



NORTH CAROLINA

STATEWIDE TELEPSYCHIATRY PROGRAM

Quarterly Progress Update

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Brody School of Medicine - East Carolina University





NORTH CAROLINA
STATEWIDE TELEPSYCHIATRY PROGRAM

NC-Step Advisory Council Meeting
Friday, March 11, 2022
10:30 am – 12:00 pm
Virtual Meeting via Zoom Video Conferencing

Agenda

- | | |
|-------------------|---|
| 10:30- 10:40 a.m. | Welcome and Introductions |
| 10:40- 10:45 a.m. | Review and Approval of December 3, 2021 Minutes |
| 10:45- 11:45 a.m. | NC-Step FY22-Q2 (Oct-Dec) Performance Data |
| 11:45- 11:50 a.m. | Old Business |
| 11:50- 11:55 a.m. | New Business |
| 11:55- 12:00 p.m. | Announcements |
| 12:00 p.m. | Adjourn |



Join Zoom Meeting

<https://us06web.zoom.us/j/88592940254?pwd=aDJXb2tFTW1tNnUyR2lGTDh3OUU0wQT09>

Meeting ID: 885 9294 0254

Passcode: 879594

NC-STeP Quality Management and Outcomes Monitoring Processes: October – December 2021

- 39 hospitals in the network, 38 hospitals were live
- 30 hospitals reporting Telepsychiatry patients in their ED
 - not all live hospitals had telepsychiatry patients
- Total number of assessments for this quarter = 1,399
- Total number of encounters for this quarter = 1,193
- Patient assessments billed for Model 1 hospitals = 933

NC-STeP Quality Management and Outcomes Monitoring Processes: October – December 2021

- The Median Length of Stay was 31.6 hours
- The Average Length of Stay was 59.7 hours
 - 52.2 hours for those discharged to home
 - 62.4 hours for those transferred to another facility
- Average Consult Elapsed Time (in Queue to Exam Complete) for Model 1 hospitals was 5 hours and 15 minutes.

NC-STeP Quality Management and Outcomes Monitoring Processes: October – December 2021


- 776 ED patients who received telepsychiatry services had an IVC in place during their ED stay.
 - 327 (42.1%) of those patients did not have an IVC in place when discharged.
- Of the ED patients who received telepsychiatry services:
 - 48.9% were discharged to home
 - 44.8% were discharged to another facility

NC-STeP Quality Management and Outcomes Monitoring Processes: October – December 2021

- 18 Community based sites were live as of 12/31/21.
- There were 1,219 total behavioral health visits.
 - 109 visits with a Psychiatrist.
 - 1,109 visits with a behavioral health manager.
 - 13 visits with a Maternal and Fetal Medicine Specialist.



	Since project inception in November 2013	Quarter Jul- Sep 2021	Quarter Oct- Dec 2021	Quarter Jan- Mar 2022	Quarter Apr- Jun 2022
Total Patient Encounters	39,046	1,172	1,193		
Model 1 Hospital Patient Encounters	23,682	698	727		
Model 2 Hospital Patient Encounters	15,364	474	466		
Total Number of Assessments (Billed Assessments for Model 1 Hospitals + Number of Patient Encounters for Model 2 Hospitals)	51,192	1,394	1,399		

 NC-STeP	Since project inception in November 2013	During Calendar Year 2014	During Calendar Year 2015	During Calendar Year 2016	During Calendar Year 2017	During Calendar Year 2018	During Calendar Year 2019	During Calendar Year 2020	During Calendar Year 2021
Total Patient Encounters	39,046	5,144	7,128	1,896	3,971	6,104	4,835	4,303	4,723
Model 1 Hospital Patient Encounters	23,682	4,578	5,849	706	2,044	2,654	1,902	2,150	2,857
Model 2 Hospital Patient Encounters	15,364	566	1,279	1,190	1,927	3,450	2,933	2,153	1,866
Total Number of Assessments (Billed Assessments for Model 1 Hospitals + Number of Patient Encounters for Model 2 Hospitals)	51,192	8,130	13,573	1,942	4,348	6,680	5,287	4,816	5,542

NC-STeP Benchmarks



Goals	Values Reached		
Cumulative Target to be reached by (06/30/2022)	Value Reached as of most recent previous quarter (09/30/2021)	Value Reached as of this reporting quarter (12/31/2021)	Year-to-Date Total with % of the Yearly Target (12/31/2021)
Number of IVCs	2,557	819	1,595 62.4% of Yearly Target
Number of IVCs Overturned	1,023	332	659 64.4% of Yearly Target
Total Number of Assessments (Billed assessments for Model 1 hospitals + Number of patient encounters for Model 2 hospitals.)	4,261	1,394	1,399 2,793 65.5% of Yearly Target

NC-STeP Status as of December 31, 2021

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2021	TARGET TO BE REACHED BY 06/30/2022	VALUES/MEASURES REACHED AS OF 12/31/2021
1. The number of full-time equivalent (FTE) positions supported by these contracts	4.10 FTEs	4.30 FTEs	3.98 FTEs
2. The number of overturned involuntary commitments (inpatient admission prevented)	711	1,023	327 in this quarter Cumulative total since program inception 8,001
3. The number of participating consultant providers	40	48	52

NC-STeP Status as of December 31, 2021

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2021	TARGET TO BE REACHED BY 06/30/2022	VALUES/MEASURES REACHED AS OF 12/31/2021
4. The number of telepsychiatry assessments conducted.	4,251	4,261	1,399 in this quarter Cumulative total since program inception 51,192
5. The number of telepsychiatry referring sites	48	41	39 38 Live
6. The reports of involuntary commitments to enrolled hospitals	2,061	2,557	776 in this quarter Cumulative total since program inception 22,957

NC-STeP Status as of December 31, 2021

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2021	TARGET TO BE REACHED BY 06/30/2022	VALUES/MEASURES REACHED AS OF 12/31/2021
7. The average (mean) Length of Stay for all patients with a primary mental health diagnosis across all dispositions.	55 hours	55 hours	QTD Average = 59.7 QTD Median = 31.6
8. The rate of "satisfied" or "strongly satisfied" among emergency department staff participating in NC-STeP.	88%	80%	Survey not conducted this quarter

