

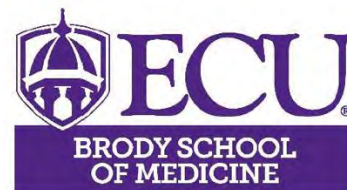


# NORTH CAROLINA

STATEWIDE TELEPSYCHIATRY PROGRAM

## 45<sup>th</sup> Quarterly Progress Update

**Sy Atezaz Saeed, MD, MS, FACPsych,**  
*Founder and Executive Director*  
North Carolina Statewide Telepsychiatry Program (NC-STeP)  
*Professor and Chair Emeritus*  
Department of Psychiatry and Behavioral Medicine  
Brody School of Medicine - East Carolina University





**NC-SteP Advisory Council Meeting**  
Monday, December 2<sup>nd</sup>, 2024  
1:30 pm – 3:00 pm  
Virtual Meeting via Zoom Video Conference

**Agenda**

- |                 |  |
|-----------------|--|
| 1:30- 1:35 p.m. | Welcome and Introductions  |
| 1:35- 1:40 p.m. | Review and Approval of September 11 <sup>th</sup> , 2024 Minutes   |
| 1:40- 2:30 p.m. | NC-SteP FY25-Q1 (July-September 2024) Performance Data   |
| 2:30- 2:40 p.m. | Updates on Grants - Funded Programs <ul style="list-style-type: none"><li>• MOTHeRS Project</li><li>• NC-SteP-Peds</li><li>• Elizabeth City State University Project</li></ul> |
| 2:40- 2:50 p.m. | Site visits  |
| 2:50- 2:55 p.m. | Old Business   |
| 2:50- 2:55 p.m. | New Business   |
| 2:55- 3:00 p.m. | Announcements  |
| 3:00 p.m.       | Adjourn  |



Join Zoom Meeting

[https://us06web.zoom.us/j/88357000762?  
pwd=3FFNcokaktEKHKgfs3AkN5ia9fK2g4.1  
&from=addon](https://us06web.zoom.us/j/88357000762?pwd=3FFNcokaktEKHKgfs3AkN5ia9fK2g4.1&from=addon)

Meeting ID: 883 5700 0762

Passcode: 377522

# NC-STeP Quality Management and Outcomes Monitoring Processes: July - September 2024

- 28 hospitals were live
- 22 hospitals reported Telepsychiatry patients in their ED
  - not all live hospitals had telepsychiatry patients
- Total number of assessments for this quarter = 1,005
- Total number of encounters for this quarter = 900



# NC-STeP Quality Management and Outcomes Monitoring Processes: July - September 2024

- The Median Length of Stay was 30.6 hours
- The Average Length of Stay was 58.4 hours
  - 44.7 hours for those discharged to home
  - 52.6 hours for those transferred to another facility
- Average Consult Elapsed Time (in Queue to Exam Complete) for Model 1 hospitals was 4 hours and 22 minutes.



# NC-STeP Quality Management and Outcomes Monitoring Processes: July - September 2024

- 615 ED patients who received telepsychiatry services had an IVC in place during their ED stay.
  - 199 (32.4%) of those patients did not have an IVC in place when discharged.
- Of the ED patients who received telepsychiatry services:
  - 47.7% were discharged to home
  - 44.3% were discharged to another facility




# NC-STeP Quality Management and Outcomes Monitoring Processes: July - September 2024

- 24 Community based sites live as of 09/30/2024.
- There were 2,188 total behavioral health visits.
  - 111 visits with a Psychiatrist.
  - 2,074 visits with a behavioral health manager.





	Since project inception in November 2013	Quarter Jan- Mar 2024	Quarter Apr- Jun 2024	Quarter Jul- Sep 2024	Quarter Oct- Dec 2024
<b>Total Patient Encounters</b>	50,561	798	920	900	
<b>Model 1 Hospital Patient Encounters</b>	32,943	737	837	830	
<b>Model 2 Hospital Patient Encounters</b>	17,618	61	83	70	
<b>Total Number of Assessments</b> (Billed Assessments for Model 1 Hospitals + Number of Patient Encounters for Model 2 Hospitals)	64,376	887	1,040	1,005	

	Since project inception in November 2013	Calendar Year 2013	Calendar Year 2014	Calendar Year 2015	Calendar Year 2016	Calendar Year 2017	Calendar Year 2018
<b>Total Patient Encounters</b>	50,491	942	5,144	7,128	1,896	3,971	6,104
<b>Model 1 Hospital Patient Encounters</b>	32,943	942	4,578	5,849	706	2,044	2,654
<b>Model 2 Hospital Patient Encounters</b>	17,618		566	1,279	1,190	1,927	3,450
<b>Total Number of Assessments</b> (Billed Assessments for Model 1 Hospitals + Number of Patient Encounters for Model 2 Hospitals)	64,376	874	8,130	13,573	1,942	4,348	6,680





Since project inception in November 2013

Calendar Year 2019

Calendar Year 2020

Calendar Year 2021

Calendar Year 2022

Calendar Year 2023

Calendar Year 2024

**Total Patient Encounters**

50,491

4,835

4,305

4,763

5,124

3,731

**Model 1 Hospital Patient Encounters**

32,943

1,902

2,152

2,897

3,328

3,487

**Model 2 Hospital Patient Encounters**

17,618

2,933

2,153

1,866

1,796

244

**Total Number of Assessments**  
(Billed Assessments for Model 1 Hospitals + Number of Patient Encounters for Model 2 Hospitals)

64,376

5,287

4,820

5,641

5,923

4,226

# NC-STeP Benchmarks



Goals	Values Reached		
Cumulative Target to be reached by (06/30/2025)	Value Reached as of most recent previous quarter (06/30/2024)	Value Reached as of this reporting quarter (09/30/2024)	Year-to-Date Total with % of the Yearly Target (09/30/2024)
<b>Number of IVCs</b>	2,229	667	615 28% of Yearly Target
<b>Number of IVCs Overturned</b>	1,133	205	199 17.6% of Yearly Target
<b>Total Number of Assessments</b> (Billed assessments for Model 1 hospitals + Number of patient encounters for Model 2 hospitals.)	3,400	1,040	1,005 30% of Yearly Target

# NC-STeP Status as of September 30, 2024

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 06/30/2024	TARGET TO BE REACHED BY 06/30/2025	VALUES/MEASURES REACHED AS OF 09/30/2024
1. The number of full-time equivalent (FTE) positions supported by these contracts	4.30 FTEs	4.30 FTEs	4.30 FTEs
2. The number of overturned involuntary commitments (inpatient admission prevented)	903	1,133	199 in this quarter  Cumulative total since program inception 11,162
3. The number of participating consultant providers	23	24	24



# NC-STeP Status as of September 30, 2024

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 06/30/2024	TARGET TO BE REACHED BY 06/30/2025	VALUES/MEASURES REACHED AS OF 09/30/2024
4. The number of telepsychiatry assessments conducted.	4,092	3,400	1,005 in this quarter  Cumulative total since program inception 64,376
5. The number of telepsychiatry referring sites	28	29	28
6. The reports of involuntary commitments to enrolled hospitals	2,649	2,229	615 in this quarter  Cumulative total since program inception 31,162

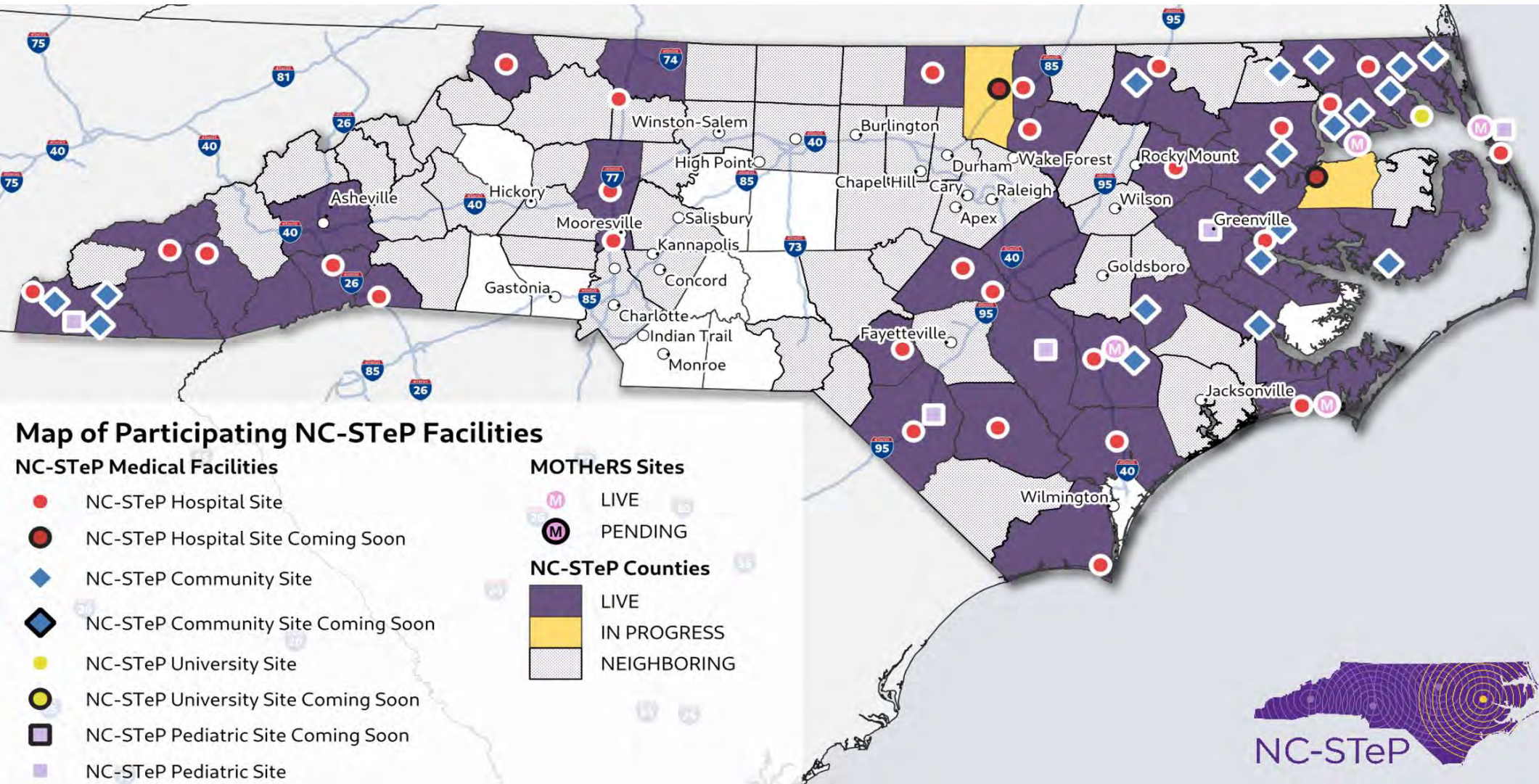


# NC-STeP Status as of September 30, 2024

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 06/30/2024	TARGET TO BE REACHED BY 06/30/2025	VALUES/MEASURES REACHED AS OF 09/30/2024
7. The average (mean) Length of Stay for all patients with a primary mental health diagnosis across all dispositions.	61.2 hours	72.25 hours	QTD Average = 58.4 QTD Median = 30.6
8. Cumulative return on investment to state psychiatric facilities through overturned involuntary commitments. (inpatient admission prevented)	\$4,876,200	\$5,929,200	QTD = \$1,074,600  Project to date = \$60,274,800

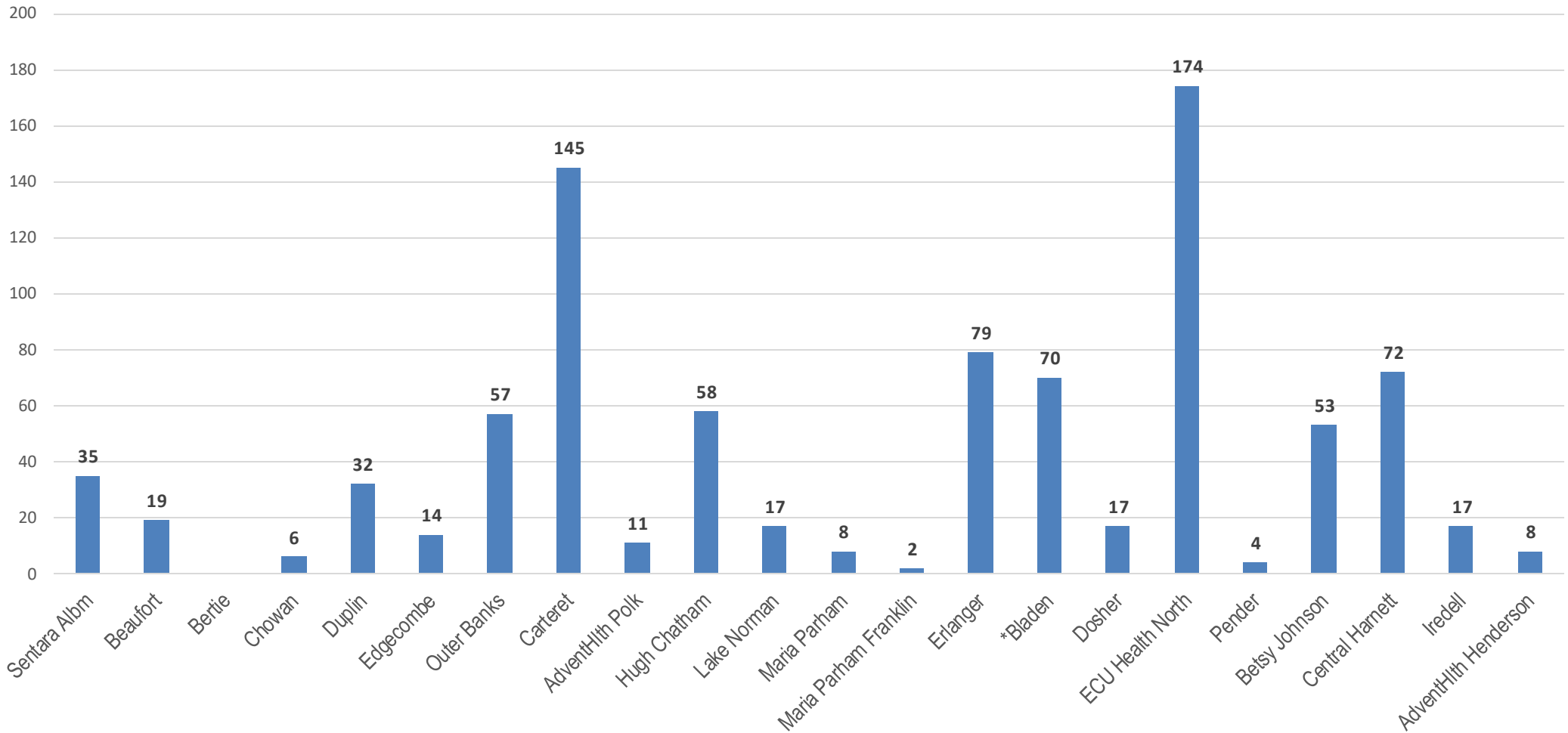


# NC-STeP Status as of September 30, 2024

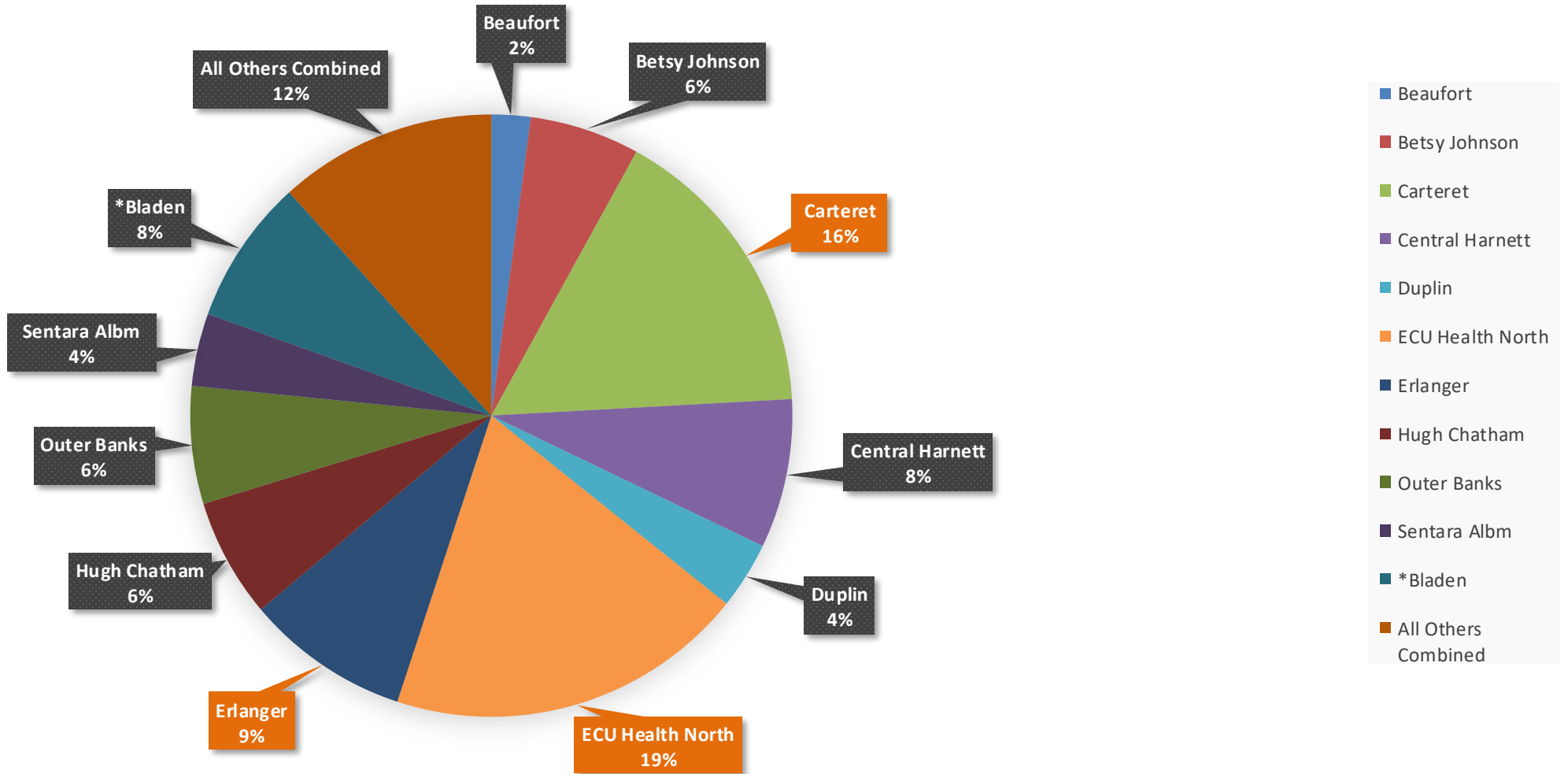


# Number of NC-STeP Patients by Hospital

## July-September 2024



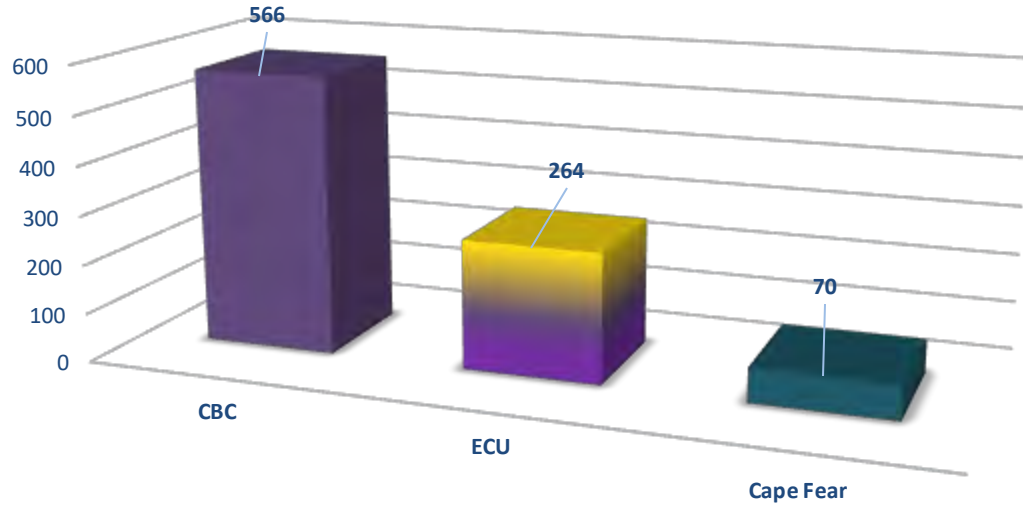
# Percent of Use by Hospital for Model 1 and Model 2 Jul-Sep 2024 (based on number of patients)



