECTION:

- Anecdotally, it takes 3-6 months on average for complex stroke patients to complete their comprehensive outpatient management. (Secondary Stroke Prevention)

- Among all stroke patients, 3-15% risk of recurring stroke in 3-12 months. Mostly frontloaded.

- One quarter of patients have had a preceding TIA.

- 25%-30% of stroke patients are categorized as ESUS (**Embolic Stroke of Undetermined Source**)

- Often, relatively younger patients.

- 25% of stroke survivors are less than 65 years of age. This number is growing.

INTEGRATED STROKE CLINIC: SOCC

- Stroke of unknown Cause Clinic (SOCC) based in downtown Toronto.

- One clinic per month: in-person and virtual.

- Launched in 2022, we have seen 40+ patients from all over the province.

- Interventional Cardiology, Stroke, Hematology physicians see persons with stroke along with their families in one sitting.

- Prior to the clinic session, the clinicians do brain-storming to prepare.

- ECHO, blood work, neuro-imaging, cerebrovascular imaging is reviewed as a group.

INTEGRATED STROKE CLINIC?

COLLABORATIVE & COORDINATED

- ✓ Patient pre-visit, visit, post-visit.

CONTINUUM

- ✓ fMD→labs/tests →treatment→fMD

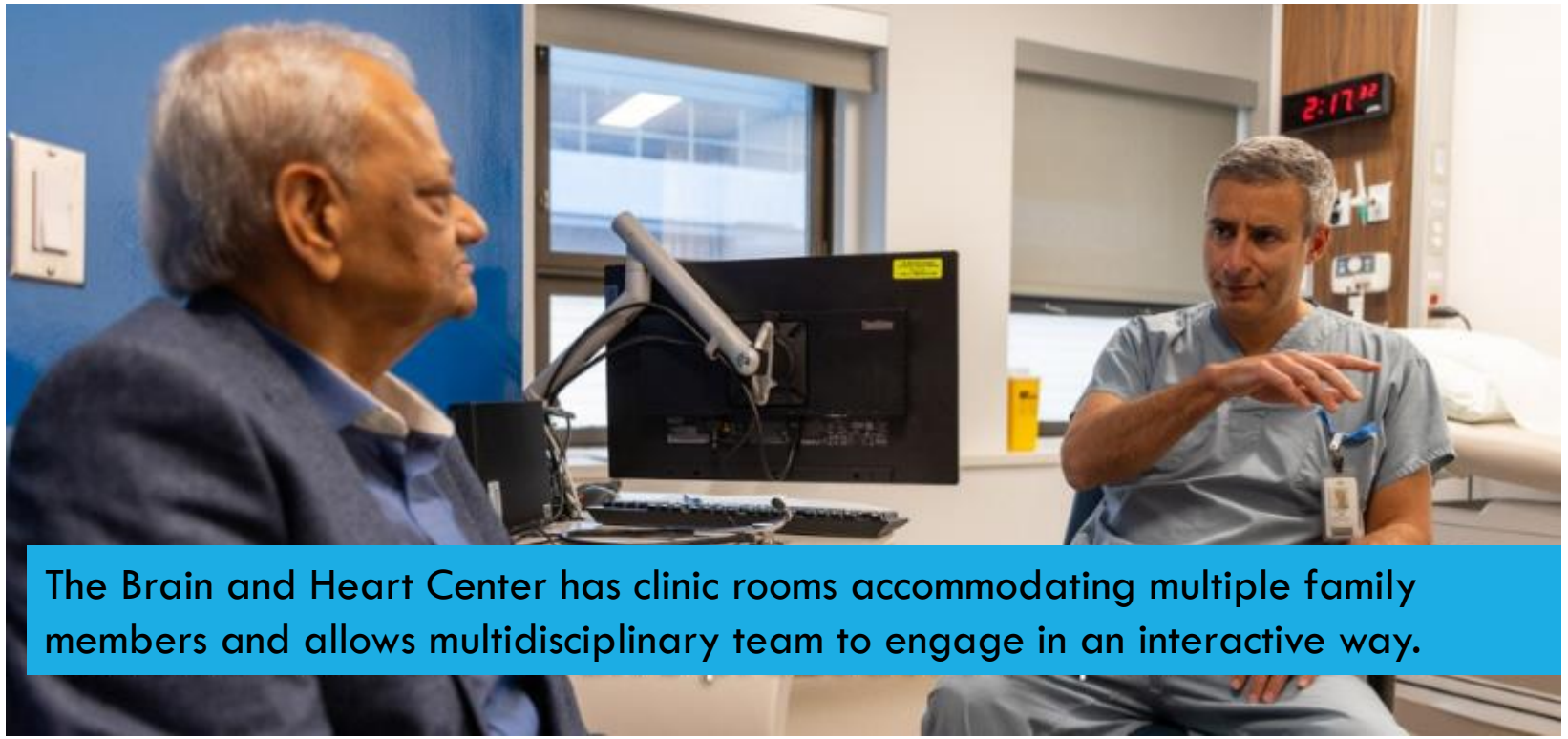
MULTIDISCIPLINARY

- ✓ Multiple specialists involved

BENEFITS OF INTEGRATED STROKE CLINIC:

- Improved patient outcomes and satisfaction