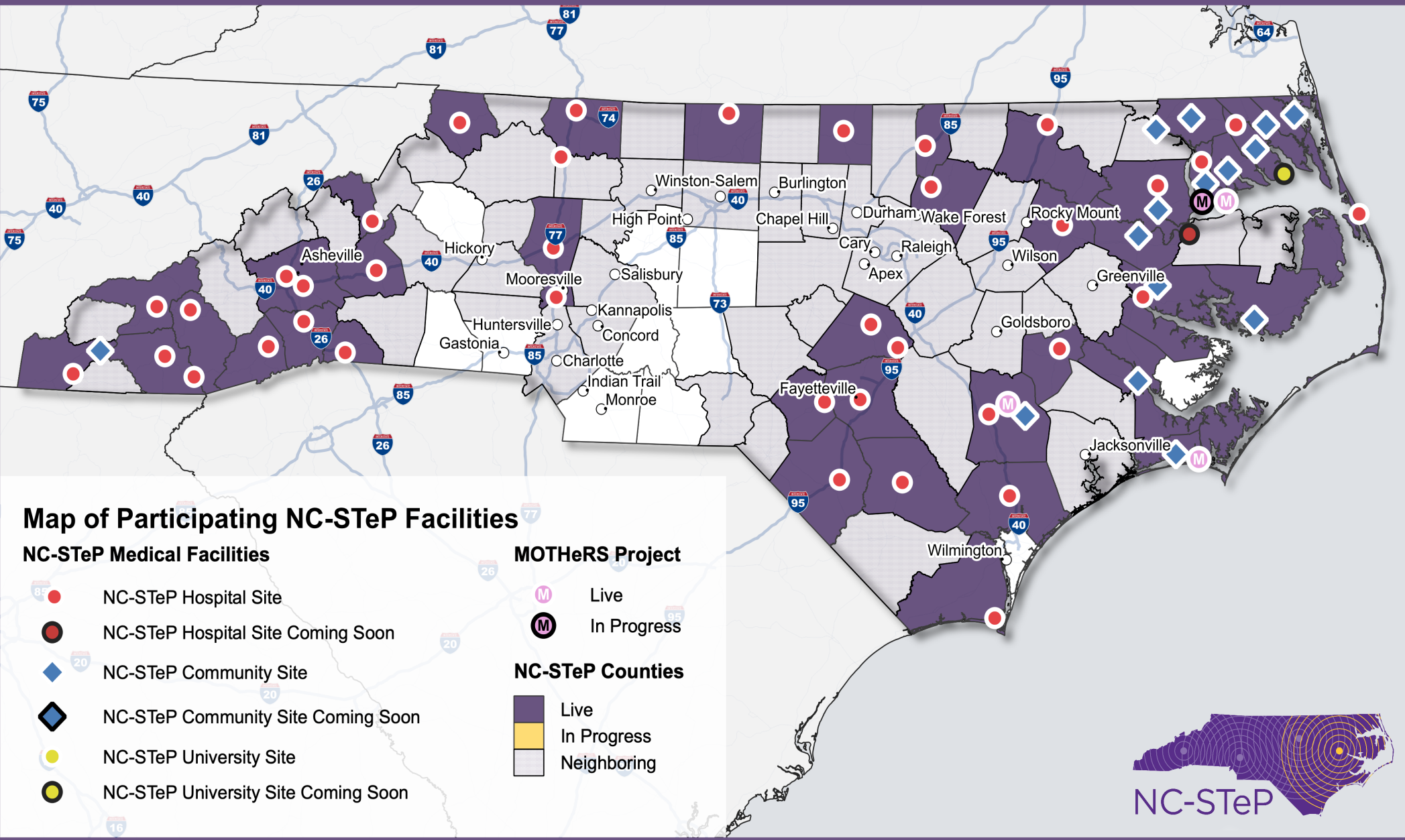
NC-STeP Status as of December 31, 2021

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2021	TARGET TO BE REACHED BY 06/30/2022	VALUES/MEASURES REACHED AS OF 12/31/2021
9. The rate of "satisfied" or "strongly satisfied" among hospital CEOs/COOs participating in NC-STeP.	100%	100%	Survey not conducted this quarter
10. The rate of "satisfied" or "strongly satisfied" among consulting (hub) providers participating in NC-STeP.	100%	85%	Survey not conducted this quarter

NC-STeP Status as of December 31, 2021

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2021	TARGET TO BE REACHED BY 06/30/2022	VALUES/MEASURES REACHED AS OF 12/31/2021
11. The rate of "satisfied" or "strongly satisfied" among emergency department physicians participating in the statewide telepsychiatry program.	100%	85%	100%
12. Cumulative return on investment to state psychiatric facilities through overturned involuntary commitments (inpatient admission prevented)	\$3,890,000	\$5,522,256	\$1,765,800 Cumulative average since program inception \$43,205,400

NC-STeP Status as of December 31, 2021



Map of Participating NC-STeP Facilities

NC-STeP Medical Facilities

- NC-STeP Hospital Site
- NC-STeP Hospital Site Coming Soon
- ◆ NC-STeP Community Site
- ◆ NC-STeP Community Site Coming Soon
- NC-STeP University Site
- NC-STeP University Site Coming Soon

