Research Grand Rounds

July 30, 2025

Psychiatric Quality Improvement

Anna Shannis - Student RA

HUNTSVILLE PHYSICIANS LOCAL EDUCATION GROUP

INTRODUCTION

Incorporating tele-psychiatry in the ED for adult patients with no acute psychosis.

How can it help?

- ➔ Improving patient wait times in the ED
- ➔ Decreasing total transfers to psychiatric facilities
- ➔ Ensuring optimal care for all patients

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Patient Presents to ED	Patient Placed on Form 1	Patient Transferred to Psychiatric Facility
Patient arrives at emergency department with complaints of mental illness (includes suicidal ideation).	Patient is seen by physician and typically placed on a Form 1.	Patient is transferred to a psychiatric facility within 7 days, where they are assessed by a psychiatrist.

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ICD10 CODES:

F10-19:
Mental and Behavioural Disorders due to Psychoactive Substance Use

F30-39:
Mood Affective Disorders (manic and depressive episodes, bipolar affective disorder)

F50-59:
Behavioural Syndromes Related to Physiological and Physical Factors

F90-98:
Behavioural and Emotional Disorders with Early Onset

F20-29:
Non-Mood Psychotic Disorders (schizophrenic, schizotypal, delusional)

F40-48:
Nonpsychotic Mental Disorders (anxiety and stress related)

F60-69:
Disorders of Adult Personality and Behaviour

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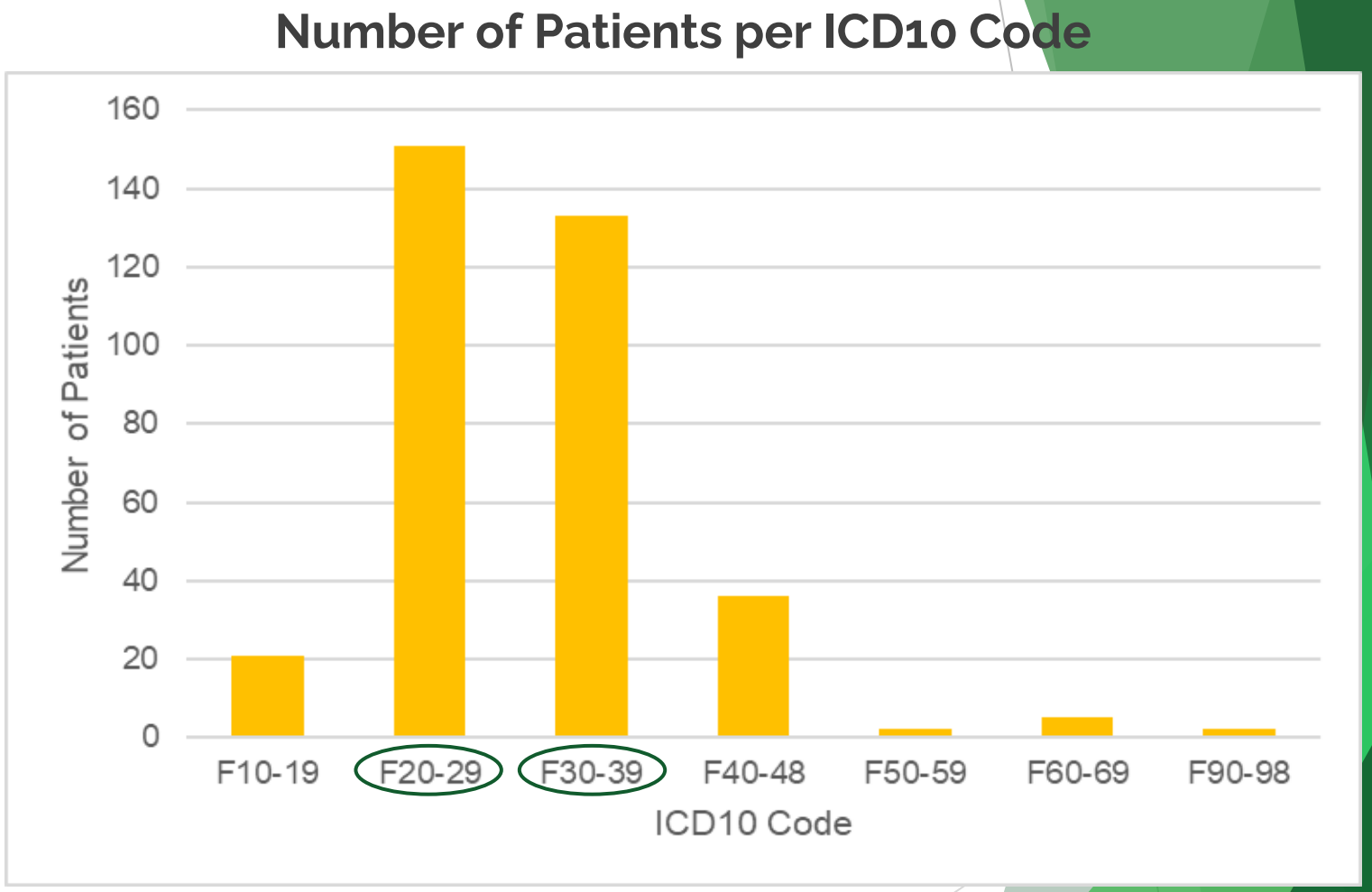
Of the 350 patients:

- ★ **151 patients** with non-mood psychotic disorders **(F20-29)**
- ★ **133 patients** with mood affective disorders **(F30-39)**



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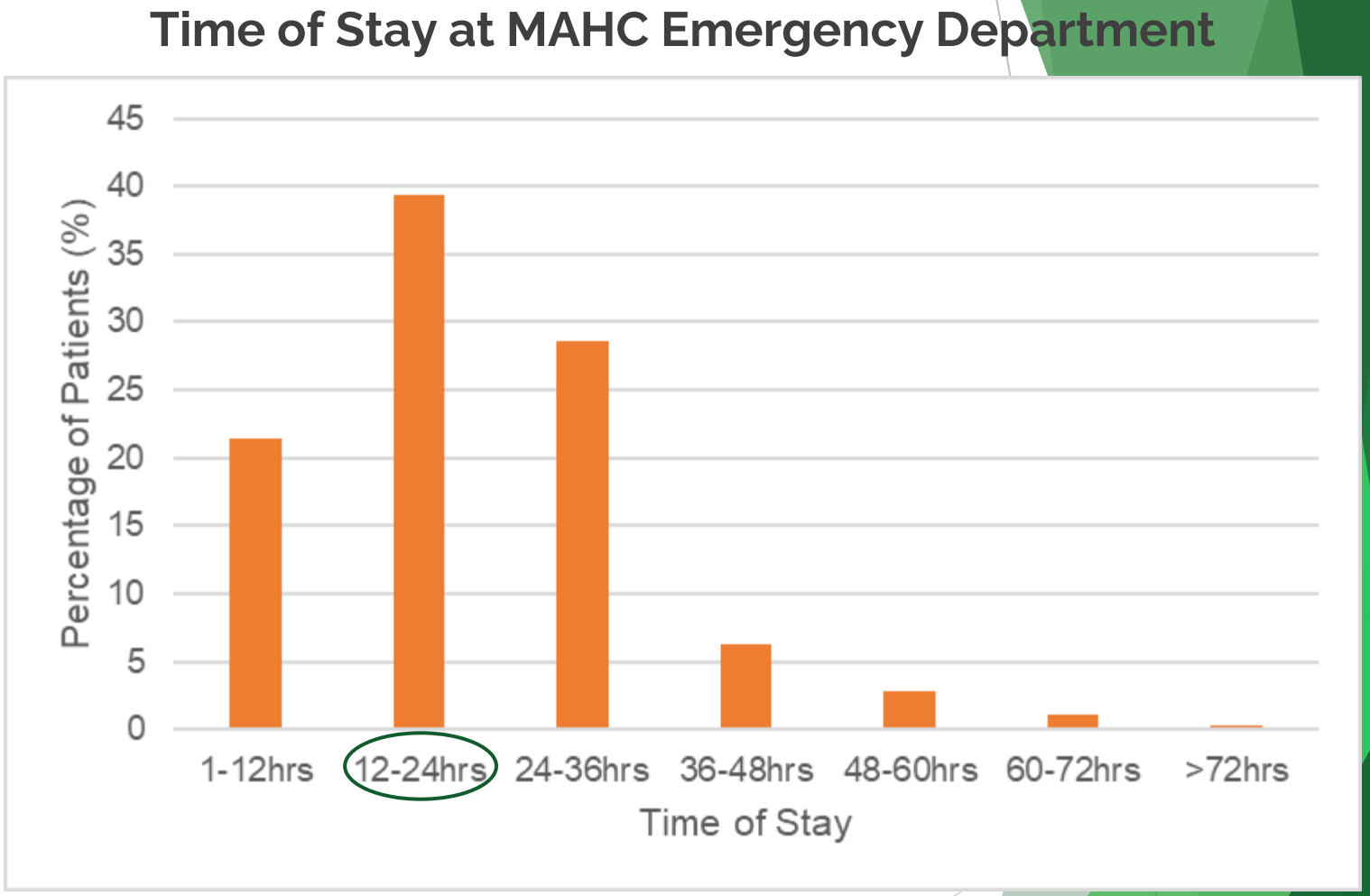
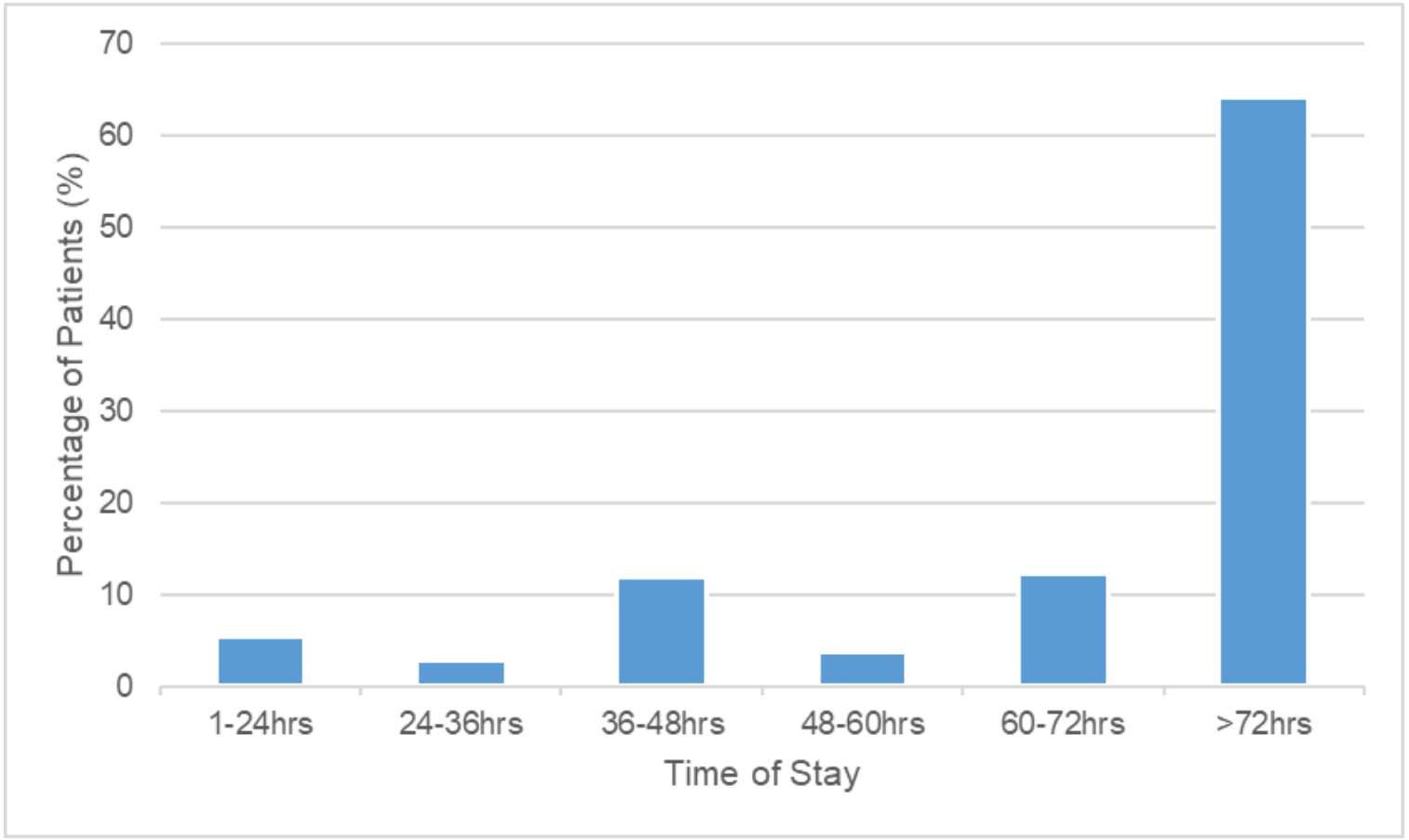
- ★ **60%** of patients are transferred **within 24 hours**- majority waiting over 12 hours

- ★ **40%** of patients waiting **over a day** to be transferred
  - inadequate staffing
  - no bed availability
  - difficulty coordinating transportation



Time of Stay at Orillia Soldiers Memorial Hospital (OSMH)

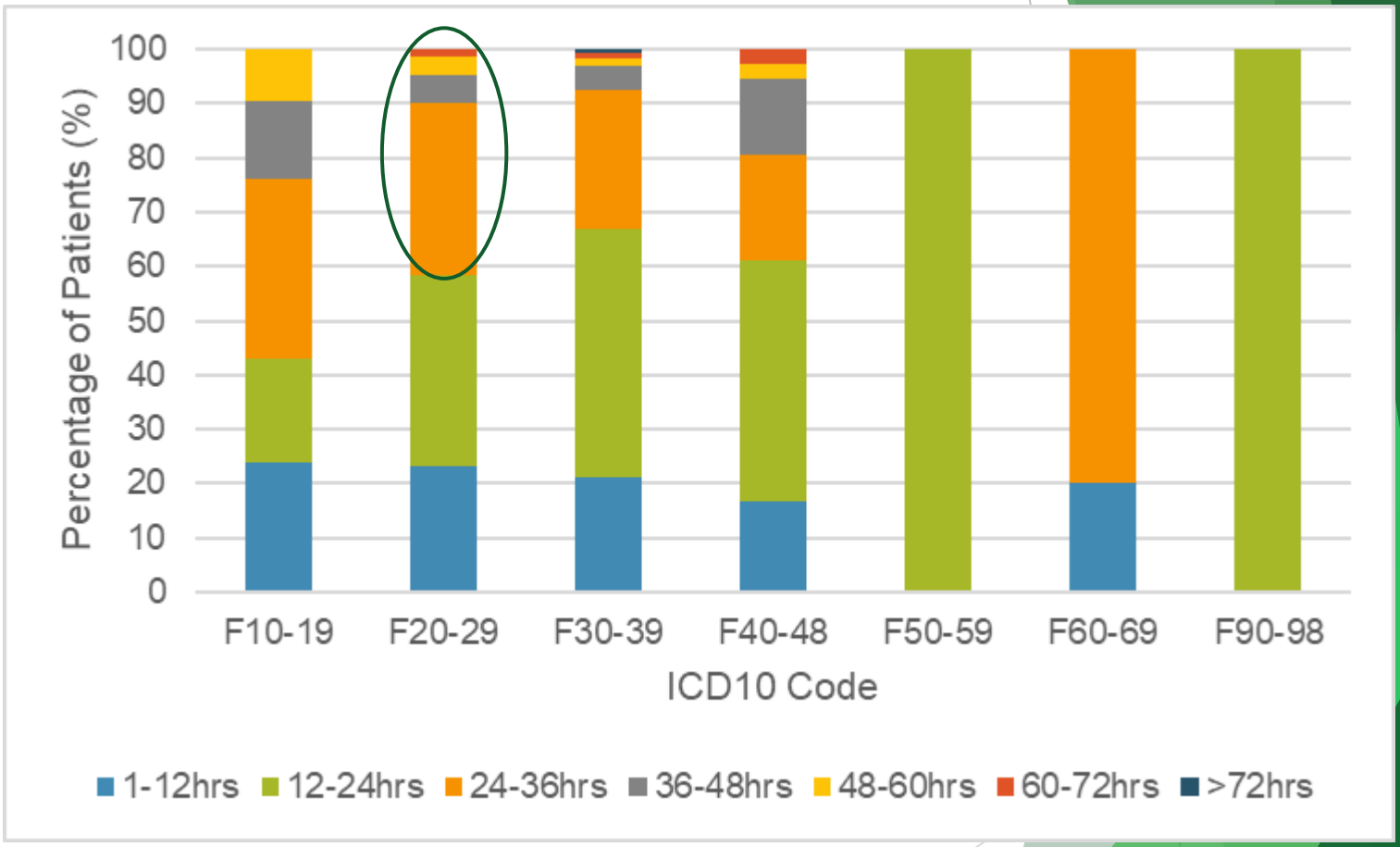


★ 245 patients transferred to OSMH

★ **65%** of patients admitted for **over 72 hours** (placed on Form 3)

★ **35%** of patients admitted for **less than 72 hours** → no need for longer involuntary hold

- ★ Most common length of stay amongst all ICD10 codes was **12-24 hours**
- ★ Approx. **40% of F20-29** patients waited **24+ hours** to be transferred



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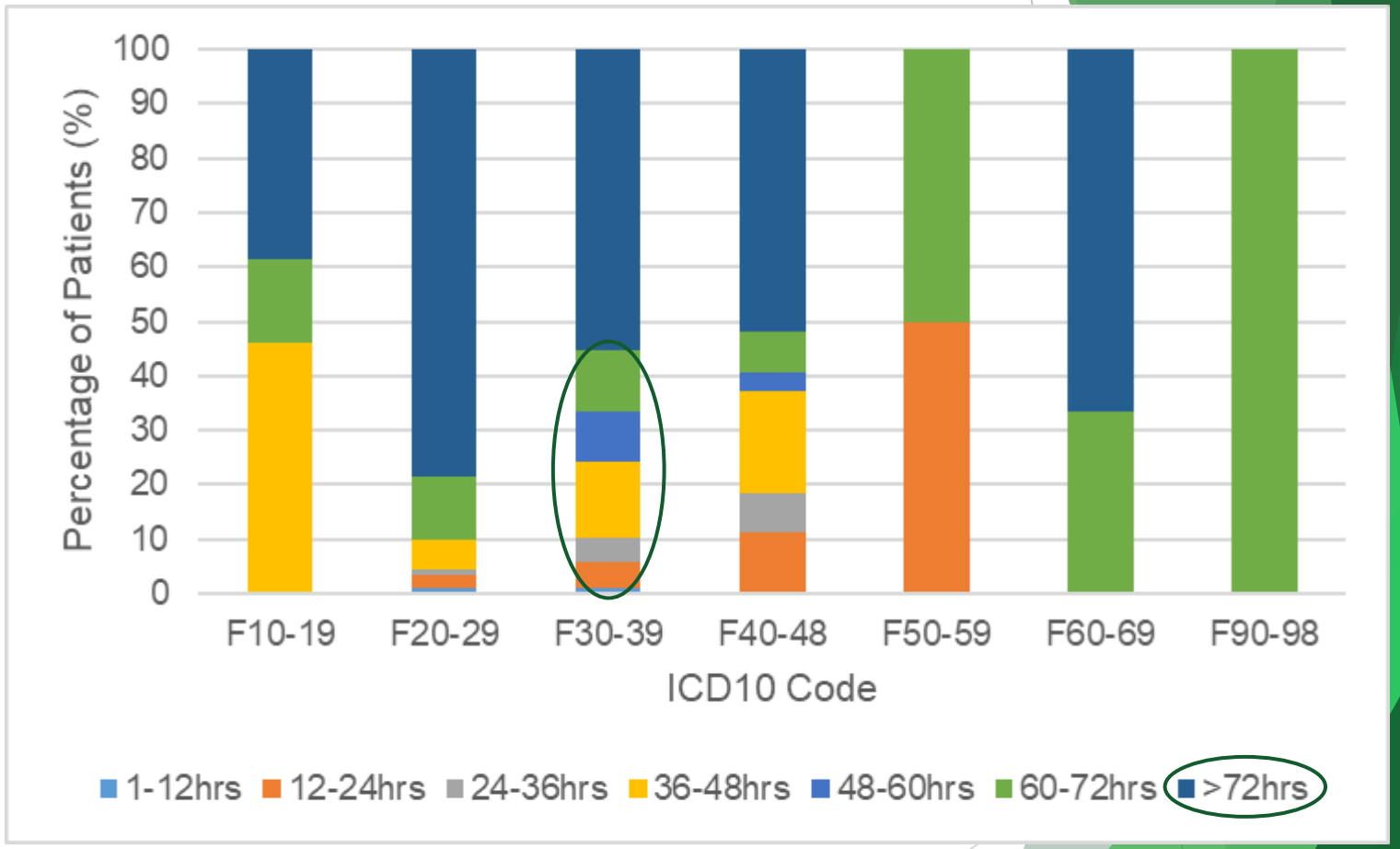
- ★ Most common length of stay amongst all ICD10 codes was **>72 hours**
- ★ **79% of F20-29** patients stayed **>72 hours**
- ★ **45% of F30-39** patients stayed **<72 hours**



Women's Health Hub

Menopause Education Seminars

Anna Shannis- Summer RA

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INTRODUCTION

Monthly menopause education seminars with a goal to:

- Create a safe space for menopause-aged women
- Expand their knowledge
- Prepare them to make educated decisions

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Seminar Topics By Month

- **October 2024** → What is Menopause?
- **November 2024** → Perimenopause
- **December 2024** → Sleep and Menopause
- **January 2025** → Mental Health, Emotional Well-being and Stress Management
- **February 2025** → Exercise and Physical Health
- **March 2025** → Nutrition and Menopause
- **April 2025** → Body Changes in Menopause
- **May 2025** → Navigating Healthcare and Menopause
- **June 2025** → Lifestyle and Complementary Approaches for Menopausal Symptoms
- **July 2025** → Menopause and Relationships
- **August 2025** → Preparing for Post-Menopause
- **September 2025** → Reflection and Community