- Enhanced efficiency and effectiveness of care delivery
- Fostered collaboration among healthcare providers
- Reduction in healthcare costs through streamlined processes

THE WHERE: (BRAIN & HEART CENTER, SMH)



The Brain and Heart Center has clinic rooms accommodating multiple family members and allows multidisciplinary team to engage in an interactive way.

THE WHO:

CLINIC COORDINATOR: AMARITA DIEZ

THE HOW:

- Hematological causes of stroke ranging from sickle cell, lupus, protein C deficiency, antiphospholipid syndromes, factor V Leiden, refractory valvular coagulopathies, etc

- Cardiac causes ranging from simple and complex PFOs to Valsalva related shunts/ASDs, structural cardiopathies (atrial appendage closures), valve degenerative diseases, wall motion abnormalities, heart failure, and afib.

- Cerebrovascular possibilities range from carotid webs, accelerated atherosclerosis, presumed COVID related infarcts, paradoxical events, steal syndromes, etc.

- We are debating, discussing, learning and often challenging each other.

ACCESS TO THE CLINIC:

- Urgent referrals are seen in RAPID TIA/Stroke Clinic within 48 hours, virtually or in-person.

- SOCC is one clinic day per month so coordination of care starts after first clinic.

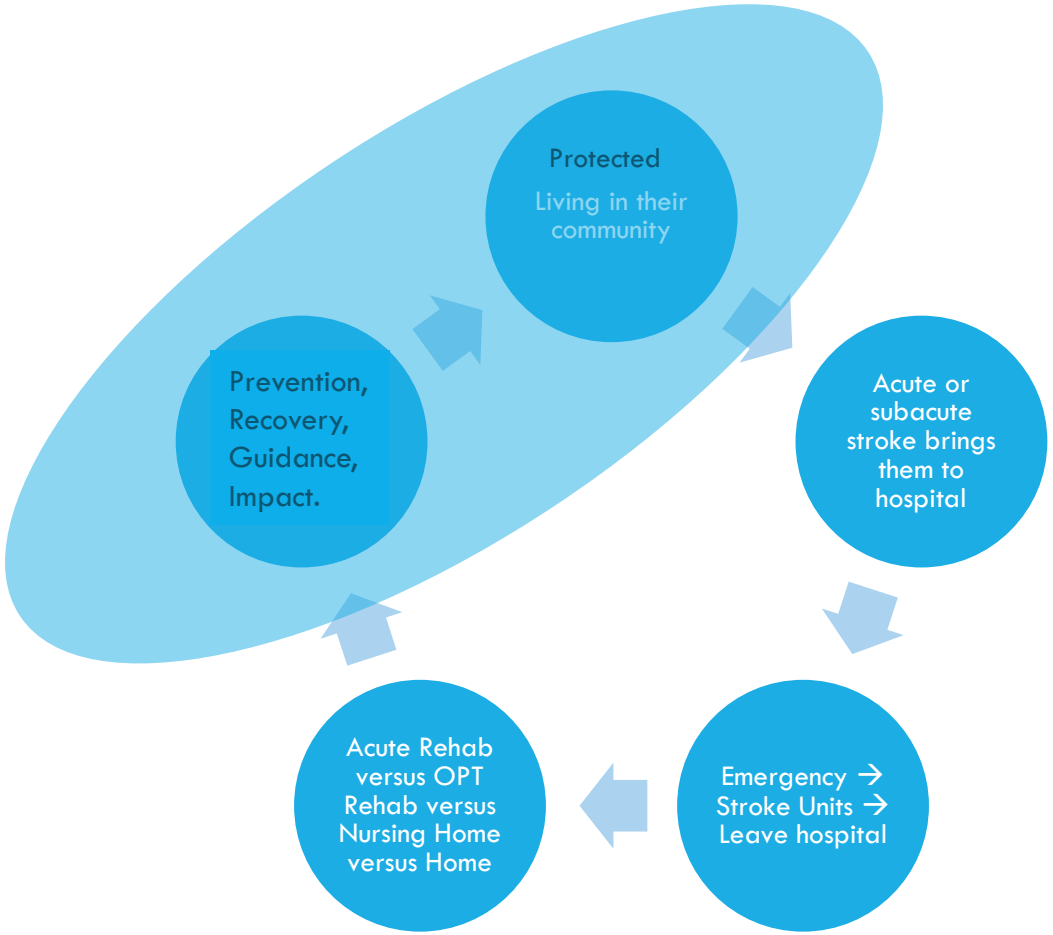
- ECHOs and blood work are coordinated strategically to minimize patient's inconvenience.