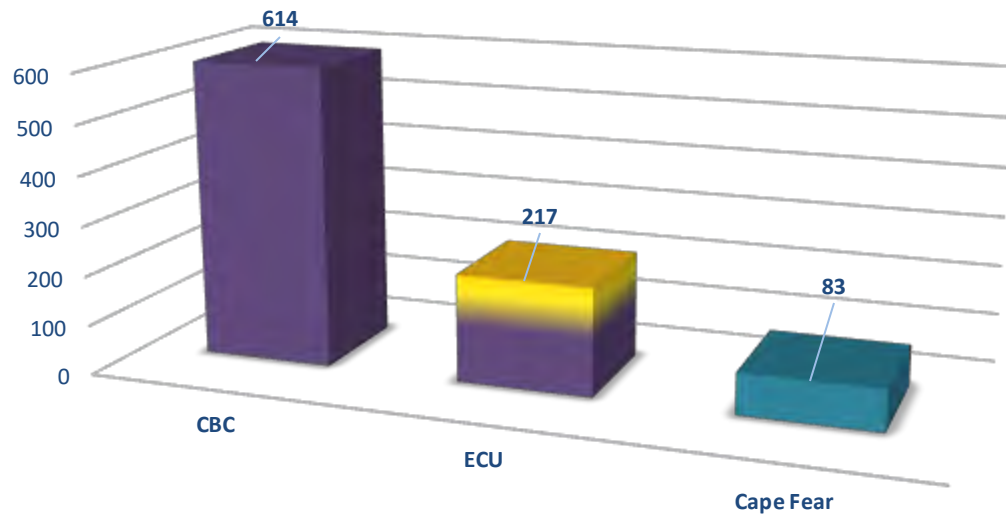


# Number of Patients by Provider

## Jul-Sep 2024

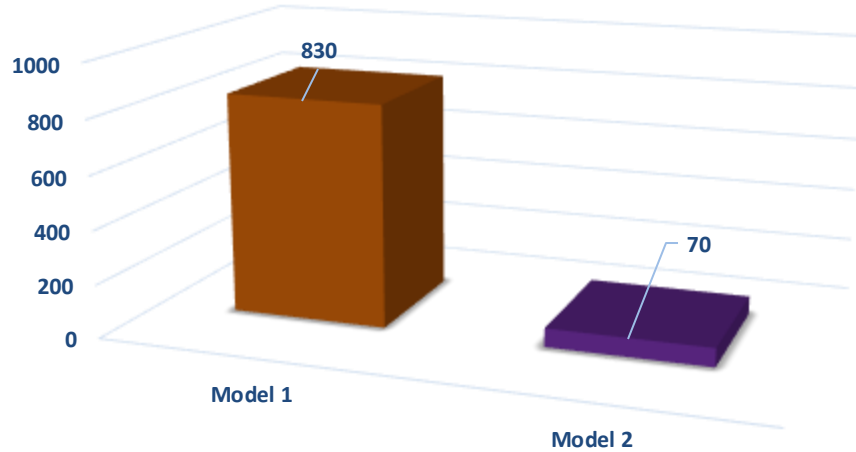


## Apr-Jun 2024

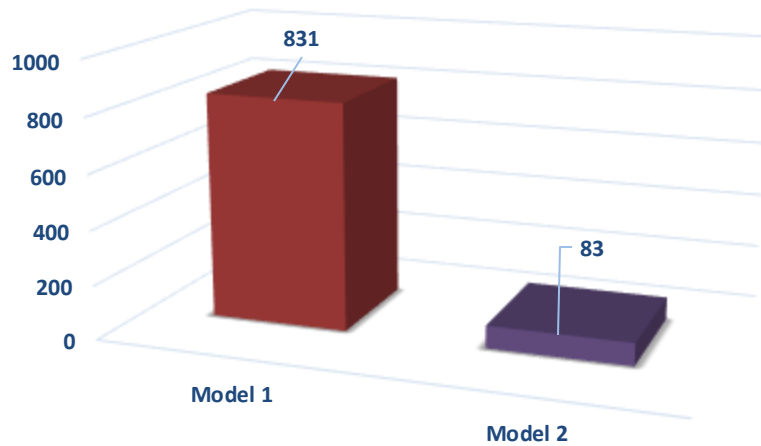


# Number of Patients by Model

Jul-Sep 2024

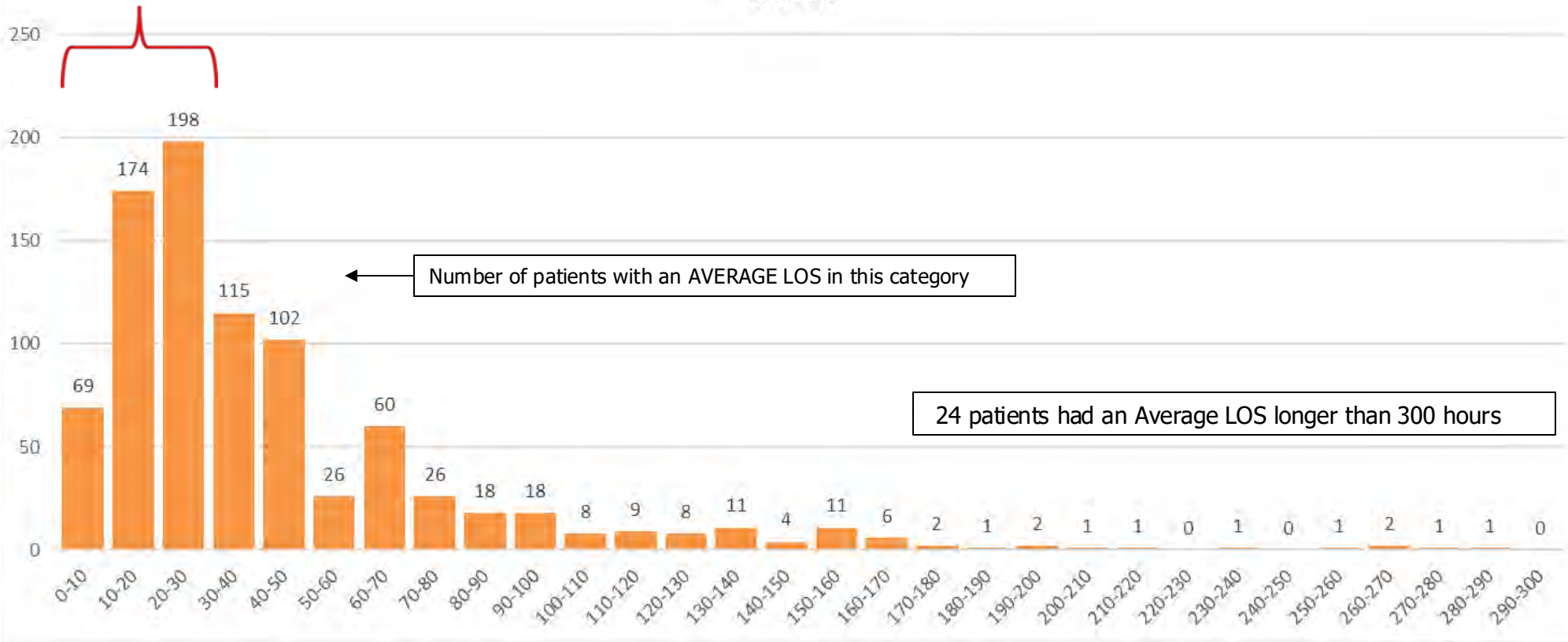


Apr-Jun 2024



## Number of NC-Step Patients by LOS Category Based on Patient Average Length of Stay July - September 2024 in hours

49% percent of patients  
had an Average LOS of 30 hours or less

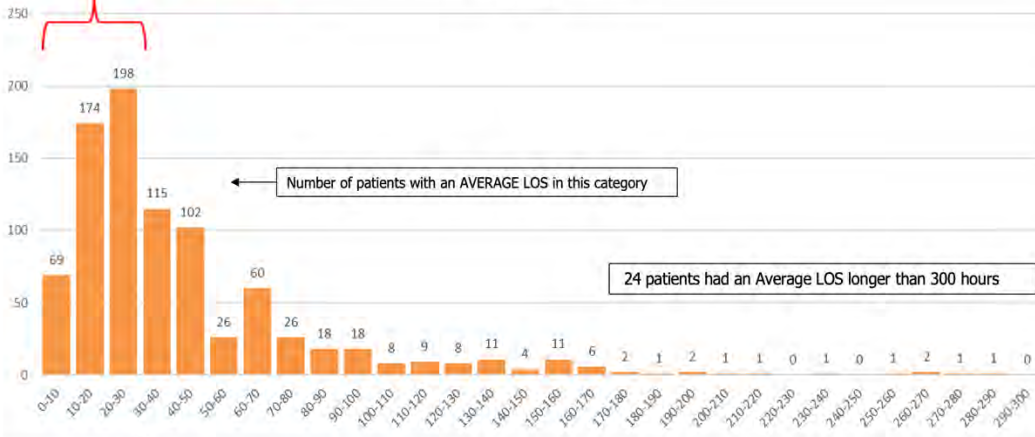


**Median** Patient Length of Stay for Jul-Sep 2024 = 30.6 hours



**Number of NC-Step Patients by LOS Category  
Based on Patient Average Length of Stay  
July - September 2024  
in hours**

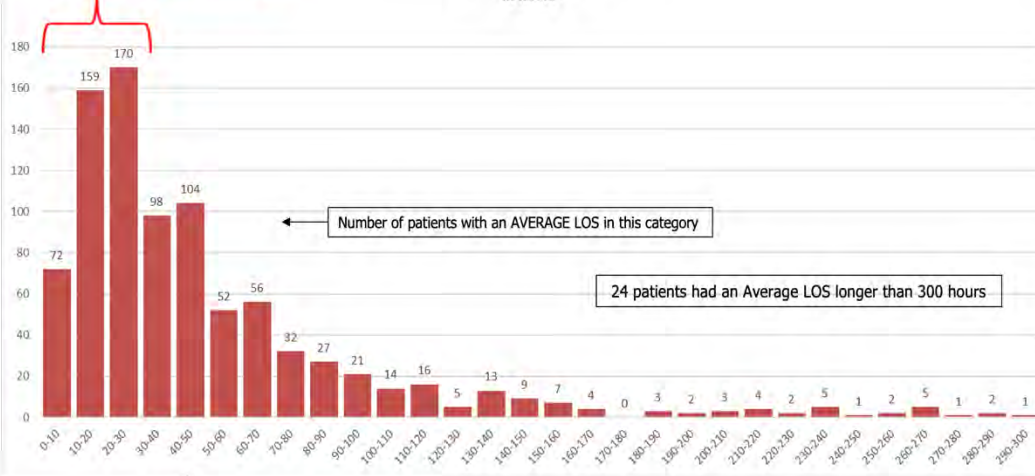
49% percent of patients  
had an Average LOS of 30 hours or less



Median Patient Length of Stay for Jul-Sep 2024 = 30.6 hours

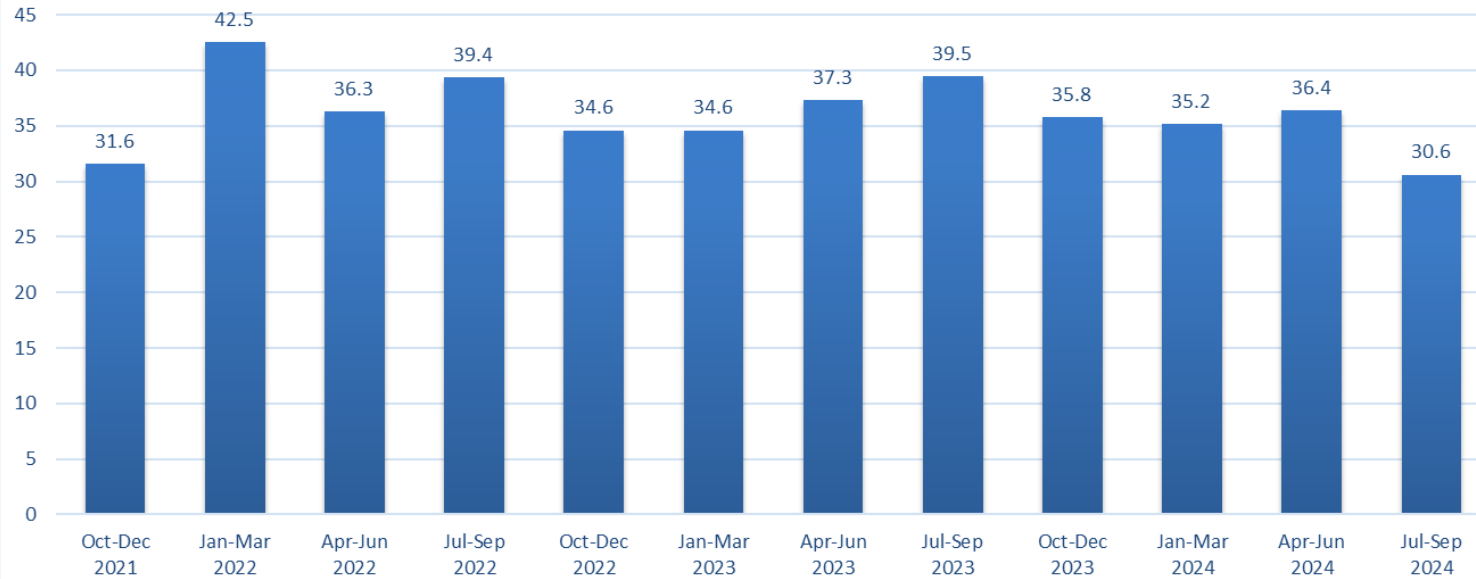
**Number of NC-Step Patients by LOS Category  
Based on Patient Average Length of Stay  
April - June 2024  
in hours**

44% percent of patients  
had an Average LOS of 30 hours or less

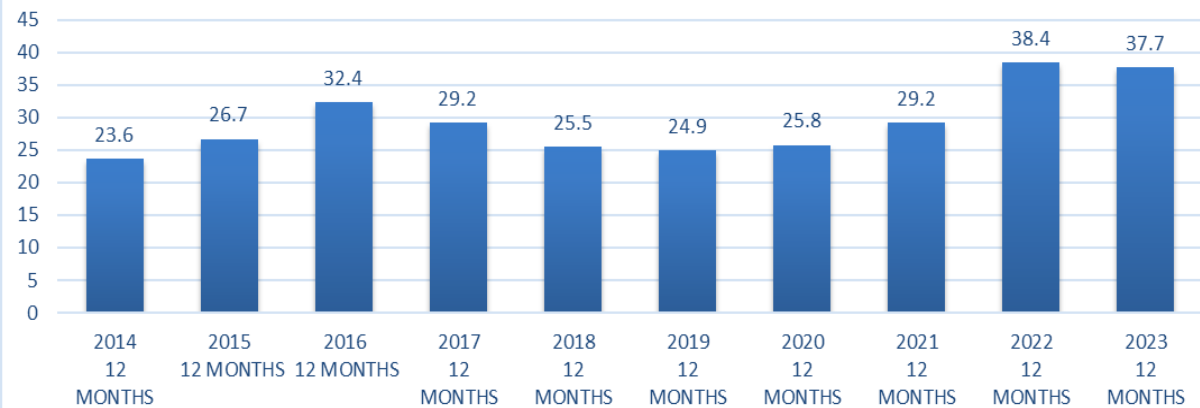


Median Patient Length of Stay for Apr-Jun 2024 = 34.8 hours

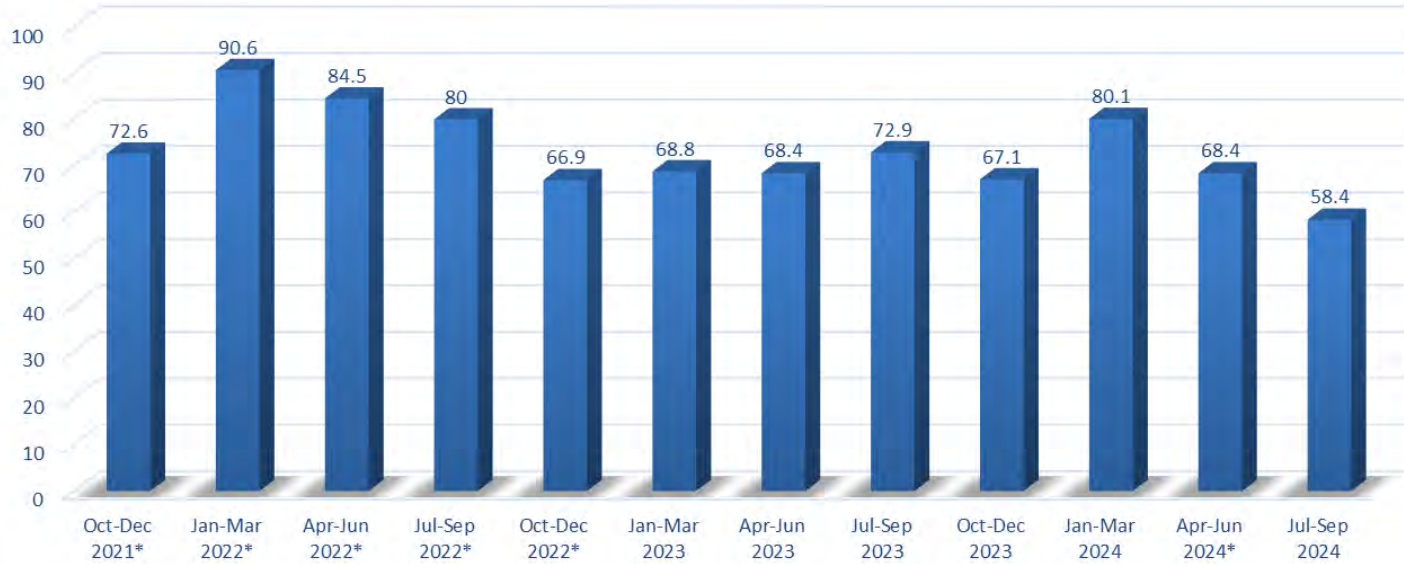
**Median Length of Stay by Quarter**  
(in hours)



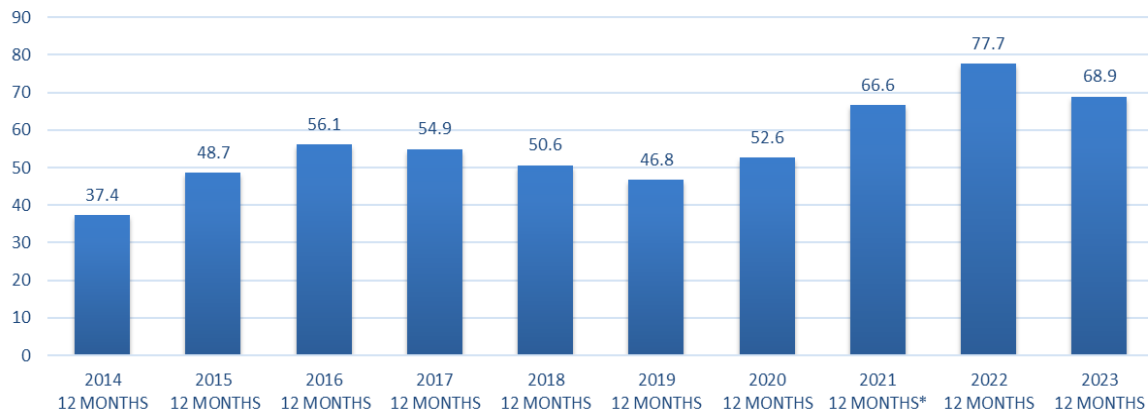
**Median Length of Stay by Year**  
(in hours)



### Average Length of Stay by Quarter for Hospitals Participating in NC-STeP (in hours)



### Average Length of Stay by Year (in hours)



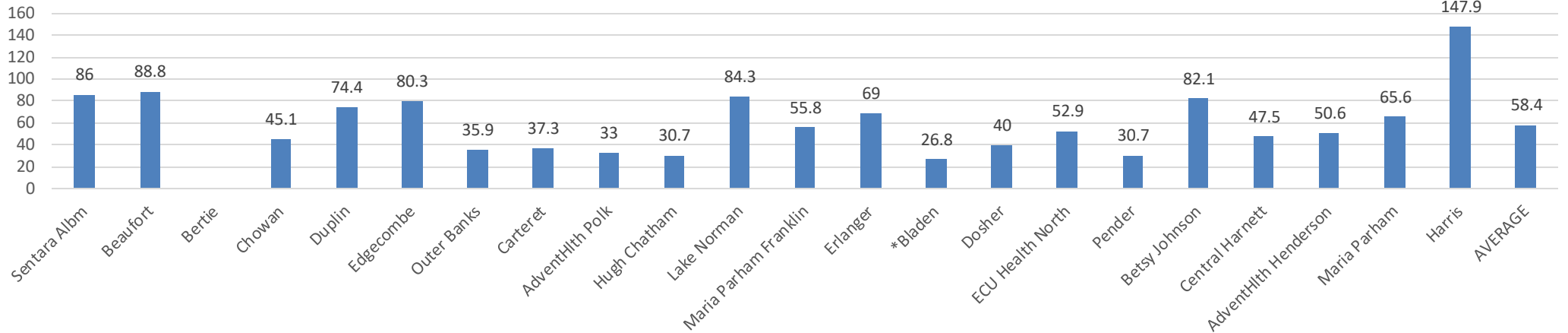
\*Indicates average was adjusted to include back data



## Average Length of Stay for NC-Step Patients by Hospital

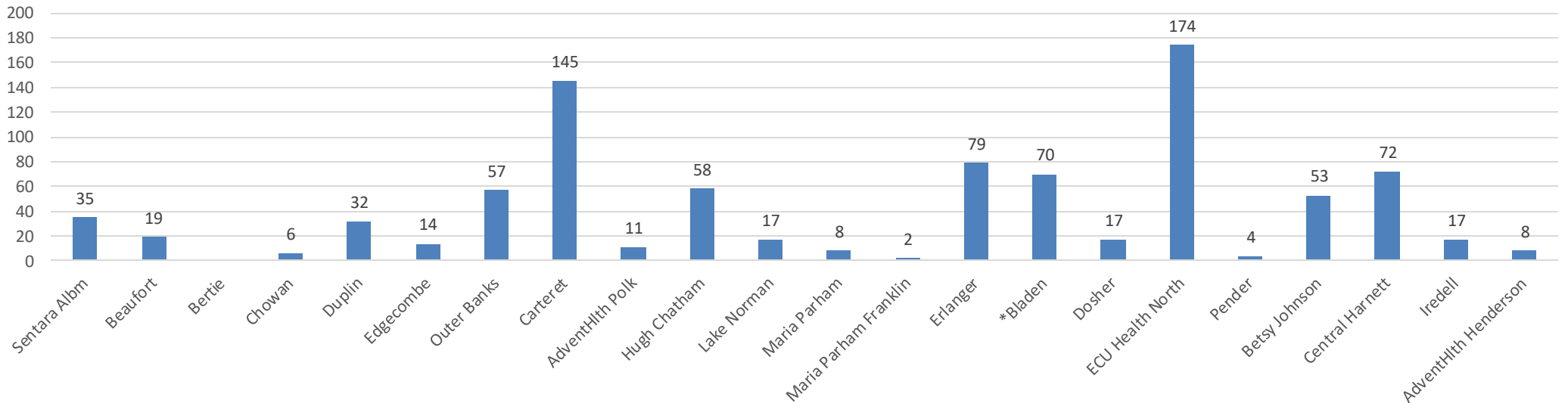
July-September 2024

(in hours)

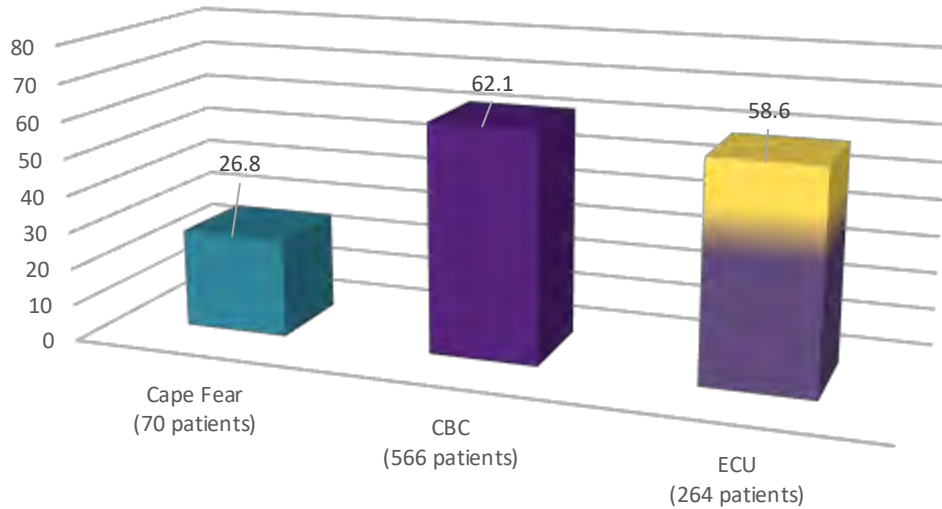


## Number of NC-Step Patients by Hospital

July-September 2024



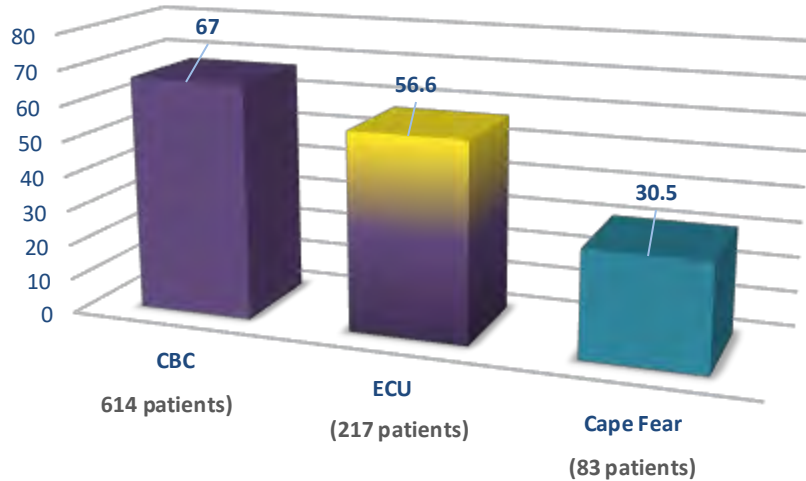
## Jul-Sep 2024 (in hours)