MOTHeRS Project

- M Live
- M In Progress

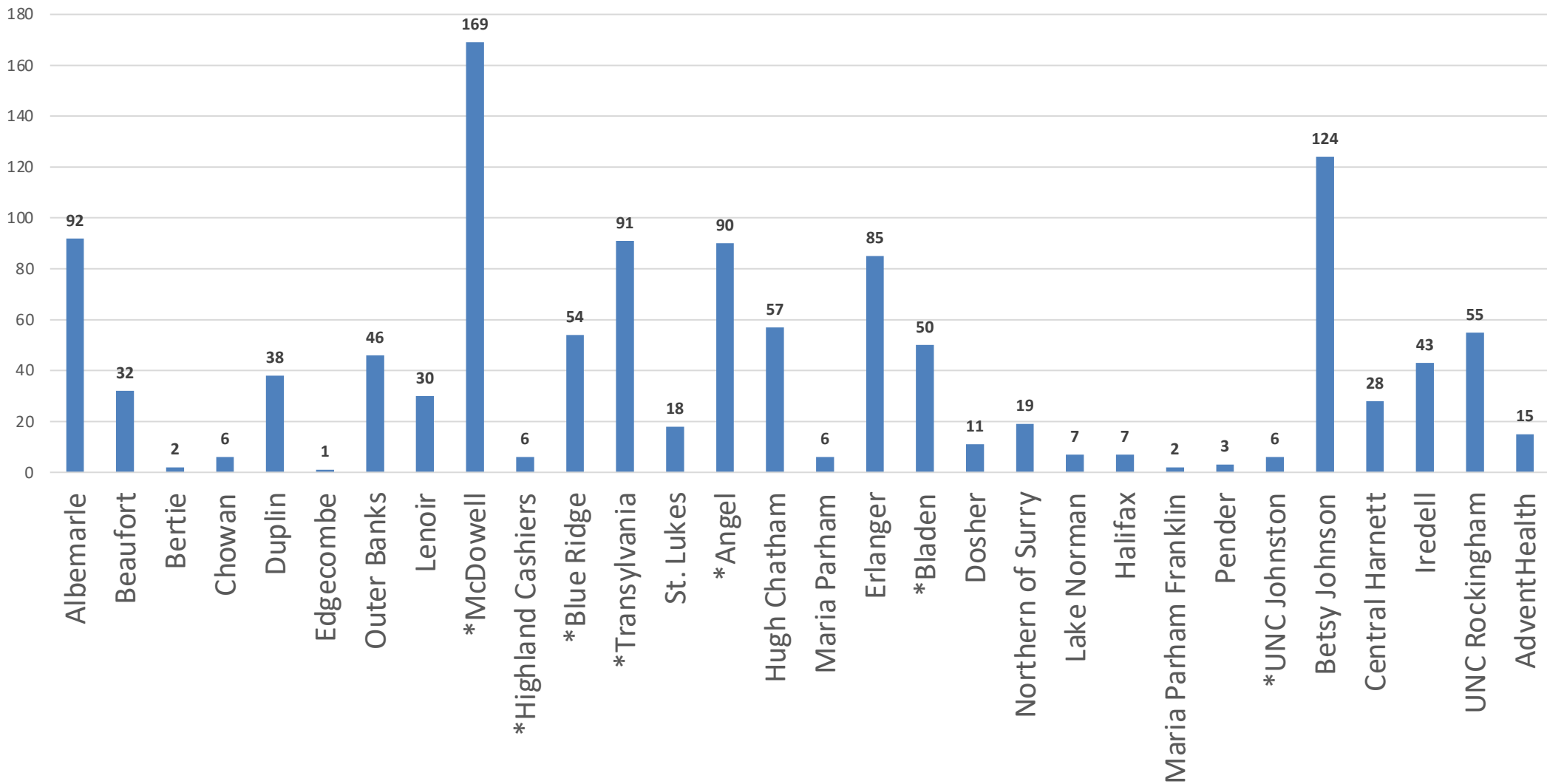
NC-STeP Counties

- Live
- In Progress
- Neighboring



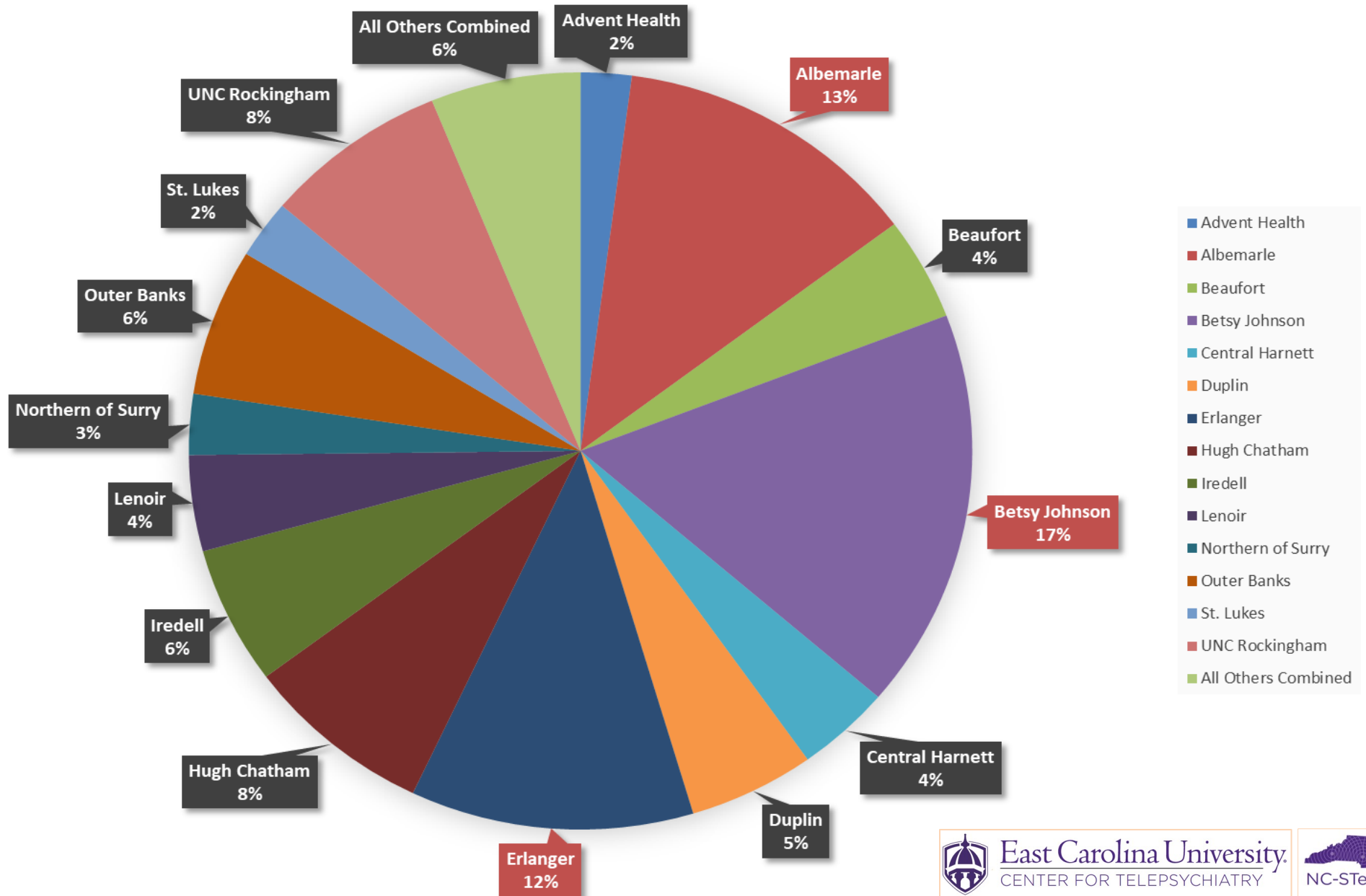
Number of NC-SteP Patients by Hospital

October - December 2021



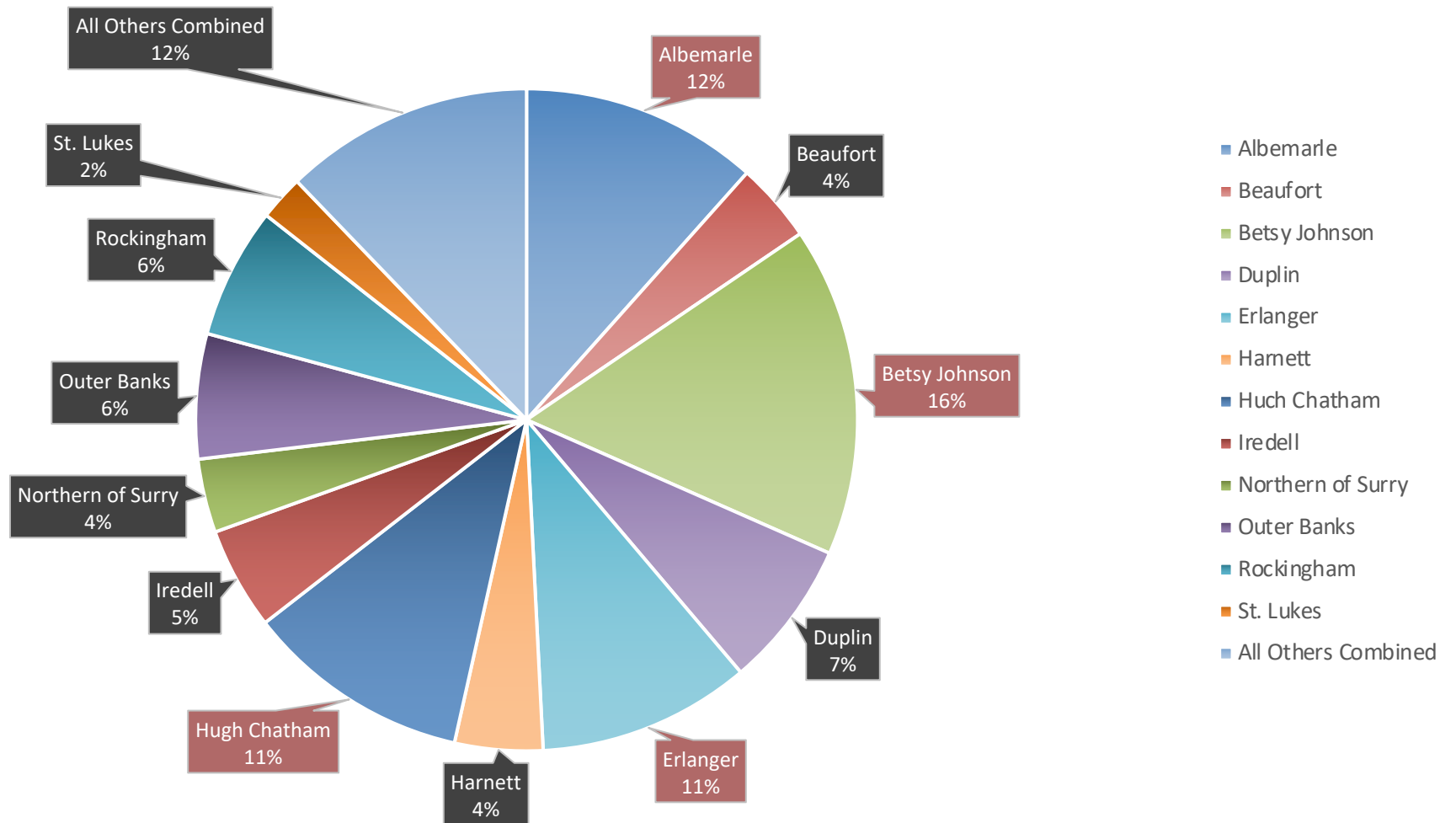
Percent of use for Model 1 hospitals Oct-Dec 2021

(based on number of encounters)