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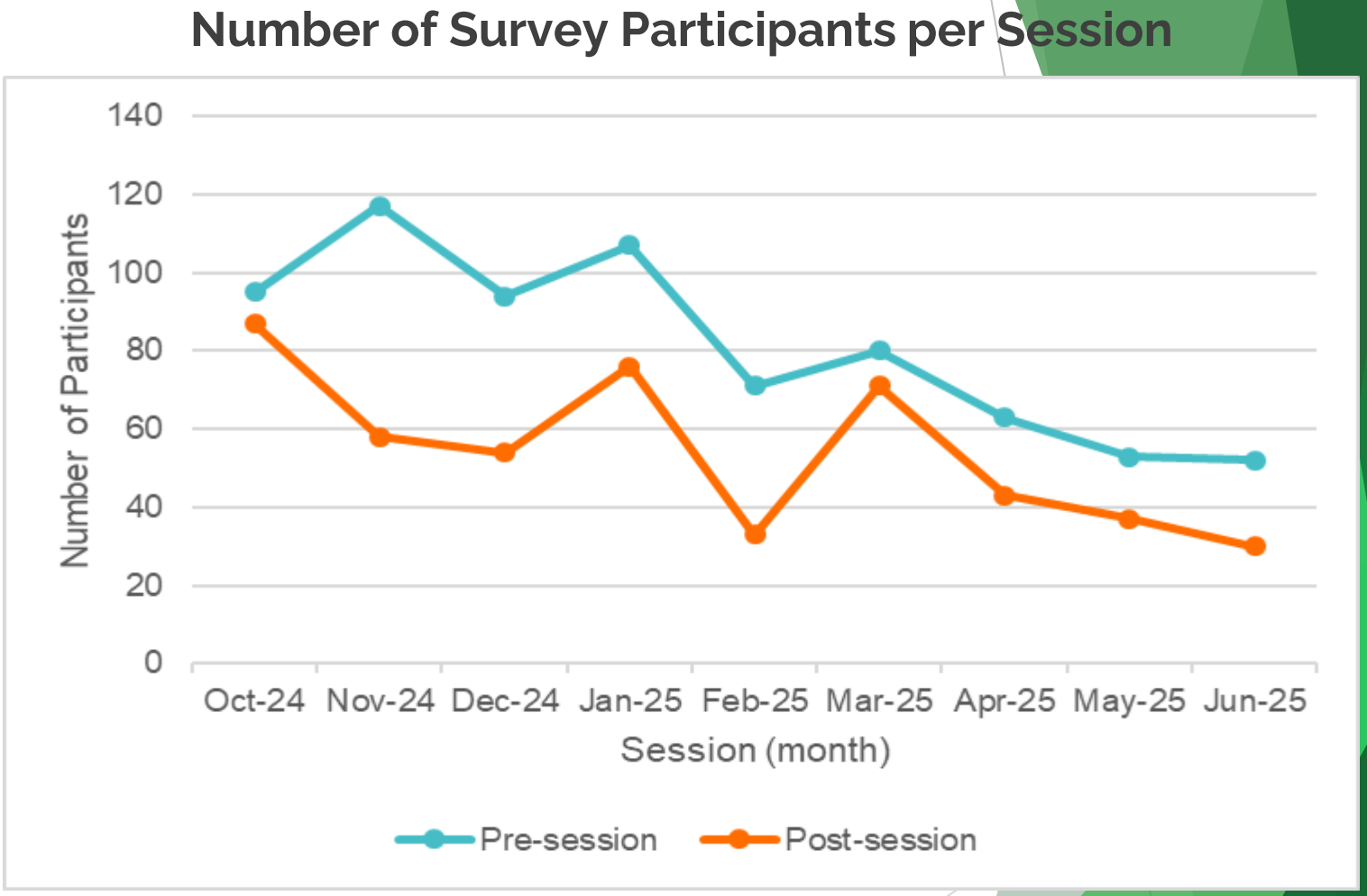
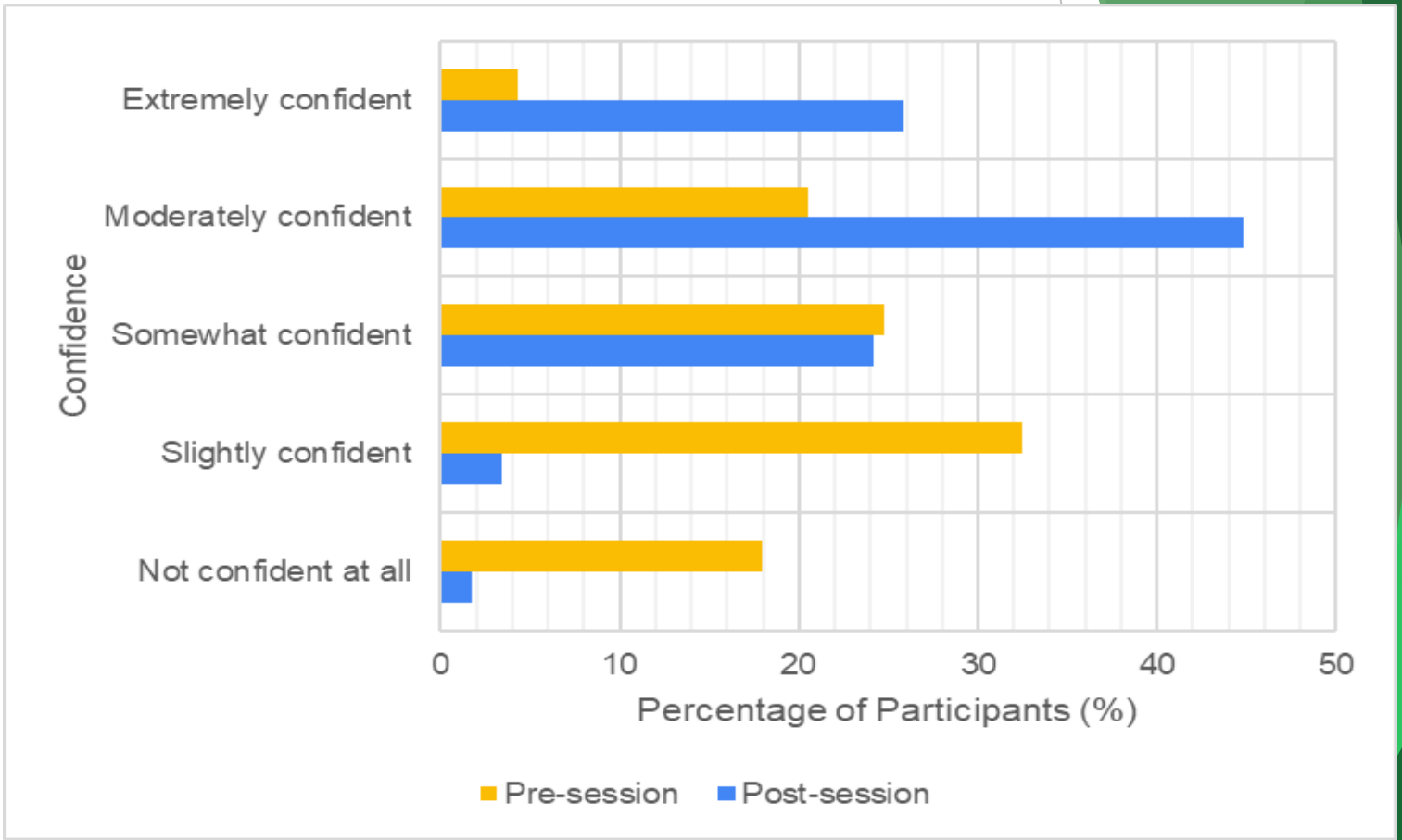
➔ Avg. number of participants:

- pre-session: **81**
- post-session: **54**

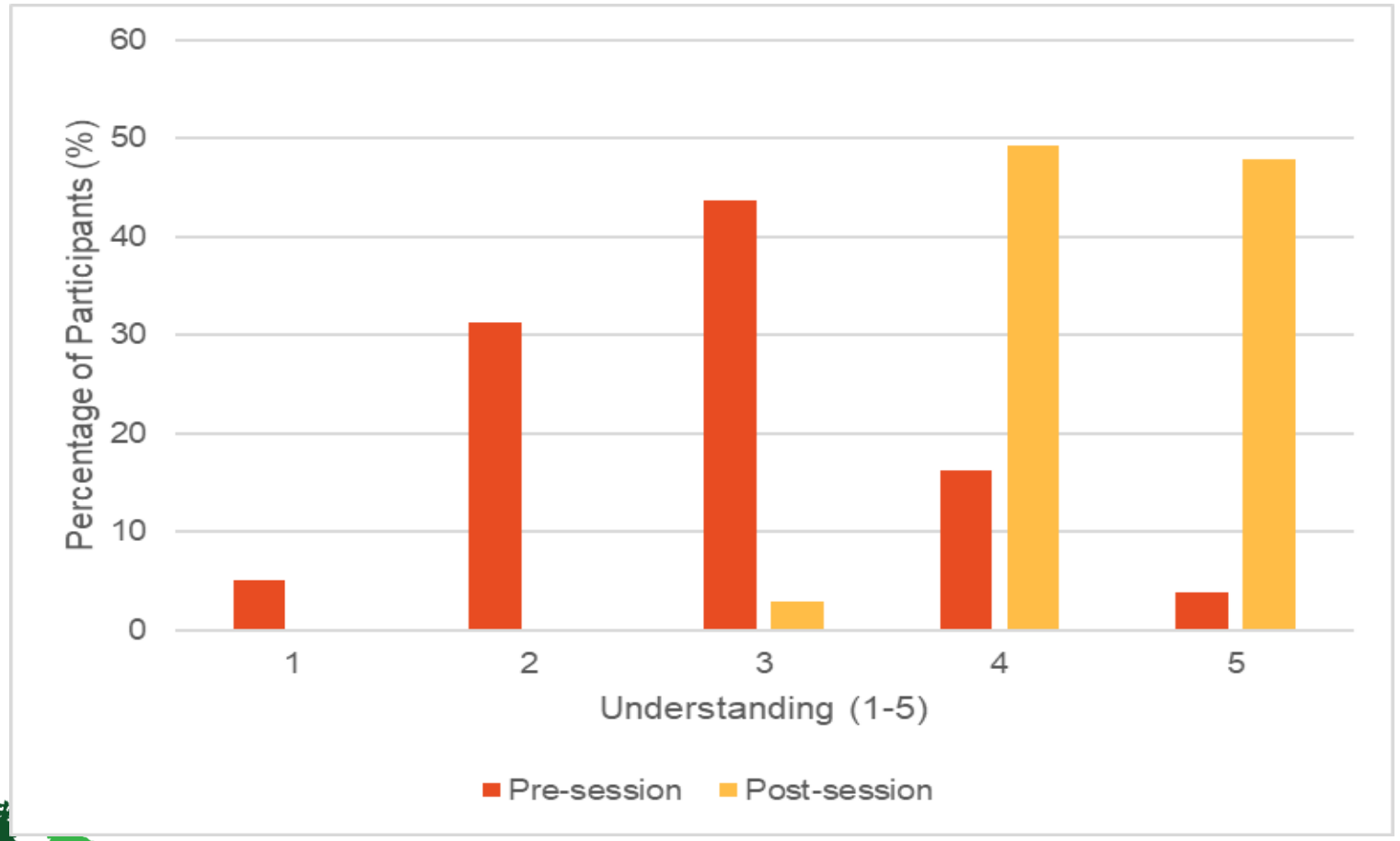


- Pre-session:
  - 50.4% slightly or not at all confident
  - Only 4.3% extremely confident
- Post-session:
  - 70.7% moderately or extremely confident
  - Only 1.7% not at all confident

Participants' Confidence to Define "Perimenopause"



Participants' Understanding of How Nutrition Impacts Perimenopause Symptoms



- ➔ Pre-session:
  - Avg. rating = **2.83**
  - 80% of participants rated understanding a 3 or less
- ➔ Post-session:
  - Avg. rating = **4.45**
  - 97.2% of participants rated understanding a 4 or 5

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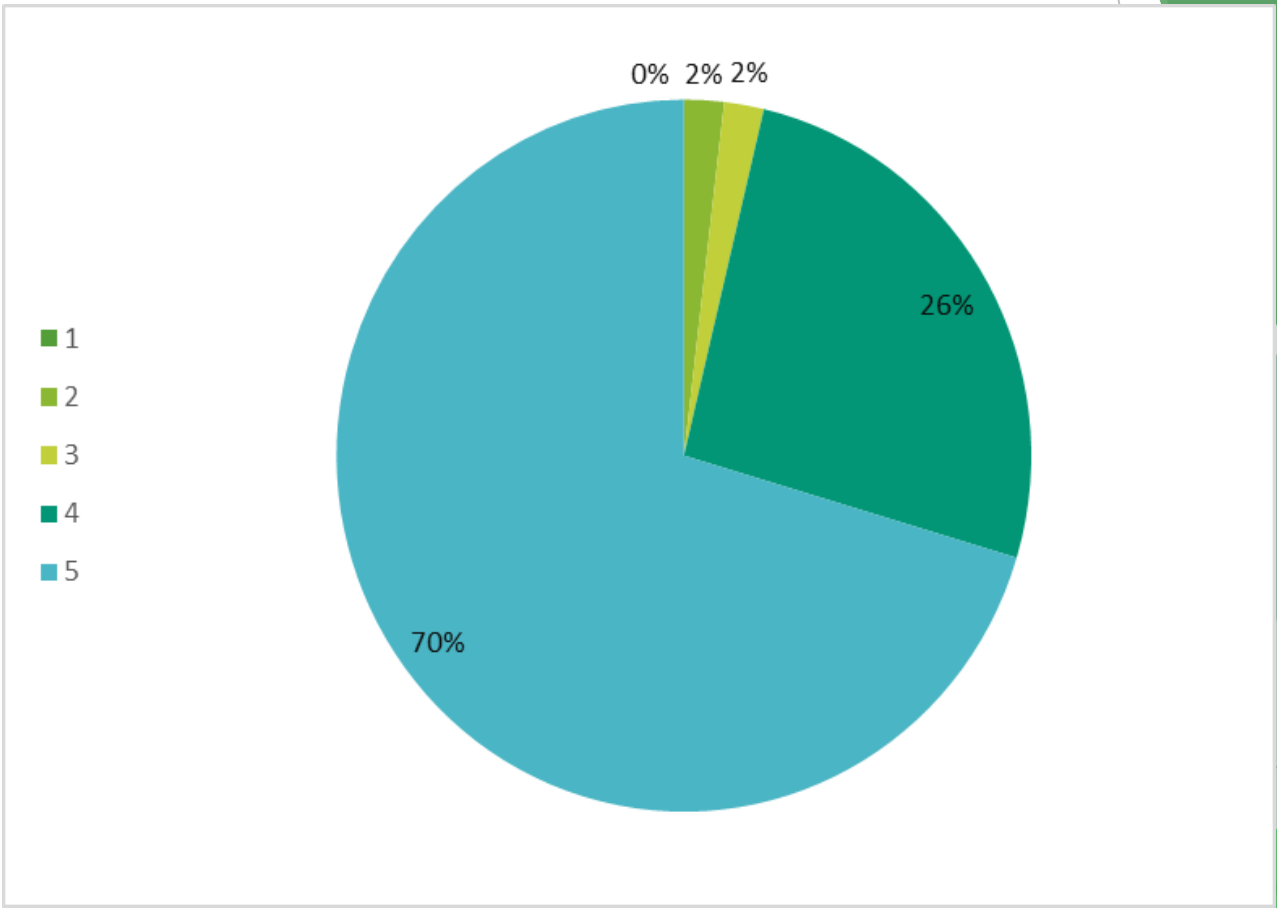
Participants' Satisfaction with the Content and Delivery of the Workshops

- ➔ 70% of participants rated their satisfaction a 5
- ➔ Only 4% of participants rated their satisfaction 3 or less
- ➔ Avg. rating was **4.65**



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The Women's Health Clinic

by Dr. Lindsay MacMillan, Dr. Correia, Dr. Woods and Dr. Fennell

- Information sessions run by Angela Hollingshead
- Fee for service clinic
- For attached and unattached patients

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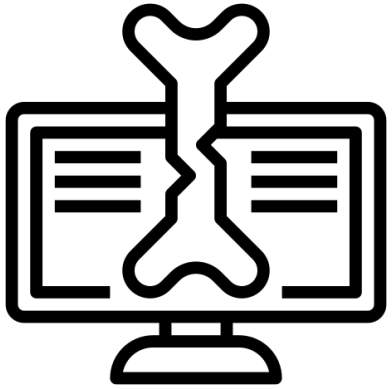
Thank you!

Orthobullets: Asynchronous Online Musculoskeletal Course for Rural General Practitioners

Taylor Marshall, Dr. Cameron Elgie, Dr. Roy Kirkpatrick, Dr. Lisa Allen, Magdalena Partyka-Sitnik

Background

- **Ontario:** 13.4% of ambulatory care visits and 12.3% of ED visits are MSK
- **Southern Africa:** 36% of primary care presentations MSK-related
- **Training:** <3% of medical school curriculum in Canada and globally.



- **Online digital education:** cost-efficient, accessible, shareable, self-directed
- **Digital MSK learning:** may better equip medical students for rural / remote primary care medicine, can be shared to promote global health equity

Objective: Design and test an online MSK program to improve core clinical knowledge for learners considering rural practice.

Methods

Design

- Randomized controlled trial with a crossover design.

Participants

- Medical learners (primarily NOSM undergraduate years 3/4 & Family Medicine postgraduate; Ugandan learners via CNIS), recruited voluntarily.

Intervention

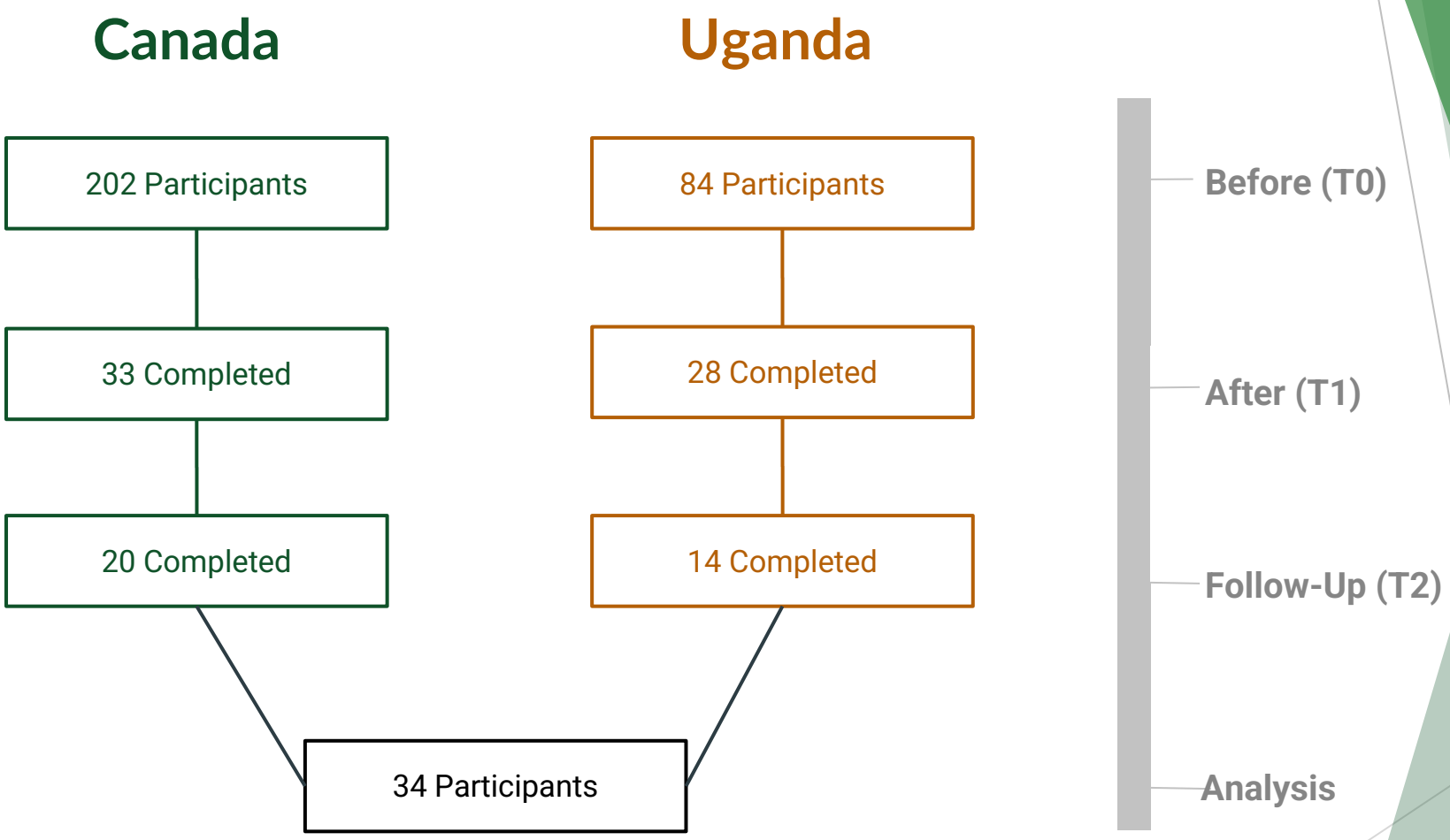
- Access to an online asynchronous 8 week MSK curriculum created with the Orthobullets platform, completion of the Freedman-Bernstein Basic Competencies Exam to evaluate knowledge pre and post curriculum

Group	Pre-test (T0)	Online modules	1st Post-test (T1)	Online modules	2nd Post-test (T2)	3rd Post test (T3)
Week	***1***	***2-9***	***10***	***11-18***	***19***	***28***
Intervention	✔	✔	✔		✔	(✔)
Control	✔		✔	✔	✔	(✔)