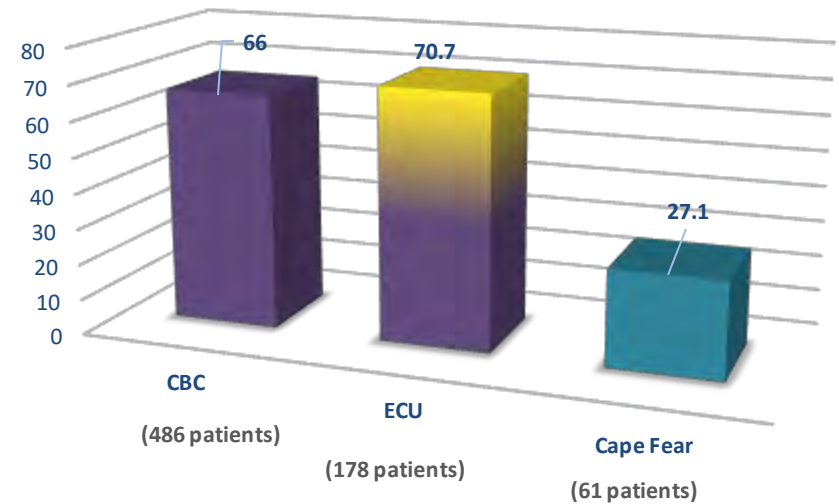
## Average Length of Stay by Provider



## Apr-Jun 2024 (in hours)

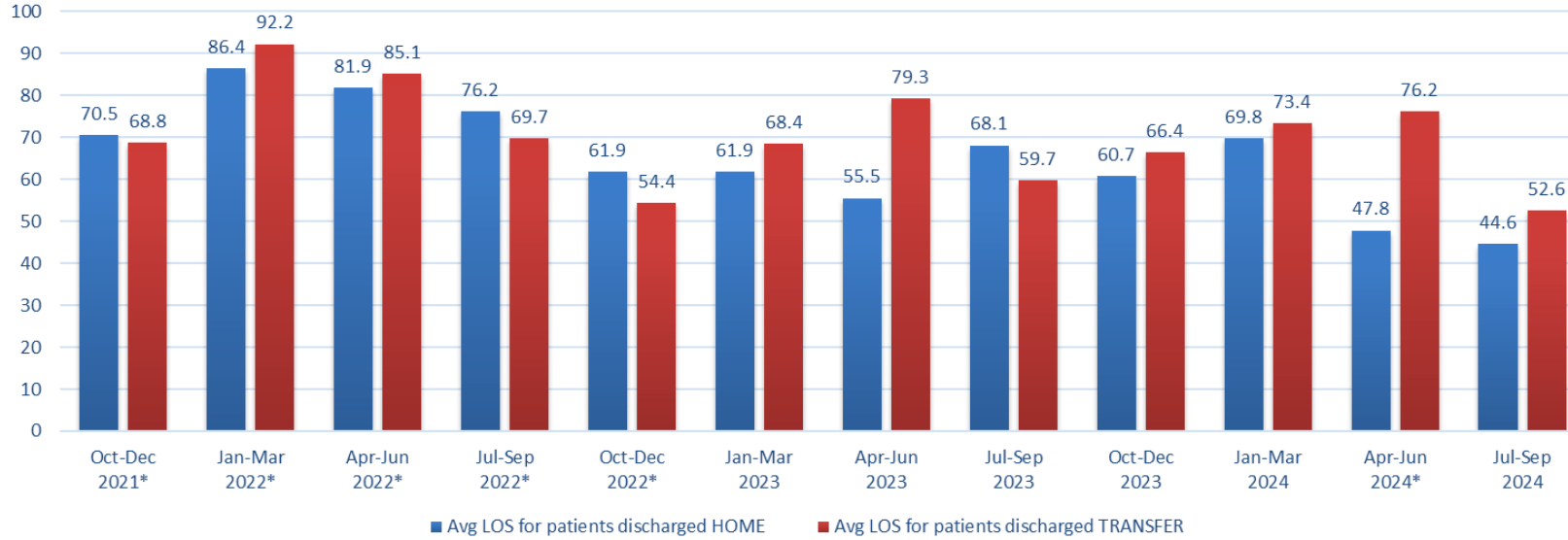


## Jan-Mar 2024 (in hours)

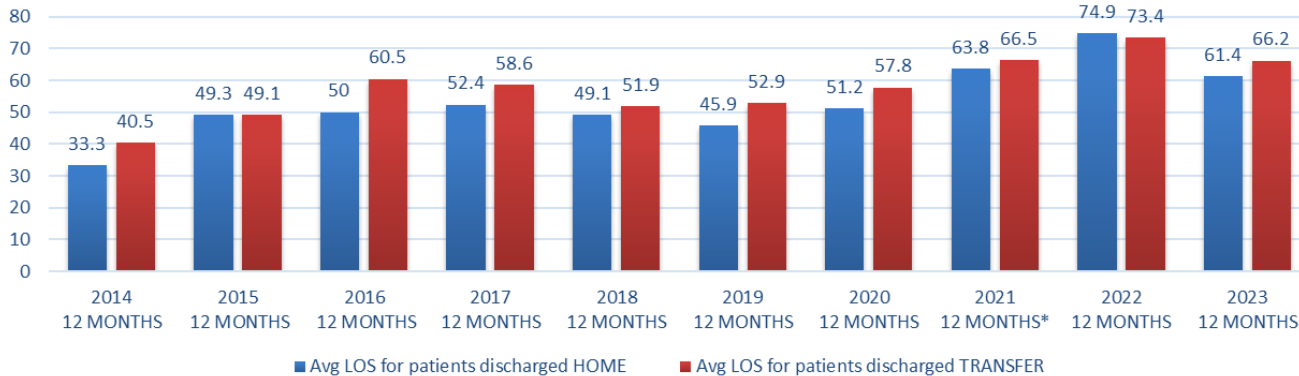




### Average Length of Stay by Quarter for Patients Discharged to Home or Transfer (in hours)



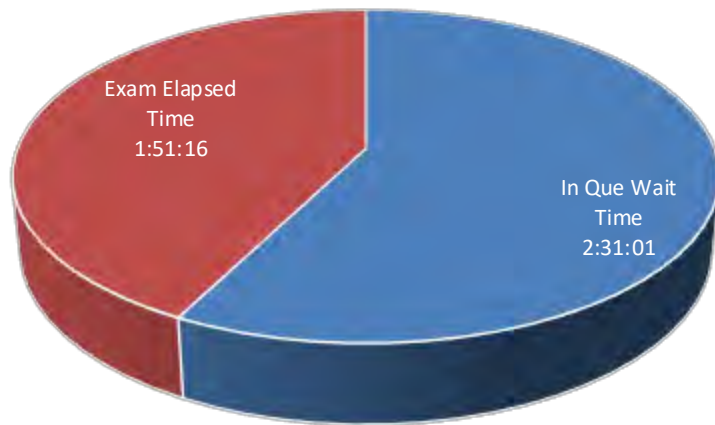
### Average Length of Stay by Year for Patients Discharged to Home or Transfer (in hours)



\*Indicates average was adjusted to include back data

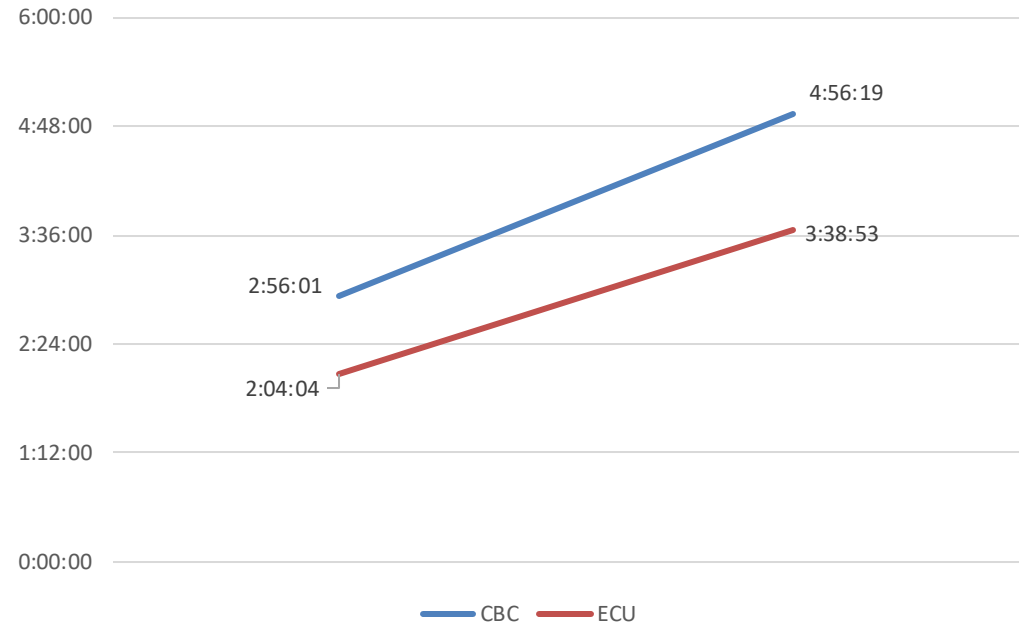
# Consult Elapsed Time: July - September 2024

**CBC & ECU**  
**Average Consult Exam Elapsed Time**  
**In Que to Exam Complete**  
**FY25 July - September 2024**  
**4 hrs. 22 min**

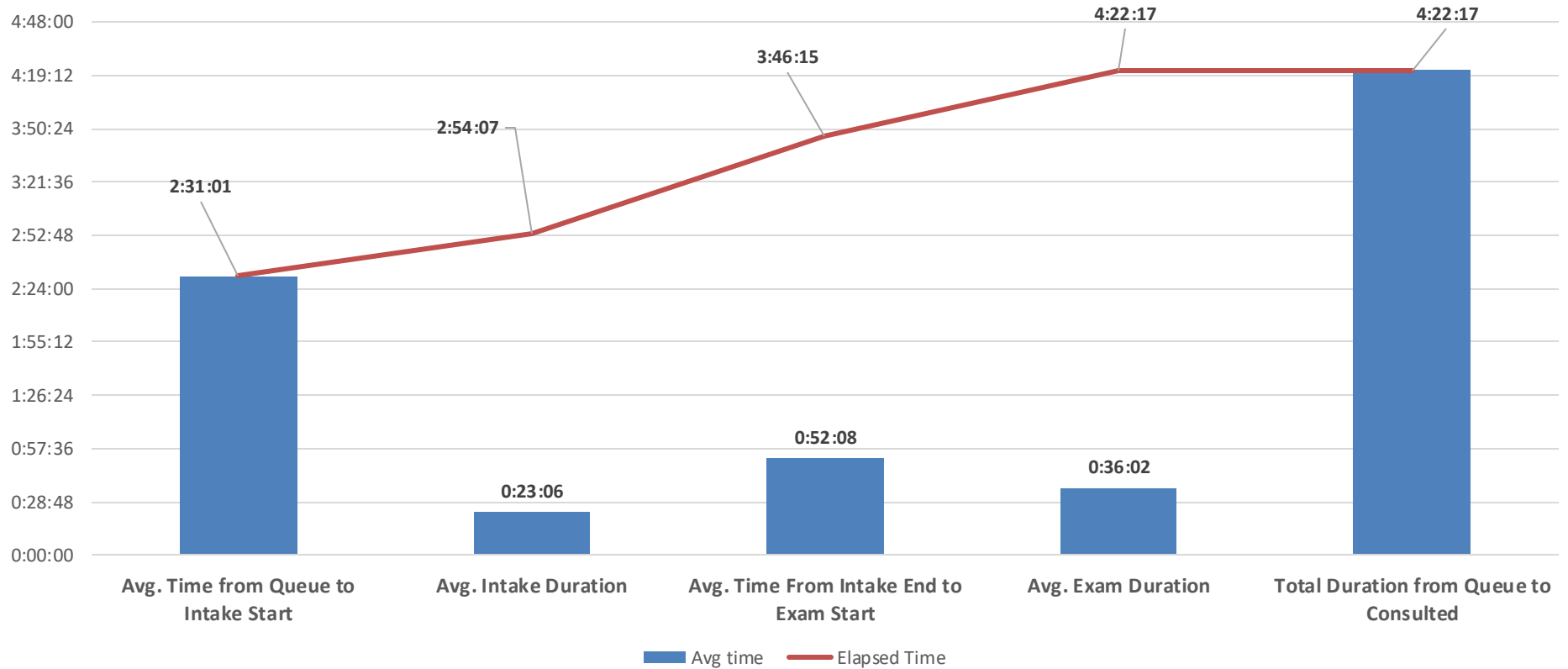


■ In Que Wait Time ■ Exam Elapsed Time

**Comparison CBC & ECU**  
**Average Consult Elapsed Time**  
**In Que to Exam Complete**  
**FY 25 July - September 2024**

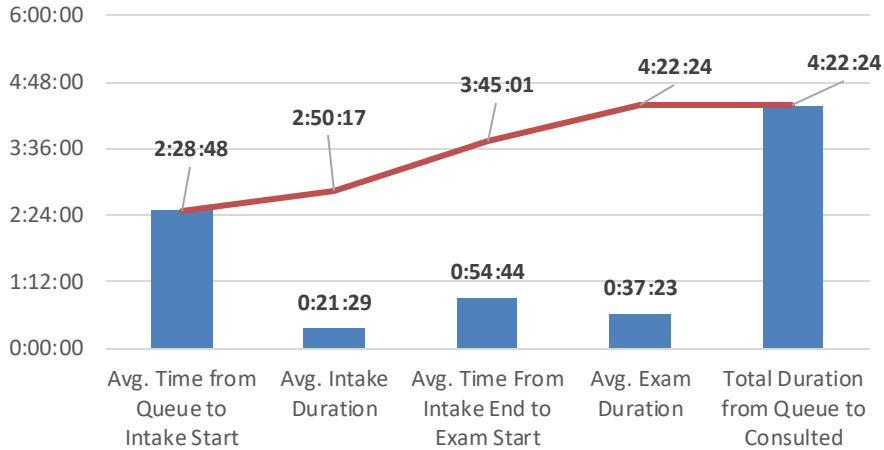


# Key Processes and Elapsed Times Averages CBC and ECU: July- September 2024

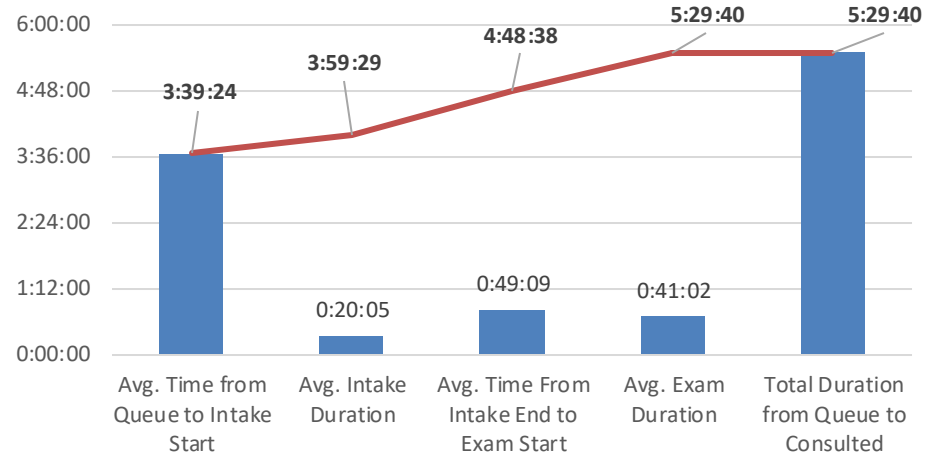


# Key Processes and Elapsed Times Averages

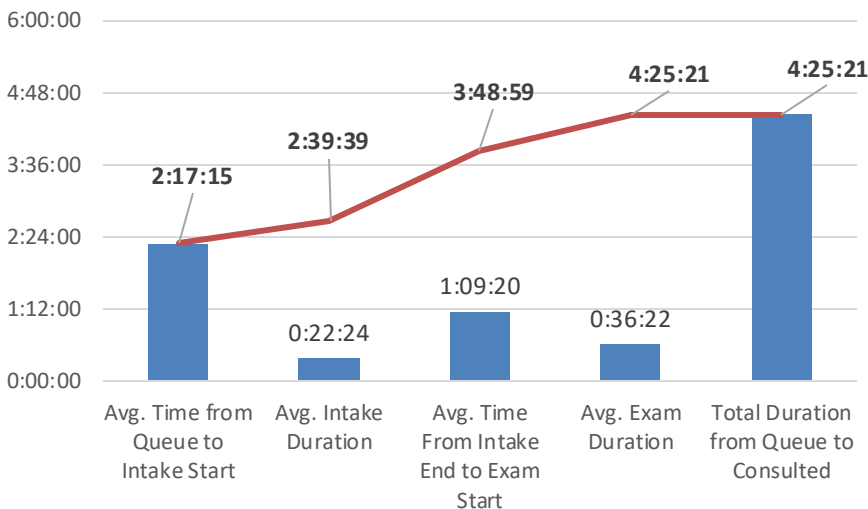
## April - June 2024



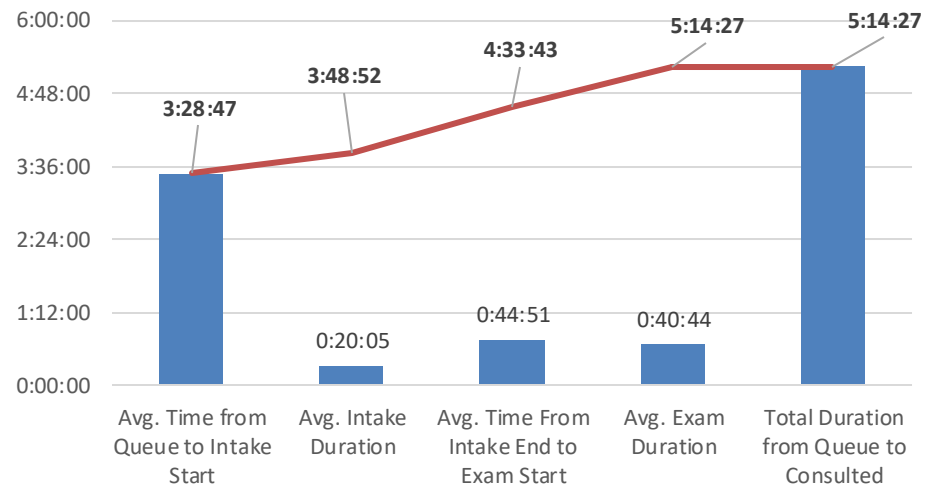
## July - September 2023



## January - March 2024



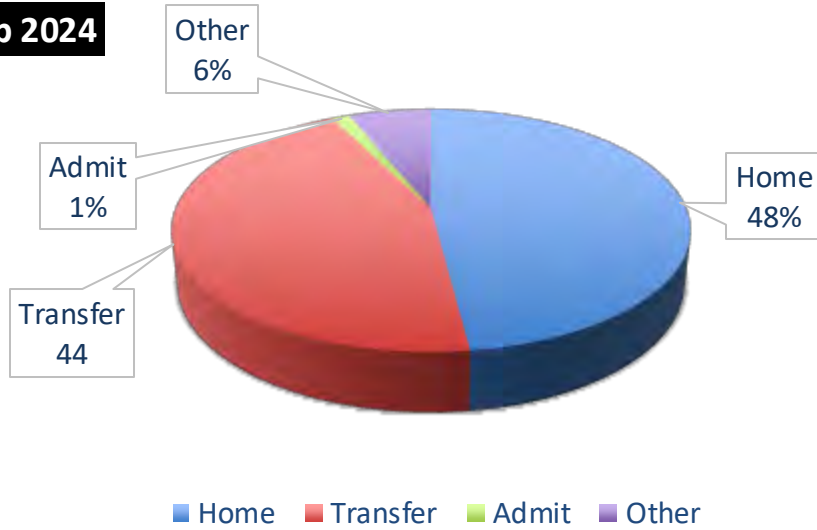
## October - December 2023



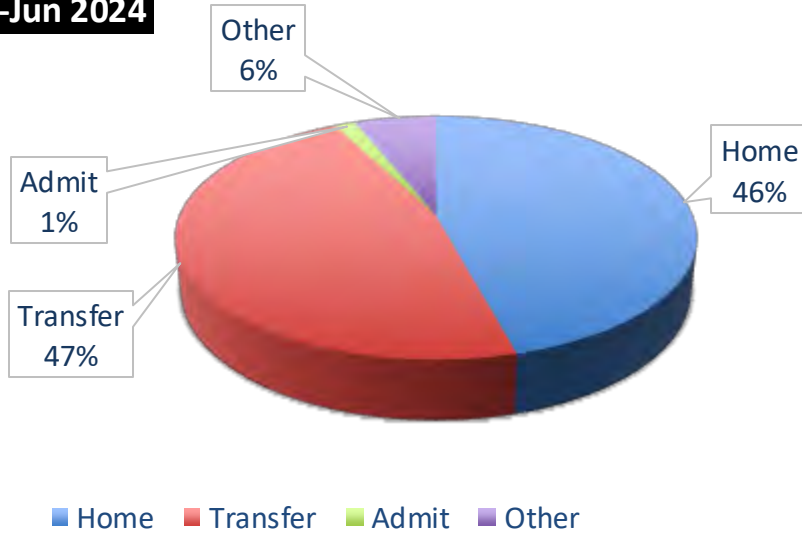
■ Avg time    — Elapsed Time

# Percent of Patients by Discharge Disposition

**Jul-Sep 2024**

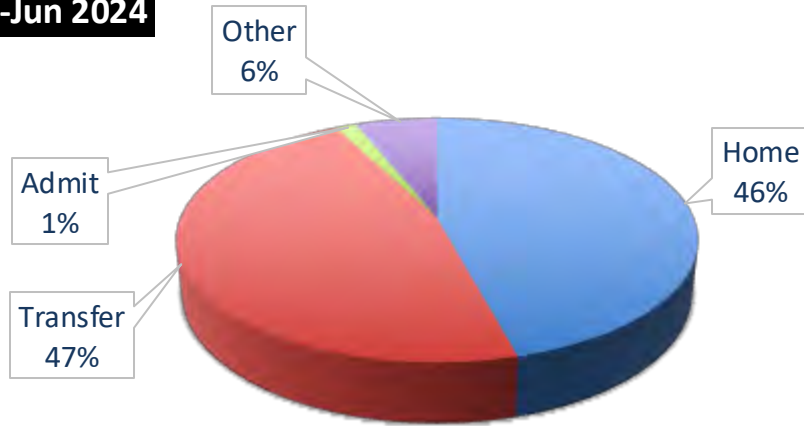


**Apr-Jun 2024**



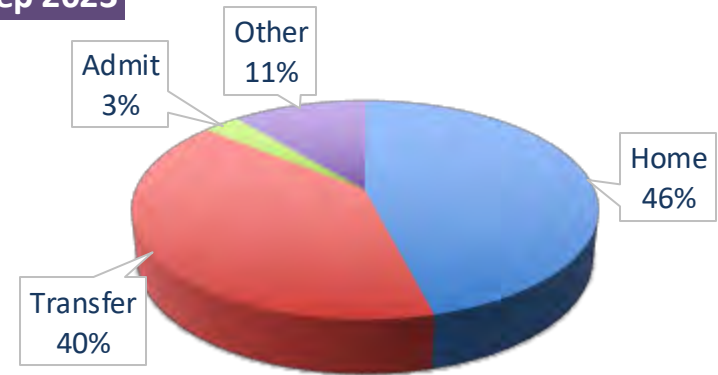
# Percent of Patients by Discharge Disposition