- SOCC day: echo, blood work performed before and after visit as needed.

- Patients updated via phone or virtually.

- Sometimes, formal f/u encounter is scheduled.

THE JOURNEY OF OUR PATIENTS



INTEGRATED CLINIC'S EXPERIENCE SO FAR…

- 95% of the clinic attendees end with final diagnosis and etiology.

- On average 1-2 encounters are needed.

- Patient feedback: "unreal", "delightful" and "We feel reassured"

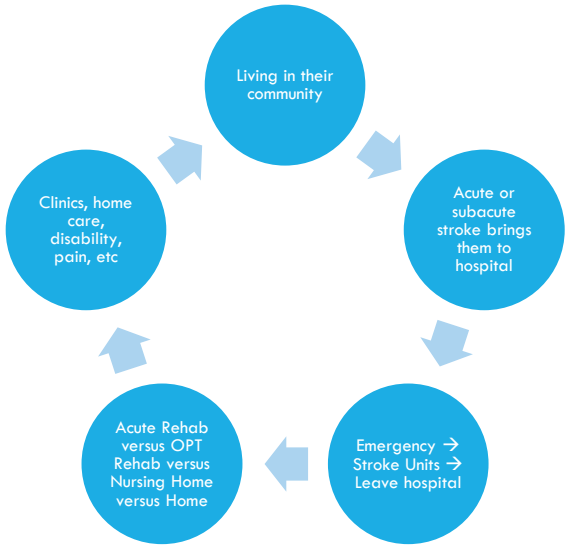
- Majority (70%) of the patients are relatively younger. (<60y)

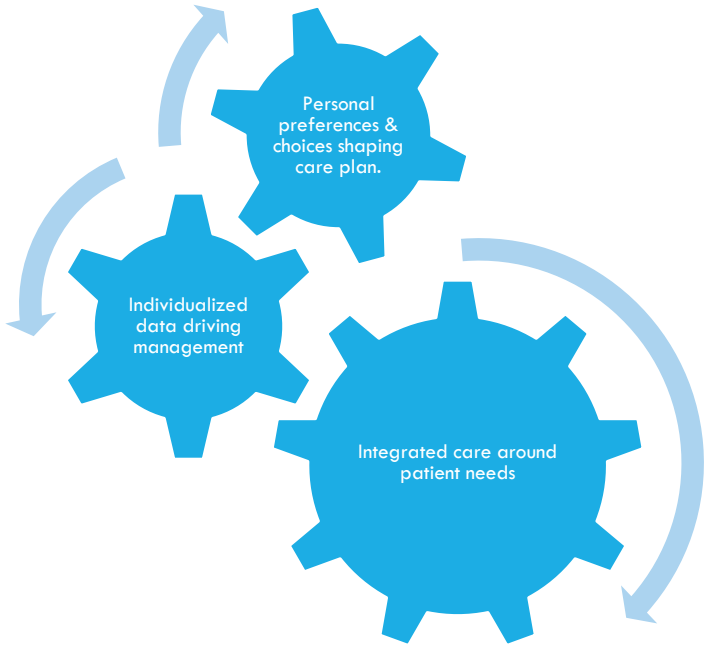
- Common Discussion Points: Anticoagulation discussion, antiplatelet choices, hematology driven hypercoagulable work up, PFO closure, WATCHMAN devices, TEE result discussions, Cardiac MRI, cerebrovascular imaging.