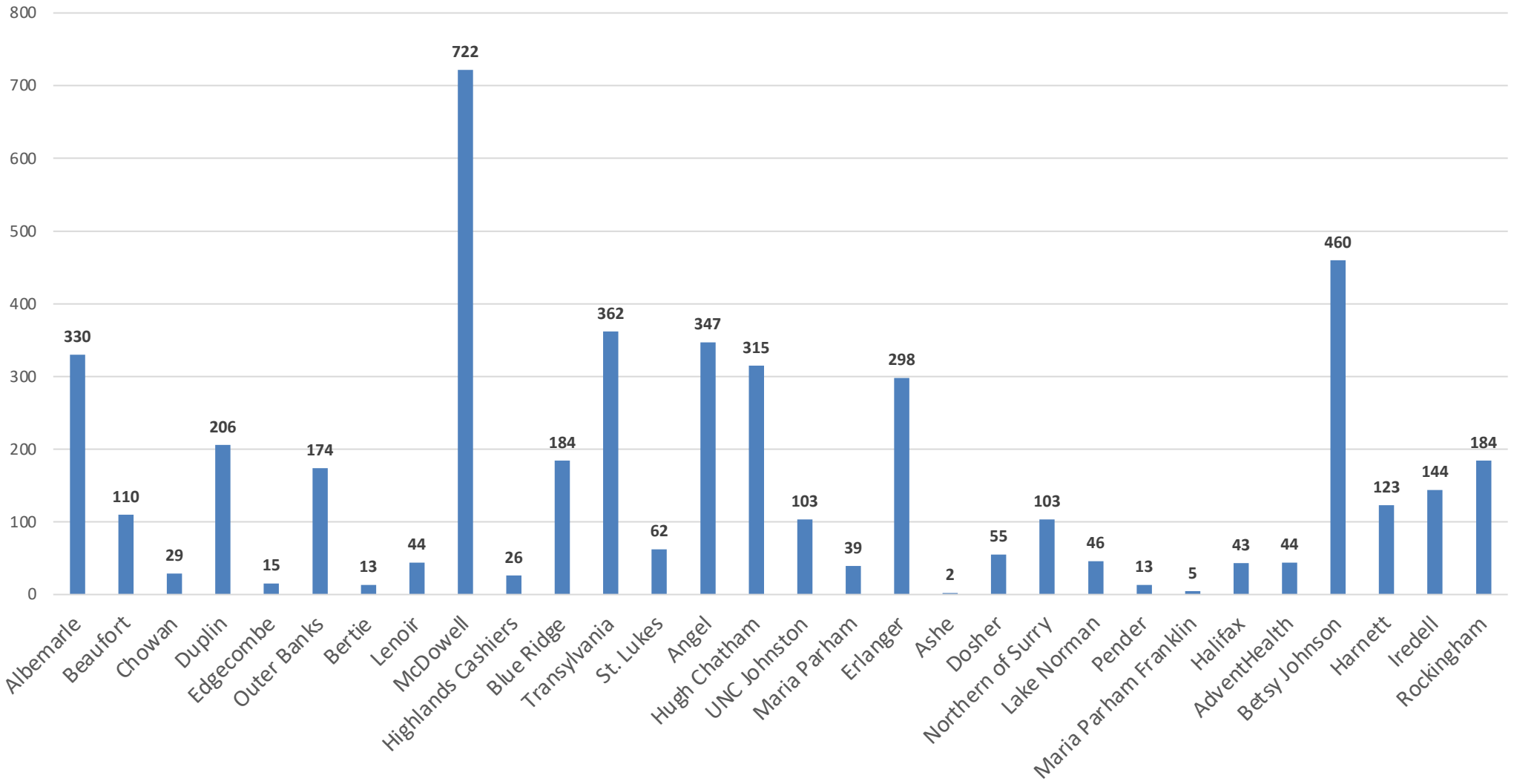
Percent of Use by Model 1 Hospital Jan - Dec 2021

(based on number of patient encounters)



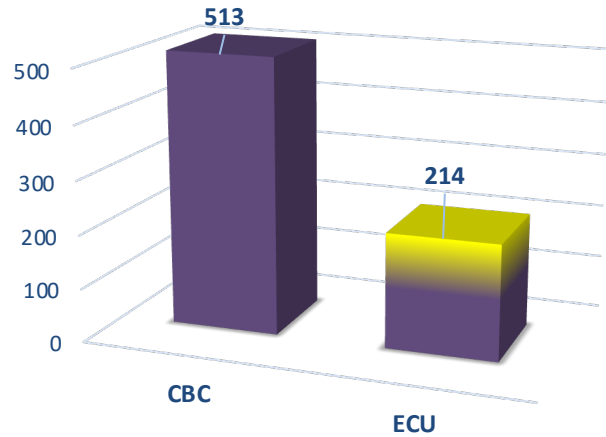
Number of NC-SteP Patients by Hospital

January - December 2021

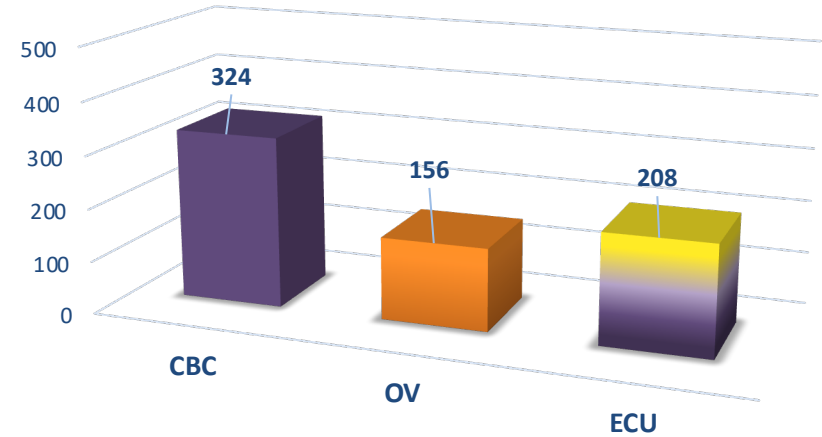


Number of Patients by Provider (Model 1)