Apr-Jun 2024



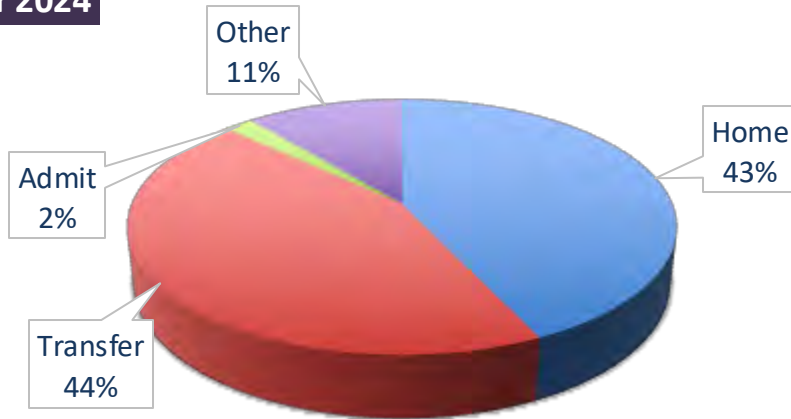
■ Home ■ Transfer ■ Admit ■ Other

Jul-Sep 2023



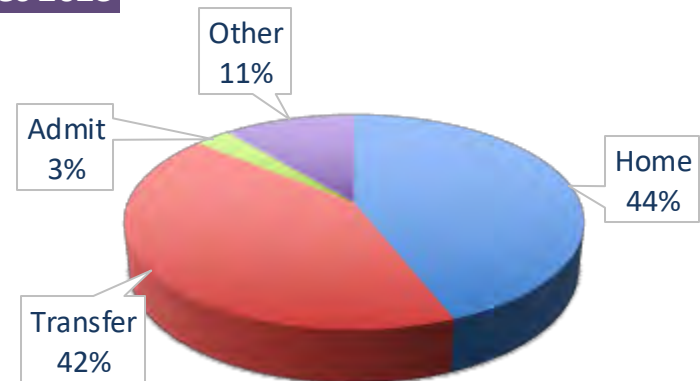
■ Home ■ Transfer ■ Admit ■ Other

Jan-Mar 2024



■ Home ■ Transfer ■ Admit ■ Other

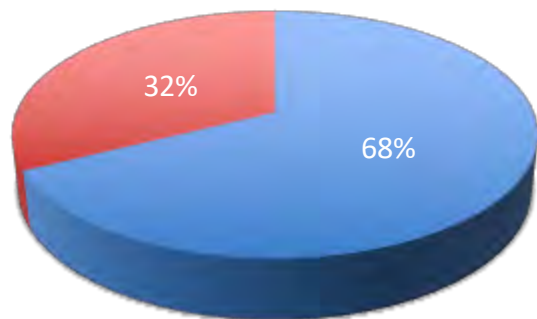
Oct-Dec 2023



■ Home ■ Transfer ■ Admit ■ Other



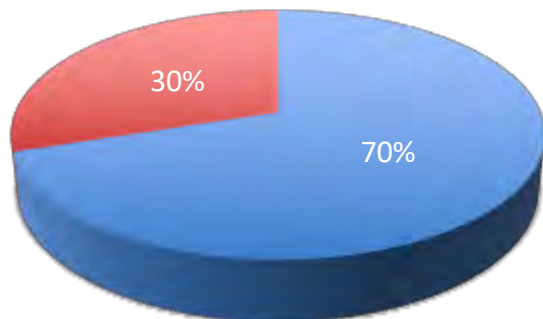
Jul-Sep 2024



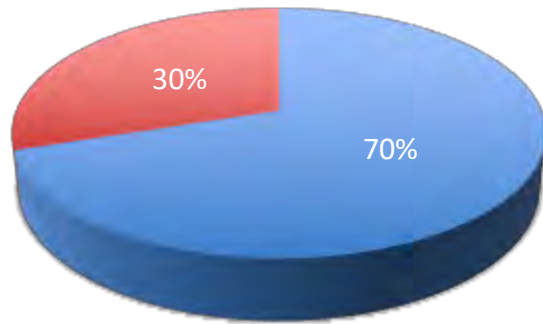
## IVCs – By Release Status

- IVCs - percent not released
- IVCs - percent released

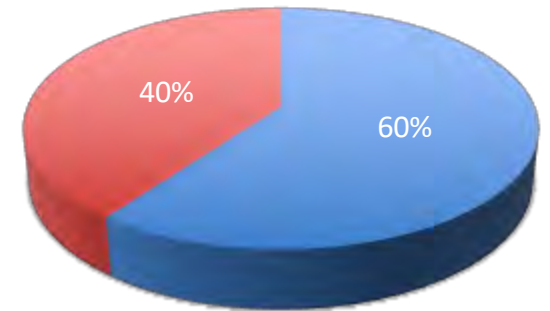
Apr-Jun 2024



**Apr-Jun 2024**



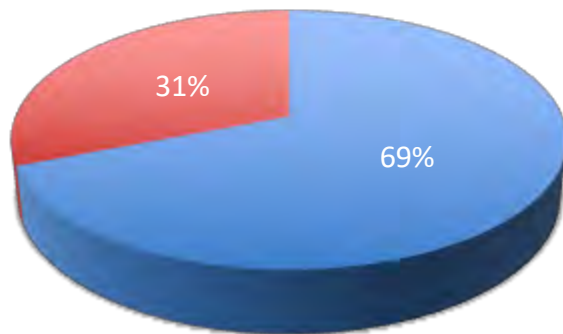
**Jul-Sep 2023**



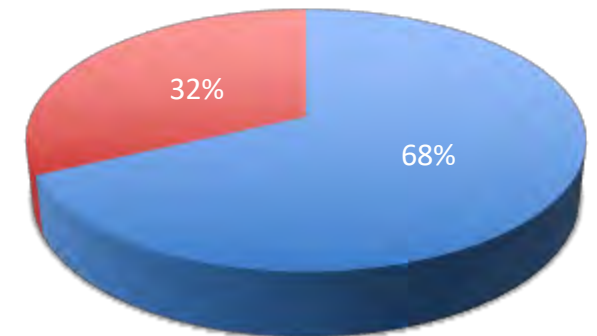
## IVCs – By Release Status

- IVCs - percent not released
- IVCs - percent released

**Jan-Mar 2024**

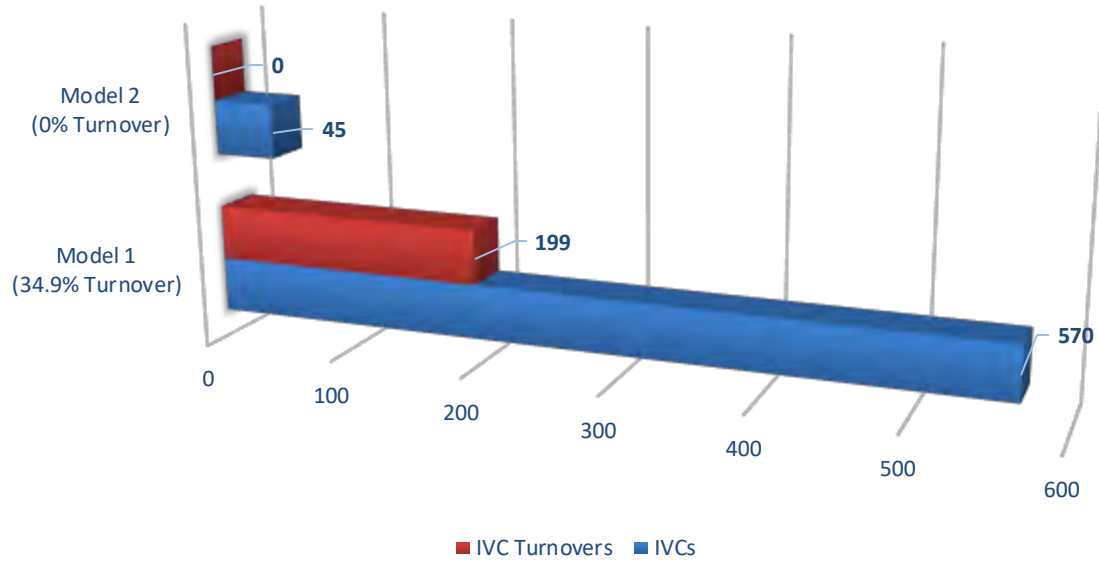


**Oct-Dec 2023**

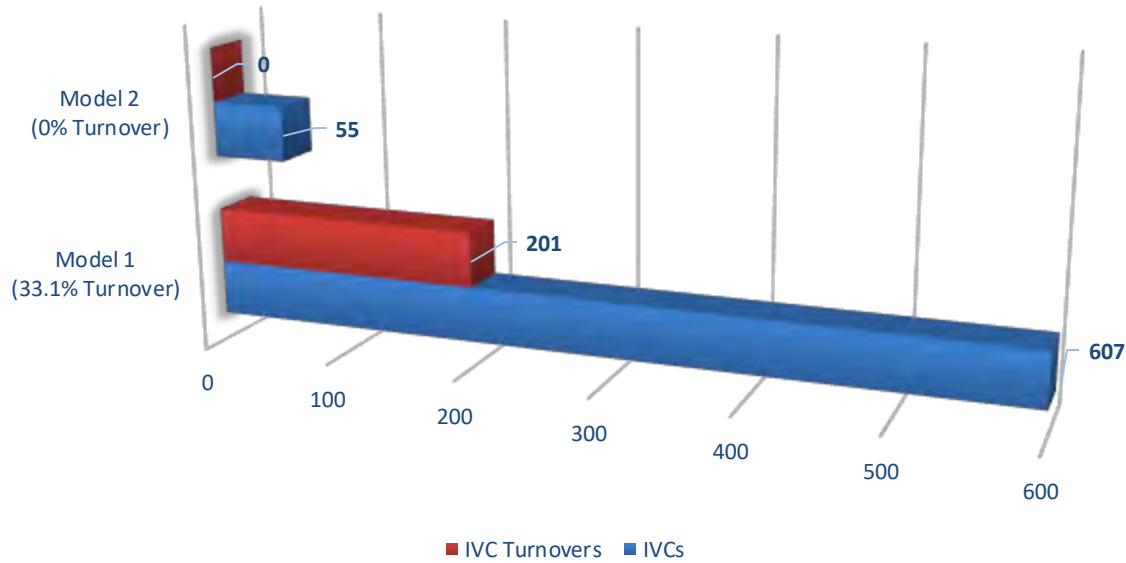




## Jul-Sep 2024

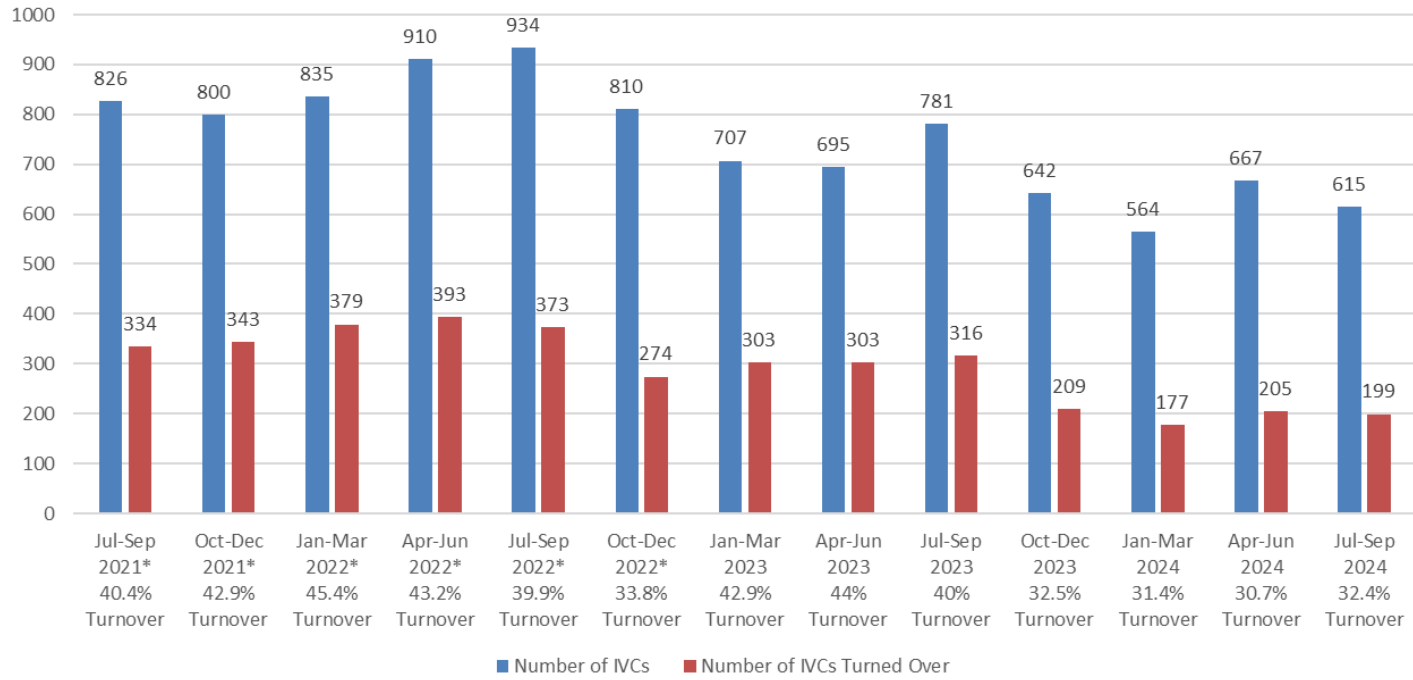


## Apr-Jun 2024

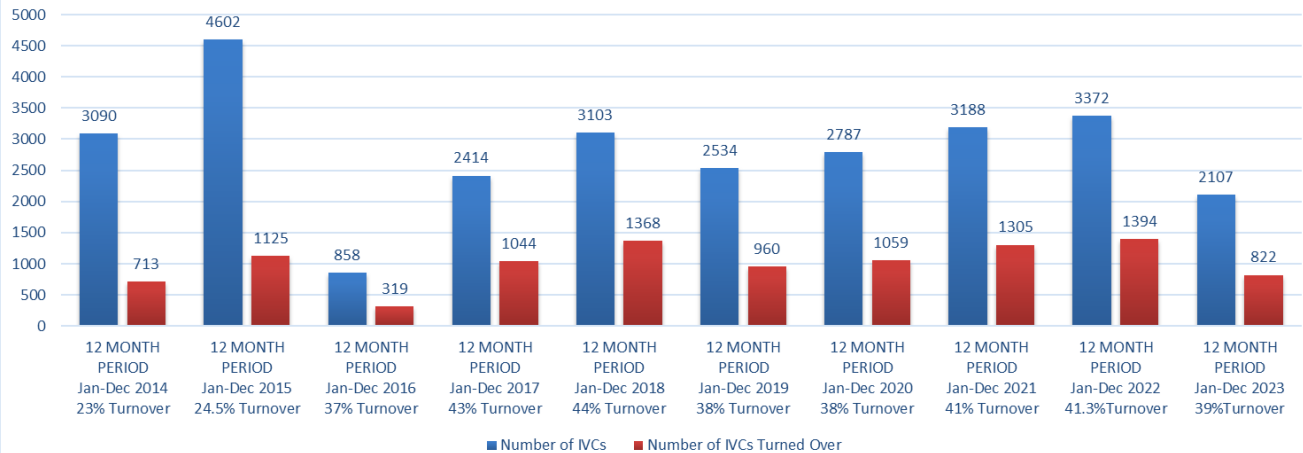


## Number of IVCs and IVC Turnovers by Model

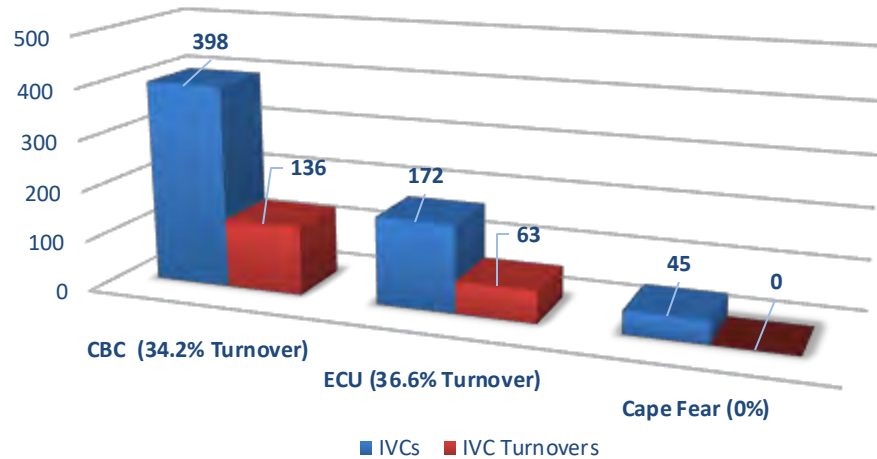
### Number of IVCs and IVCs Turned Over by Quarter



### Number of IVCs and IVCs Turned Over by Year

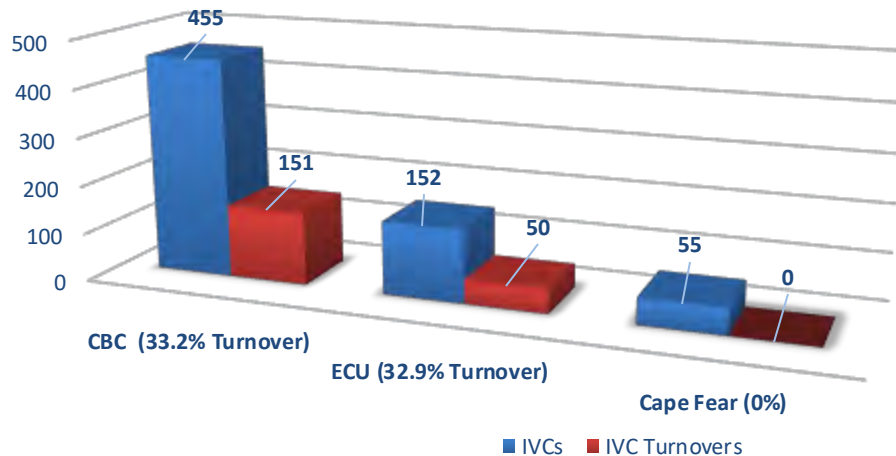


## Jul-Sep 2024



## Number of IVCs and IVC Turnovers by Provider

## Apr-Jun 2024



# Satisfaction Surveys

- Satisfaction surveys are done twice a year.
- Most recent surveys were conducted in September 2024.
- Invitations to participate were sent via electronic mail
- Surveys were completed online via Qualtrics software

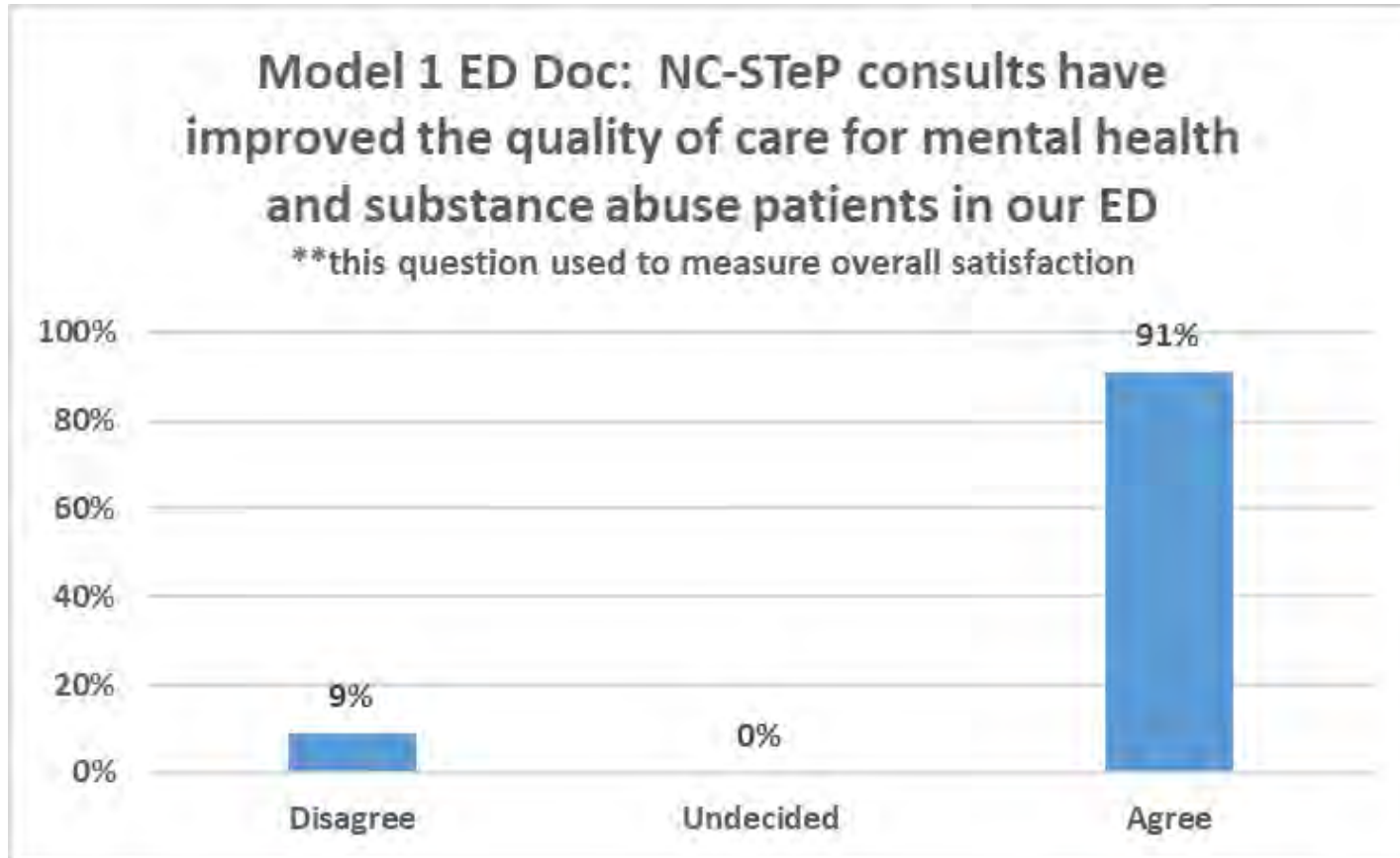


# Satisfaction Surveys Methodology

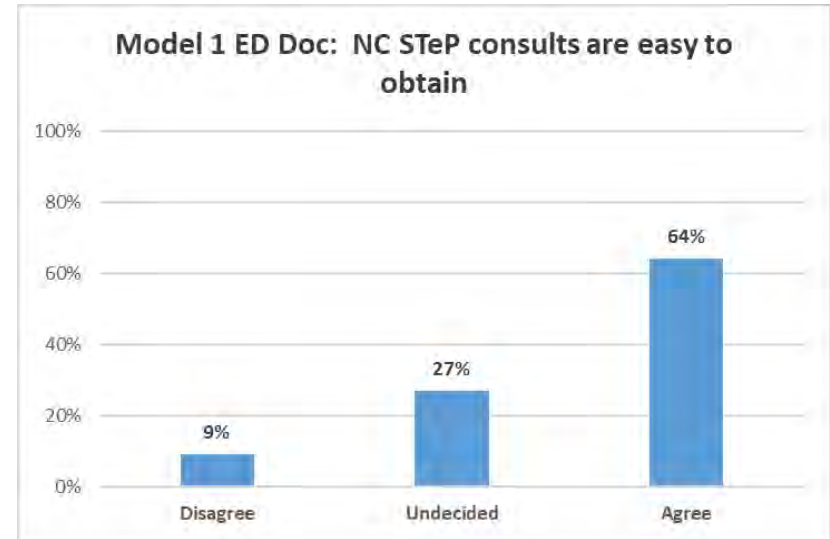
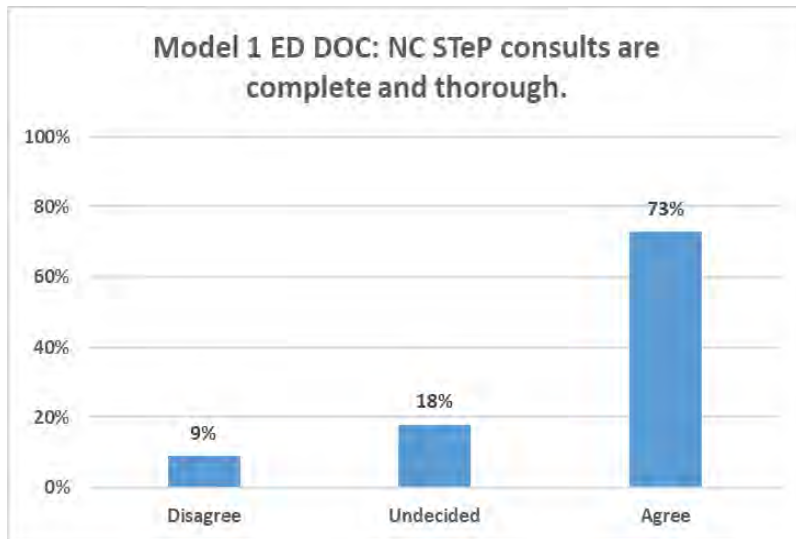
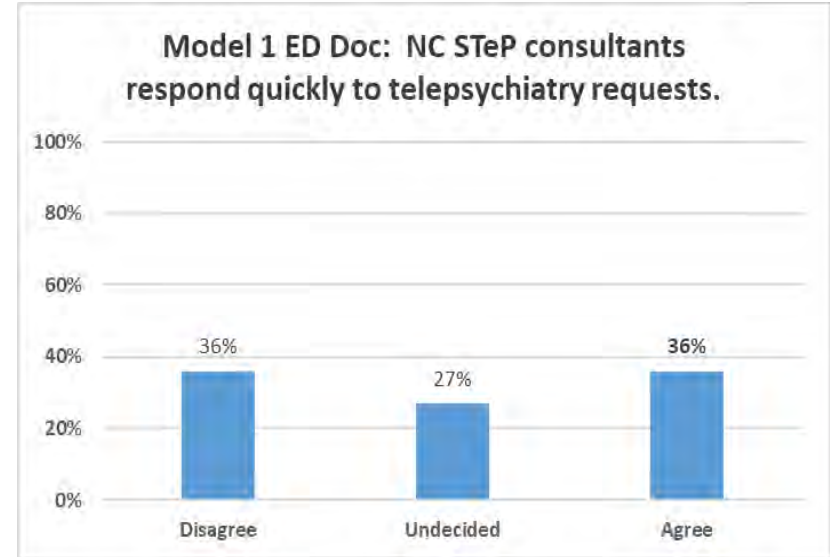
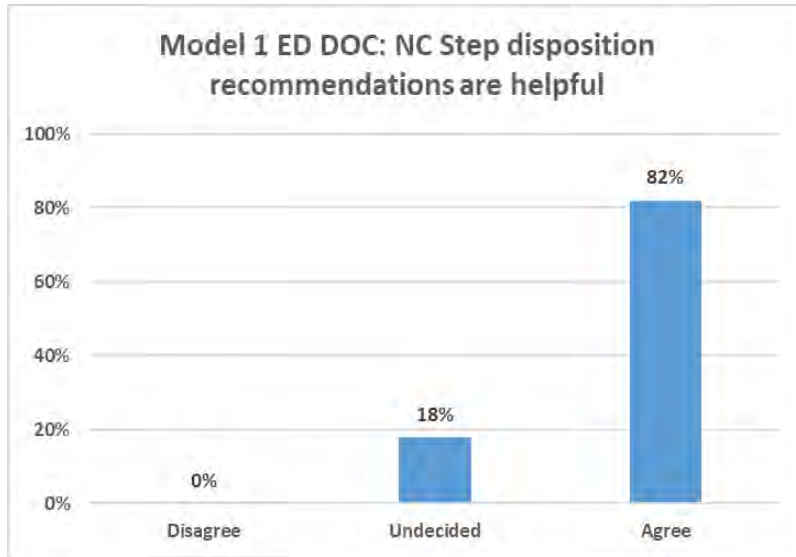
- 69 individuals responded to the survey.
- For each group, one summary question was selected for an overall “satisfaction” rate.
- **The overall satisfaction rate was 76%.**