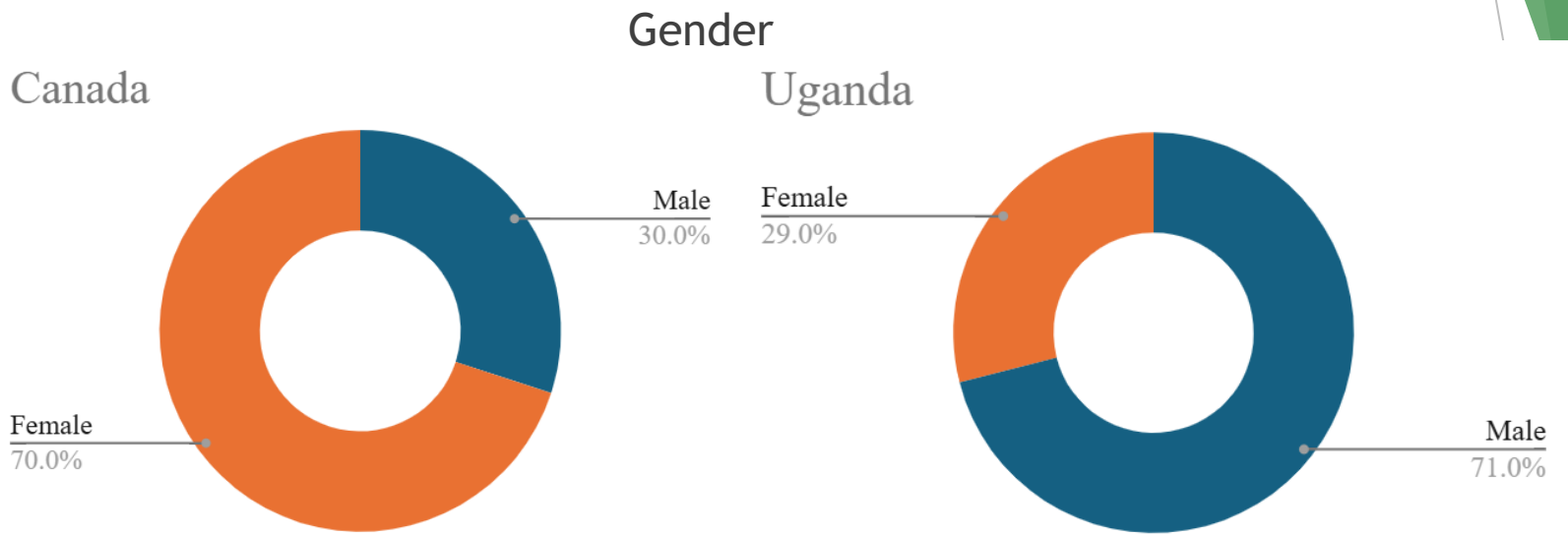
Sample BCE questions

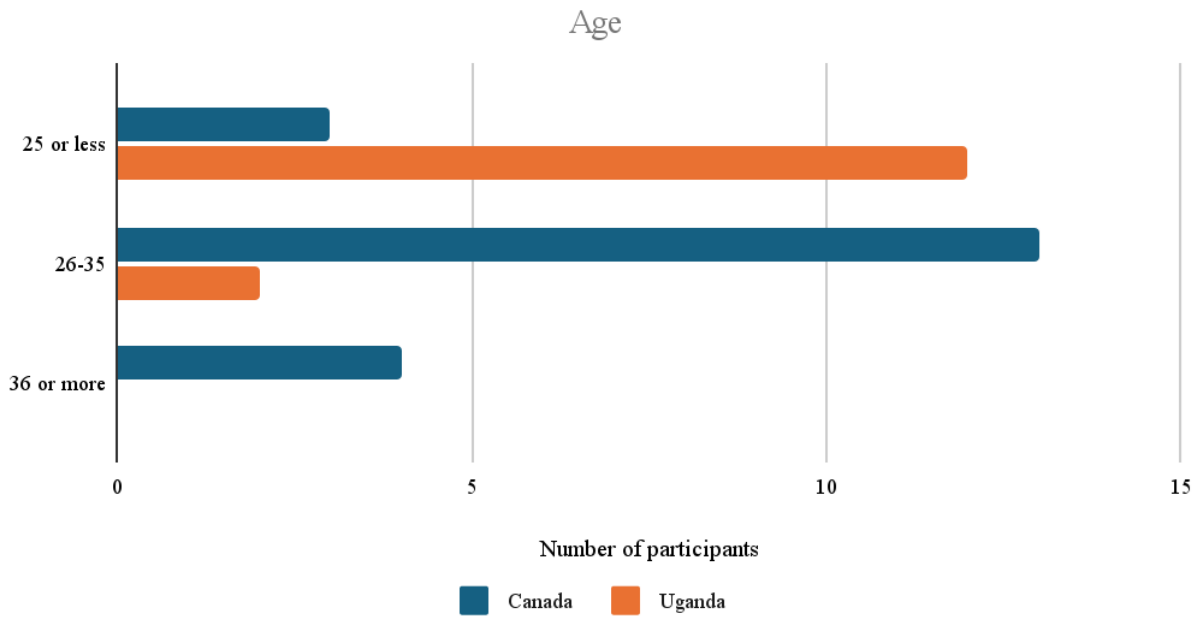
A 25-year-old male is involved in a motor- vehicle accident. His left limb is in a position of flexion at the knee and hip, with internal rotation and adduction of the hip. What is the most likely diagnosis?

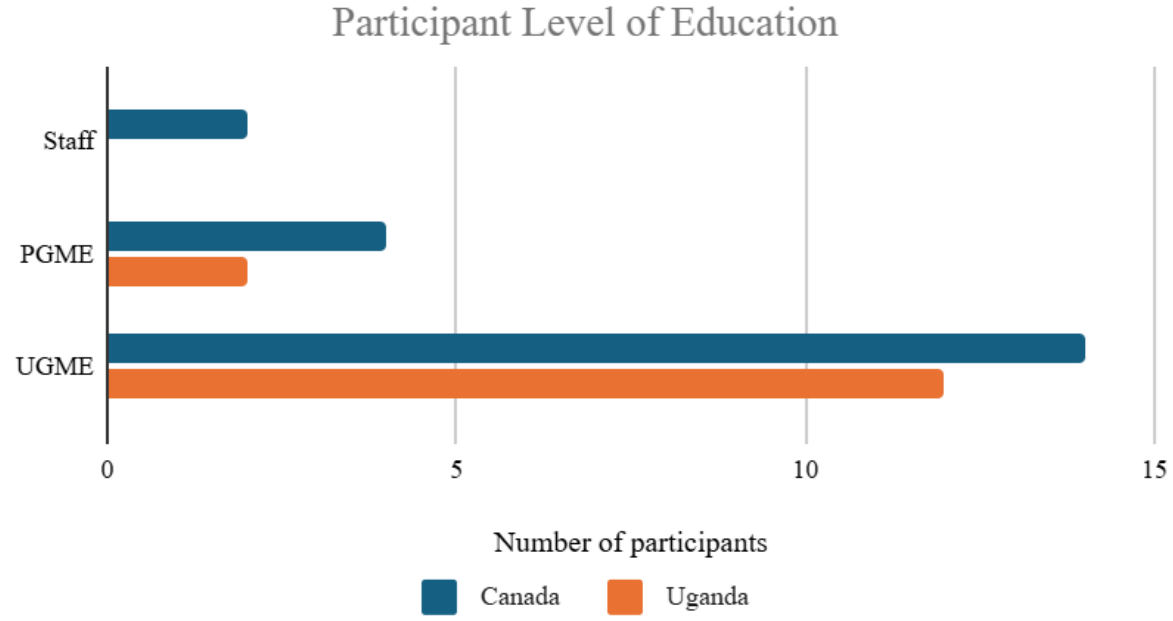
A 20-year-old injured his knee while playing football. You see him on the same day, and he has a knee effusion. An aspiration shows frank blood. What are the three most common diagnoses?


Canada
Uganda
202 Participants
84 Participants
33 Completed
28 Completed
20 Completed
14 Completed
34 Participants
Before (T0)
After (T1)
Follow-Up (T2)
Analysis

Demographics

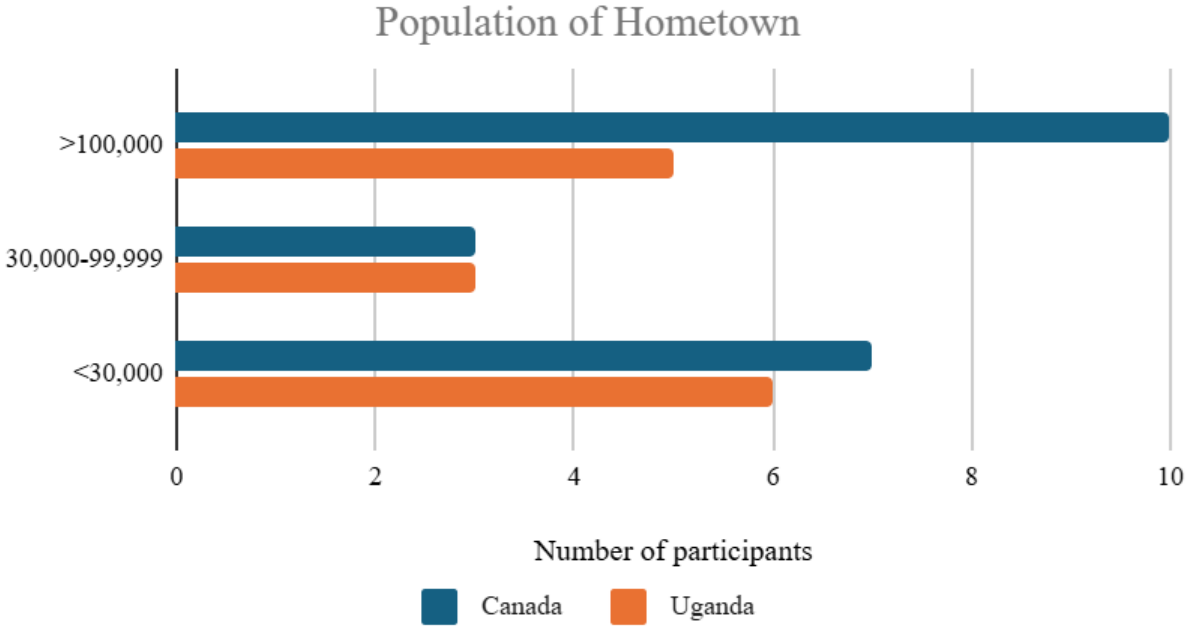


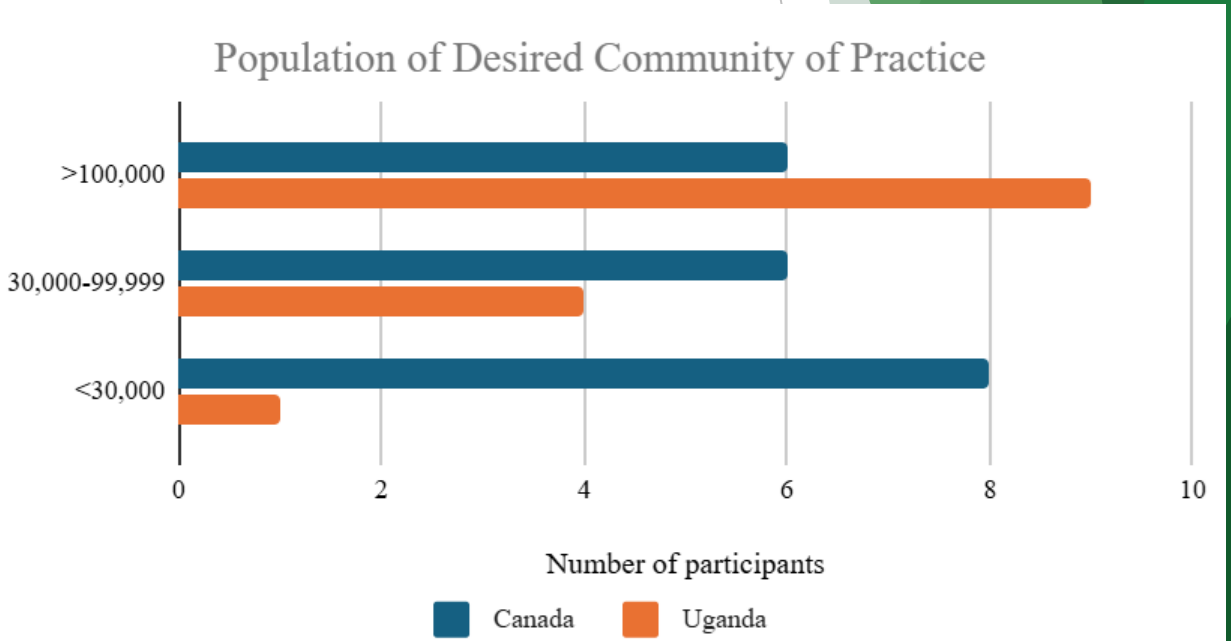




Demographics

Interest in rural practice





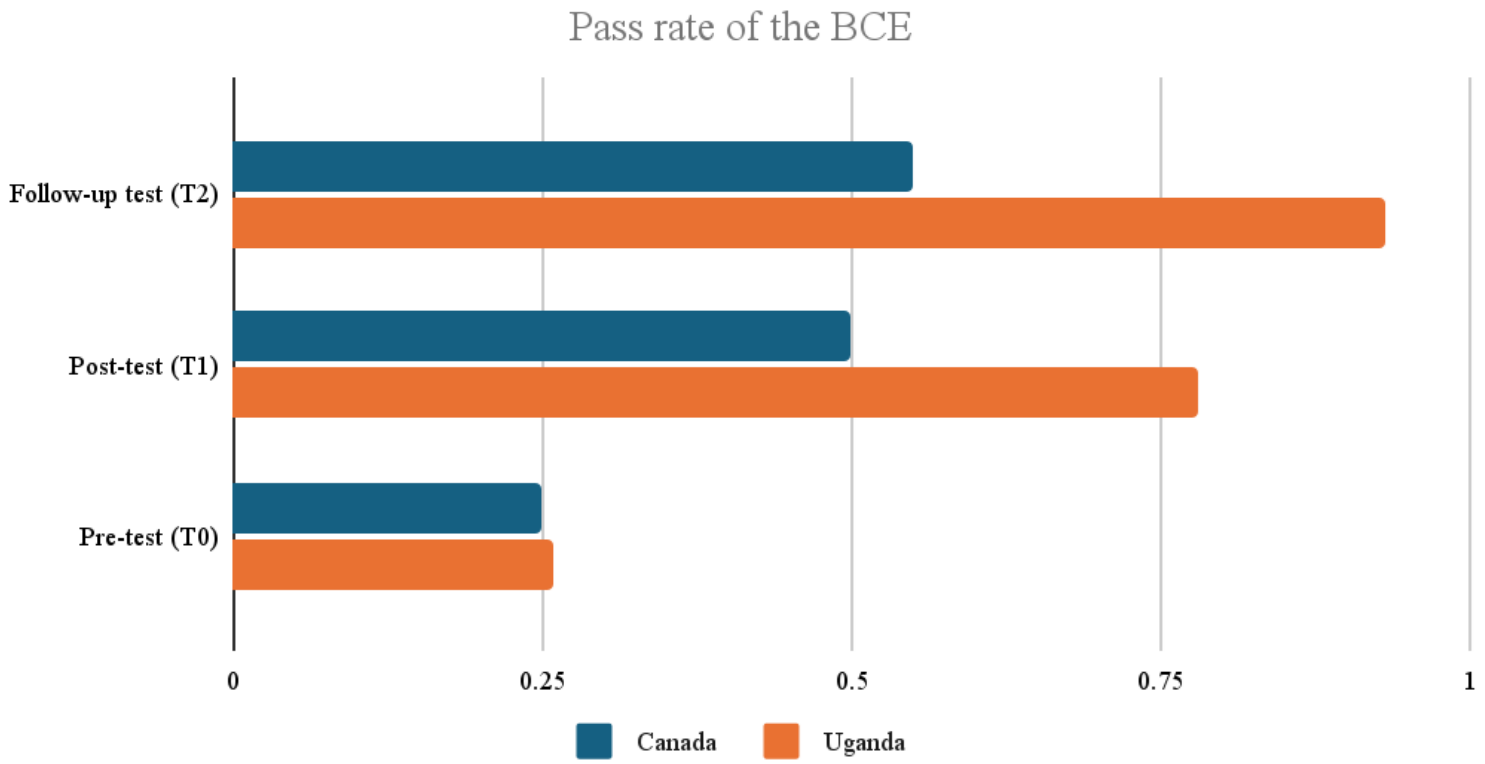
Results

- **Statistically significant increase in pass rate** for Ugandan and Canadian participants.
- **20 of 34 participants changed from Fail to Pass** after completing the course
- Only **1 participant changed from Pass to Fail** on the follow-up test
- **No significant difference in follow-up scores** (T2) compared to post-course scores (T1) (mean difference = 0.09) and no significant difference in pass rates (*Cdn data only*).

Ugandan	*After (2) Pass*	*After (2) Fail*	**Total**	
Before (1) Pass	6	0	**6**	26.1%
Before (1) Fail	12	5	**17**	73.9%
Total	**18**	**5**	**23**	100.0%
	78.3%	21.7%	100.0%	
McNemar test, p=		0.001		
Canadian	*After (2) Pass*	*After (2) Fail*	**Total**	
Before (1) Pass	7	0	**7**	30.4%
Before (1) Fail	7	9	**16**	69.6%
Total	**14**	**9**	**23**	100.0%
	60.9%	39.1%	100.0%	
McNemar test, p=		0.016		

Table 1. Pass rate Before (1) and After (2) completion of digital curriculum

Impact



- Test results confirm that **generalist MSK knowledge is still insufficient.**
  - Only ~25% of both Canadian and Ugandan students had a passing grade initially.
- Medical learners who committed to the program **significantly improved and retained MSK knowledge.**

Limitations

- Participant drop-out / small sample size
  - Application access and navigation issues
  - Overwhelming academic content
  - Time-consuming daily lessons
- Repeat testing & question remembrance
  - Control group also improved on the test before accessing the course
    - Some improvement expected, but magnitude smaller

Next Steps

- **Final Analysis:** Deep dive into stats to compare Canadian control and intervention subgroups and look at final Uganda data.
- **Publication:** Working towards a final manuscript this fall!
- **Presentations:** Hoping to submit and present at the Rural and Remote Medicine Conference and Northern Constellations in 2026.
- **Round 2:** Tighter content and a simpler Canadian made digital platform (new grant application in the fall).

Thanks for listening!

SMMH Mobility Study

Grace Gaughan and Raylene Schultz

SOUTH MUSKOKA
Local Education Group

Study Background

CURRENT PROBLEM

Prolonged immobilization

- Decreasing independence and functional ability
- Increasing institutionalization after discharge

STUDY OBJECTIVE

Regular mobilization with a dedicated mobility staff member

- Impact on patient wellbeing and functionality?
- Ability to return to and remain home after discharge?

Procedure

1

Assisting Up To Chair
(Breakfast + Lunch + Dinner)

Has the patient had other movement throughout the day?

2

Check on Control Group

Have they gotten up themselves?

Have they been mobilized by nursing staff?

3

SURVEYS!
(every third day)

1. FACT-G
2. MME
3. Pain Scale (0-10)
4. Additional Questions

Goals

330 Participants in total at the end of the study

Collect data on the benefits of regular mobility in hospital

Are dedicated resources needed for mobilization of patients?