EQUITABLE, PERSONALIZED STROKE CARE

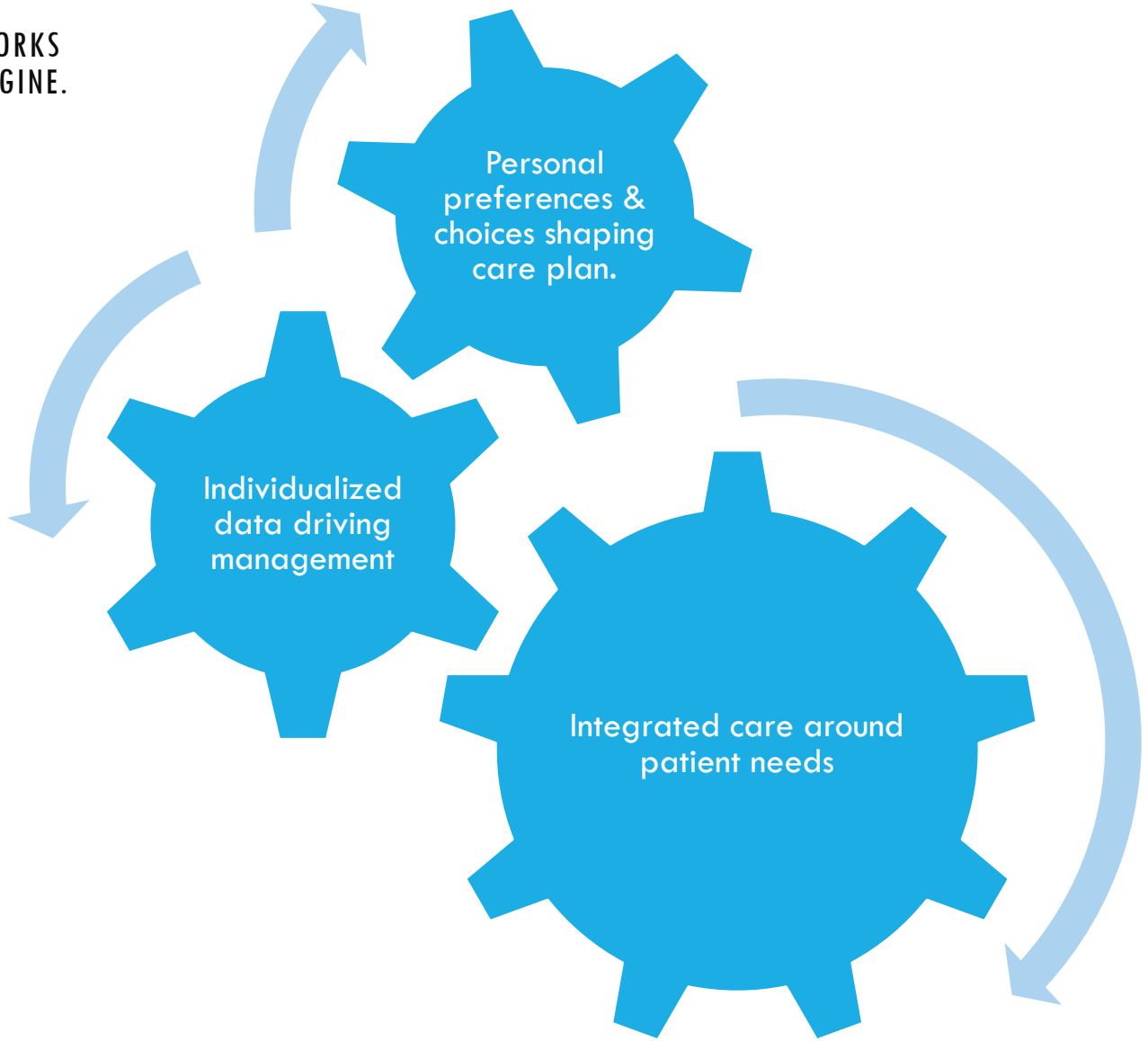
- Integrated Stroke Clinic is a critical piece of Personalized Stroke Initiatives.

- OH is looking at community partnerships, home health, and this time involving hospitals in these initiatives.





PERSONALIZED CARE WORKS LIKE A MECHANICAL ENGINE.



WE NEED MORE INTEGRATED STROKE CLINICS?

- Interventional Neurology Clinics (INR, Neurologist, vascular surgeon)
- Vascular Dementia Clinics (neurologist, geriatrician, physio, OT)
- Stroke Recovery Clinics (PT, OT, Neurologist, Engineers)
- Aphasia Clinic (Speech, Neurology, health-tech engineers, musician)
- Stroke Genetics (Geneticist, Stroke neurologist)

OBJECTIVES – DID WE COVER IT ALL?

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LET'S BREAK THE SILOS.
LET'S INTEGRATE STROKE CARE.

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