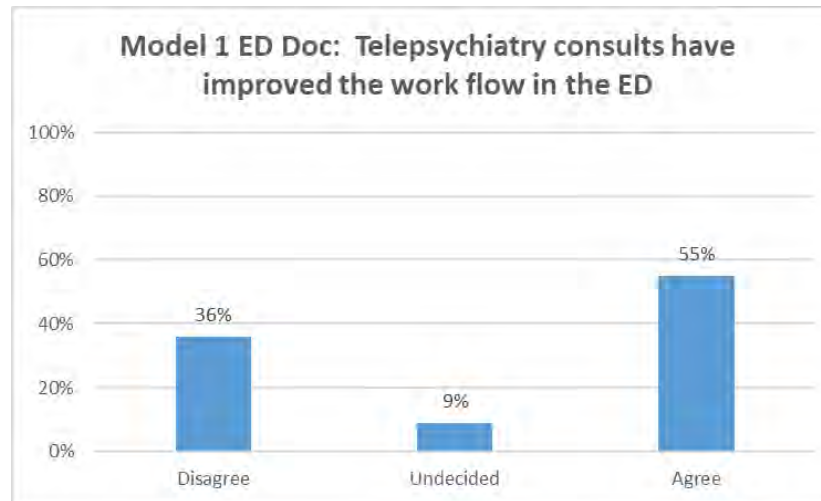
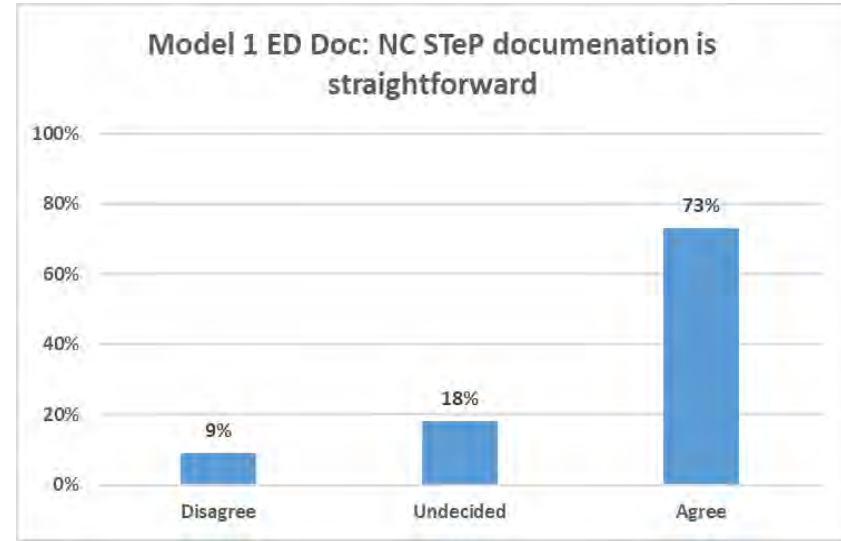
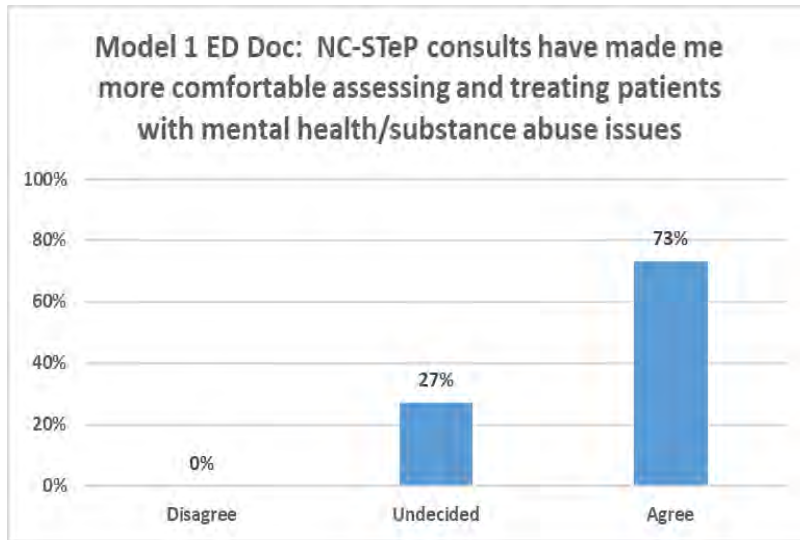
# Model 1 Hospital ED Physicians Results (n= 11)



# Model 1 Hospital ED Physicians Results (n= 11)

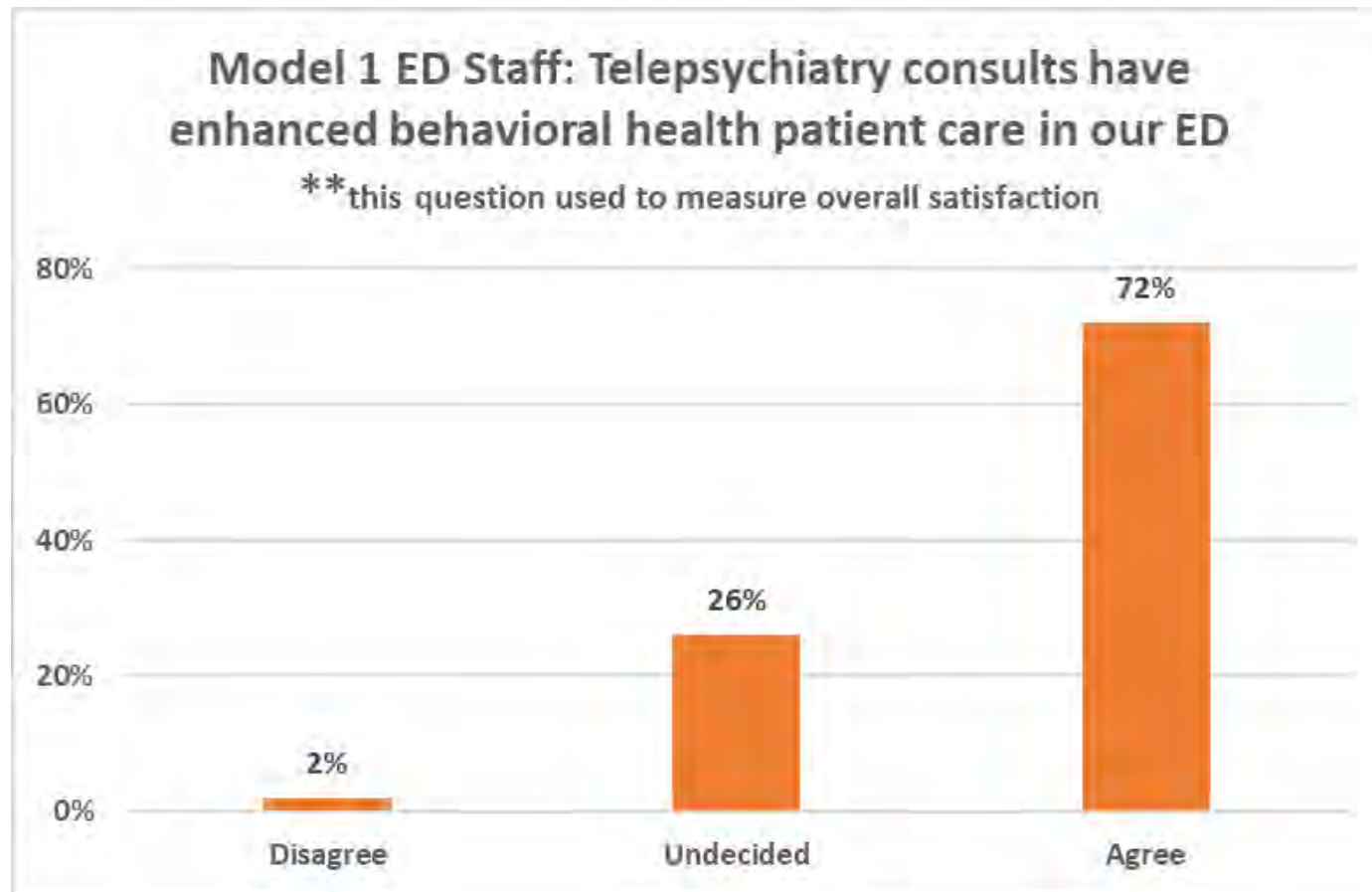


# Model 1 Hospital ED Physicians Results (n= 11)

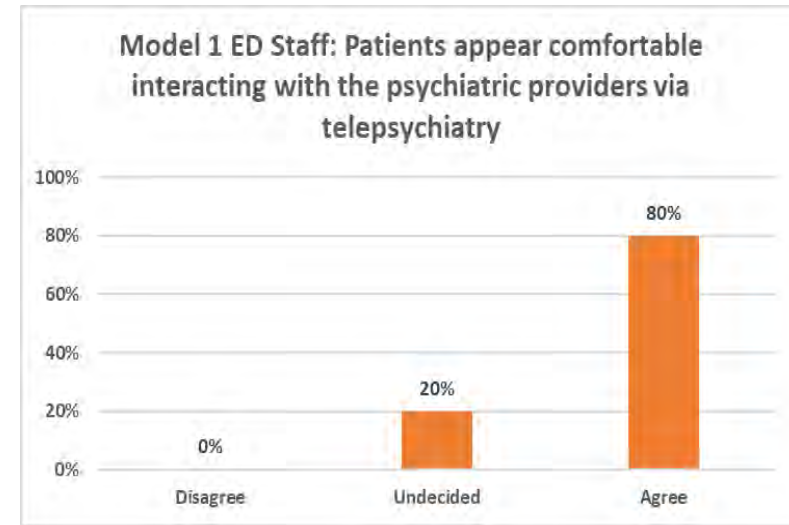
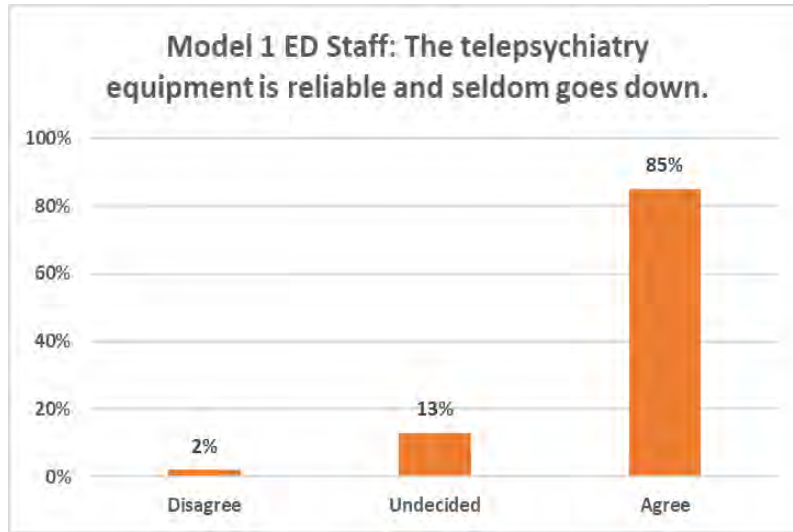
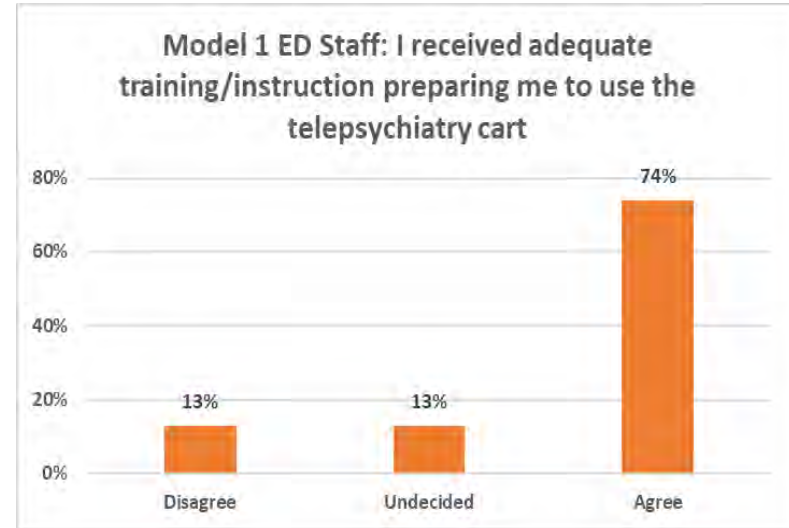
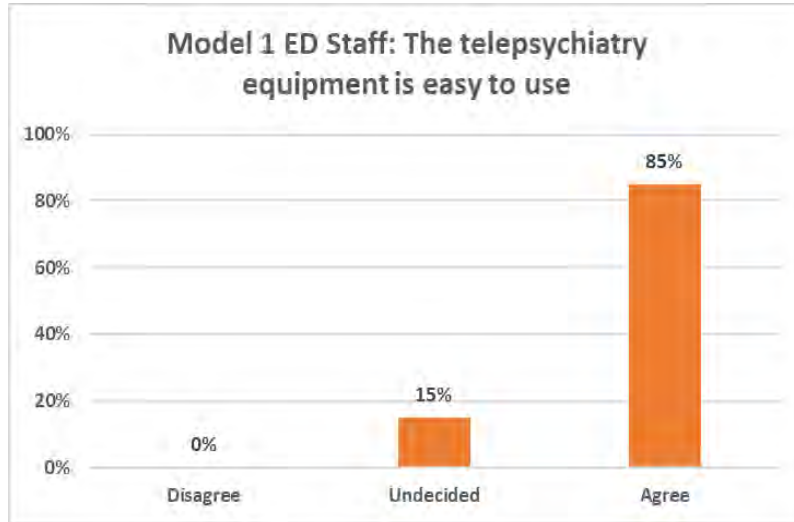




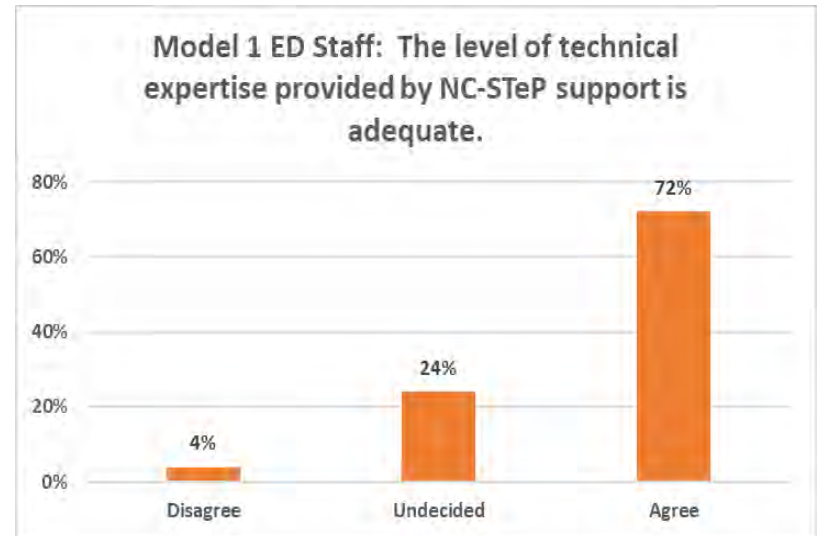
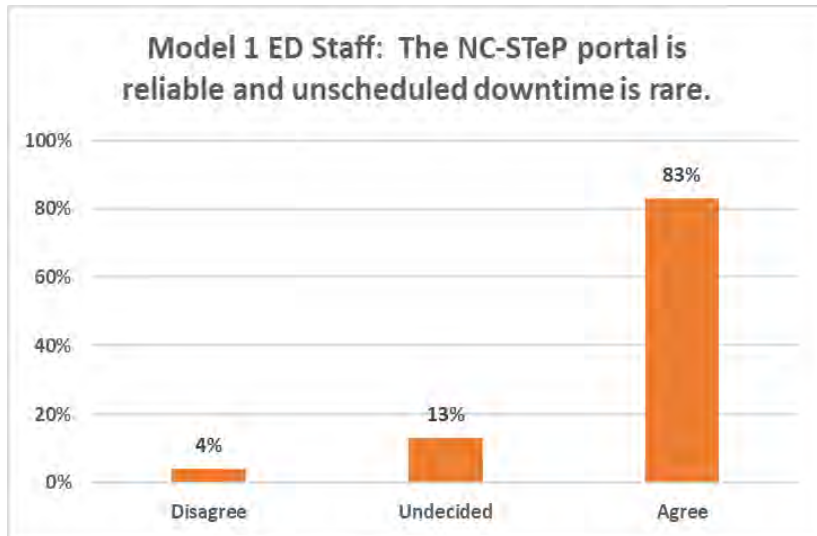
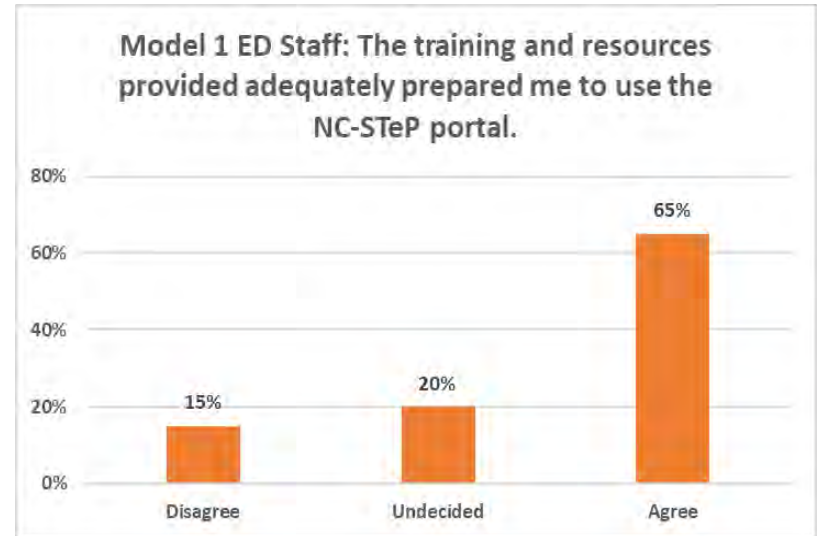
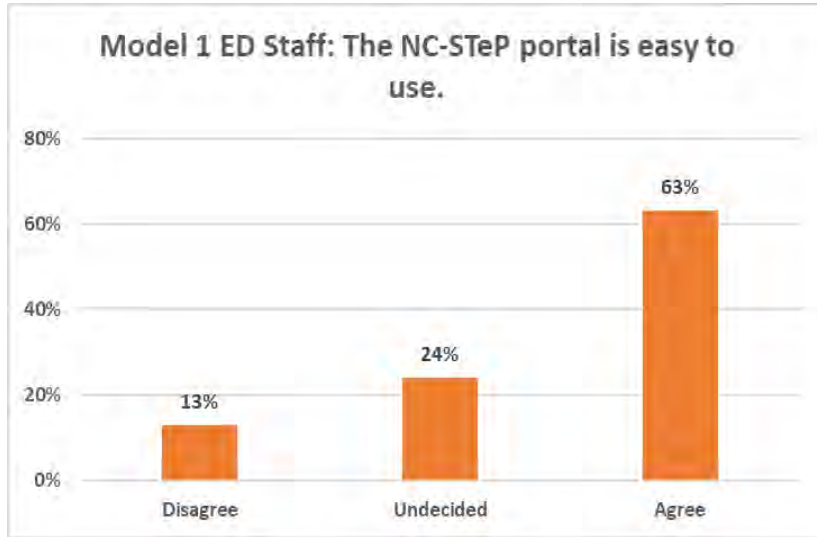
# Model 1 Hospital ED Staff Results (n= 46)



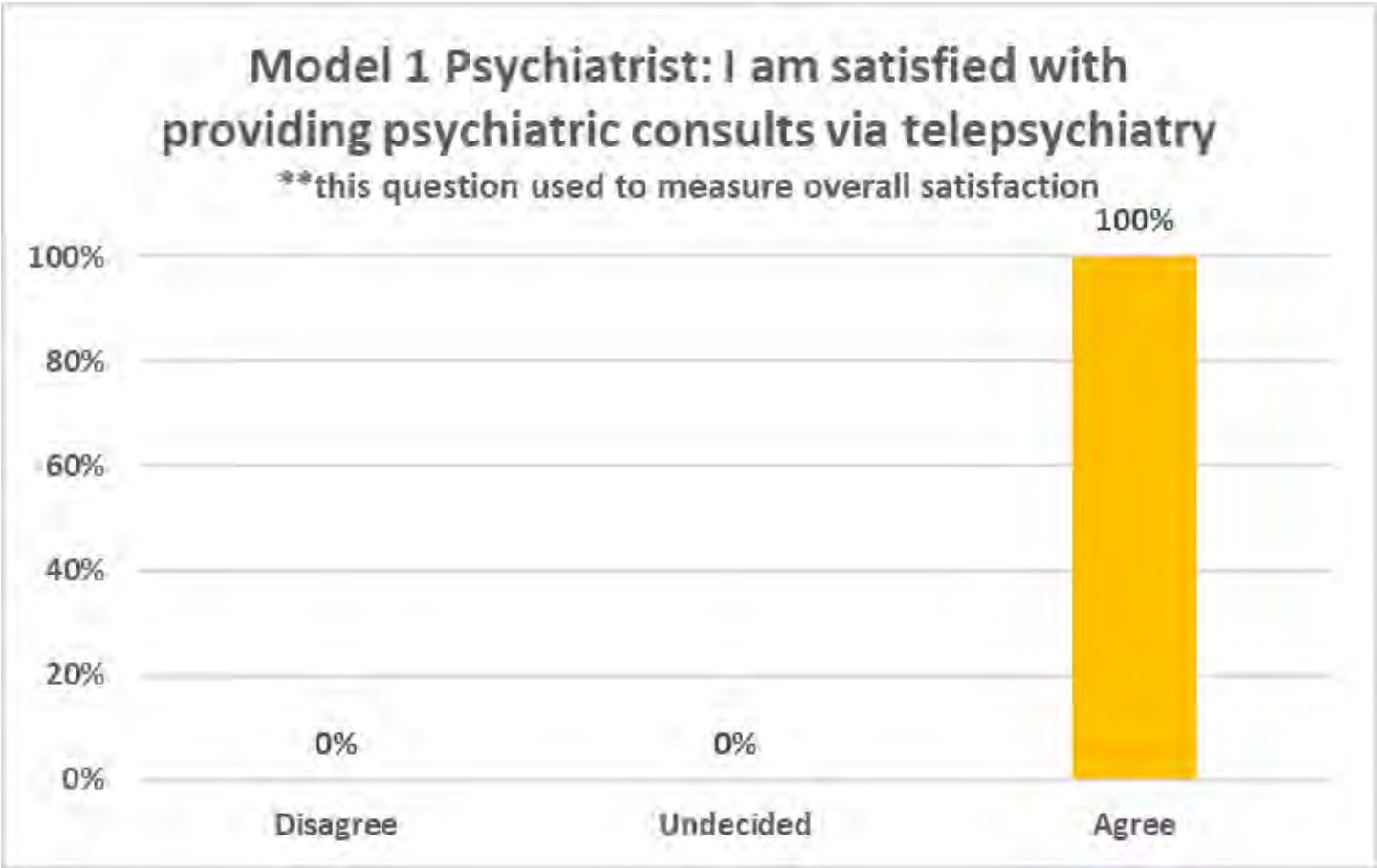
# Model 1 Hospital ED Staff Results (n= 46)