Inclusion and Exclusion Criteria

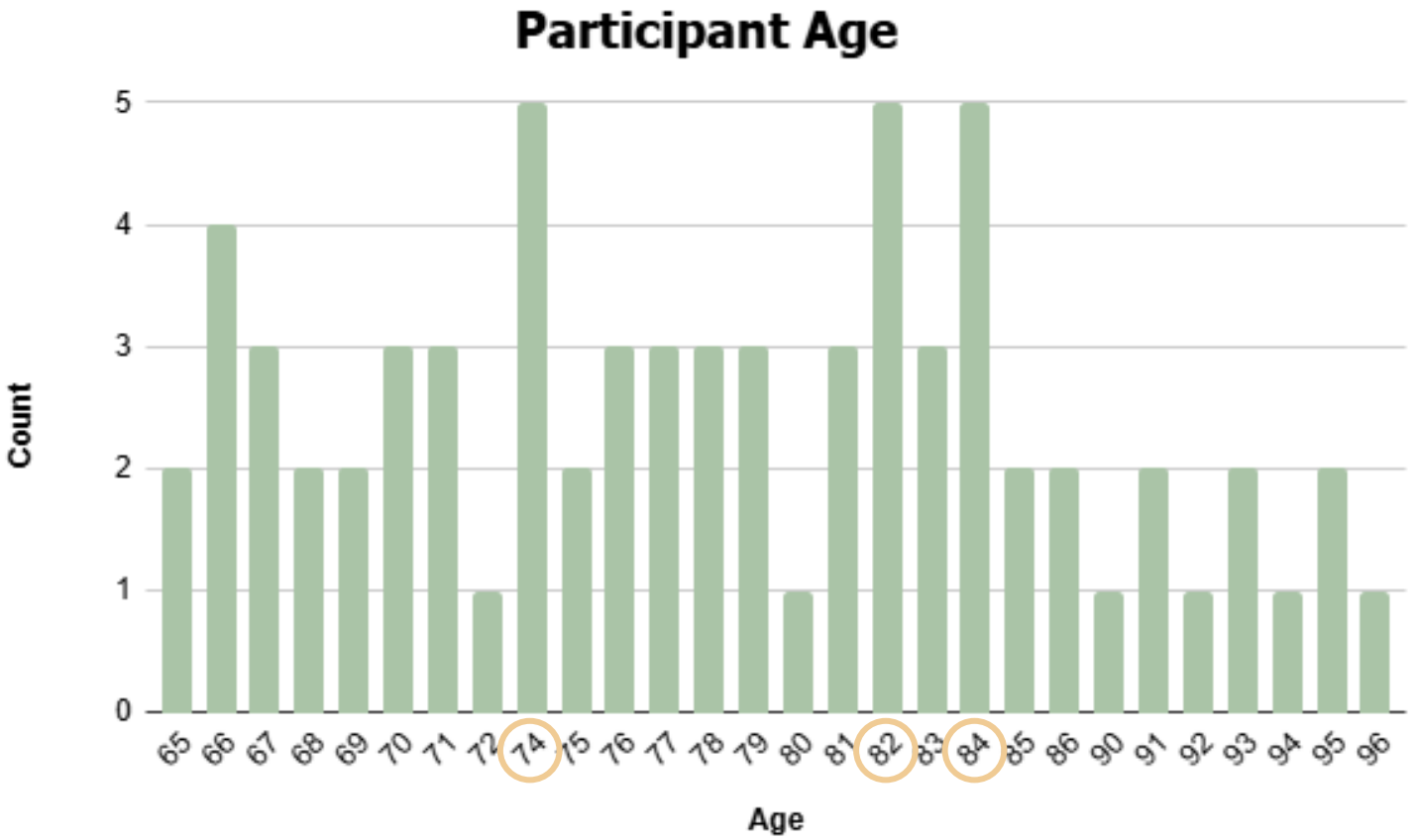
- ✓ 65 years or older
- ✓ Acute Care
- ✓ Able to mobilize to some degree
- ✓ Independent, standby, x1 or x2 assist

- ✗ Severe Cognitive Impairment
- ✗ ALC/SSR
- ✗ Critical Care/ICU
- ✗ Hoyer or maximum assist

Current Status

96	Total # of patients who have participated in the study
80	Participants discharged to date
7	Participants in each group at any given time

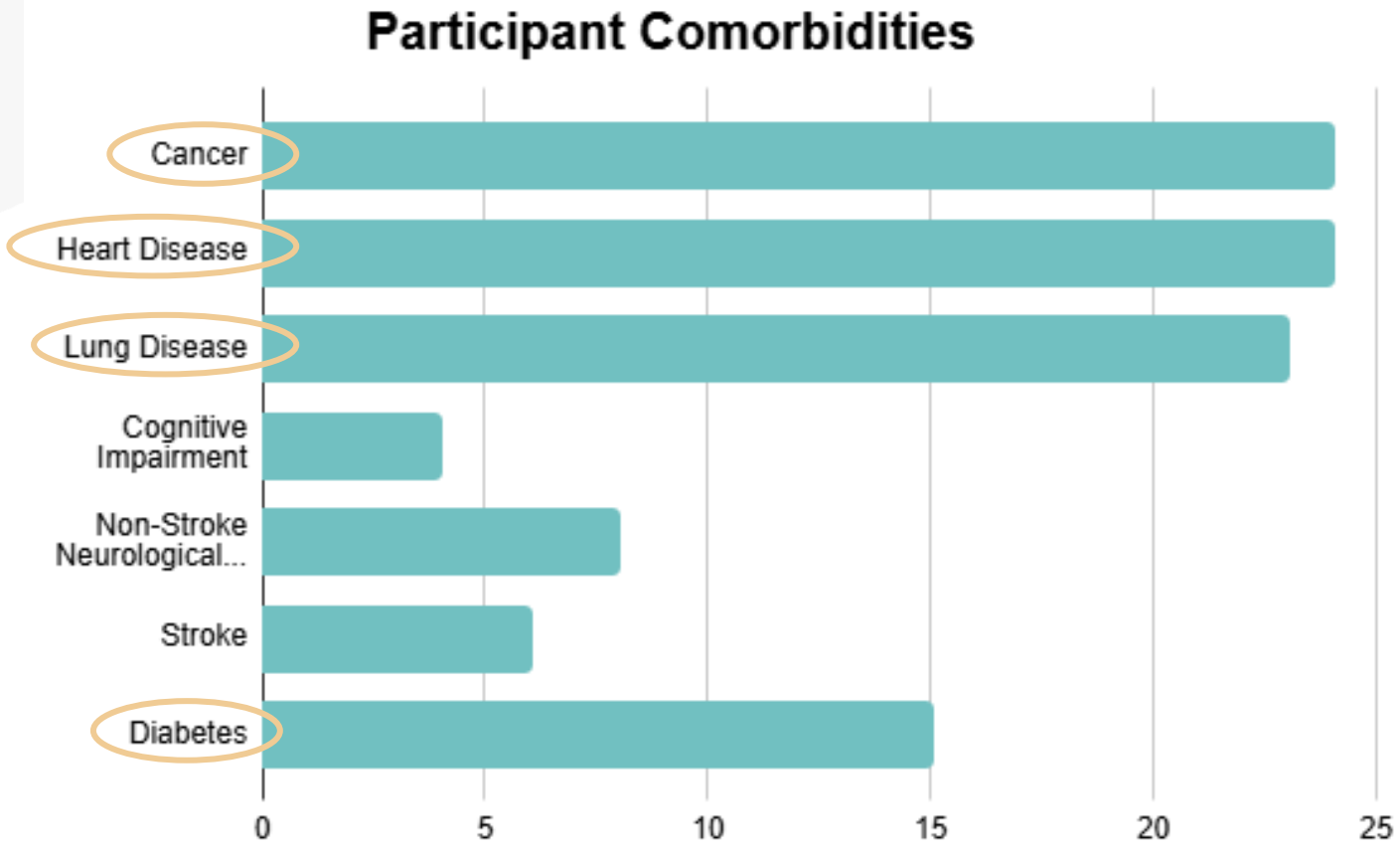
Preliminary Results



Average Participant age:
78.7 years

Most common ages:
74, 82, and 84

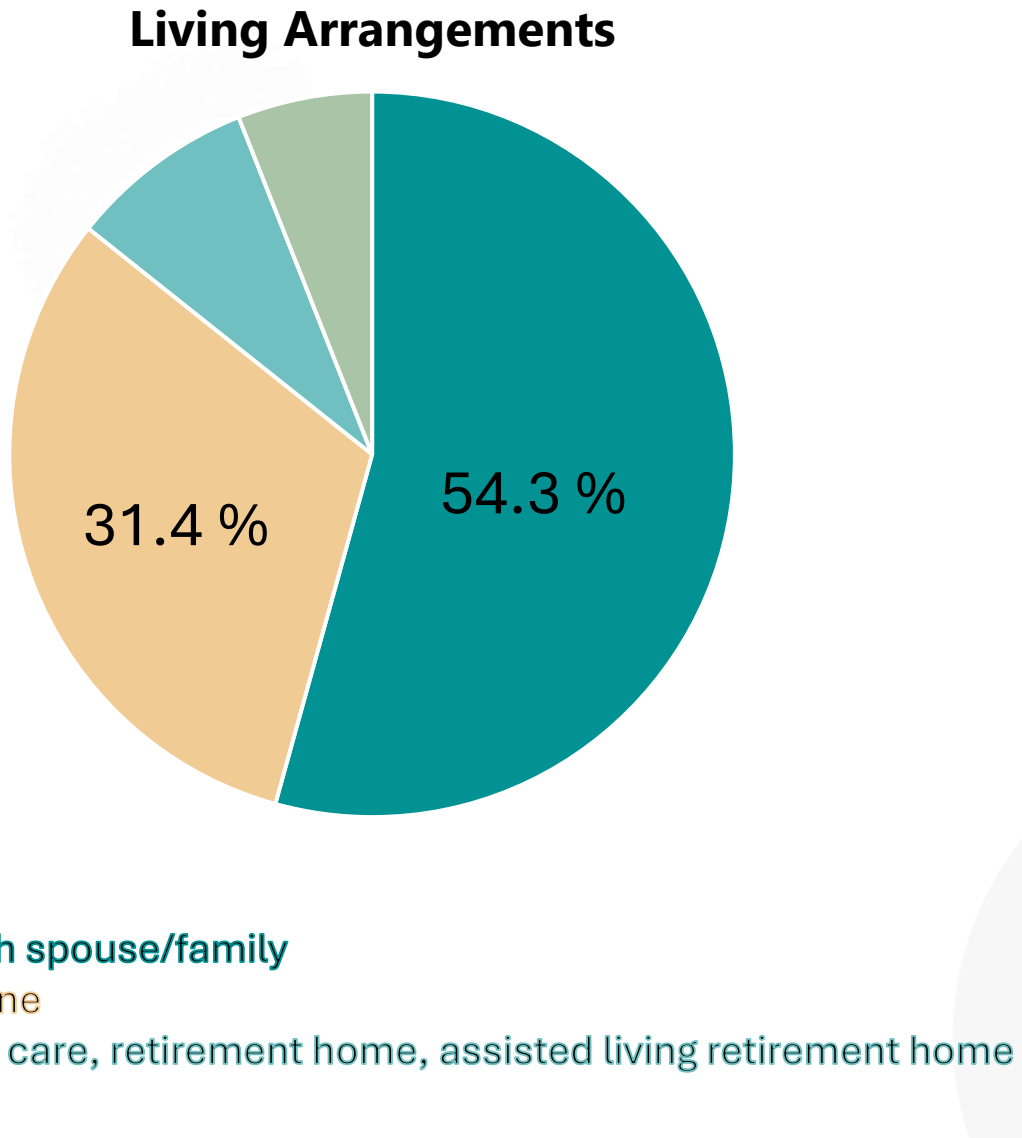
Preliminary Results



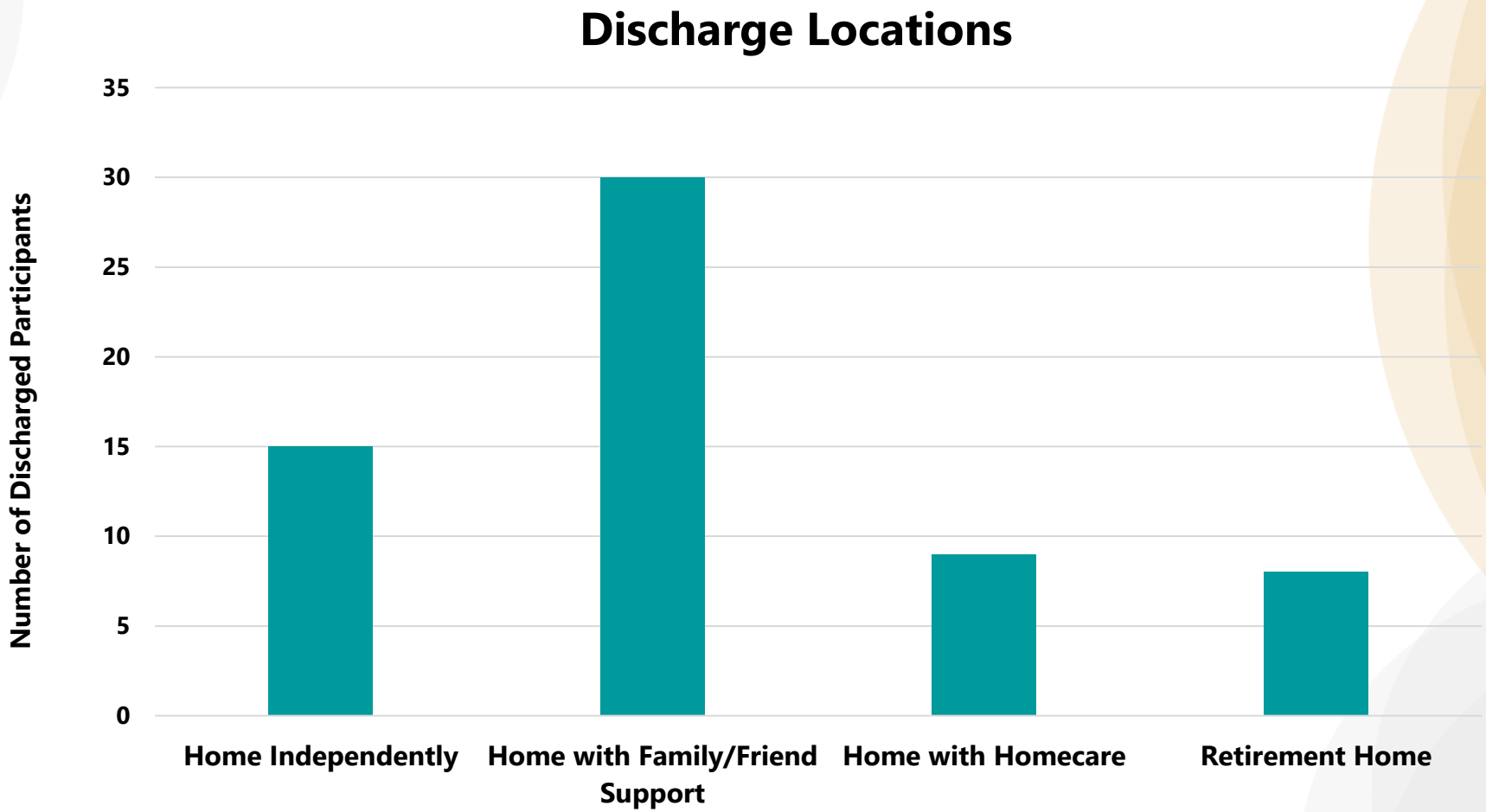
Most Common:

- Cancer **(n=24)**
- Heart Disease **(n=24)**
- Lung Disease **(n=23)**
- Diabetes **(n=15)**

Preliminary Results



Preliminary Results



Compliance

ONLY **3 cases** so far where participants did not get out of bed for any meals

Compliance – Day 1

90%

Intervention participants up for **breakfast** on day 1 of mobilization

88%

Intervention participants up for **lunch** on day 1 of mobilization

77%

Intervention participants up for **dinner** on day 1 of mobilization

Compliance- Day 4

100%

Intervention participants up for **breakfast** on day 4 of mobilization

100%

Intervention participants up for **lunch** on day 4 of mobilization

64%

Intervention participants up for **dinner** on day 4 of mobilization

Challenges

- Limited chair availability or not enough space for a chair
- Holes in Data Collection – Patients away for testing/procedure
- Quick turnover from admission → discharge
- Patients reluctant to repeat the same survey questions
- Recruitment difficulty
- Participant fatigue

Participant Feedback

- Social Aspect: benefits of regular check ins and chats
- Survey Questions: help patients talk through and process their current situation and emotional wellbeing
- Many participants have voiced the importance of regular mobility

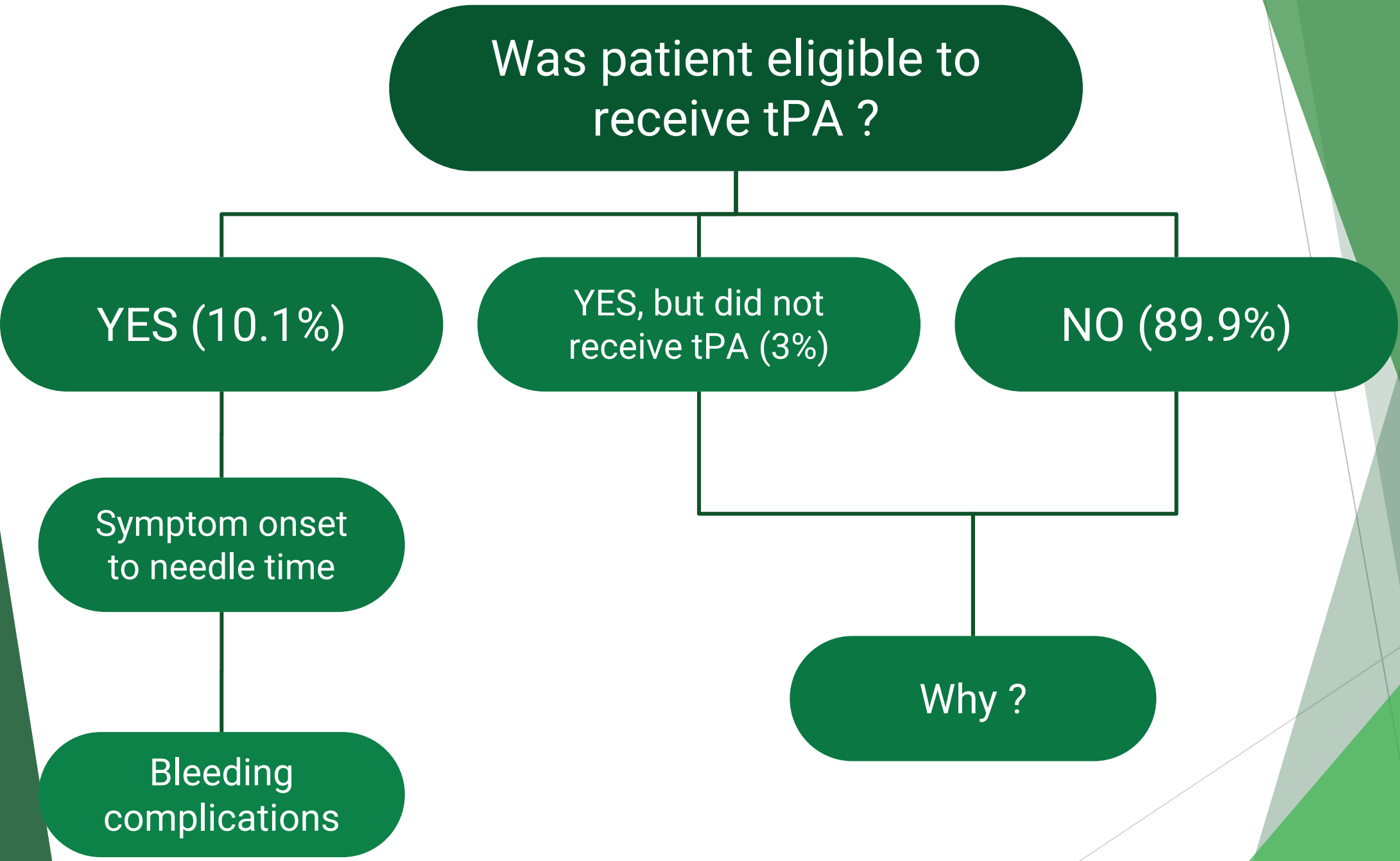
Thank You

Stroke QI and tPA

Joyce Hlal and Keenan Paterson, Dr. Carmen Baker

Over 300 stroke patient charts were assessed for admitted and non-admitted patients, from 2023, 2024, and 2025.

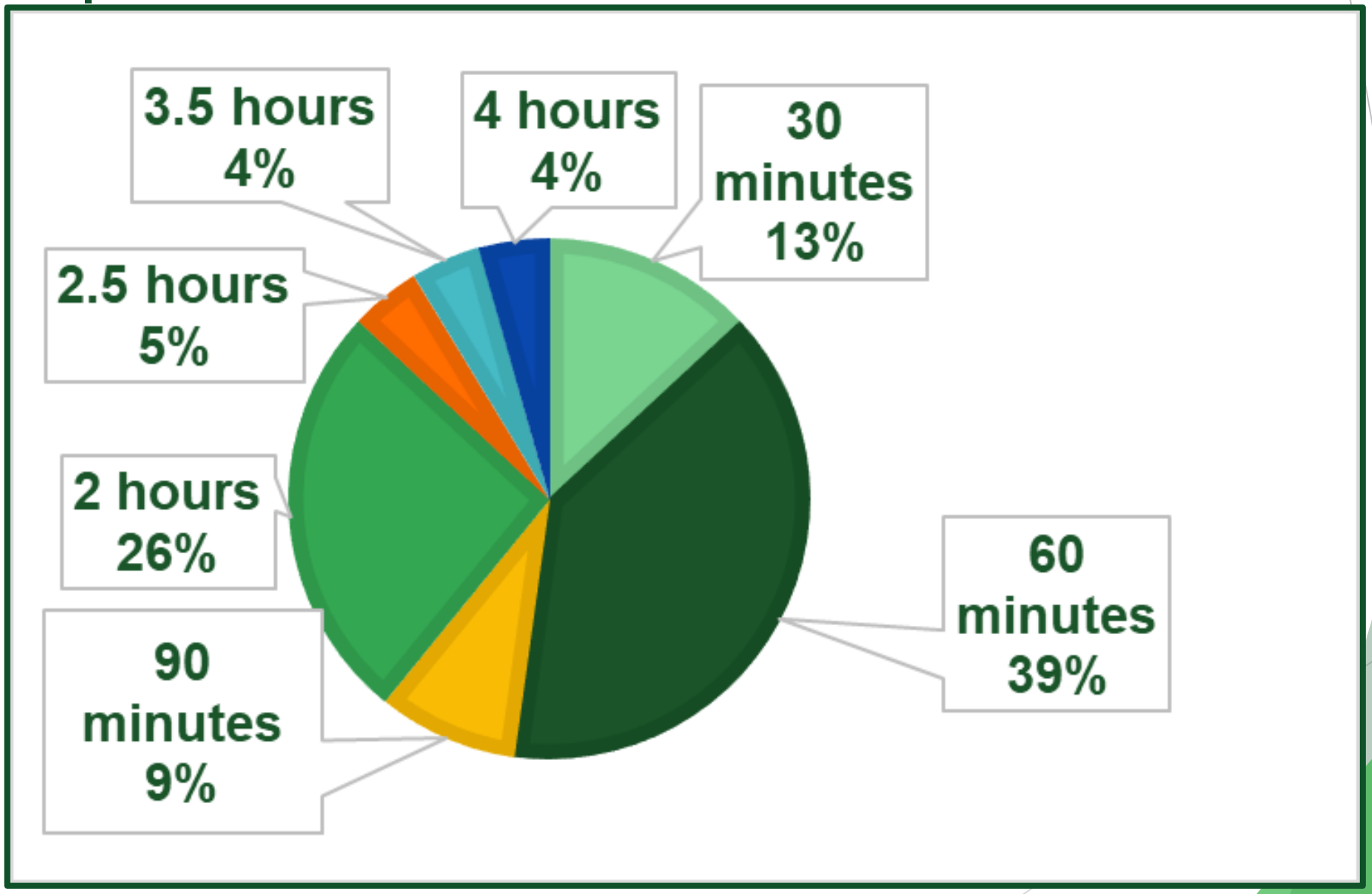
01	**tPA**	• Eligibility • Complications • Follow-ups and discharge
02	**Stroke QI**	• Secondary work-up and DAPT • Admitted assessments • Complications and discharge
03	**EVT and Transfers**	• Eligibility • Transfers to specialized facilities (Julie)


Was patient eligible to receive tPA ?
YES (10.1%)
YES, but did not receive tPA (3%)
NO (89.9%)
Symptom onset to needle time
Bleeding complications
Why ?