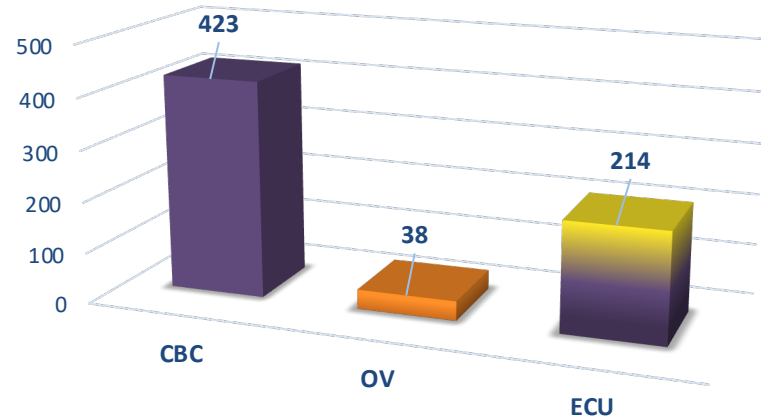
Oct-Dec 2021



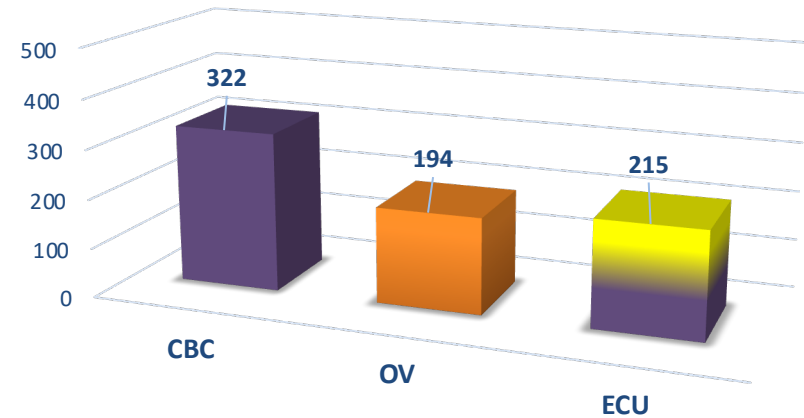
Jan-Mar 2021



Jul-Sep 2021

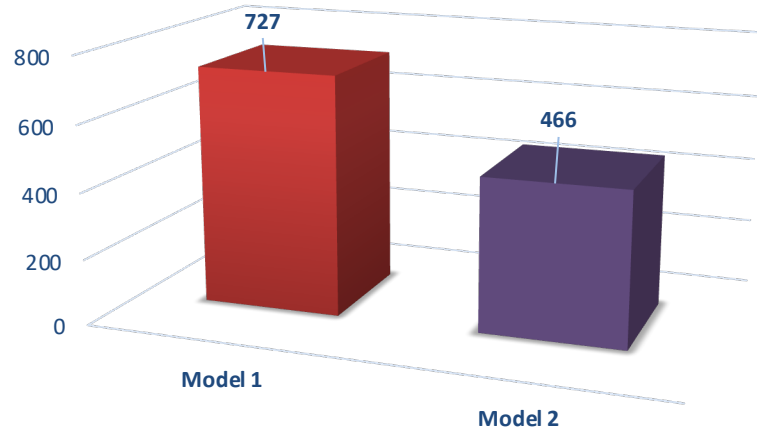


Apr-Jun 2021

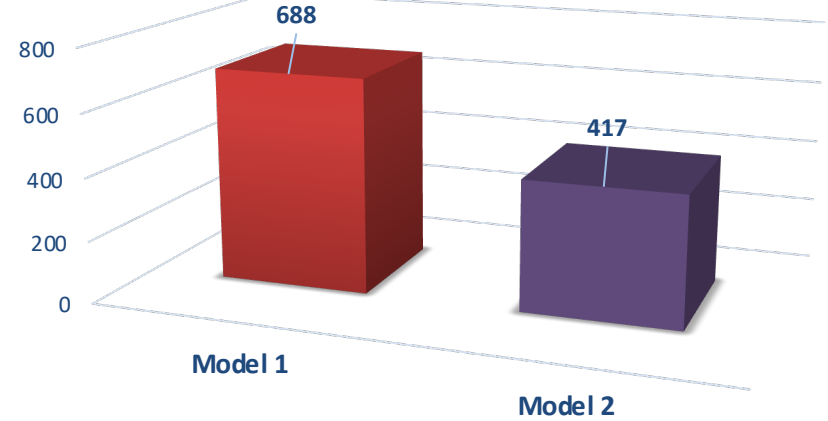


Number of Patients by Model

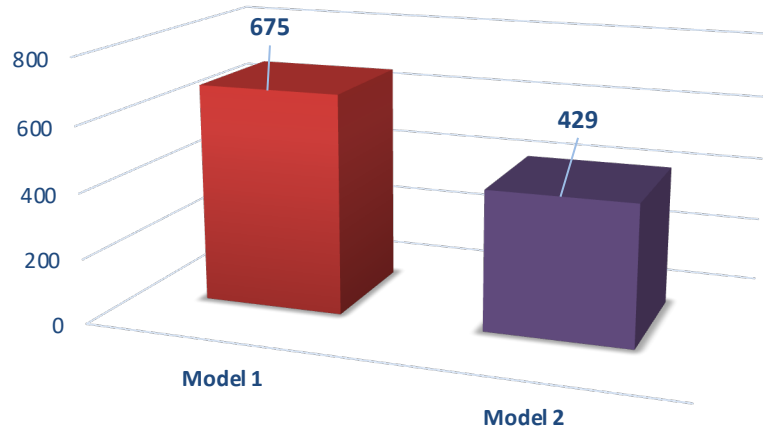
Oct-Dec 2021



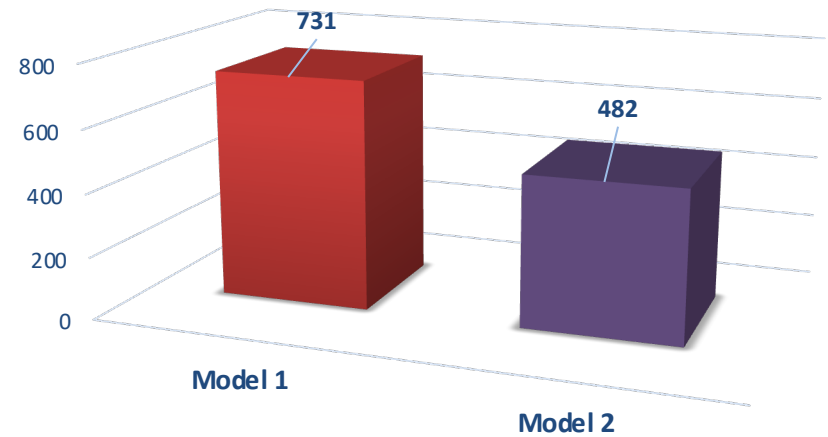
Jan-Mar 2021



Jul-Sep 2021

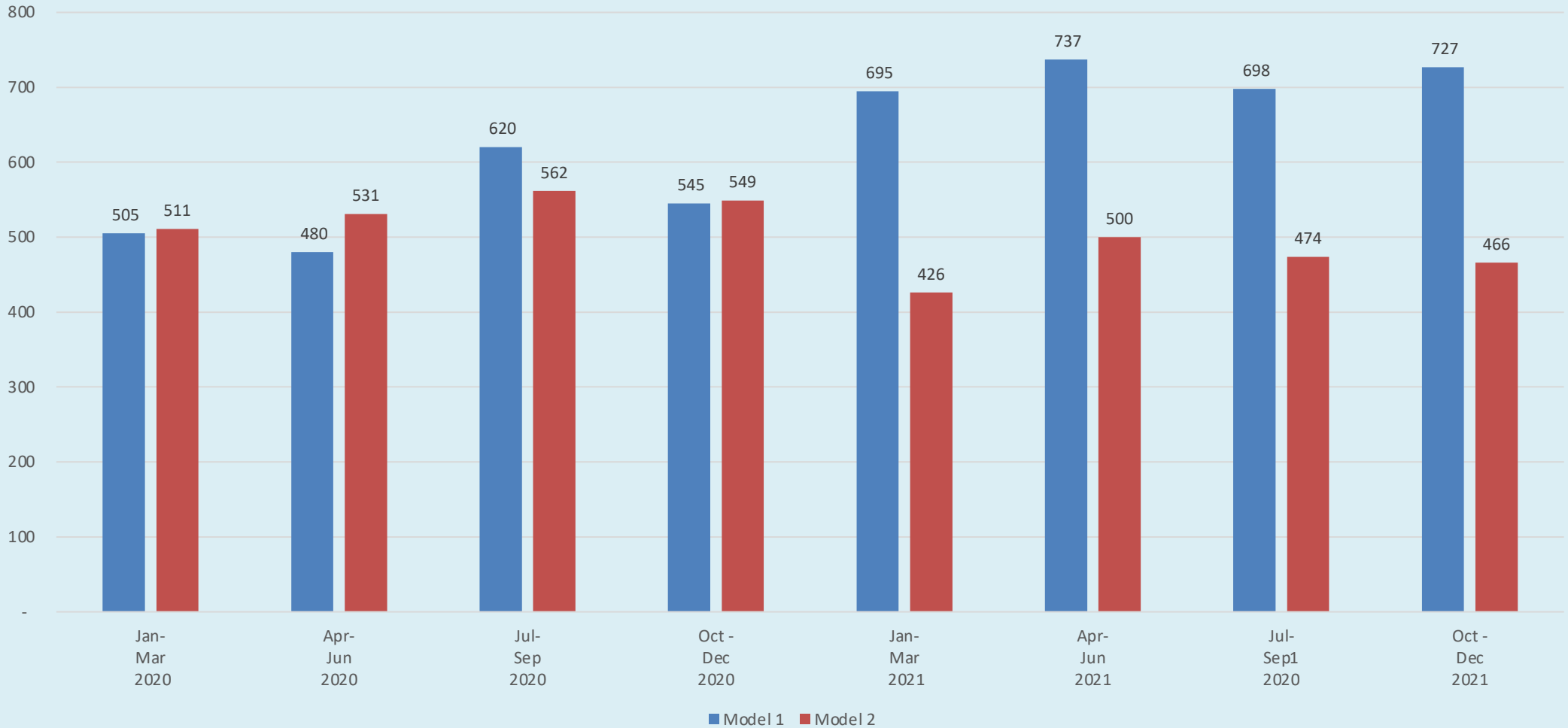


Apr-Jun 2021



Number of NC-STEP Patients by Model by Quarter

January 2020 - December 2021

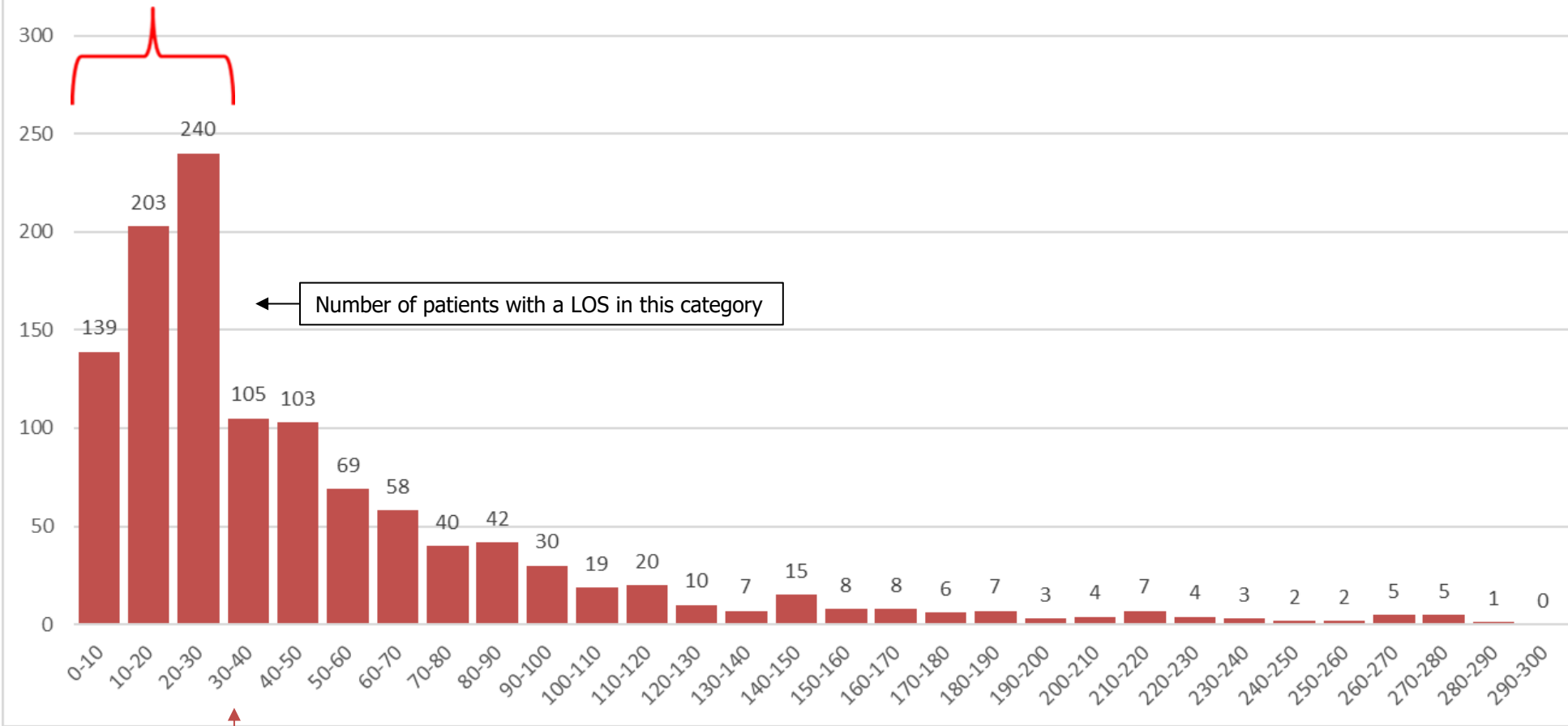