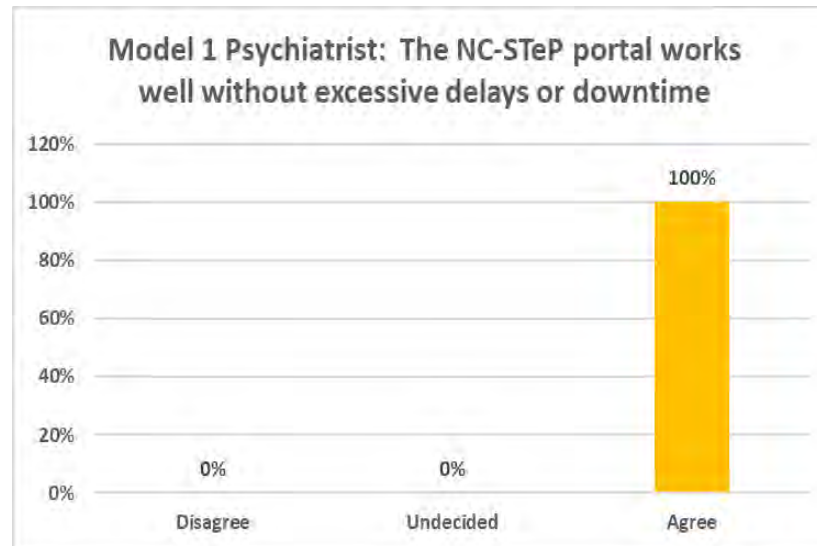
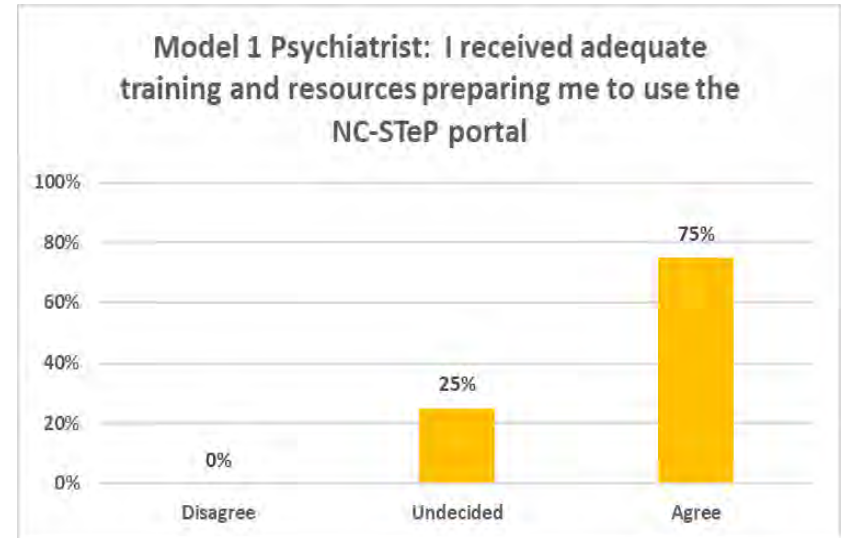
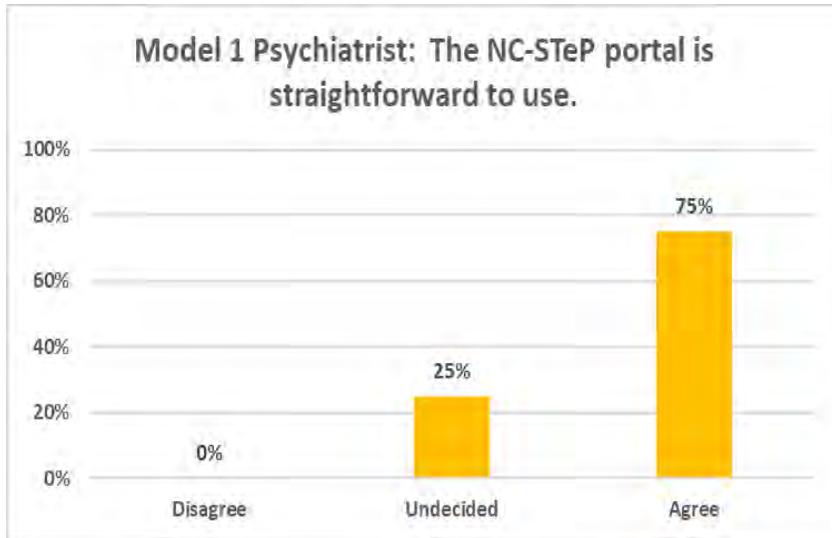
# Model 1 Hospital ED Staff Results (n= 46)



# Model 1 Provider Psychiatrist Results (n= 4)



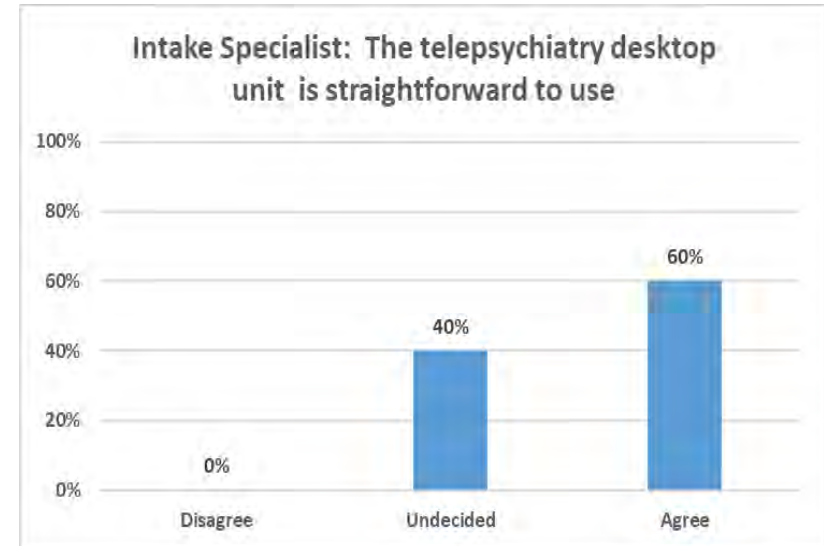
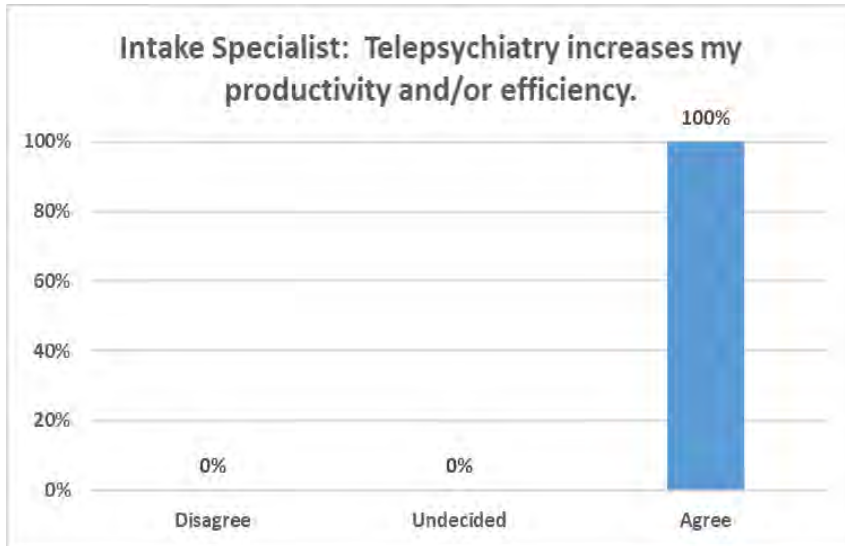
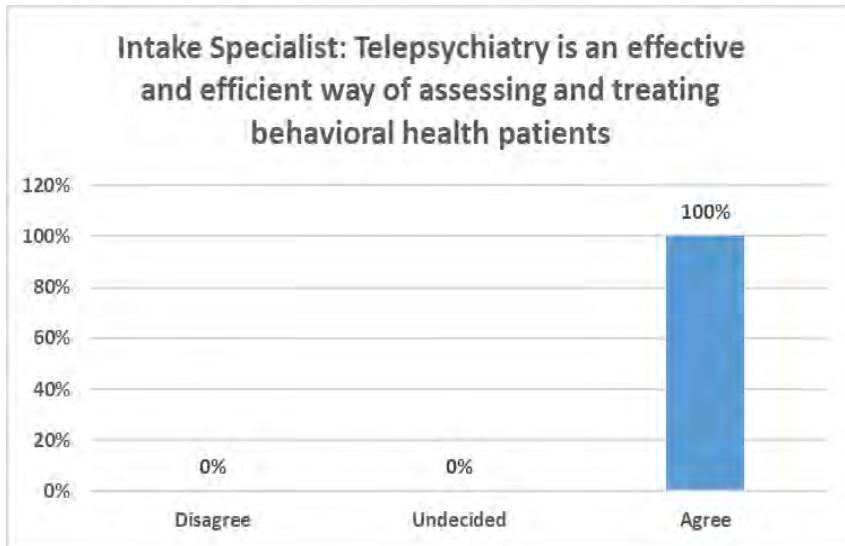
# Model 1 Provider Psychiatrist Results (n= 4)



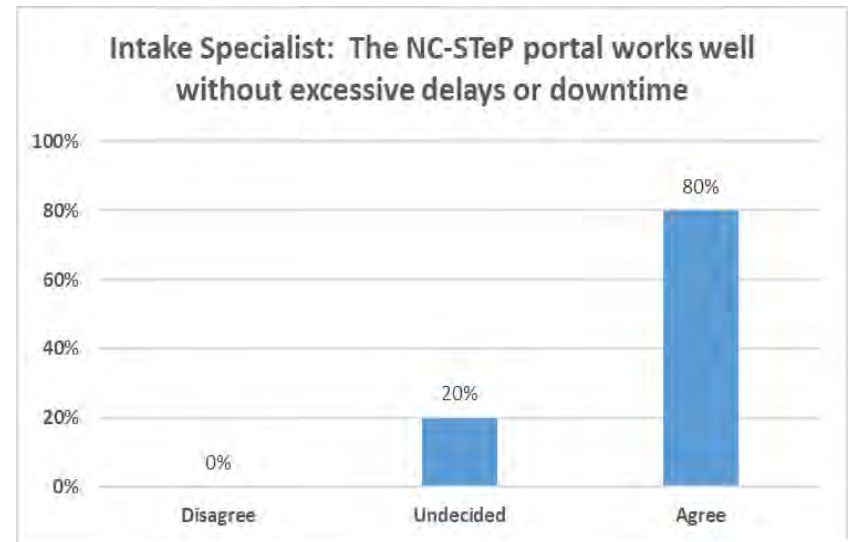
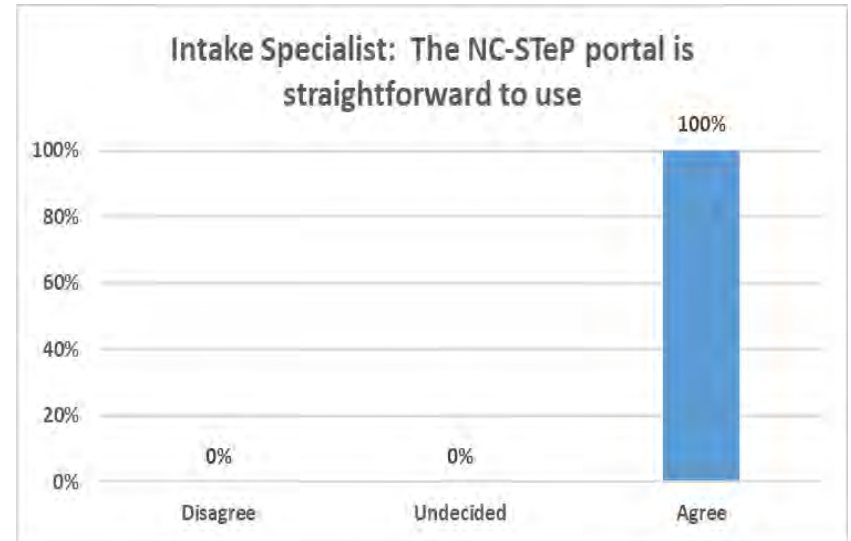
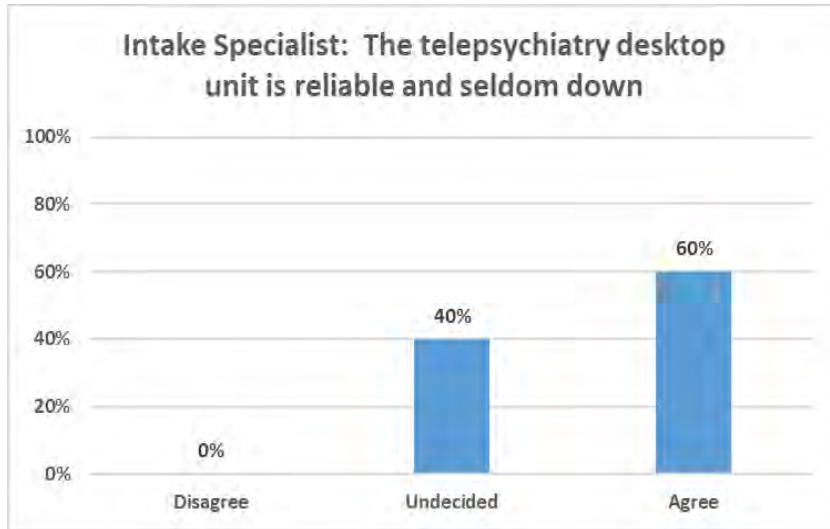
# Model 1 Psychiatric Intake Specialist Results (n=5)



# Model 1 Psychiatric Intake Specialist Results (n=5)



# Model 1 Psychiatric Intake Specialist Results (n=5)



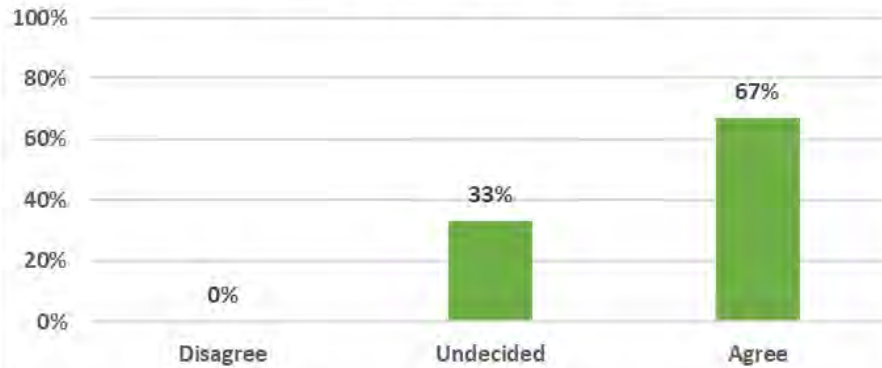


# Model 1 CEO/CNO/CFO Results (n= 3)

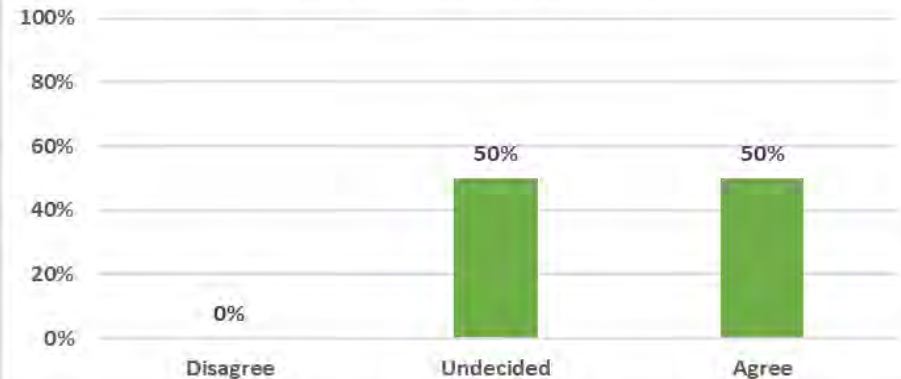


# Model 1 CEO/CNO/CFO Results (n= 3)

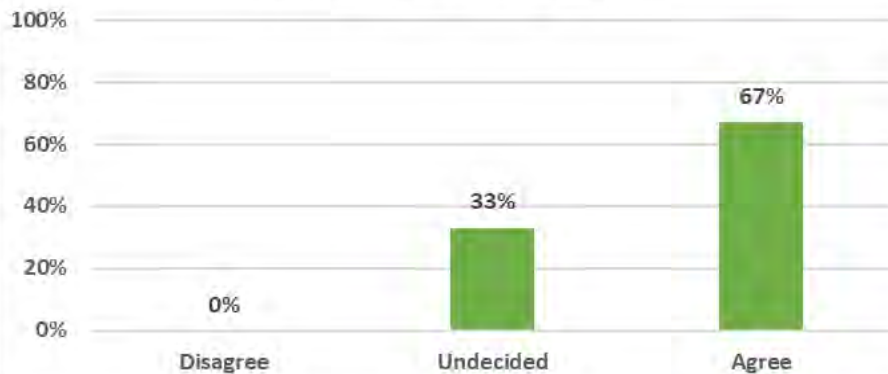
**Model 1 Hospital CEO: The LOS for psychiatric patients in our ED has reduced**



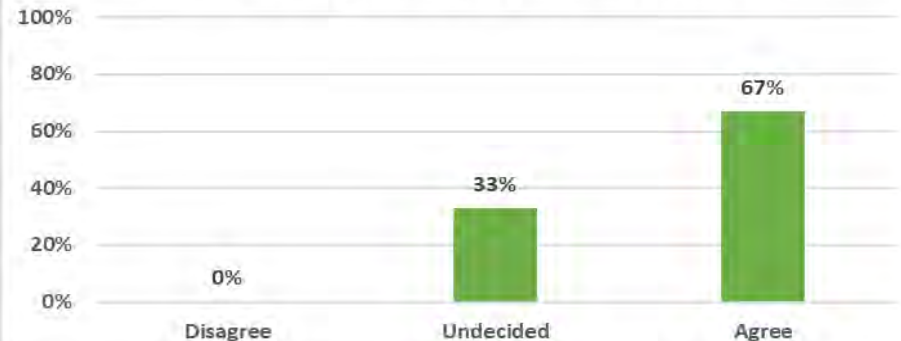
**Model 1 Hospital CEO: Overall, ED throughput has improved.**



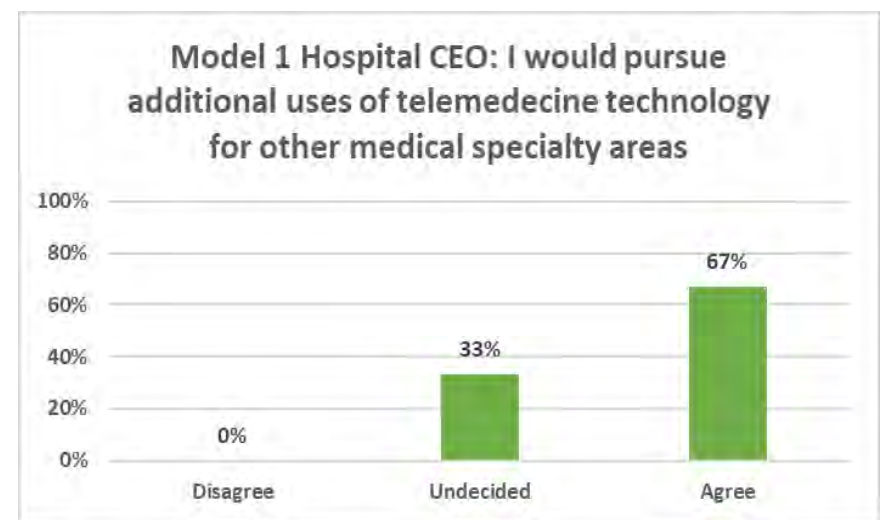
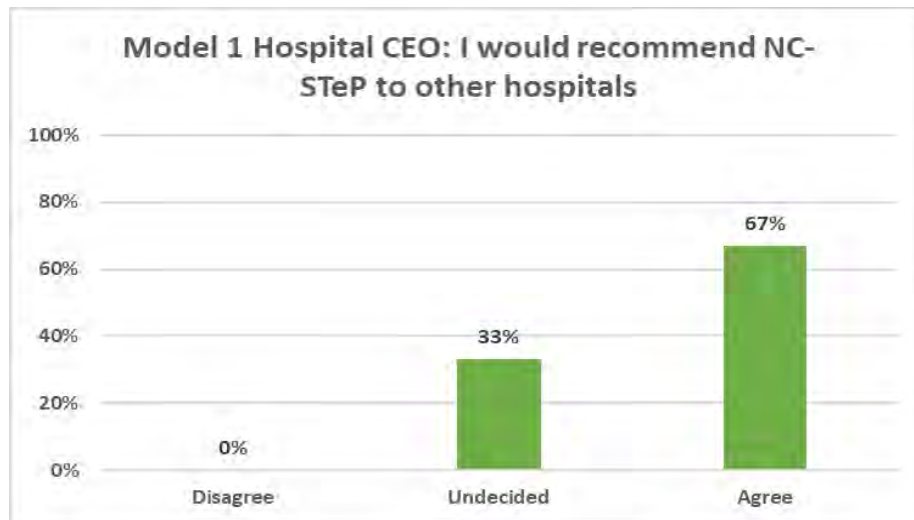
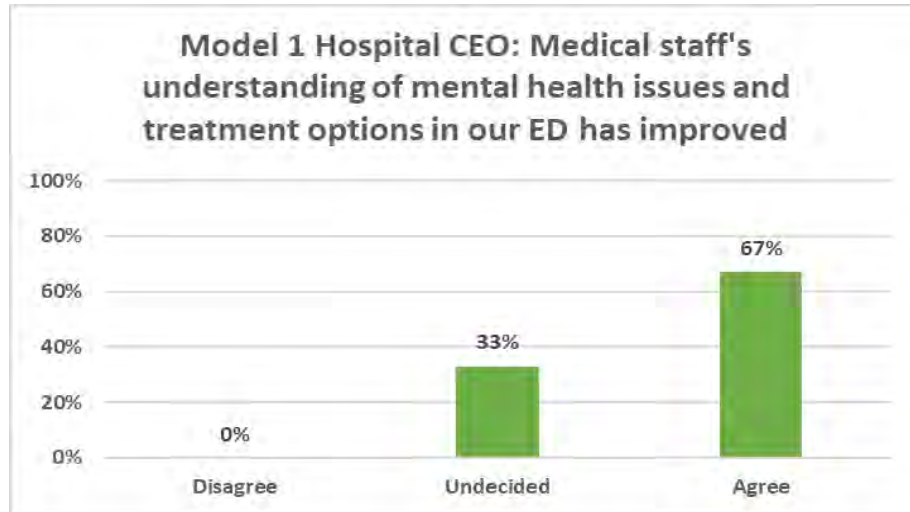
**Model 1 Hospital CEO: Overall, ED staff satisfaction has improved**



**Model 1 Hospital CEO: There has been an improvement in discharge planning and referrals for psychiatric patients in our ED**