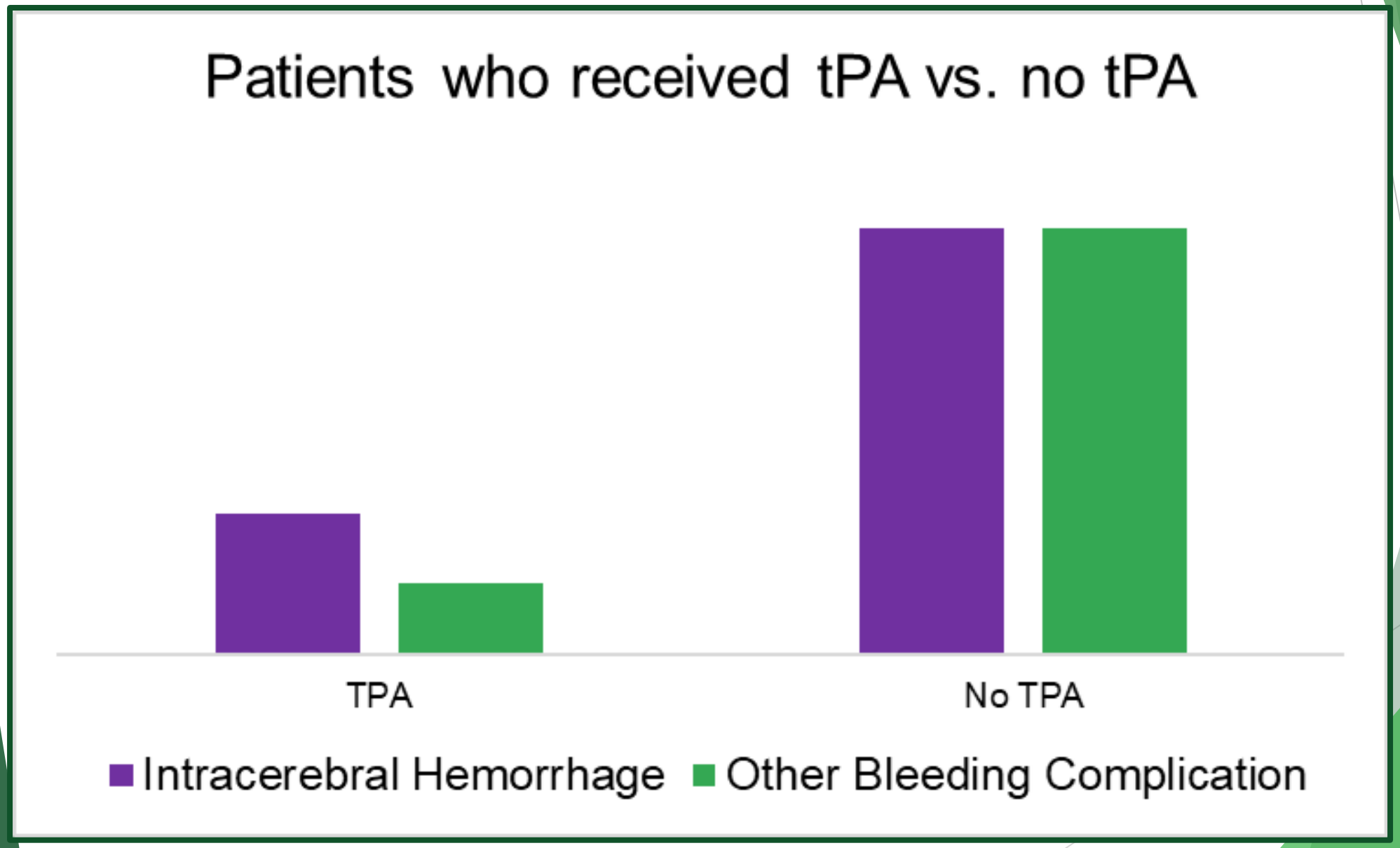
YES (10.1%)

Symptom onset to needle time

Symptom onset to needle time



Hemorrhage Complications



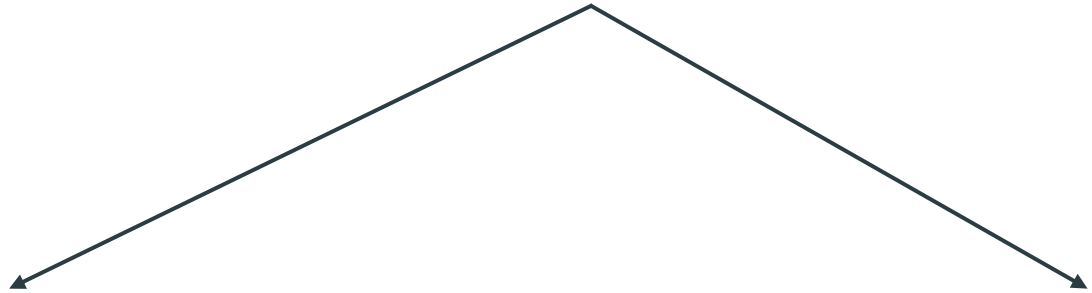
YES (10.1%)

Symptom onset to needle time

Bleeding complications

3%

of patients who were eligible, but did not receive.



37.5%

of patients declined due to comorbidities.

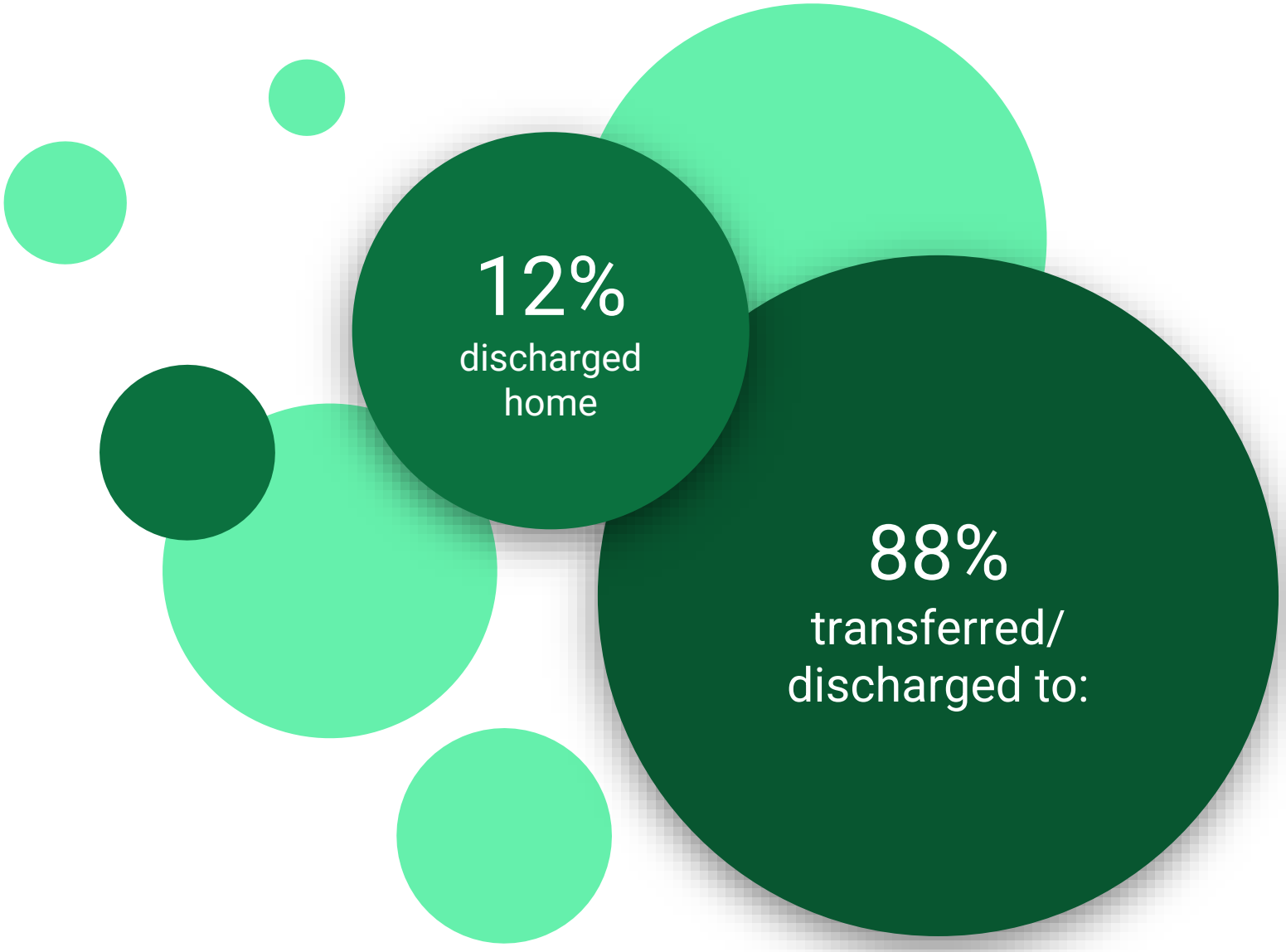
62.5%

of patients declined due to POA.

“Risks outweigh harm”

“Cons outweigh pros”

“Bad outweighs good”

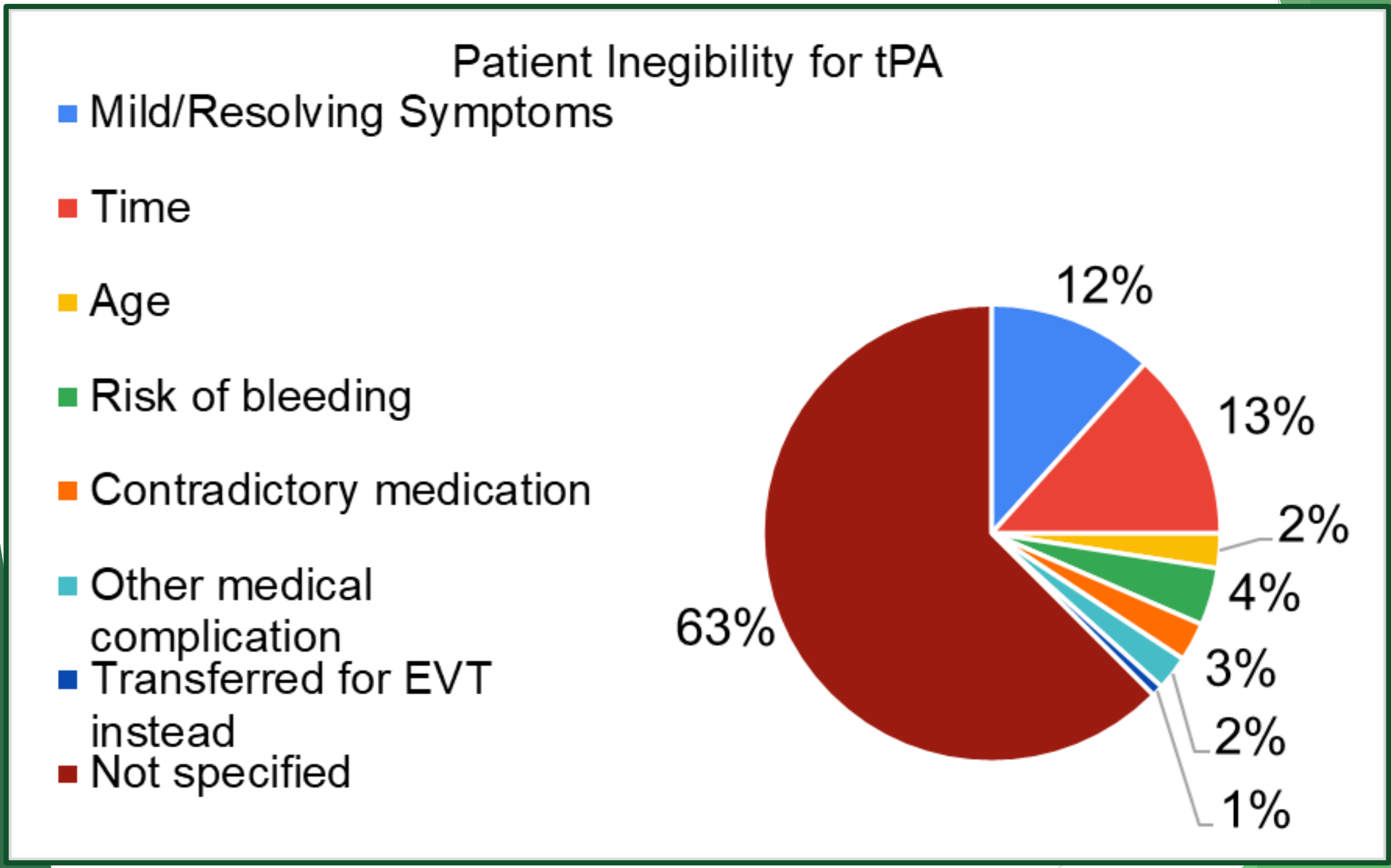

12%
discharged
home
88%
transferred/
discharged to:

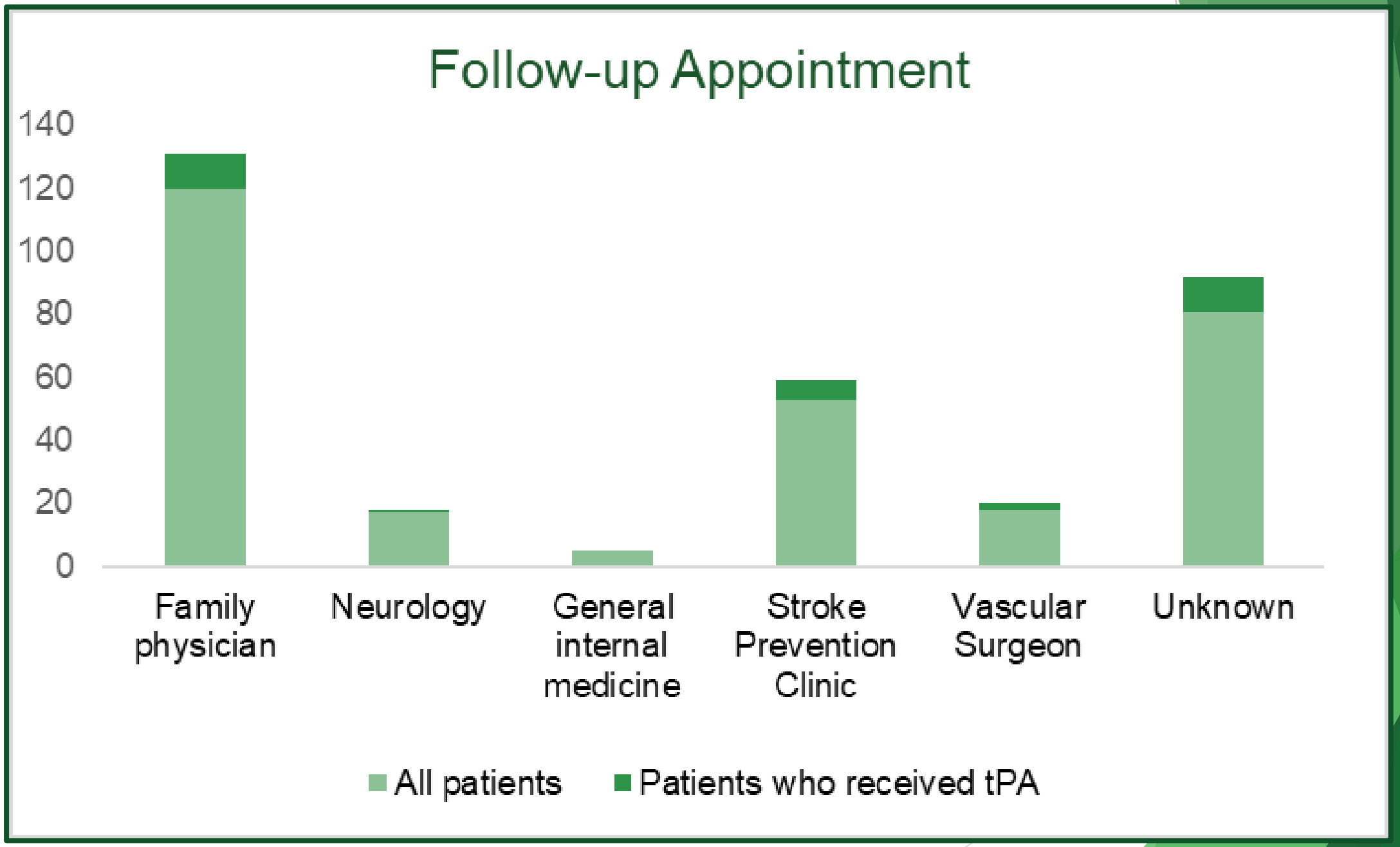
Transferred/Discharged to:

- 28.5% —> Specialized facility
- 28.5% —> Another hospital
- 28.5% —> Palliative Care
- 14.5% —> Died

88%

NO (89.9%)

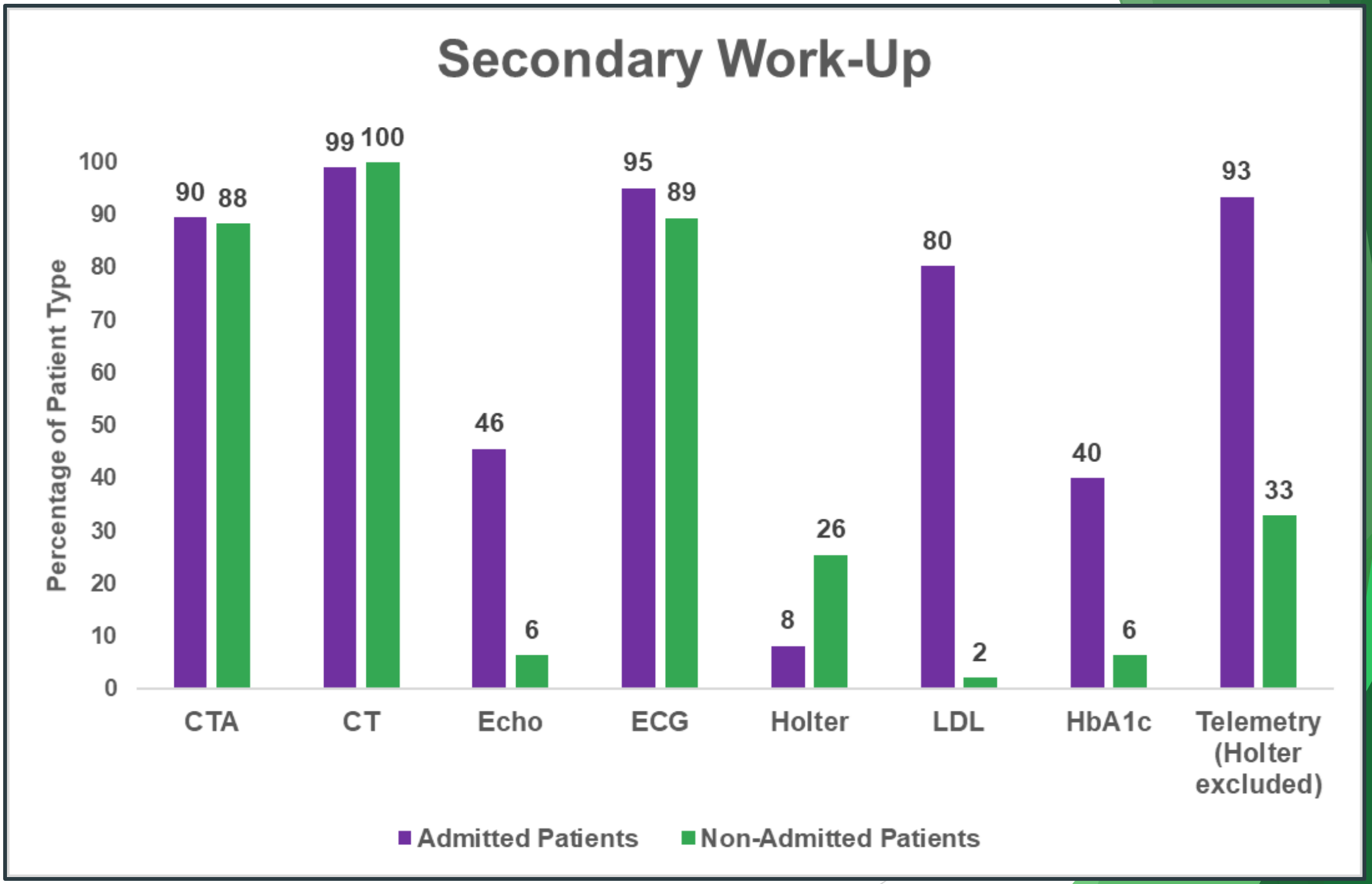

Patient Inegibility for tPA
Mild/Resolving Symptoms
Time
Age
Risk of bleeding
Contradictory medication
Other medical complication
Transferred for EVT instead
Not specified
12%
13%
2%
4%
3%
2%
1%
63%


Follow-up Appointment
140
120
100
80
60
40
20
0
Family physician
Neurology
General internal medicine
Stroke Prevention Clinic
Vascular Surgeon
Unknown
All patients
Patients who received tPA