Number of NC-STeP Patients by LOS Category

Oct - Dec 2021

in hours

49% percent of patients had a LOS of 30 hours or less

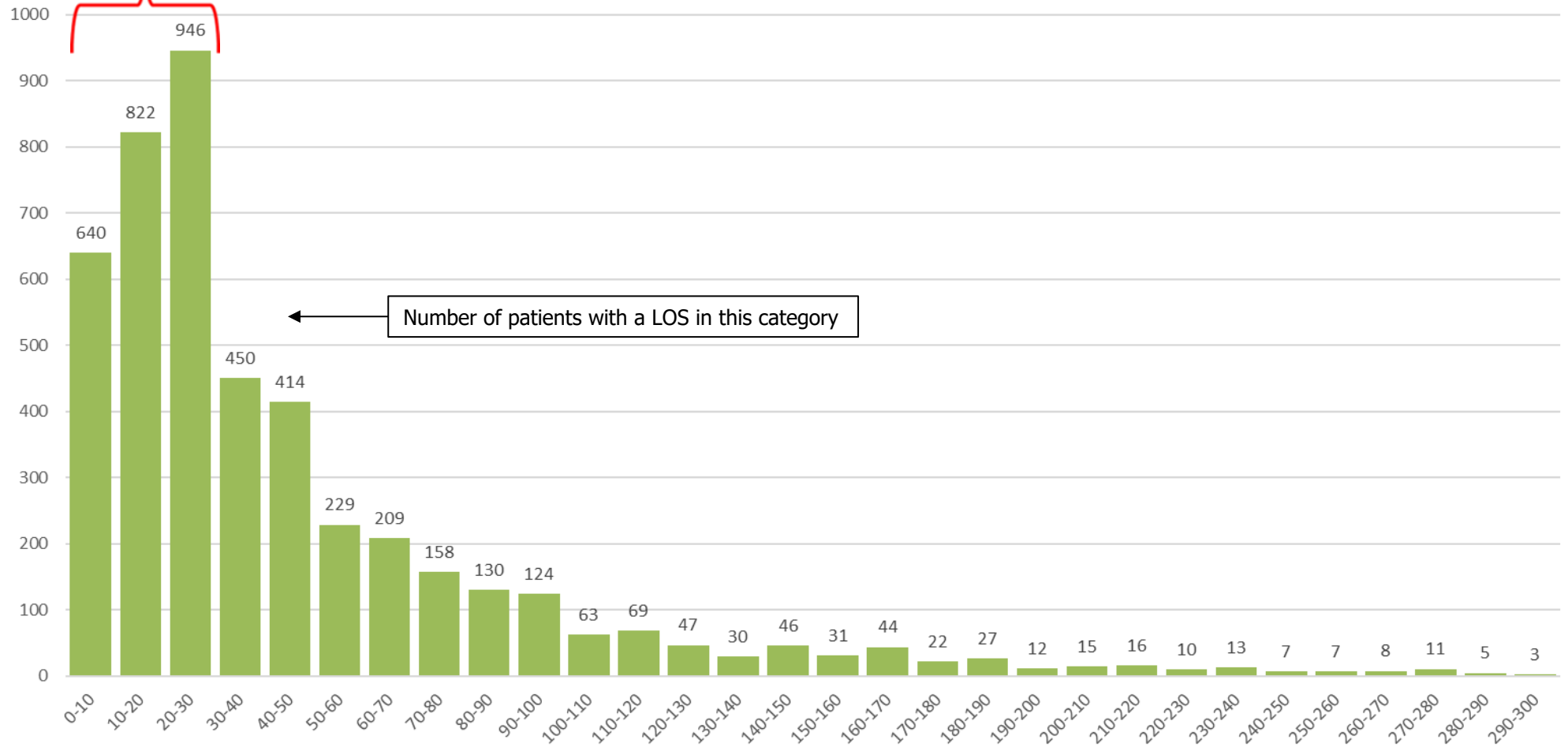


Median Length of Stay for Oct- Dec 2021 = 31.6 Hours

28 patients had a LOS longer than 300 hours

Number of NC-STeP Patients by LOS Category Jan - Dec 2021 in hours

51% percent of patients had a LOS of 30 hours or less



Number of patients with a LOS in this category

Median Length of Stay for Jan-Dec 2021 = 29.2 Hours

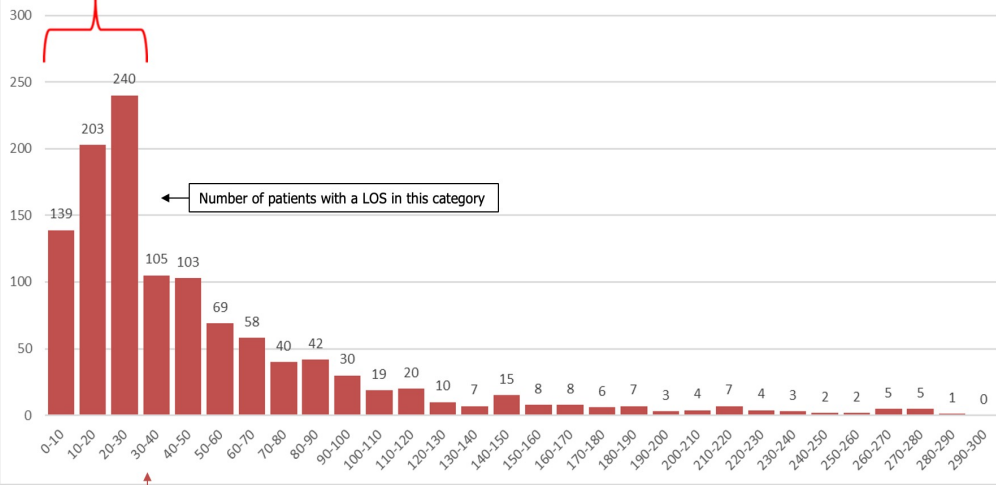
115 patients had a LOS longer than 300 hours over the 12 months