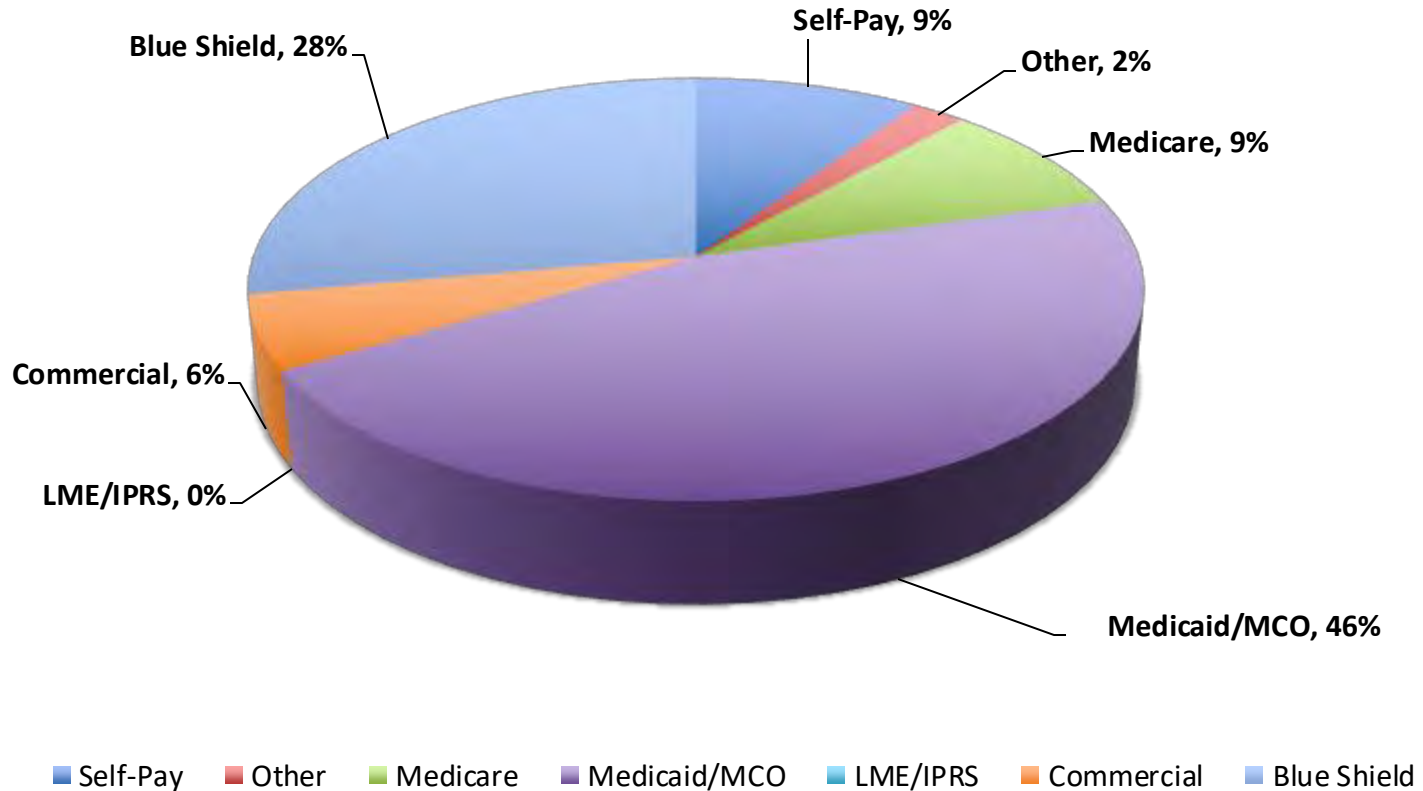


# Model 1 CEO/CNO/CFO Results (n= 3)



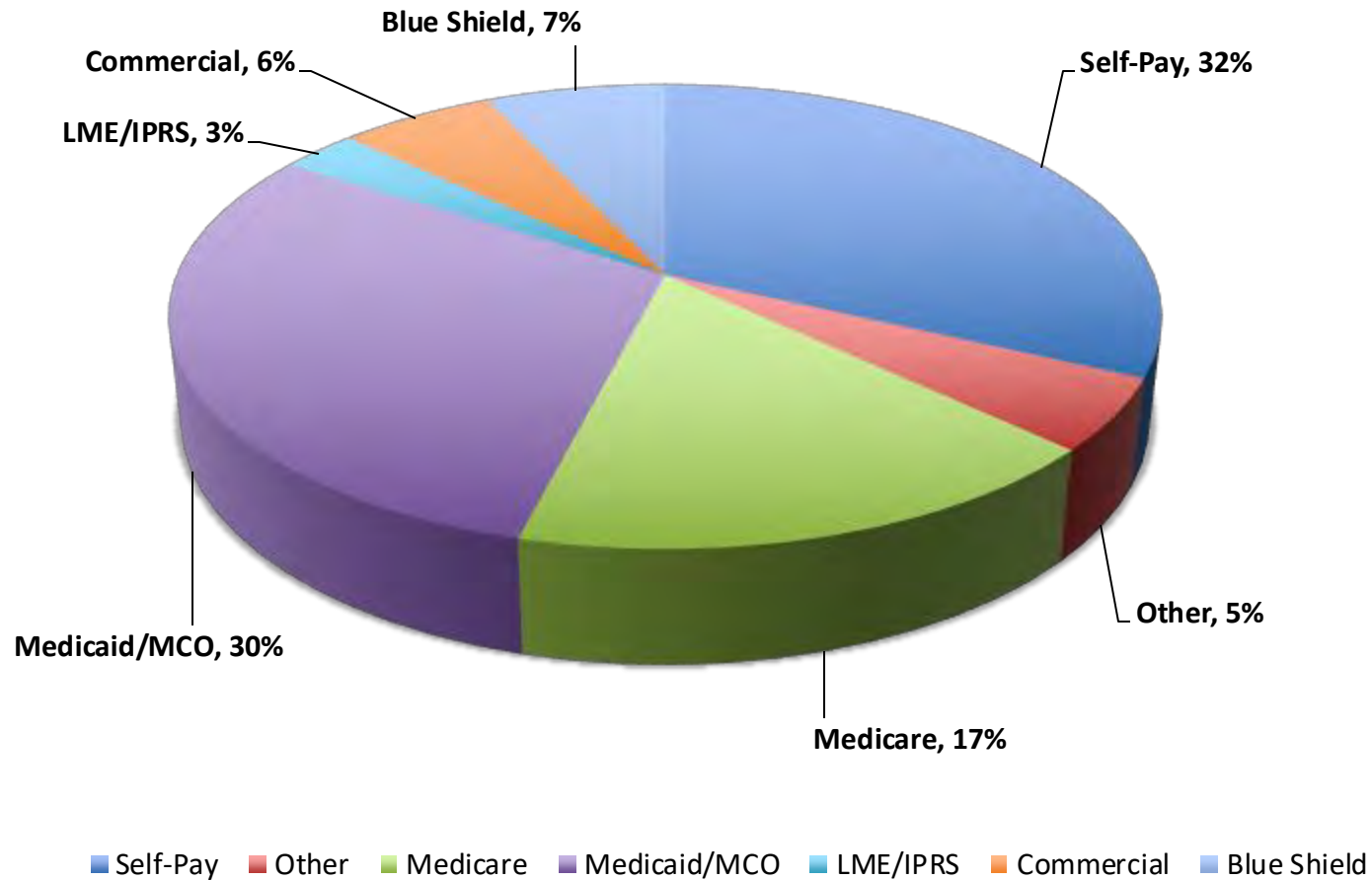
# NC-STeP Charge Mix

QTD FY2025 - Quarter 1 (July 1- September 30, 2024)



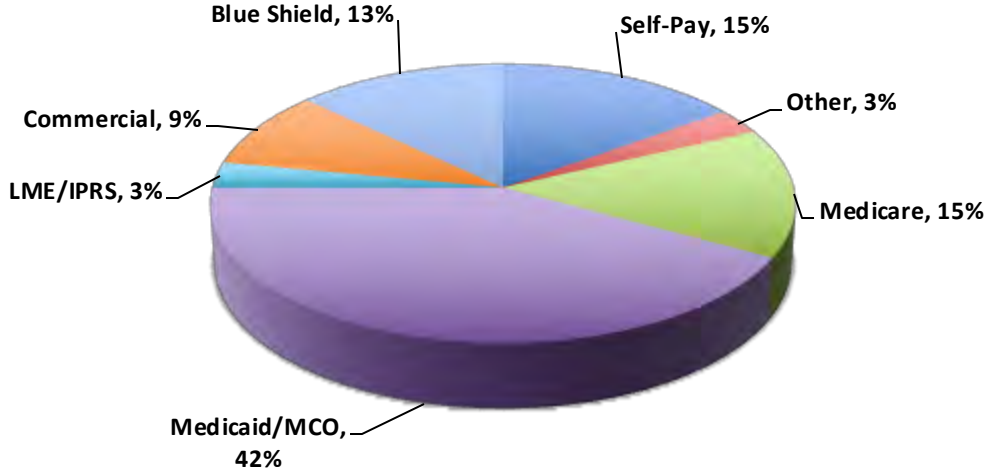
# NC-STeP Charge Mix - Project to Date

Service Dates: October 1, 2013 – September 30, 2024

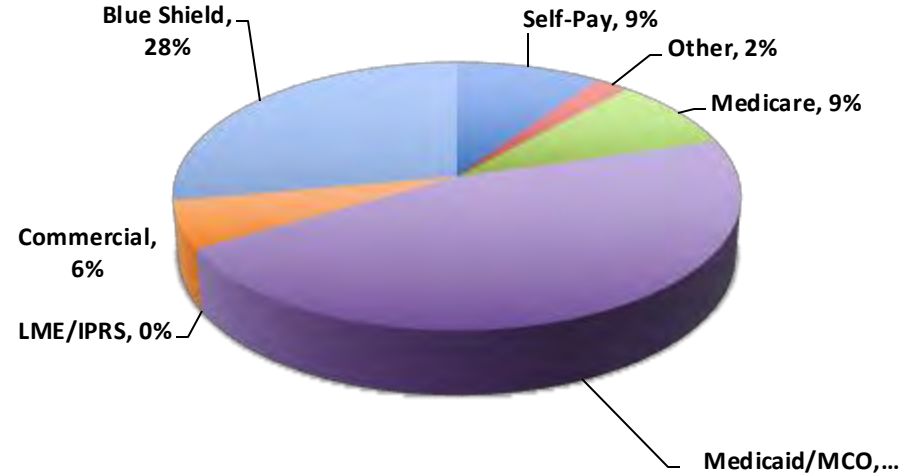


# NC-Step Charge Mix Last 4 Quarters

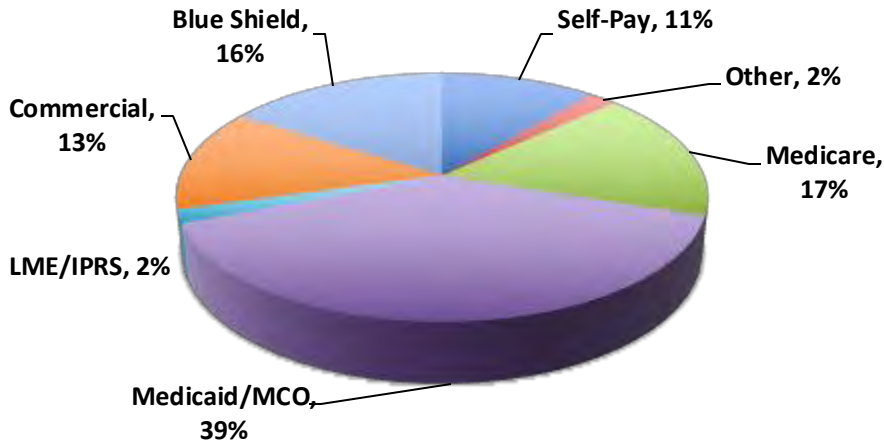
**Quarter 4 (April 1- June 30, 2024)**



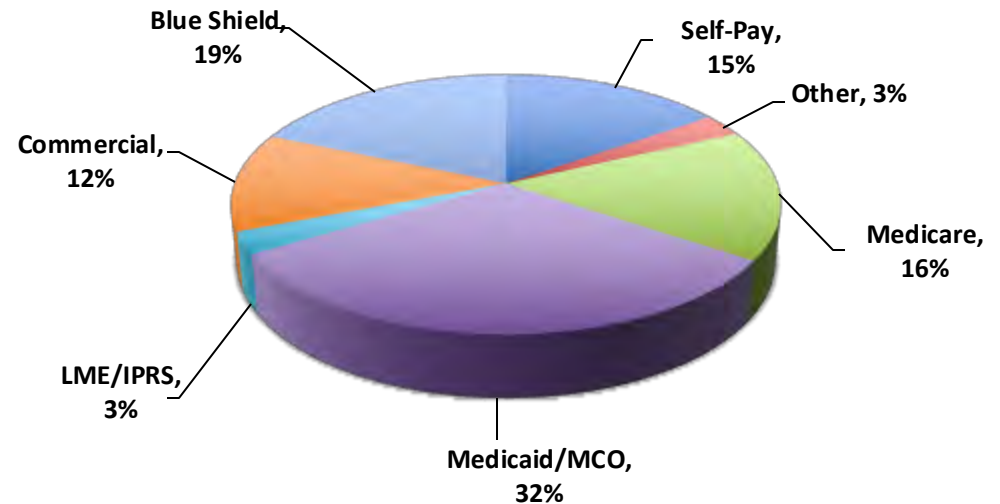
**Quarter 1 (July 1- September 30, 2024)**



**Quarter 3 (January 1- March 31, 2024)**



**Quarter 2 (October 1- December 31, 2023)**



# Community-Based Sites as of September 30, 2024

EVALUATION CRITERIA	VALUES/MEASURES REACHED AS OF 06/30/2024
1. The number of full-time equivalent (FTE) providers supporting the program	<b>.90 FTEs</b>
2. The number of community-based sites contracted	<b>24</b>
3. Number of patient visits with medical (psychiatric) doctor	<b>111</b> <b>PTD= 2,769</b>
4. The number return visits	<b>1,782</b> <b>PTD= 23,998</b>
5. The number of patient visits with a mid-level provider	<b>2,074</b> <b>PTD= 27,593</b>
6. The number of new patient visits	<b>406</b> <b>PTD= 6,423</b>

# NC-STeP Community Patient Visits

Patient Visits	Since October 2018 (project inception)	During Calendar Year 2018	During Calendar Year 2019	During Calendar Year 2020	During Calendar Year 2021	During Calendar Year 2022	During Calendar Year 2023	During Quarter Jan- Mar 2024	During Quarter Apr- Jun 2024	During Quarter Jul- Sep 2024	During Quarter Oct- Dec 2024
With Medical Doctor	<b>2,769</b>	8	536	265	316	567	708	129	129	111	
With Mid-Level Provider	<b>27,593</b>	7	2,006	3,217	4,122	4,669	7,359	2,050	2,089	2,074	
<b>Total Patient Visits</b>	<b>30,471</b>	15	2,633	3,477	4,440	5,253	8,068	2,179	2,218	2,188	

Since project inception there are 111 visits that listed no provider and 5 visits that listed both a mid-level and a doctor. For a net increase of 106 shown in the total visits but not in the individual rows for doctor or mid-level visits.

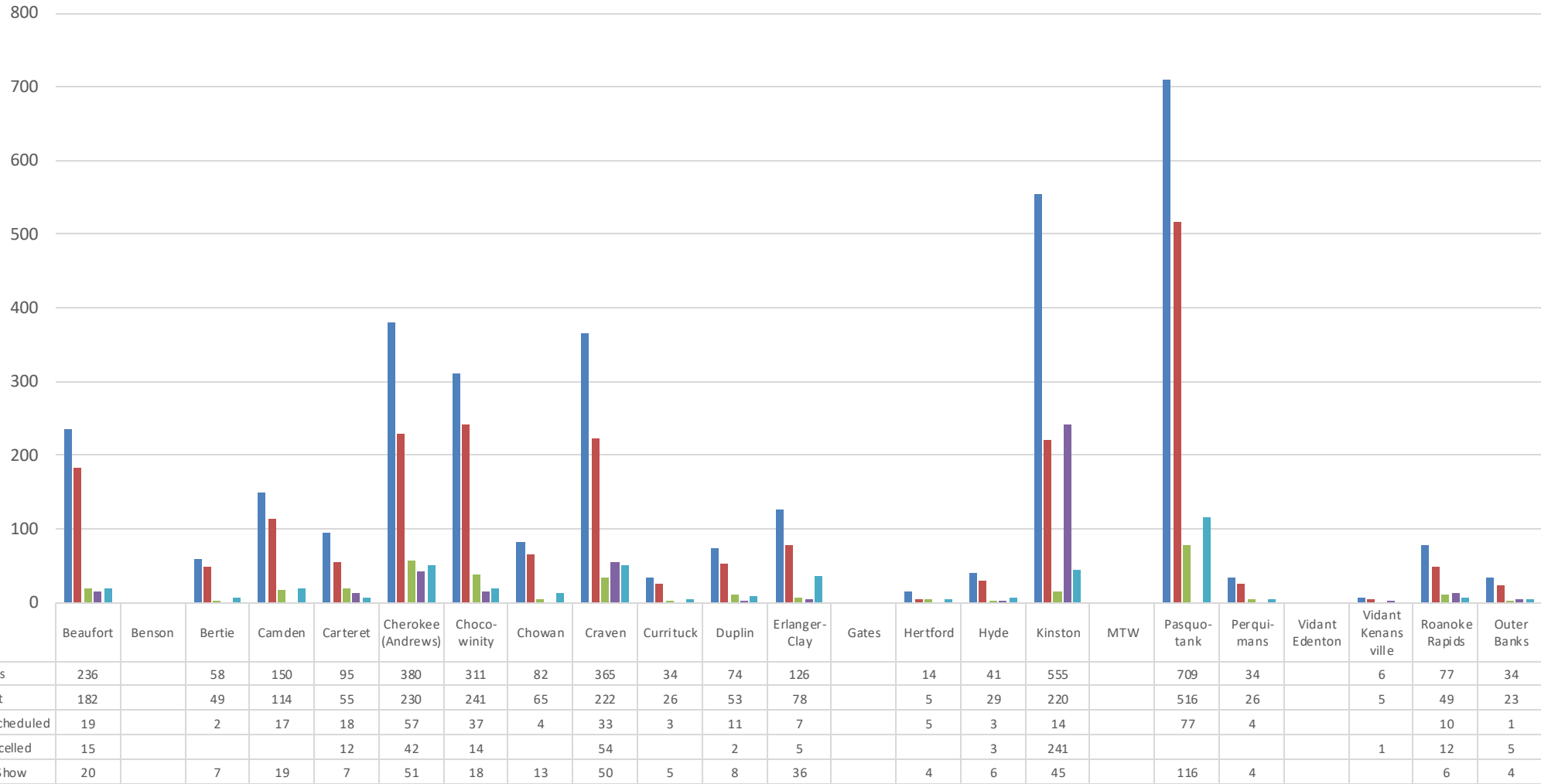




# NC-Step Appointment by Site

## Appointments, Visits Kept, Rescheduled, Cancelled, No Show

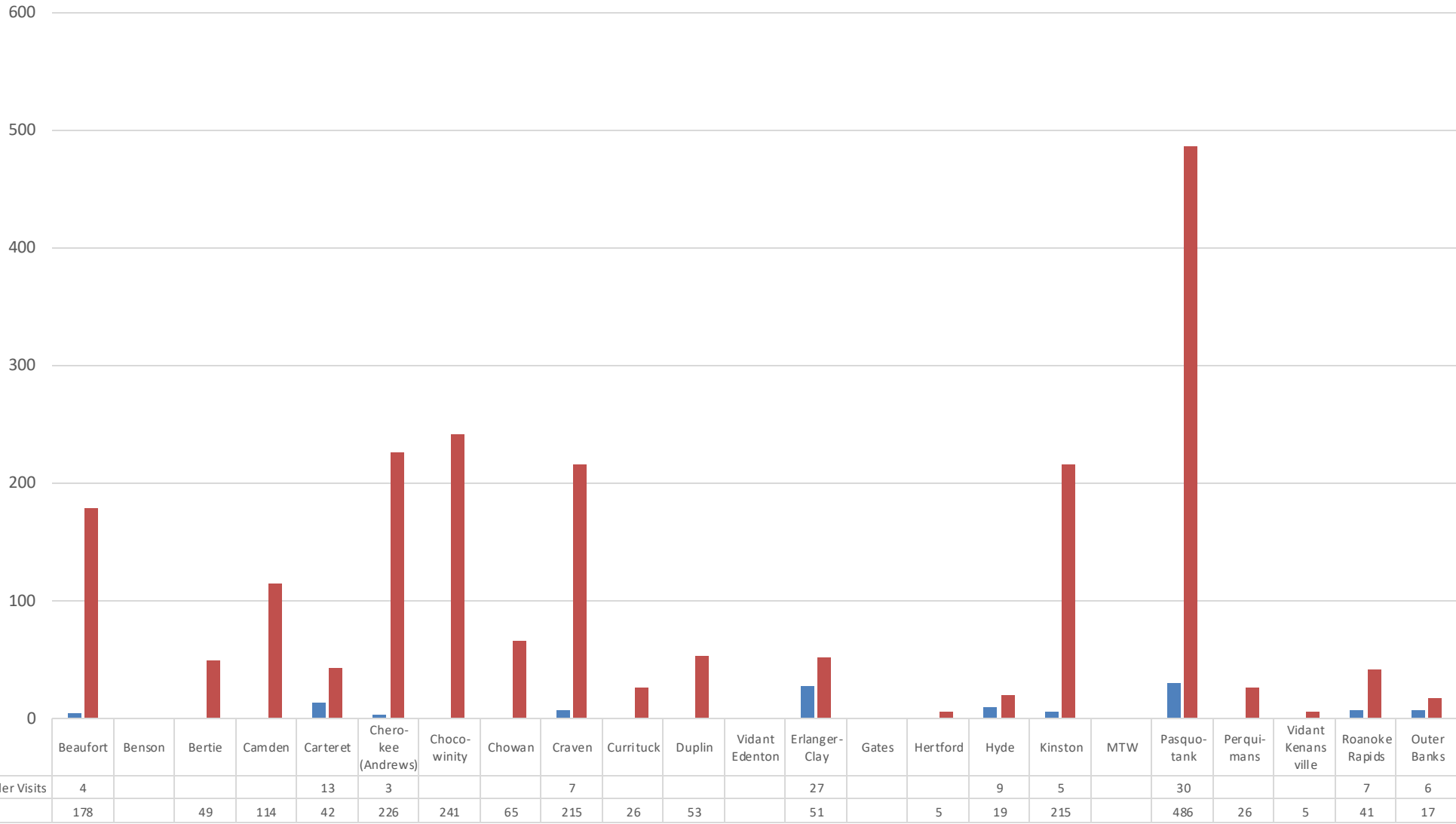
### July - September 2024



■ Total Apts   
 ■ Apts Kept   
 ■ Apts Rescheduled   
 ■ Apts Cancelled   
 ■ Apts No Show



## NC-Step Community Visits by Site by Provider Type July - September 2024



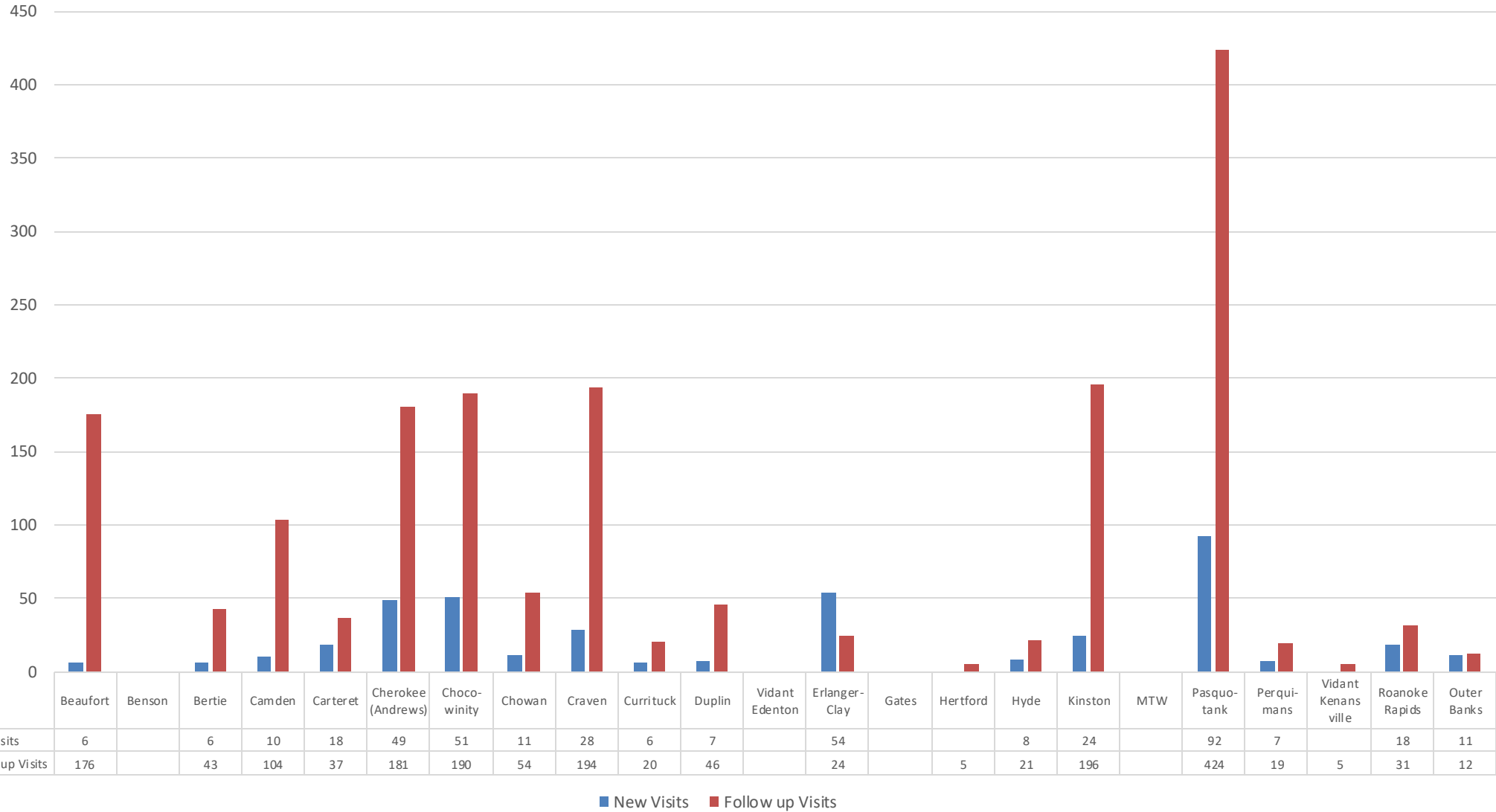
■ Psychiatric Provider Visits   ■ BH Mgr Visits