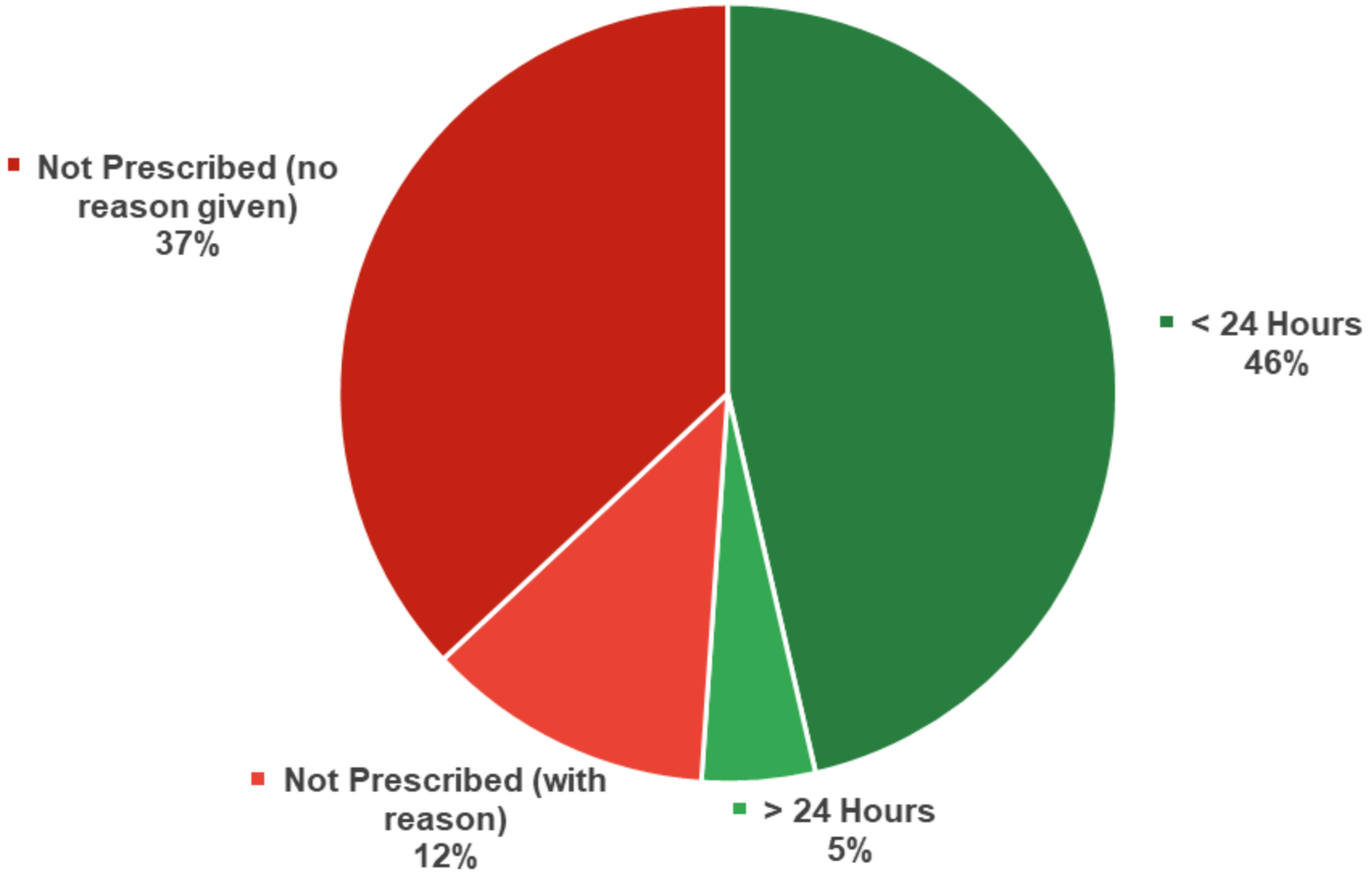
Stroke QI

Stroke QI Targets

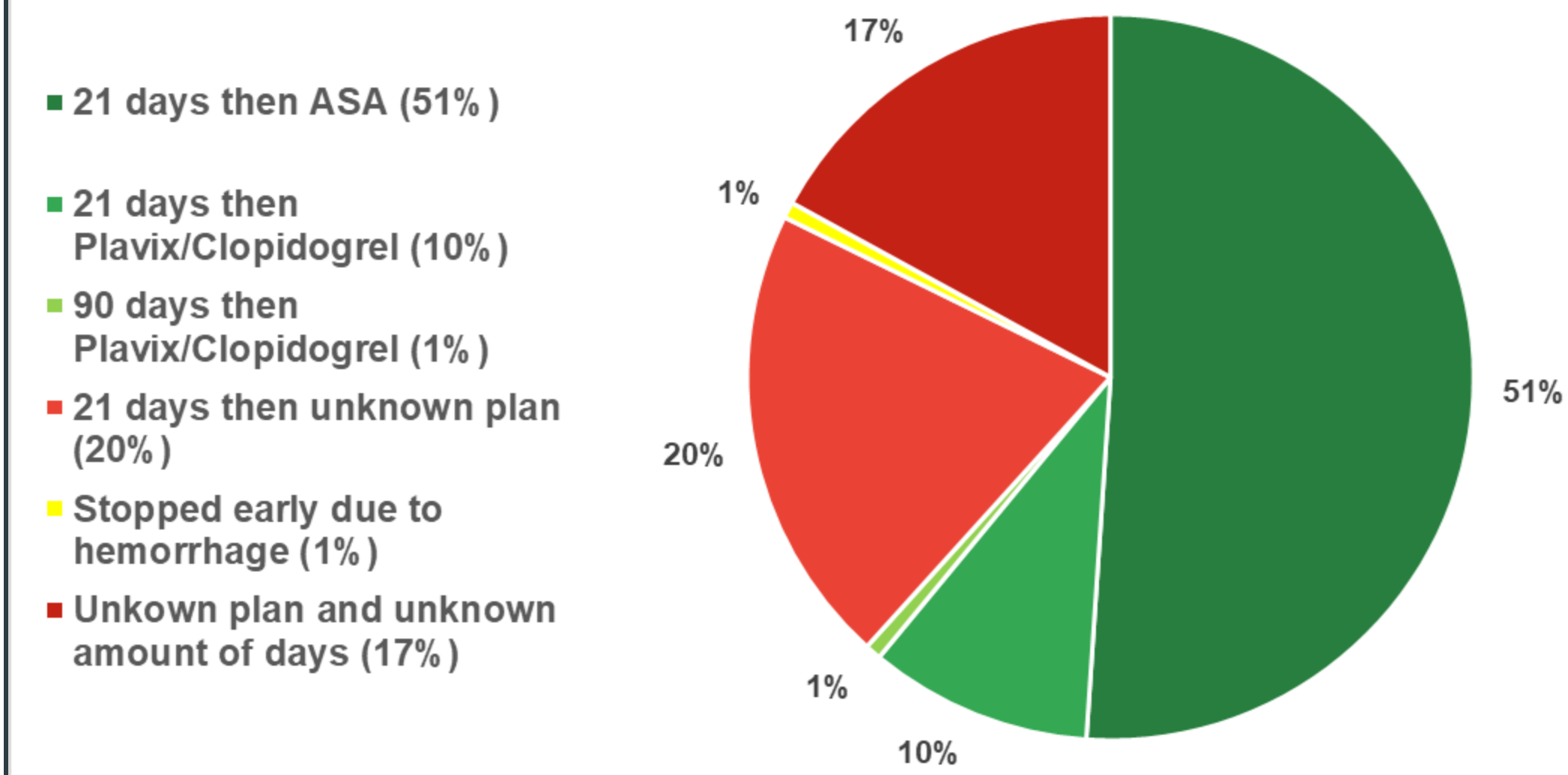
1. Secondary Work – Up
   - CT, CTA, ECG, etc
2. DAPT
   - Prescription times and step-down plans
3. Stroke Team Assessments (Admitted Patients)
   - PT, OT, SLP, etc
4. Secondary Complications
   - Secondary stroke, pneumonia, etc


Secondary Work-Up
Percentage of Patient Type
100
90
80
70
60
50
40
30
20
10
0
90
88
99
100
46
6
95
89
8
26
80
2
40
6
93
33
CTA
CT
Echo
ECG
Holter
LDL
HbA1c
Telemetry (Holter excluded)
Admitted Patients
Non-Admitted Patients

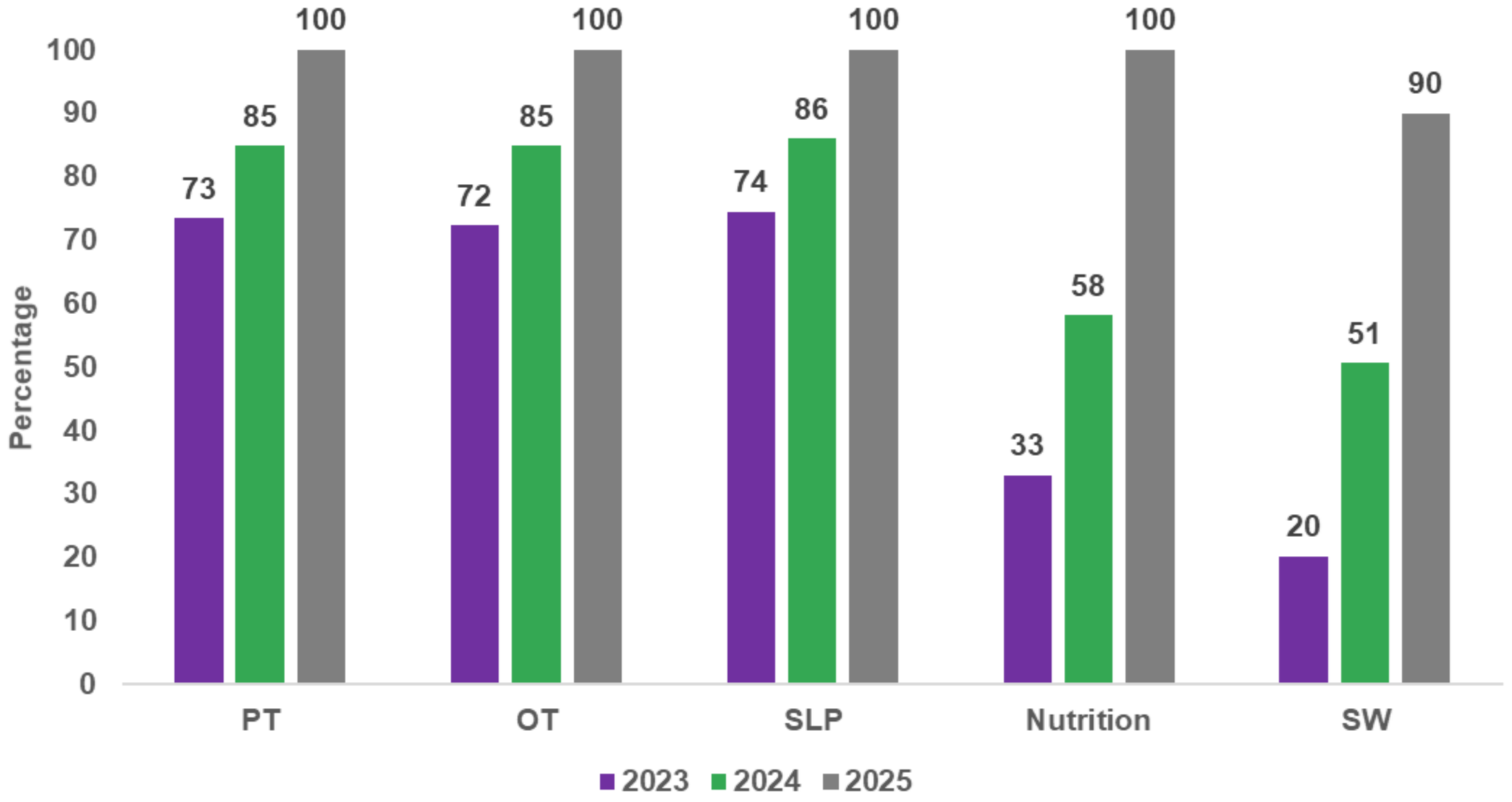
DAPT Prescriptions



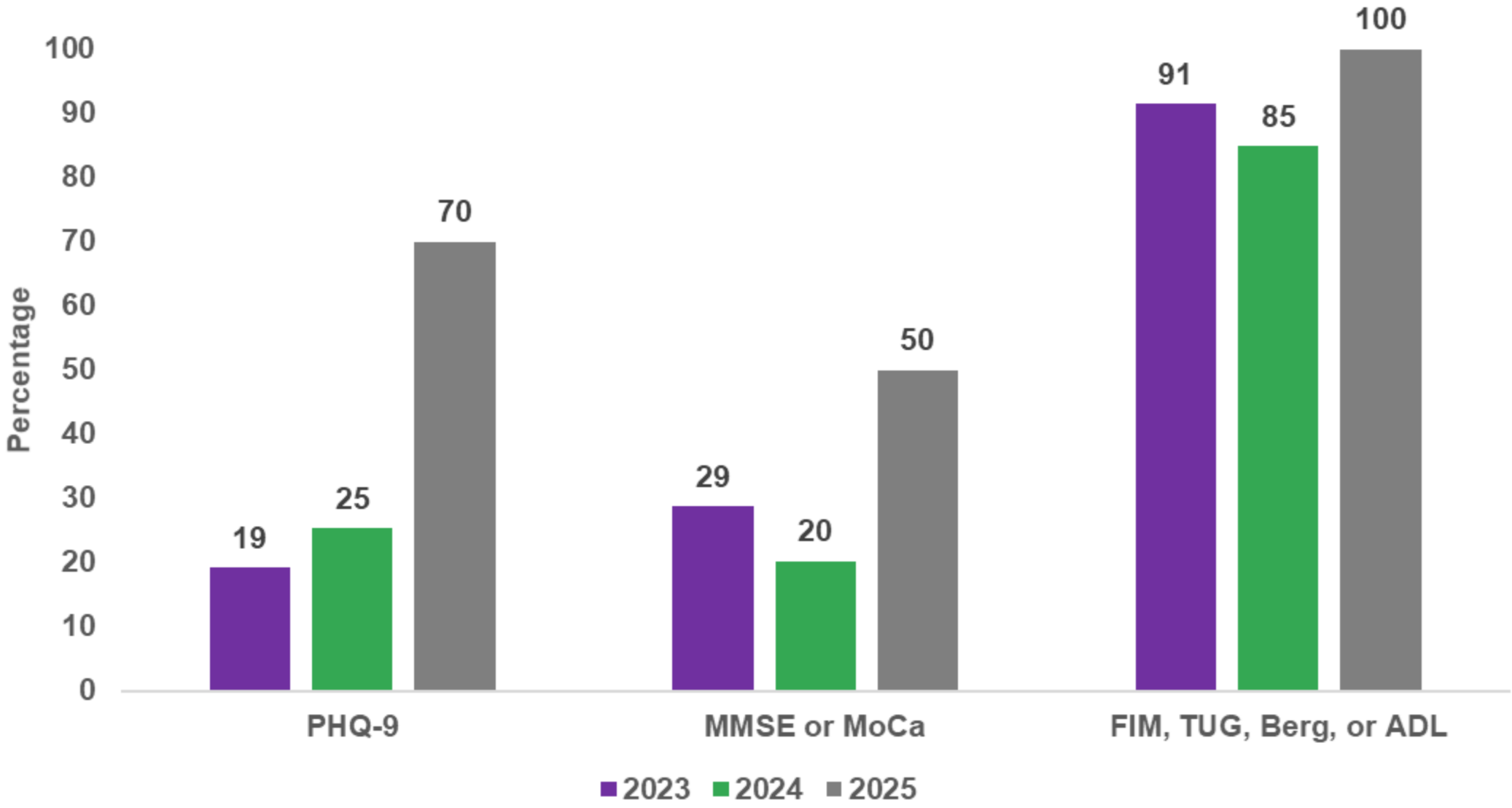
DAPT Step-Down Plans



Stroke Referrals (Admitted Patients)

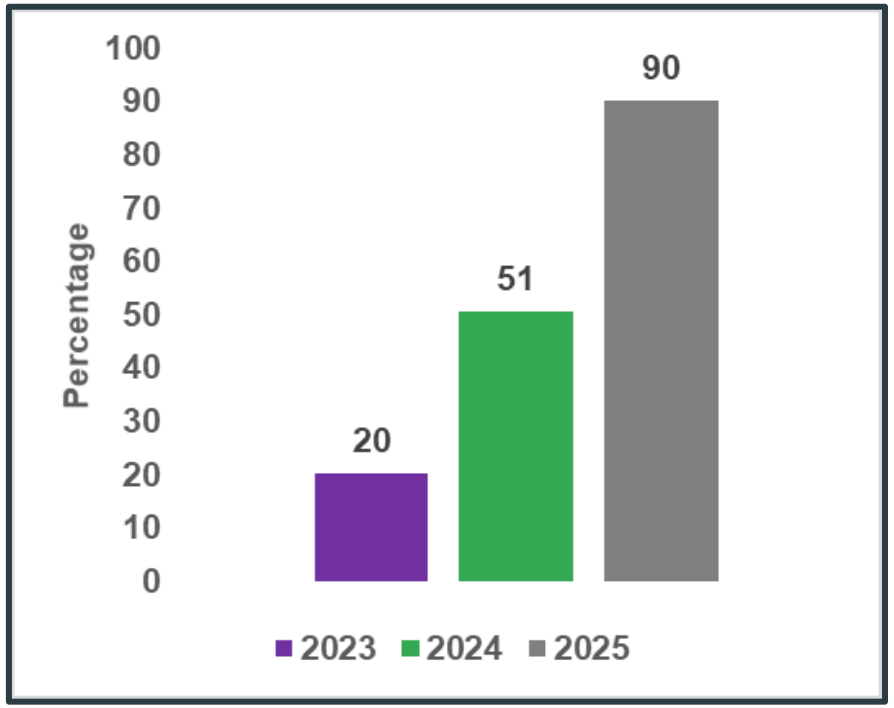


Stroke Assesments (Admitted Patients)