Number of NC-STeP Patients by LOS Category

Oct - Dec 2021

in hours

49% percent of patients had a LOS of 30 hours or less



Median Length of Stay for Jul-Sep 2021 = 31.6 Hours

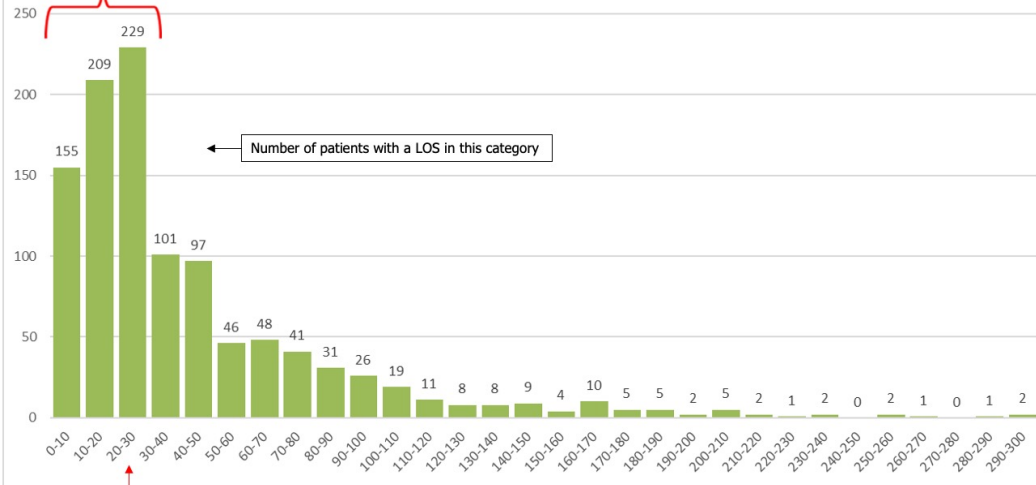
28 patients had a LOS longer than 300 hours

Number of NC-STeP Patients by LOS Category

Jan - Mar 2021

in hours

54% percent of patients had a LOS of 30 hours or less



Median Length of Stay for Jan-Mar 2021 = 27.7 Hours

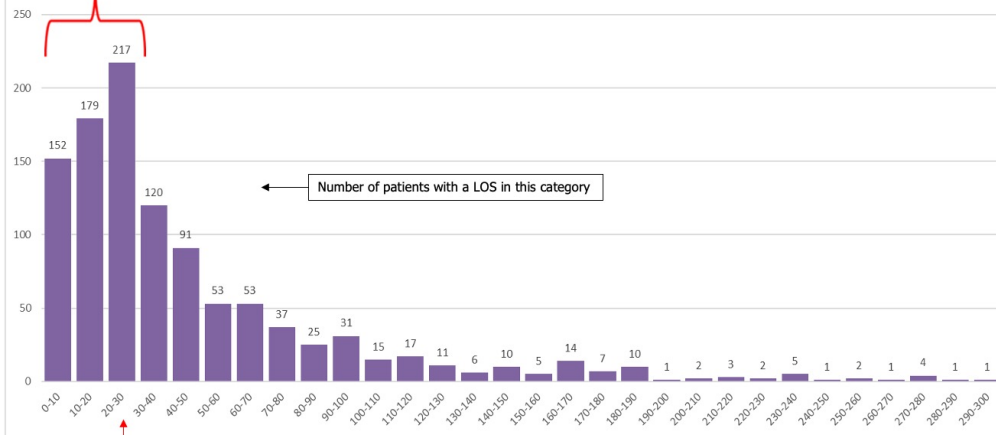
25 patients had a LOS longer than 300 hours

Number of NC-STeP Patients by LOS Category

Jul - Sep 2021

in hours

45% percent of patients had a LOS of 30 hours or less



Median Length of Stay for Jul-Sep 2021 = 30 Hours

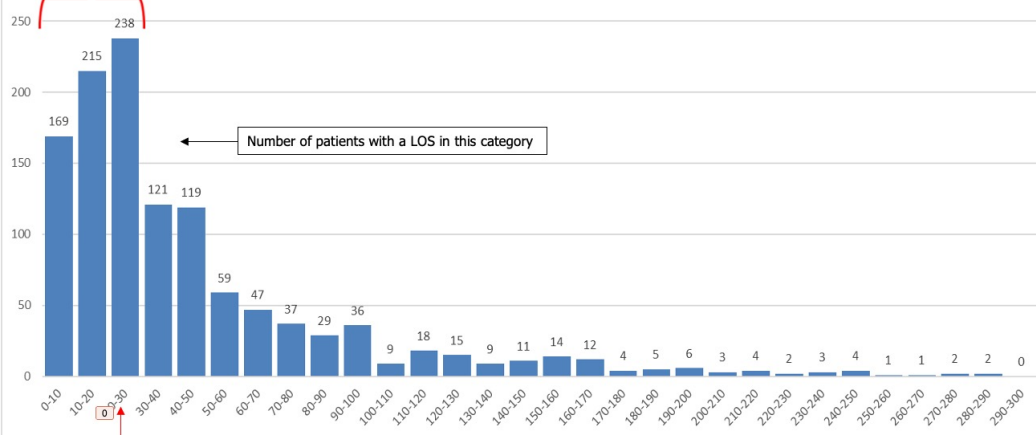
28 patients had a LOS longer than 300 hours

Number of NC-STeP Patients by LOS Category

Apr - Jun 2021

in hours

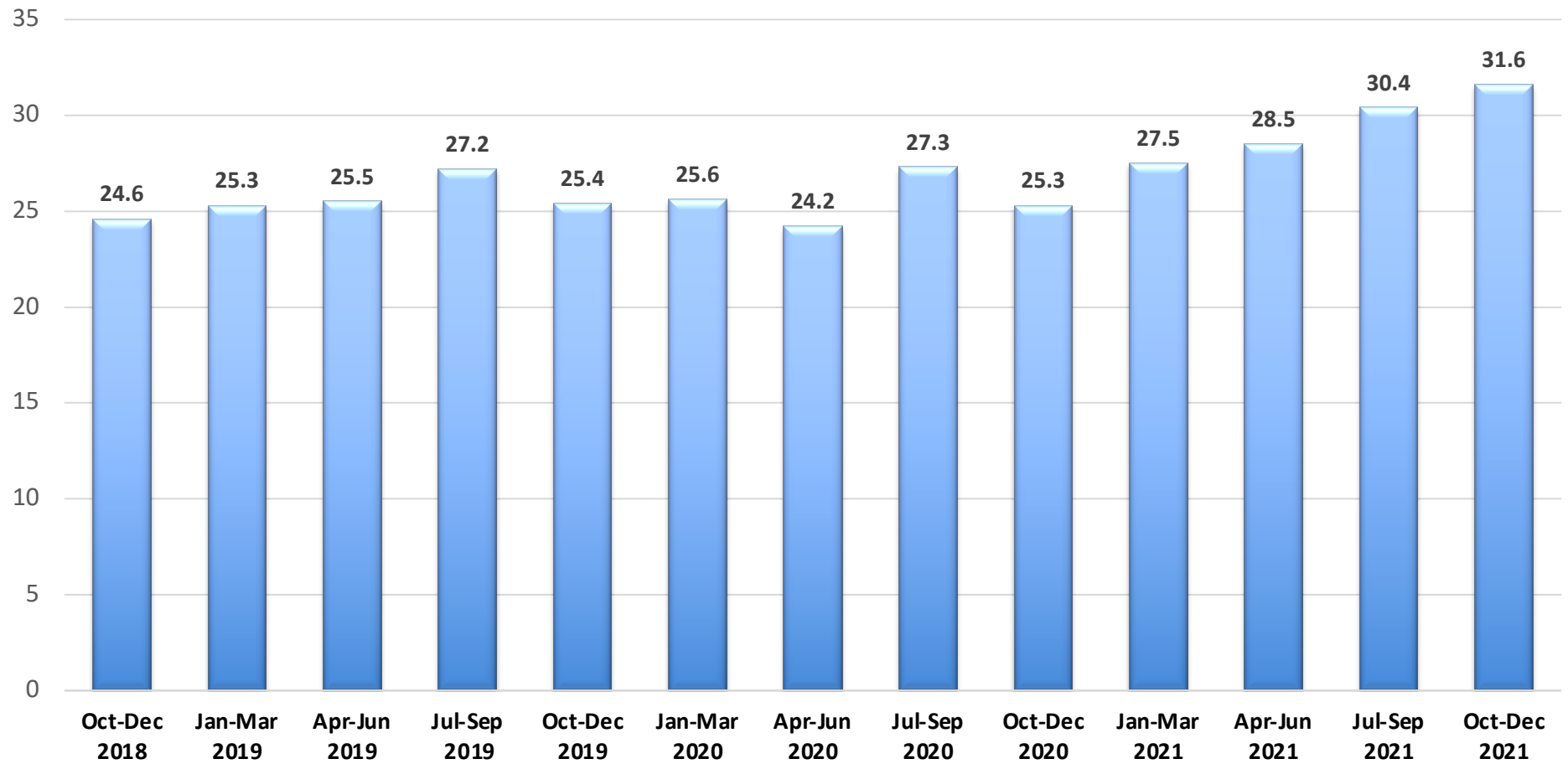
51% percent of patients had a LOS of 30 hours or less