# NC-STeP Community Visits by Site

## New and Follow-Up

### July - September 2024



# NC-STeP Status as of September 30, 2024

- 28 hospitals live.
- 64,376 total psychiatry assessments since program inception
- 11,162 IVCs overturned
  - Cumulative return on investment = \$60,274,800  
(savings from preventing unnecessary hospitalizations)
- Three Clinical Provider Hubs with 24 consultant providers
- 32% of the patients served had no insurance coverage



# NC-STeP Status as of September 30, 2024

- 24 community-based sites.
- 30,362 total patient visits since program inception in October 2018.
  - 2,769 total patient visits with a psychiatrist
  - 27,593 total patient visits with a mid-level provider



# Hospital Status Report as of September 30, 2024

## Model 1 - Live



Hospital Name	Contract Date	Portal Go Live
Vidant Outer Banks Hospital	10/01/2013	08/08/2016
Vidant Duplin Hospital	10/01/2013	08/22/2016
Vidant Bertie Hospital	10/01/2013	08/15/2016
Vidant Chowan Hospital	10/01/2013	08/15/2016
Vidant Edgecombe Hospital	10/01/2013	08/15/2016
Sentara Albemarle Medical Center	10/01/2013	08/17/2016
Vidant Beaufort Hospital	10/01/2013	08/22/2016
Vidant North (Halifax Regional)	03/15/2015	08/08/2017
St Lukes Hospital	03/01/2014	09/07/2016
DLP Harris Regional Medical	07/01/2015	10/14/2016
DLP Swain Community Hospital	07/01/2015	10/14/2016
Erlanger Murphy Medical Center	05/01/2015	10/26/2016
DLP Maria Parham Medical Center	07/01/2015	11/15/2016
J. Arthur Doshier Memorial Hospital	04/01/2015	01/07/2017
Ashe Memorial Hospital	06/01/2015	01/26/2017
Southeastern Regional Medical	05/01/2014	08/08/2017
Advent Health Hendersonville	10/01/2018	10/27/2020
DLP Person Memorial Hospital	07/01/2015	08/17/2017
Carteret	02/01/2023	04/01/2023

# Hospital Status Report as of September 30, 2024

## Model 1 - Live

Hospital Name	Contract Date	Portal Go Live
Pender Memorial Hospital	09/01/2014	12/07/2017
DLP Maria Parham Franklin	03/01/2018	02/01/2019
Central Harnett Hospital	07/01/2019	02/21/2020
Betsy Johnson Hospital	07/01/2019	02/21/2020
Iredell Hospital	09/01/2109	04/17/2020
Lake Norman Regional Medical	10/01/2018	10/27/20
Hugh Chatham Hospital	03/01/2020	12/8/20

# Hospital Status Report as of September 30, 2024

## Model 2



Hospital Name	Go Live Date/Status
Cape Fear Valley Bladen Hospital	07/2014
Cape Fear Valley Hoke Hospital	06/2016





# Hospital Status Report as of September 30, 2024

## Graduated



Hospital Name	Hospital Name
Alleghany Memorial Hospital	Martin County General
Carolina East	Nash General Hospital
Mission Health	Sampson
Columbus Regional	UNC Hillsborough
Davie Medical	WakeMed Apex
DLP Rutherford Regional Medical Center	WakeMed Briar Creek
FirstHealth Montgomery Memorial Hospital	WakeMed Cary
FirstHealth Moore Regional Hospital	WakeMed Garner
FirstHealth Regional Hospital – Hoke	WakeMed North Healthplex
FirstHealth Richmond Memorial Hospital	WakeMed Raleigh
FirstHealth Sandhills Regional Medical	WakeMed Raleigh Children's ED
Lexington	WakeMed Psychiatric Observation Unit
Wilson Memorial Hospital	DLP Haywood Hospital
UNC Chatham	Novant Brunswick
Novant Clemmons	Novant Forsyth Medical
Novant Kernersville	Novant Presbyterian Hospital
Novant Rowan	Novant Thomasville
Cone Health Behavioral Health Hospital	Cone Health MedCenter High Point
Wesley Long Hospital	Annie Penn Hospital
Moses H. Cone Memorial Hospital	Women’s Hospital – Cone Health
Alamance Regional Medical Center	UNC Johnson – Clayton and Smithfield

# Community Based Site Report as of September 30, 2024



## Under Contract

Albemarle Regional Health Services – Camden	Aug-18	Live
Albemarle Regional Health Services – Pasquotank	Aug-18	Live
Hyde County Health Department	Aug-18	Live
Martin County Health Department	Aug-18	Live
Craven County Health Department	Apr-19	Live
Duplin County Health Department	May-19	Live
Albemarle Regional Health Services – Gates	Nov-19	Live
Erlanger Health – Andrews and Clay	Aug-20	Live
Beaufort County Health Department	Sep-20	Live
Albemarle Regional Health Services – Chowan	Nov-19	Live
Albemarle Regional Health Services – Currituck	Nov-19	Live
Albemarle Regional Health Services – Perquimans	Nov-19	Live
Albemarle Regional Health Services – Bertie	Nov-19	Live
Vidant Family Medicine – Chocowinity	Jan-21	Live
Carteret OB-GYN Associates, PA	Jan-21	Live
ECU Health Women’s Edenton (Broad St.)	Dec-21	Live
Erlanger Health - Clay	Apr-21	Live
ECU Health Women’s Kenansville	Dec-21	Live
Albemarle Regional Health Services - Hertford	Mar-22	Live
ECU Health Kinston	Mar-22	Live
Roanoke Rapids	Jun-22	Live
Outer Banks Women's Care	Jul-22	Live

# Community Based Site Report as of September 30, 2024

## Terminated



Hospital Name	Contract Start Date	Termination Date
Macon County Health Department	February 2019	July 2020
Wilson County Health Department	February 2020	May 2021
Benson	March 2022	September 2024

# Updates on Grants-Funded Projects

**MOTHeRS Project**

**NC-STeP-Peds**

**NC-STeP Expansion: Elizabeth City State University**

**HRSA: NC-STeP Expansion**

# MOTHeRS Project

Maternal Outreach Through Telehealth for Rural Sites

Saeed SA, Jones K, Sacks AJ, Craven K, Xue Y. Maternal Outreach Through Telehealth for Rural Sites: The MOTHeRS Project. NCMJ. 2023;84 (1).



**MOTHeRS Project Results**  
As of September 30, 2024

<b>Impact on Patient Access to Care</b>	Number of perinatal patients who received care (visits with MFM specialist)	122*	
	Impact on patient access (calculated as driving miles saved per MFM specialist visit and Diabetes educator/Medical Nutrition Specialist visit: Carteret)	36,784 driving miles saved*	
	Number of patient visits with Diabetes Educator or Medical Nutrition Therapist	116	
	Number of women served for mental health reasons	LCSW visits	1,739
		Psychiatrist visits	629
		Total Mental Health visits	2,368
	Impact on patient access (calculated as driving miles saved per Psychiatrist and LCSW visit)	392,724 driving miles saved	
<b>Food Security</b>	Number of Food Boxes sent to Clinics	1,195**	
	Number of Patients Screened for Food Insecurity	41,229**	
	Number of Food Boxes Distributed	888**	

\* MFM part of the MOTHeRS Project was completed on March 31, 2023

\*\*Food Insecurity part of the MOTHeRS Project was completed on December 31, 2024





- All 6 clinical sites are currently live.
- As of September 30, the program had already successfully screened 22,610 children.
  - 2,519 children (13.5% of those screened) had PSC-17 scores of 15 or higher (increased likelihood of having a behavioral health disorder).
  - 1,657 children (17.28% of those screened) had GAD-7 scores of 8 or higher (mild to moderate levels of anxiety).

Pediatrics Clinic Name:	Catawba Pediatric Associates, PA	Surf Pediatrics and Medicine	Robeson Pediatrics	Clinton Medical Clinic	ECU Pediatrics	Peachtree Pediatrics	All sites
Reporting Month	Inception – September 30, 2024						
Number of patients screened during the reporting period	8902	5060	4077	2656	1431	484	22610
Number of patients who completed PSC-17 screening	6260	5045	2719	2655	1421	484	18584
Number of patients whose PSC-17 score < 15	5115	4548	2427	2399	1221	355	16065
Number of patients whose PSC-17 score >= 15	1145	497	292	256	200	129	2519
Number of patients who completed GAD-7 screening	2806	2579	2330	1141	539	192	9587
Number of patients whose GAD-7 score <8	2324	2112	1972	929	430	157	7924
Number of patients whose GAD-7 score >=8	476	467	358	212	109	35	1657

## NC-STeP-Peds

### Patient Screening Data Program Inception to September 30, 2024



<b>Reporting Period</b>	<b>2024Q2</b>	<b>2024Q3</b>	<b>inception-093024</b>
Number of patients seen by a psychiatrist	54	35	181
Number of patients seen by behavioral health provider	146	115	330
Number of patients receiving follow-up counseling with behavioral health provider	28	24	138
Number of patients receiving re-consults by a psychiatrist	0	0	5
Number of patients receiving integrated care	160	130	331
Number of new visits (involving mental health service)	160	130	331
Number of follow-up visits (involving mental health service)	69	51	458
Percentage of visits kept	71.3%	66.3%	76.8%

<b>Race</b>	<b>Number of Children</b>	<b>Percent</b>
American Indian or Alaska Native	26	7.9
Asian	2	0.6
Black Or African American	61	18.4
Native Hawaiian or Other Pacific Islander	1	0.3
Other	38	11.5
Patient Declined	1	0.3
Two or More Races	5	1.5
Unknown	3	0.9
White	194	58.6
Total	331	100.0

<b>Ethnicity</b>	<b>Number of Children</b>	<b>Percent</b>
Hispanic or Latino	57	17.2
Non-Hispanic or Latino	274	82.8
Total	331	100.0

<b>Gender</b>	<b>Number of Children</b>	<b>Percent</b>
Female	159	48.0
Male	172	52.0
Total	331	100.0

<b>Dimensions and Items</b>	<b>Scores</b>
<b>Satisfaction</b>	4.6
Satisfaction - 1. I am satisfied with the overall services my child received	4.8
Satisfaction - 2. Staff helping my child stuck with us no matter what	4.7
Satisfaction - 3. I felt my child had someone to talk to when he/she was troubled	4.6
Satisfaction - 4. Services that my child received were right for us	4.7
Satisfaction - 5. My family got the help we wanted for our child	4.5
Satisfaction - 6. My family got the help we needed for our child	4.5
<b>Service Effectiveness</b>	3.8
Service Effectiveness - 1. My child is better at handling daily life	3.7
Service Effectiveness - 2. My child gets along better with family members	3.8
Service Effectiveness - 3. My child gets along better with friends and other people	3.8
Service Effectiveness - 4. My child is doing better in school	3.8
Service Effectiveness - 5. My child is better able to cope when things go wrong	3.6
Service Effectiveness - 6. I am satisfied with our family life right now	4.0
<b>Cultural Sensitivity</b>	4.8
Cultural Sensitivity - 1. Staff treated my child and me with respect	4.8
Cultural Sensitivity - 2. Staff respected my family's religious/cultural beliefs	4.8
Cultural Sensitivity - 3. Staff spoke with my child in a way that she/he understood	4.8
Cultural Sensitivity - 4. Staff were sensitive to my family's cultural/or ethnic background	4.8
<b>Participation</b>	4.7
Participation - 1. I helped choose my child's treatment goals	4.6
Participation - 2. I participated in my child's treatment	4.7
<b>Access</b>	4.6
Access - 1. The location of the service was convenient	4.7
Access - 2. Services were available to us at convenient times	4.6

# Introduction to NC Kids Get Well

- Vision: Creating a nurturing and inclusive virtual community.
- Mission: Promote mental health education and overall well-being for NC children.
- Platform: Built on the Roblox platform.
- Community House Website: [Home | NCKidsgetwell](#)
- Joining Community House details: [JoiningNow | NCKidsgetwell](#)



Community House Virtual Tour on YouTube (approximate 13 minutes)  
[NC Kids Get Well Virtual Community House Tour \(youtube.com\)](#)

# Floor Plans



## OUR COMMUNITY HOUSE

### Design & Structure

#### Design

Two levels

Our virtual community house is designed with two levels of main components to cater to the mental health needs of North Carolina children from an educational perspective.

Our two-level component design is inspired by Maslow's Hierarchy of Needs theory, which summarizes human needs into five levels: physiological, safety, love/belonging, esteem, and self-actualization.

#### Level Descriptions

[Level 1: Community Hub](#)

[Essentials](#)

The base level focuses on providing essential community activities, including: Sports: Basketball, soccer, skating, swimming; Fitness and Wellness: Yoga, fidget tools, finger movement exercises; Performing Arts: Dance, music performance, instrument playing; Hobbies: Reading, drawing, crafts (e.g., knitting, crochet, clay)

[Level 2: Observation, Thinking, and Imagination Spaces](#)

The higher level is dedicated to

#### Structure

Three floors

The "NC Kids Get Well" virtual community house is a three-floor structure that provides a virtual space for North Carolina children to engage in various mental health activities. These activities include sports, dance, reading, arts, music, yoga, social connection (chat rooms), a natural garden, an observatory, and educational elements.

[House Tour >](#)



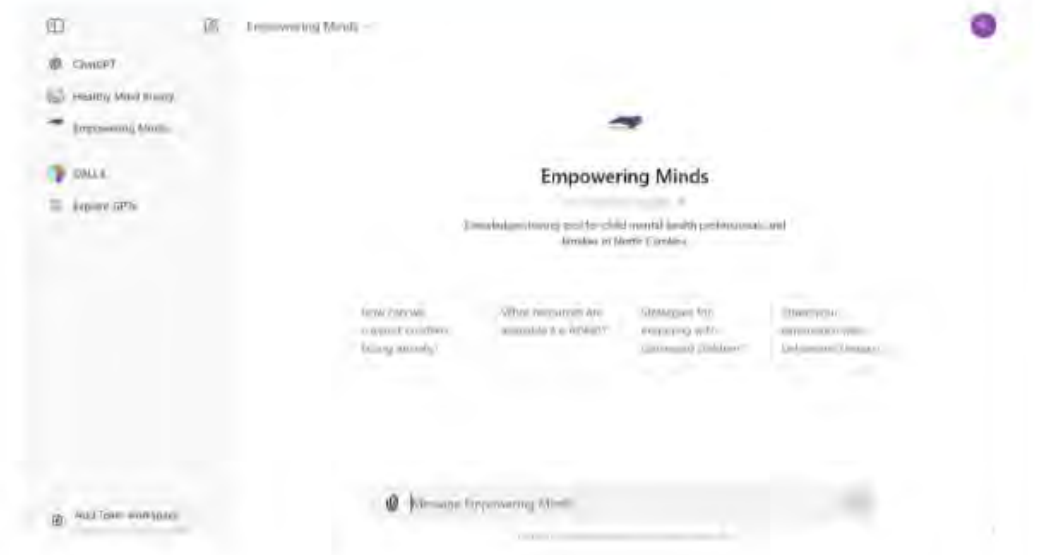
**Anti-Bullying Education  
Event with Carolina IceZone  
Summer Camp Participants**

**Date: August 9, 2024**  
**Event Hosts: Alex Bardykin,  
Sophie Liang, & Henry Zhang**



# Integration of AI with the NC STeP Peds Project

- Empowering Minds with GPT:
  - AI-Enhanced, NC STeP Pediatrics Project-Based Knowledge Integration
  - Benefits for child mental health professionals and families in North Carolina.
  - [ChatGPT - Empowering Minds](#)





**East Carolina University and Blue Cross and Blue Shield of North Carolina:  
A Partnership to Bridge the Behavioral Health Care Gap at  
Elizabeth City State University**





**East Carolina University and Blue Cross and Blue Shield of North Carolina:  
A Partnership to Bridge the Behavioral Health Care Gap at  
Elizabeth City State University**

**ECSU Student Screening and Service Data: From Program Inception to September 30, 2024**

	2022					2023												2024									Total
	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	
<b>Number of Patients Seen By Practitioner:</b>	67	122	112	127	23	62	72	87	131	9	1	0	99	87	126	59	19	101	117	83	85	8	3	0	89	120	1809
<b>Number of Patients Referred To See LCSW/Counselor:</b>						0	5	2	8	1	1	6	2	10	19	8	0	11	13	7	7	2	0	0	9	19	130
<b>Number of Patients Referred To See Psychiatrist:</b>						0	1	2	3	2	1	0	2	3	5	8	1	6	11	4	12	1	0	0	3	7	72
<b>PHQ9's Completed:</b>	67	122	112	127	23	60	70	87	129	8	4	4	96	87	125	59	19	101	115	82	84	8	5	7	88	120	1809
<b>PHQ-9 score &lt;10</b>						54	58	75	108	6	3	3	90	73	121	49	11	89	88	71	72	6	3	3	80	103	1166
<b>PHQ-9 score ≥10</b>						6	12	12	21	2	1	1	6	14	24	10	8	12	27	11	12	2	2	4	8	17	212
<b>GAD-7's Completed:</b>	67	122	112	127	23	60	70	87	129	8	4	4	96	87	126	58	19	101	114	82	82	8	6	8	89	120	1809
<b>GAD-7 score &lt;8</b>						52	50	72	102	6	2	2	89	73	99	43	12	84	87	70	66	6	4	6	72	94	1091
<b>GAD-7 score ≥8</b>						8	20	15	27	2	2	2	7	14	27	15	7	17	27	12	16	2	2	2	16	26	266
<b>Number of NC-SteP Scheduled Sessions Held</b>						1	7	6	22	18	8	5	14	33	51	22	8	22	36	15	21	6	7	9	13	19	343
<b>Number of NC-SteP Follow-up by Email</b>						*	*	*	4	28	12	16	24	32	34	32	17	49	56	50	33	28	78	42	33	110	678
<b>Number of "On-Call"/Evening Sessions</b>						*	*	*	0	0	0	0	1	3	1	1	3	1	1	0	0	0	0	0	0	3	14
<b>Number of NC-SteP Check-Ins by Phone</b>						*	*	*	5	13	3	14	32	21	24	61	20	25	30	27	49	59	55	25	57	38	558
<b>Number of "Walk-ins"/Not Scheduled</b>						*	*	*	2	2	1	1	12	5	11	4	1	6	11	4	2	0	0	0	4	6	72
<b>Marketing Efforts Completed/Outreach Opportunities</b>									11	5	16	5	9	7	8	5	0	8	7	3	9	2	9	6	6	9	125

# NC-STeP Published Papers and Book Chapters

1. Xue, Y., Saeed, S.A., Muppavarapu, K.S. et al. Exploring the Impact of Education Strategies on Individuals' Attitude Towards Telemental Health Service: Findings from a Survey Experiment Study. *Psychiatr Q* (2023). <https://doi.org/10.1007/s11126-023-10033-y>
2. Saeed SA, Shore JH, Yellowlees P. Using Technology for Providing Care. (2023). In Saeed SA, Lauriello J, and Roberts LW (Editors). Textbook of Psychiatric Administration and Leadership, Third Edition. American Psychiatric Association Publishing, Washington, DC. ISBN 978-1-61537-337-6
3. Saeed SA, Kolodner RM, Balog DJ. Health Information Technology. (2023). In Saeed SA, Lauriello J, and Roberts LW (Editors). Textbook of Psychiatric Administration and Leadership, Third Edition. American Psychiatric Association Publishing, Washington, DC. ISBN 978-1-61537-337-6
4. Muppavarapu K, Saeed SA, Jones K, Hurd O, Haley V. (2022). Study of impact of telehealth use on clinic “no show” rates at an academic practice. *Psychiatric Q*. 2022. April 12. Online ahead of print.
5. Saeed SA, Jones K, Sacks AJ, Craven K, Xue Y (Lucky). Maternal Outreach Through Telehealth for Rural Sites: The MOTHeRS Project. *North Carolina Medical Journal*. 2023;84 (1).
6. Xue Y, Saeed SA, Liang H, Jones K, Muppavarapu KS. (2022). Investigating the impact of COVID-19 on telepsychiatry use across sex and race: a study of North Carolina emergency departments. *Telemedicine and e-Health*. Vol.00, No.00, Month 2022. Online first March 2022. DOI: 10.1089/tmj.2021.0549.
7. Saeed SA, Jones K, Muppavarapu K. The Impact of NC Statewide Telepsychiatry Program (NC-STeP) on Cost Savings by Reducing Unnecessary Psychiatric Hospitalizations During a 6½ Year Period. *Psychiatric Q*. 2021 Nov 18. Online ahead of print.
8. Saeed, S.A., Masters, R.M. Disparities in Health Care and the Digital Divide. *Curr Psychiatry Rep*. 23, 61 (2021).
9. Saeed SA, Lluberes N, Buwalda VJA (2021). Applications of Technology. In Sowers WE and Ranz JM (Editors) Seeking Value: Balancing Cost and Quality in Psychiatric Care. Chapter 10, pp 245-273.
10. Kothadia RJ, Jones K, Saeed SA, Torres MJ, (2020). The Impact of NC-Statewide Telepsychiatry Program (NC-STeP) on Patients' Dispositions from Emergency Departments. *Psychiatric Services*. Online in Advance of print, October 2020.
11. Saeed SA (2020). North Carolina Statewide Telepsychiatry Program (NC-STeP): Using telepsychiatry to improve access to evidence-based care. *European Psychiatry*, Volume 33, Issue S1: Abstracts of the 24th European Congress of Psychiatry, Cambridge University Press: 23 March 2020, pp. S66. DOI: <https://doi.org/10.1016/j.eurpsy.2016.01.968>.
12. Saeed SA. (2018). Successfully Navigating Multiple Electronic Health Records When Using Telepsychiatry: The NC-STeP Experience. *Psychiatric Services*. 2018 Sep 1; 69(9):948-951
13. Saeed SA (2018). Tower of Babel Problem in Telehealth: Addressing the Health Information Exchange Needs of the North Carolina Statewide Telepsychiatry Program (NC-STeP). *Psychiatric Quarterly*. 2018 Jun;89 (2):489-495.
14. Saeed SA, Johnson TL, Bagga M, Glass O. (2017). Training Residents in the Use of Telepsychiatry: Review of the Literature and a Proposed Elective. *Psychiatric Quarterly*. Volume 88. No.2. June. pp. 271-283.
15. Saeed SA, Anand V. (2015). Use of Telepsychiatry in Psychodynamic Psychiatry. *Psychodynamic Psychiatry*: Vol.43, No.4, pp.569-583.
16. Saeed SA. (2015). Telebehavioral Health: Clinical Applications, Benefits, Technology Needs, and Setup. *NCMJ*: Vol. 76, Number 1, pp 25-26.

## Contact

Sy Atezaz Saeed, MD, MS, FACPsych

*Professor and Chair Emeritus*

Department of Psychiatry and Behavioral Medicine  
Brody School of Medicine | East Carolina University

*Founding Executive Director*

North Carolina Statewide Telepsychiatry Program (NC-STeP)

Phone: 252.744.2660 | e-mail: [saeeds@ecu.edu](mailto:saeeds@ecu.edu)

Website: <http://www.ecu.edu/psychiatry>

Mail: 600 Moye Boulevard, Suite 4E-65,  
Greenville, NC 27834





NORTH CAROLINA  
STATEWIDE TELEPSYCHIATRY PROGRAM