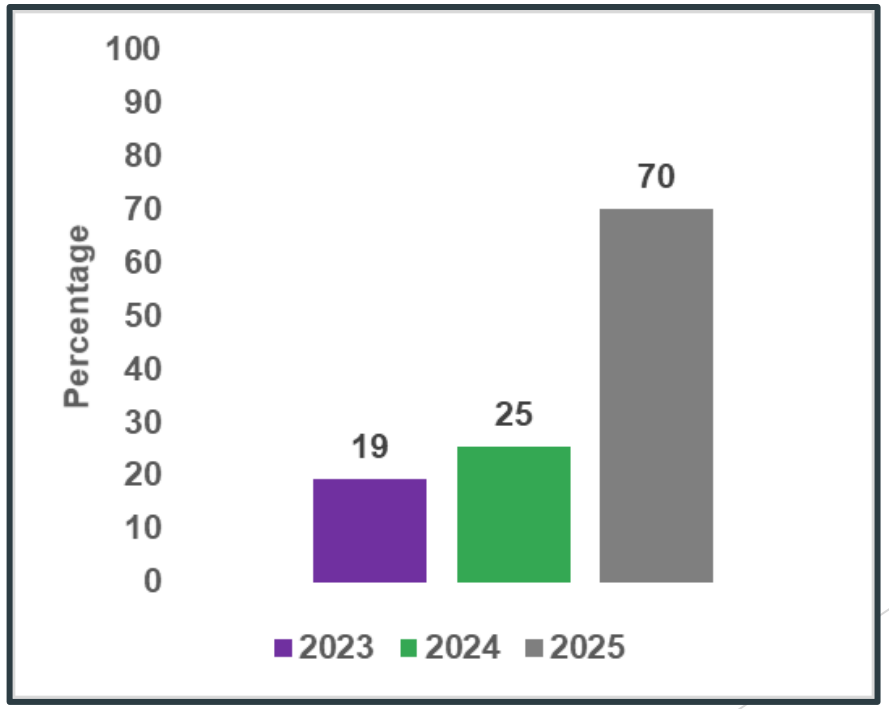


SW vs PHQ-9

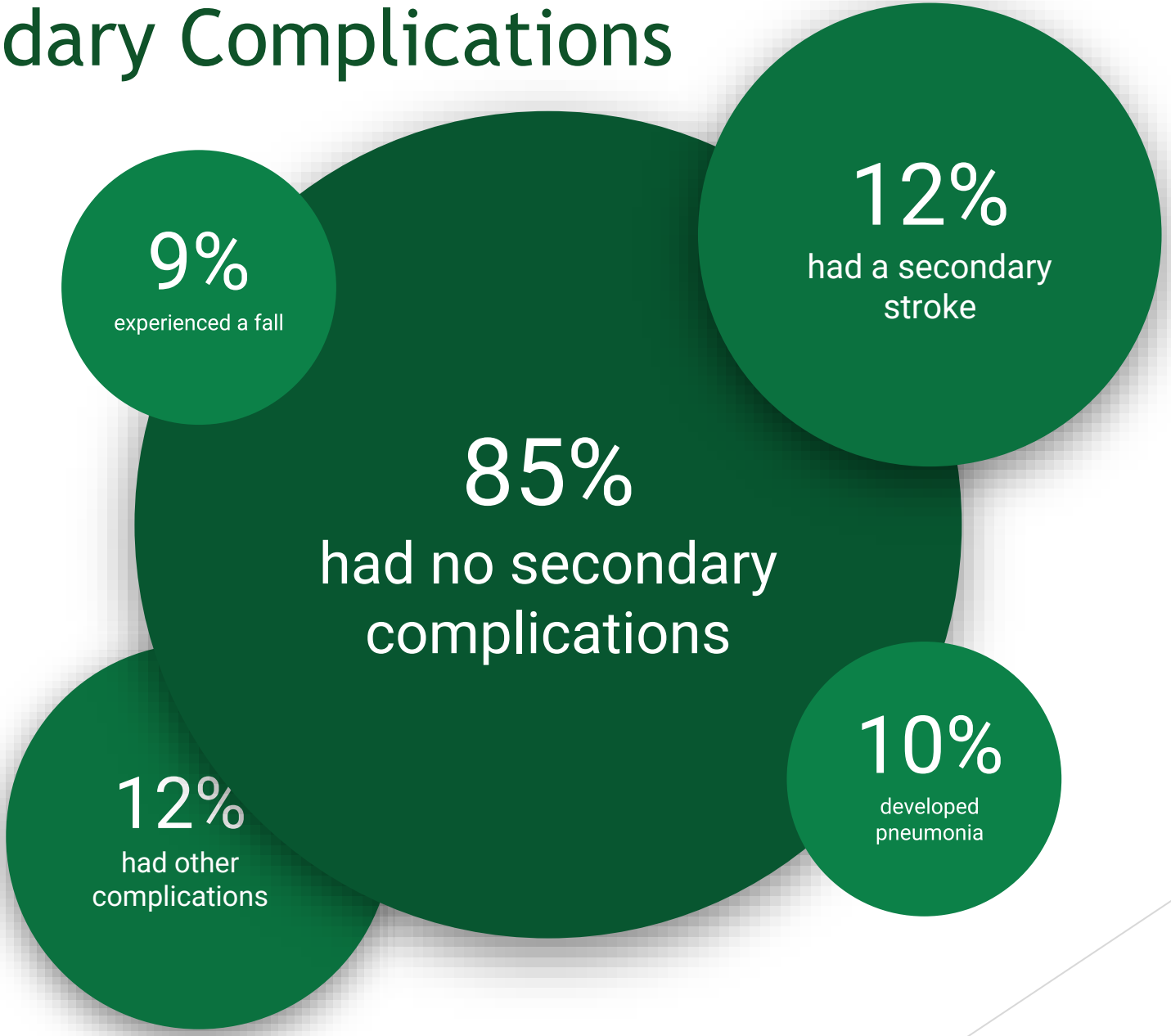
Social Worker Assessment



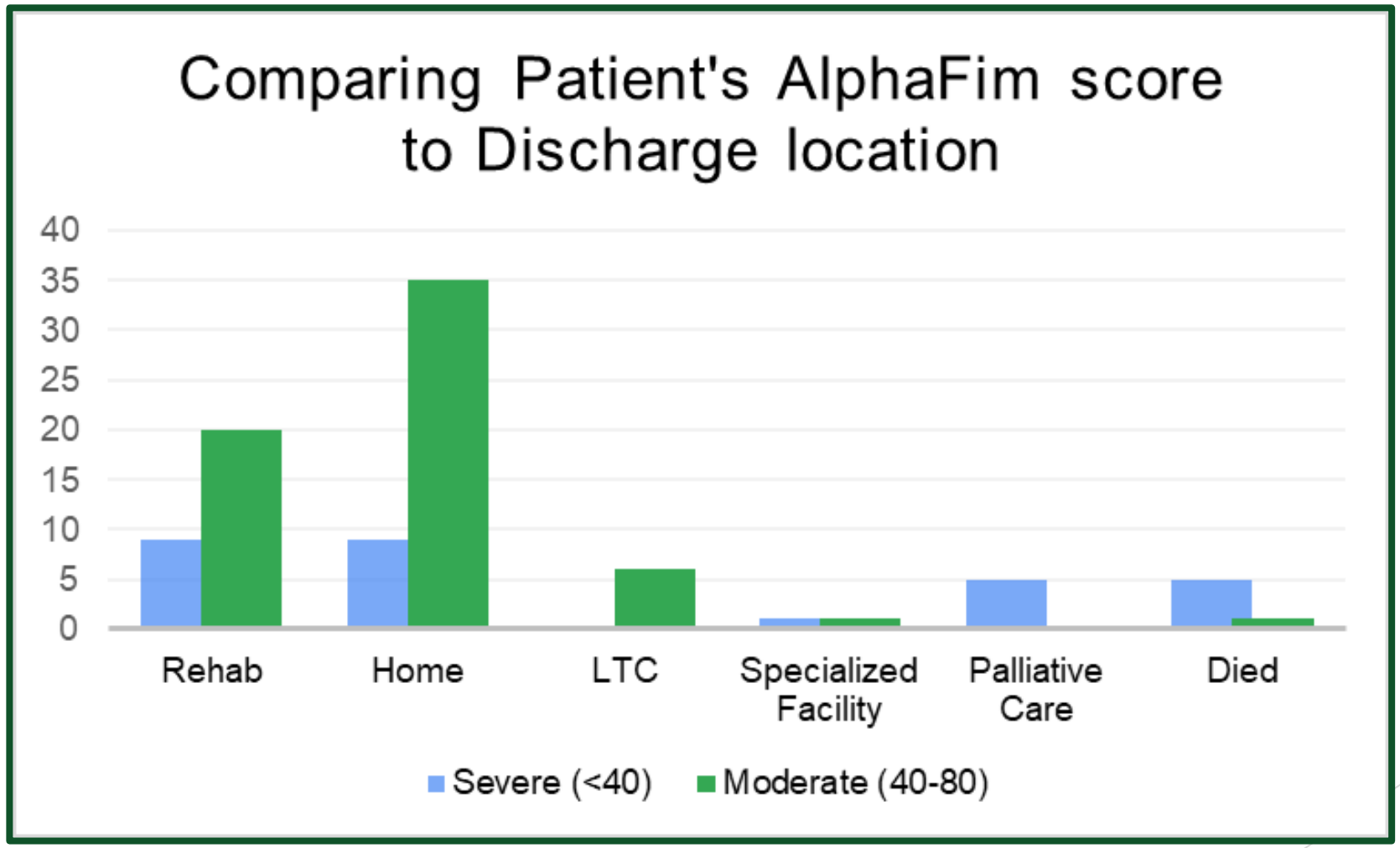
Anxiety/Depression Screen

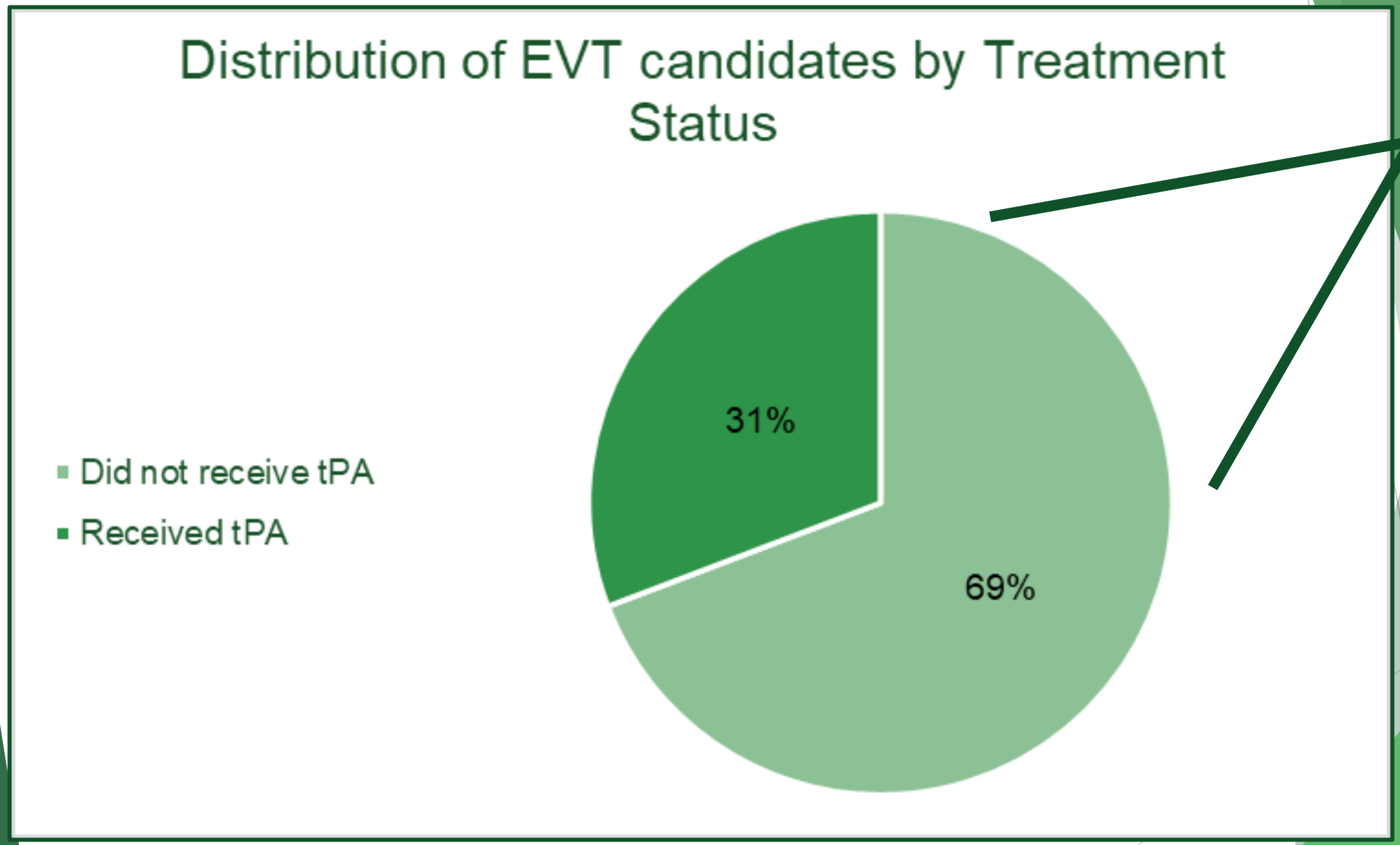


Secondary Complications



Discharged from MAHC to:





9.8%

of all patients were EVT candidates.

The Next Step: Where do Patients Go?

Julie Wallace, Dr. Timothy Lapp

HUNTSVILLE PHYSICIANS LOCAL EDUCATION GROUP

tPA Quality Improvement Project 2024

Identifying Gaps in Knowledge

- Unable to follow patients after discharge for specialized stroke care
- Lack of data surrounding success of MAHC interventions and transfers

Goals Moving Forward

- Is our current system improving patient outcomes?

Methods

Connecting Ontario

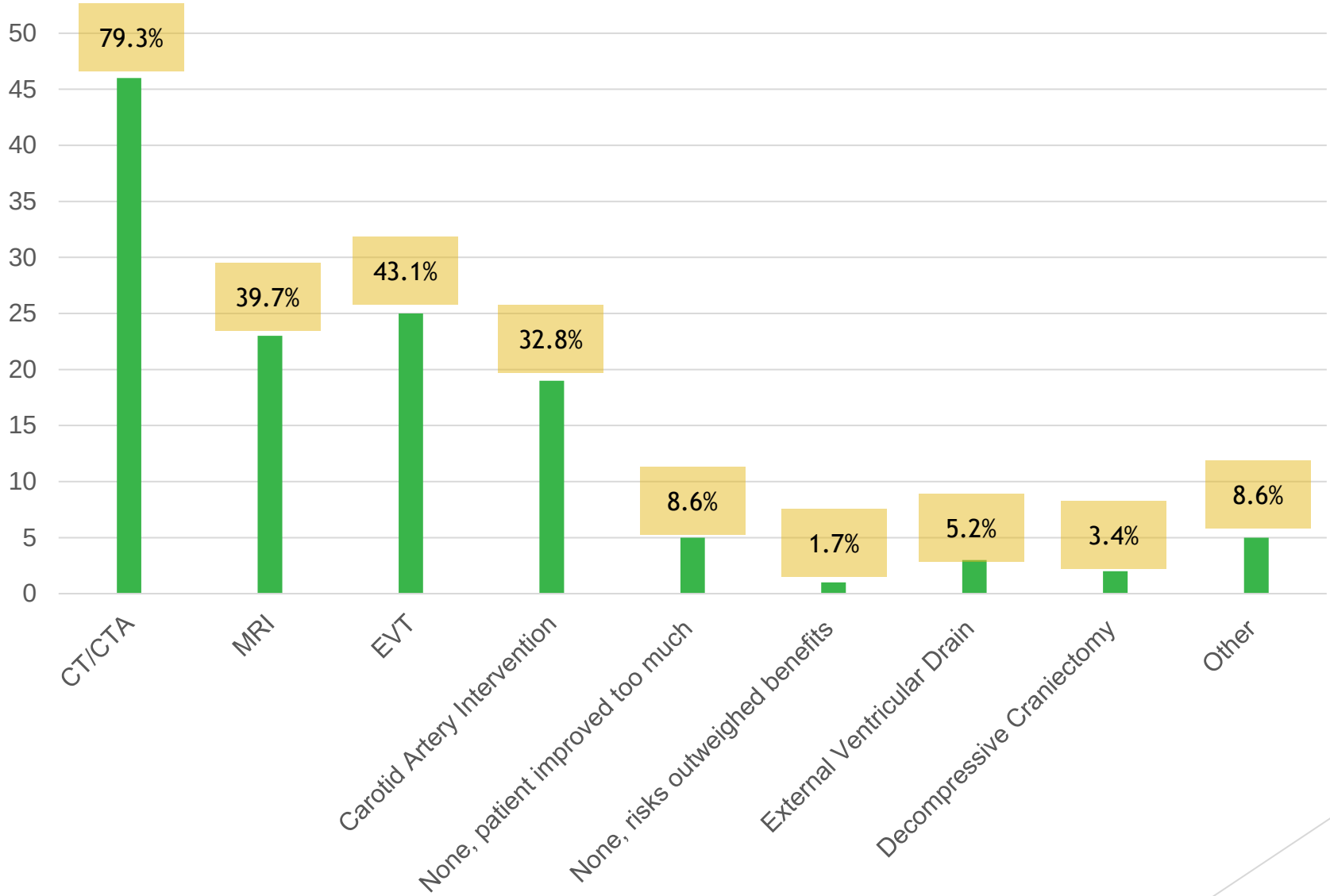
- Examined patient charts from other facilities
- 2019 - 2025

58 Patients

Modified Rankin Scale (mRS)

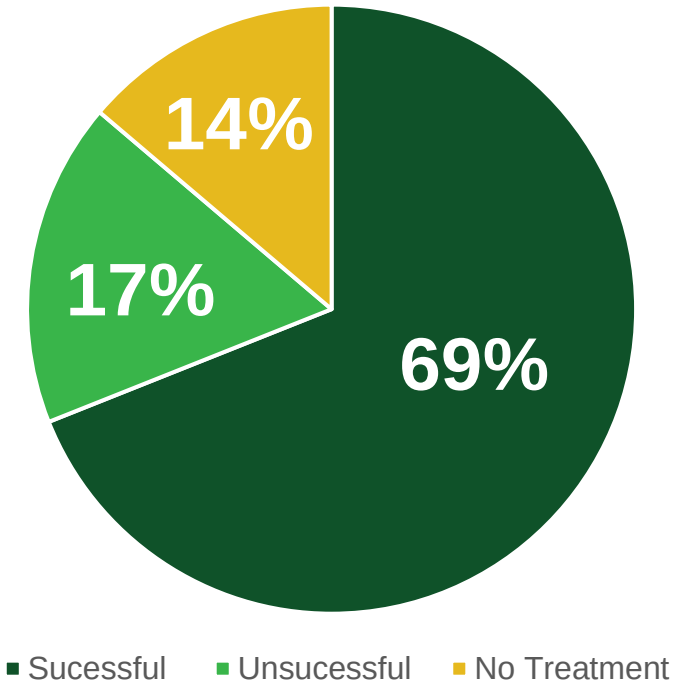
mRS	Disability State		Can	... But	Health State
0	Non-disabled		No symptoms	None	Normal
1	Non-significant disability		Do work, leisure, school full time	... Has symptoms	Symptomatic but nondisabled
2	Slight disability		Live alone for >1 week	... can't do work, leisure, school activities full time	Disabled but independent
3	Moderate disability		Walk	... can't live alone for >1 week (not independent for ADLs)	Dependent but ambulatory
4	Moderately severe disability		Be alone for a few hours at a time (not require full time care)	Can't walk Can't perform own self-care (ADLs)	Dependent but not constant care.
5	Severe disability		Alive	Requires constant care	
6	Dead		-	-	Dead

Specialized Stroke Diagnostics/Interventions



Intervention Success

Successful and Unsuccessful Interventions



Reasons for Unsuccessful Procedure

- Clot moved too distal to retrieve
- Intracranial hemorrhaging
- Severe deterioration and worsened function
- Death

Common Complications of Interventions

- ★Hemorrhaging★
- Loss of Consciousness
- Intubation Required
- Cerebral Spinal Fluid Leak
- Infection (Meningitis)
- Seizures
- Peripheral Vascular Disease

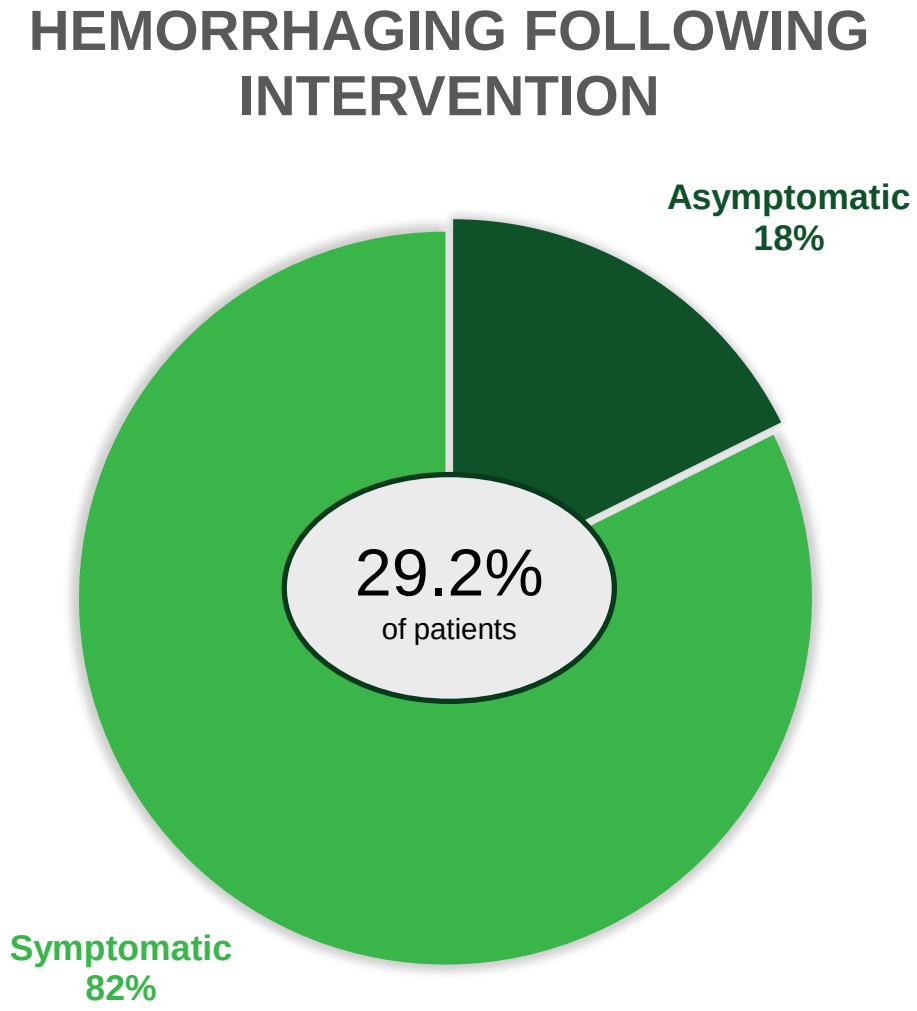
Deaths in Facilities Following Specialized Care

3.4%

Hemorrhaging

Non-Acute: petechial, mild

Acute: hemorrhagic transformation, subarachnoid hemorrhage, intracranial hemorrhage, causing mass effect and/or midline shift



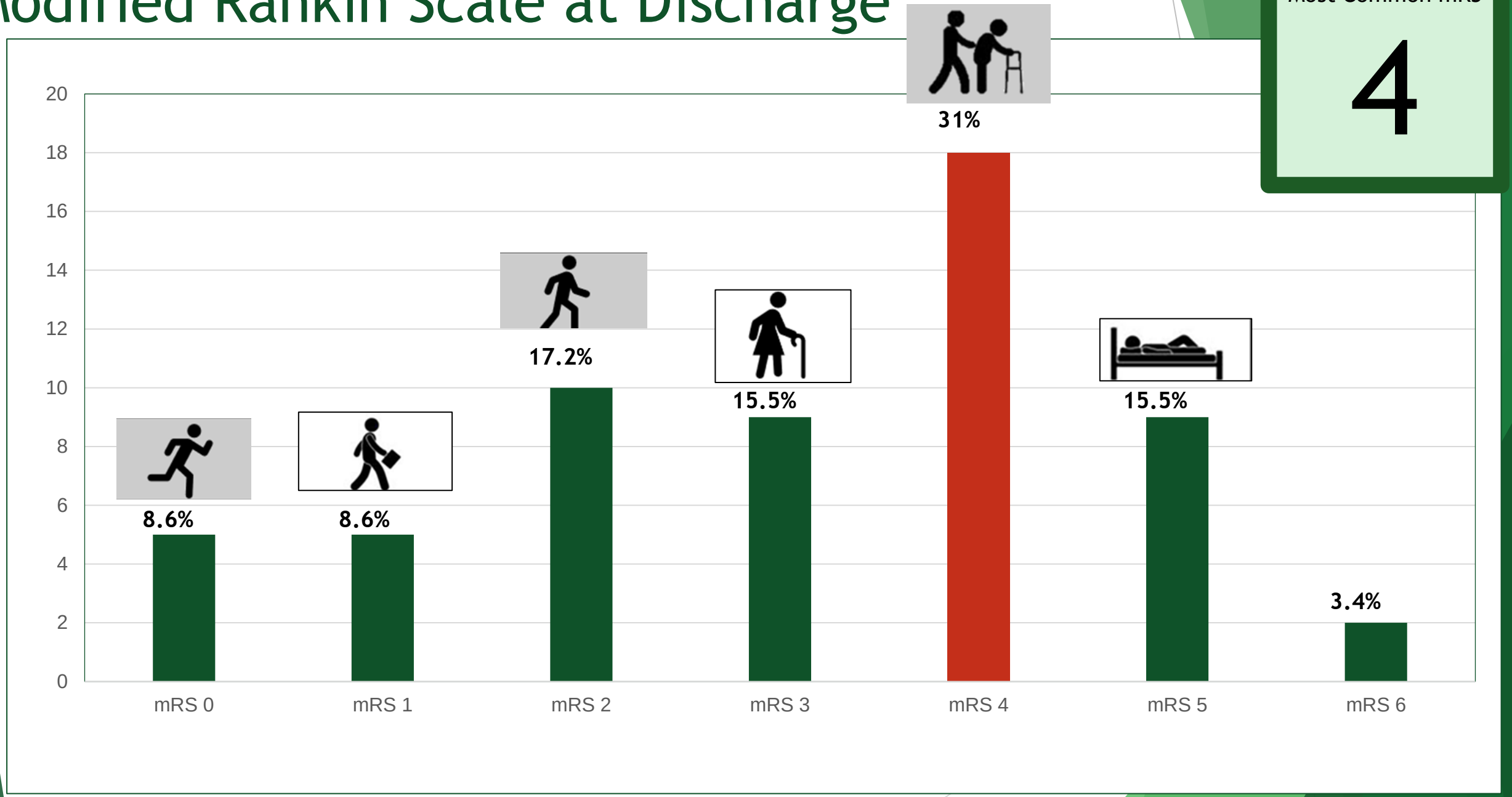
Specific Outcomes Seen on Postoperative CT Scans	
Non-Acute	**5** (8.6% of total patients)
Acute	**12** (20.6% of total patients)

Patient Outcomes	
Symptomatic	**14** (82% of hemorrhages)
Asymptomatic	**3** (18% of hemorrhages)

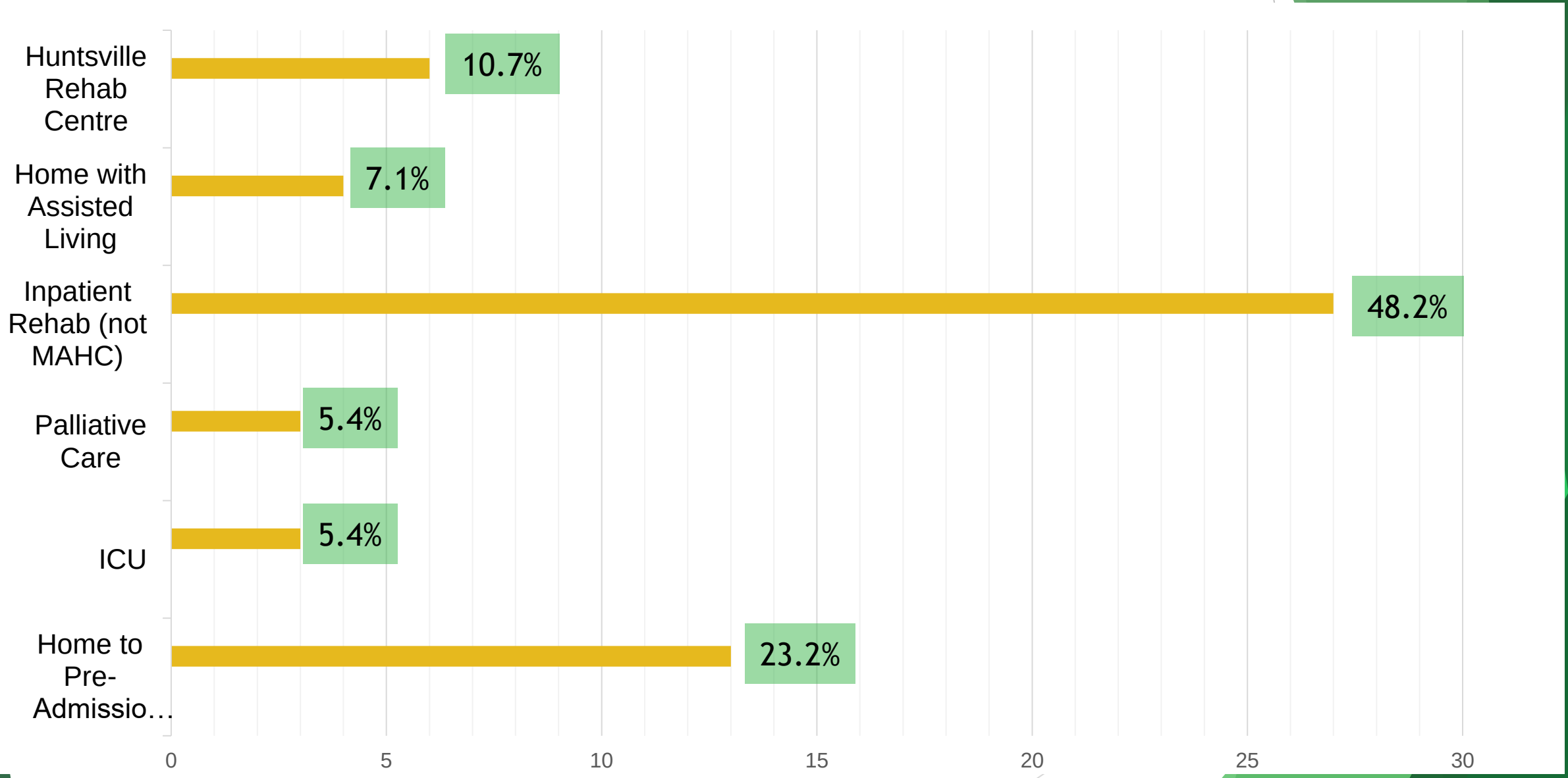
Modified Rankin Scale at Discharge

Most Common mRS

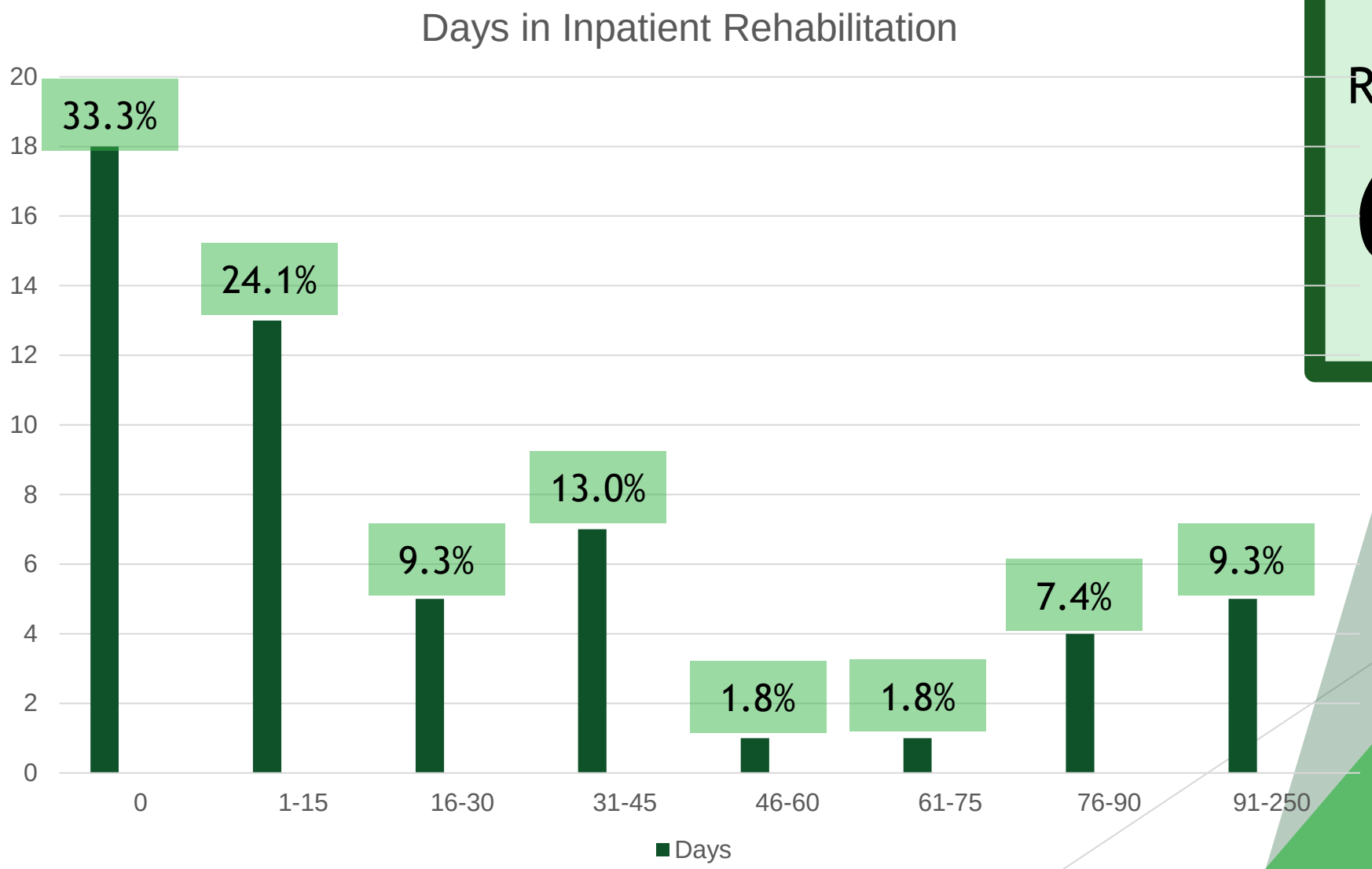
4



Where Patients Were Discharged To



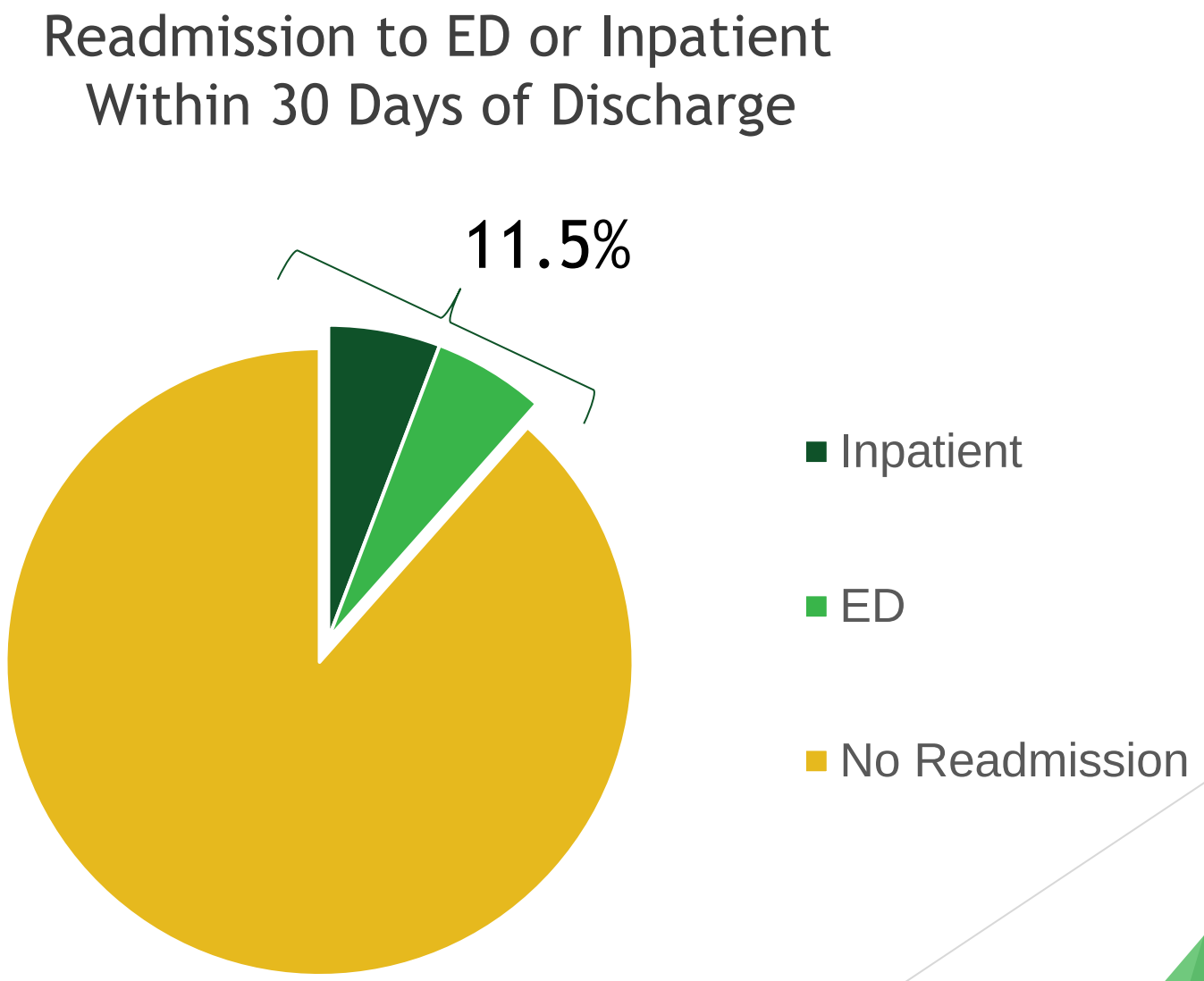
Length of Stay at Inpatient Rehabilitation



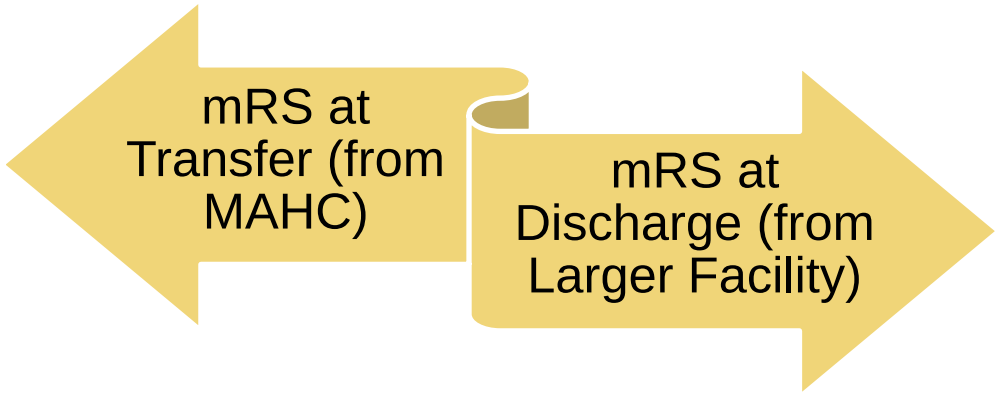
Deaths in Inpatient Rehabilitation

6.9%

Readmission to Hospital



Patient Improvement



Patient Declined	Patient Remained the Same	Patient Improved
56%	28%	16%

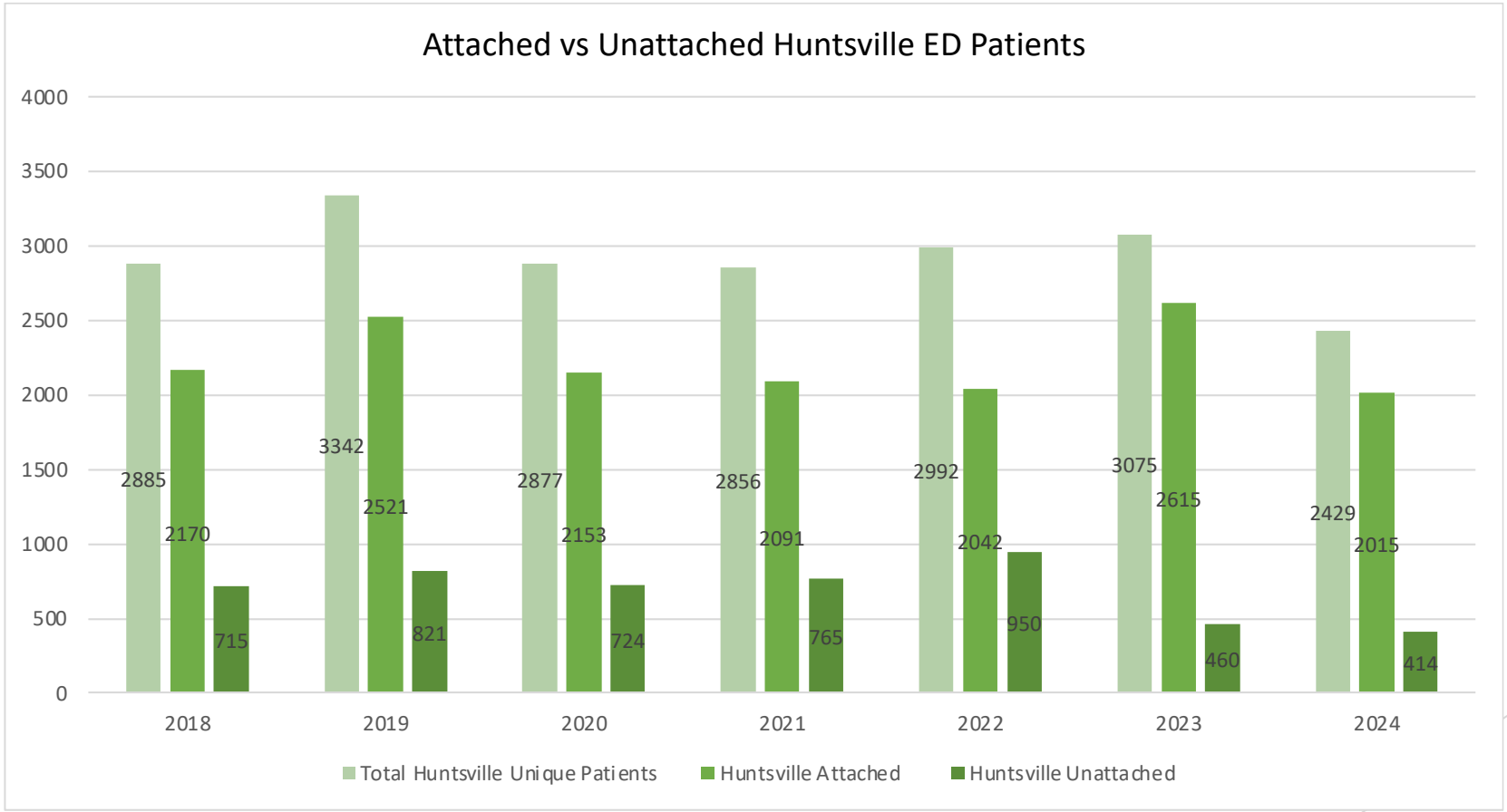
Takeaways

- Most common intervention: EVT (43.1%) and carotid artery interventions (32.8%).
- 69% of specialized stroke interventions were considered successful.
- Common complication: hemorrhaging.
  - 82% symptomatic
- Most common mRS at discharge is 4.
- Majority of patients discharged to inpatient rehab.
  - 57.4% stay in rehab for under 15 days.

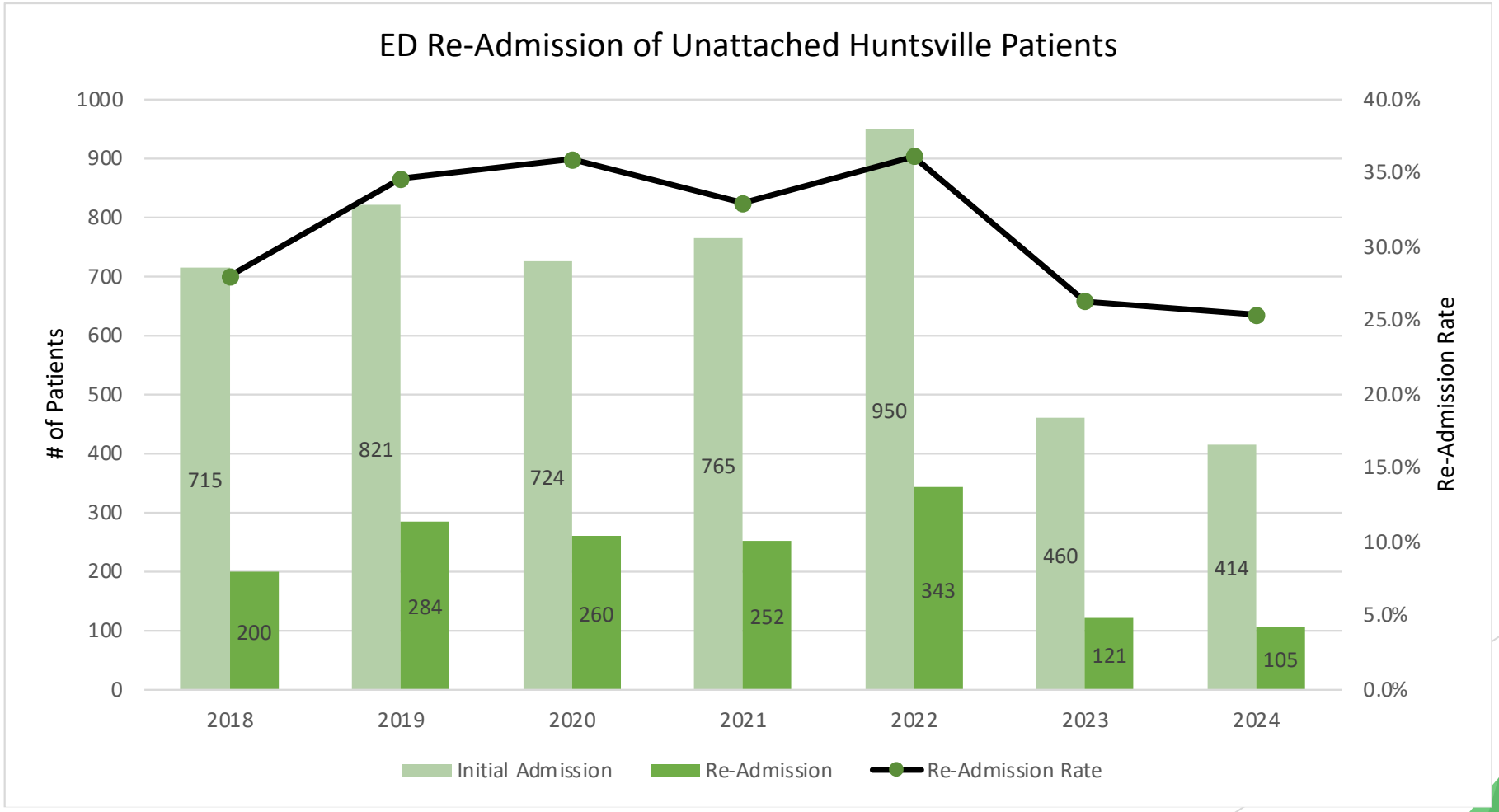
Thank you!

The Annex: A success Story in Primary Care

Breakdown of Huntsville resident ED Visitors (Total, Attached, and Unattached)



ED Re-Admission rate of Unattached Patients



Thank You!

Questions?

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