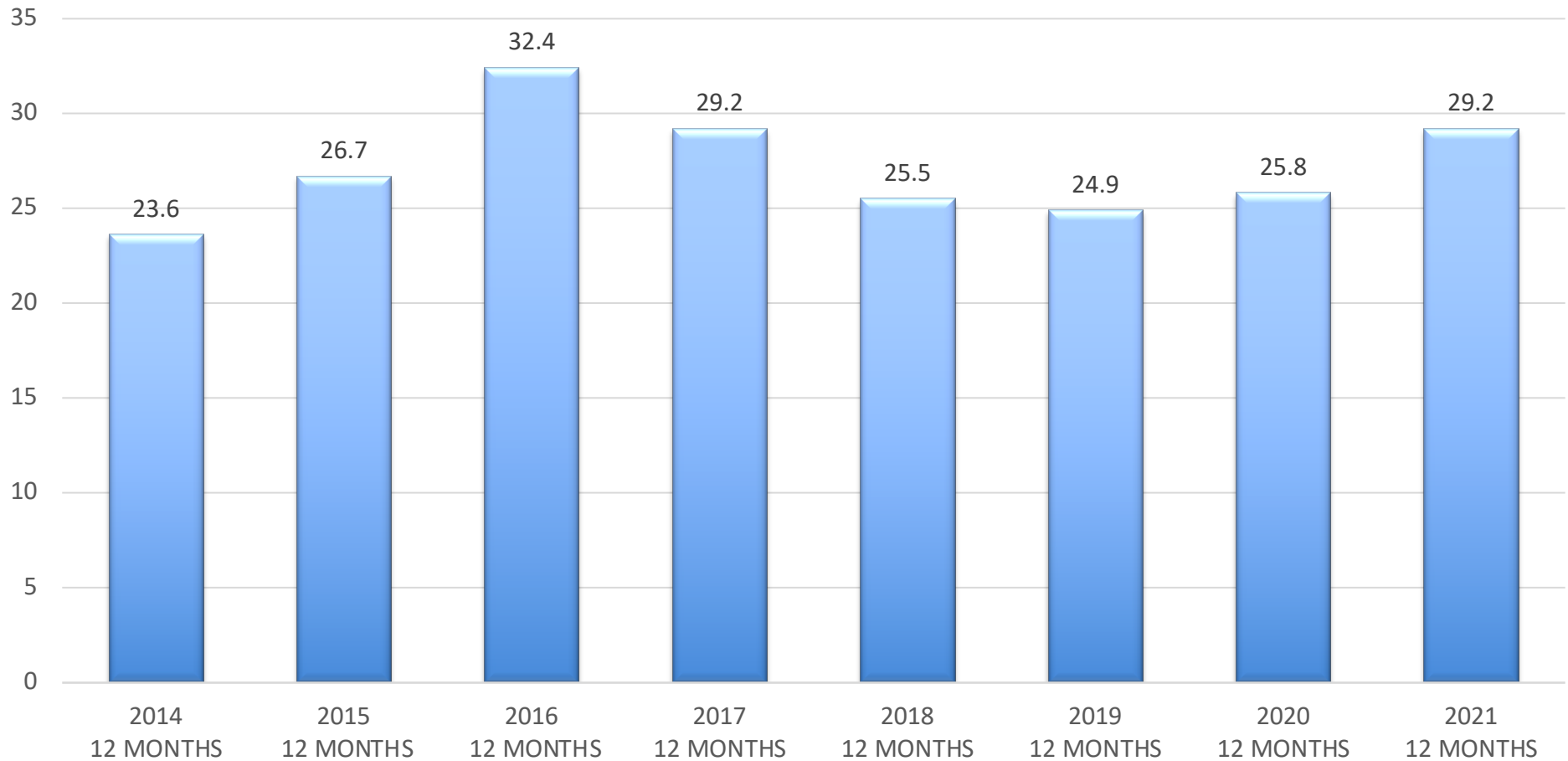
Median Length of Stay for Apr-Jun 2021 = 29 Hours

18 patients had a LOS longer than 300 hours

Median Length of Stay by Quarter (in hours)

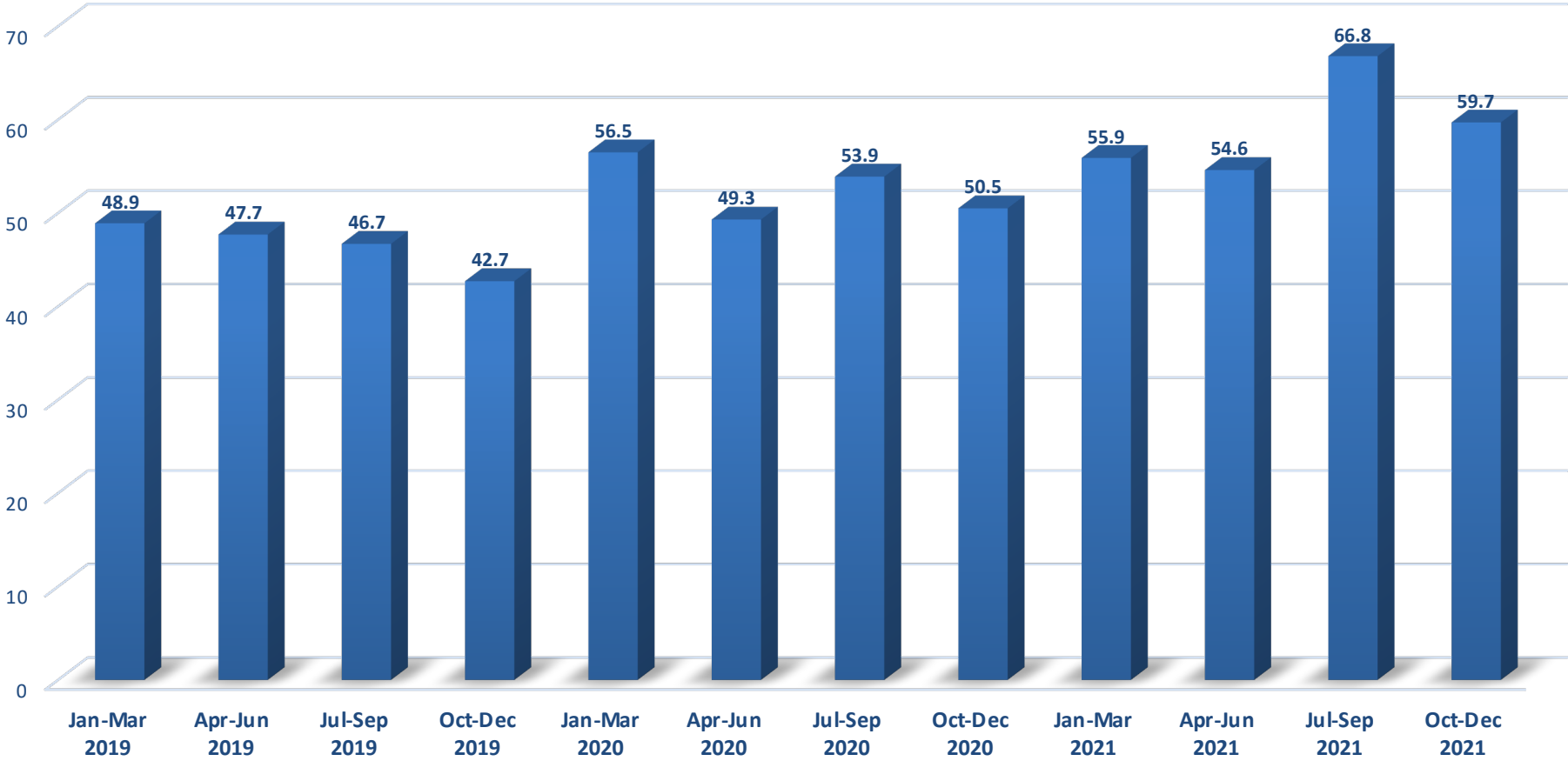


Median Length of Stay by Year (in hours)

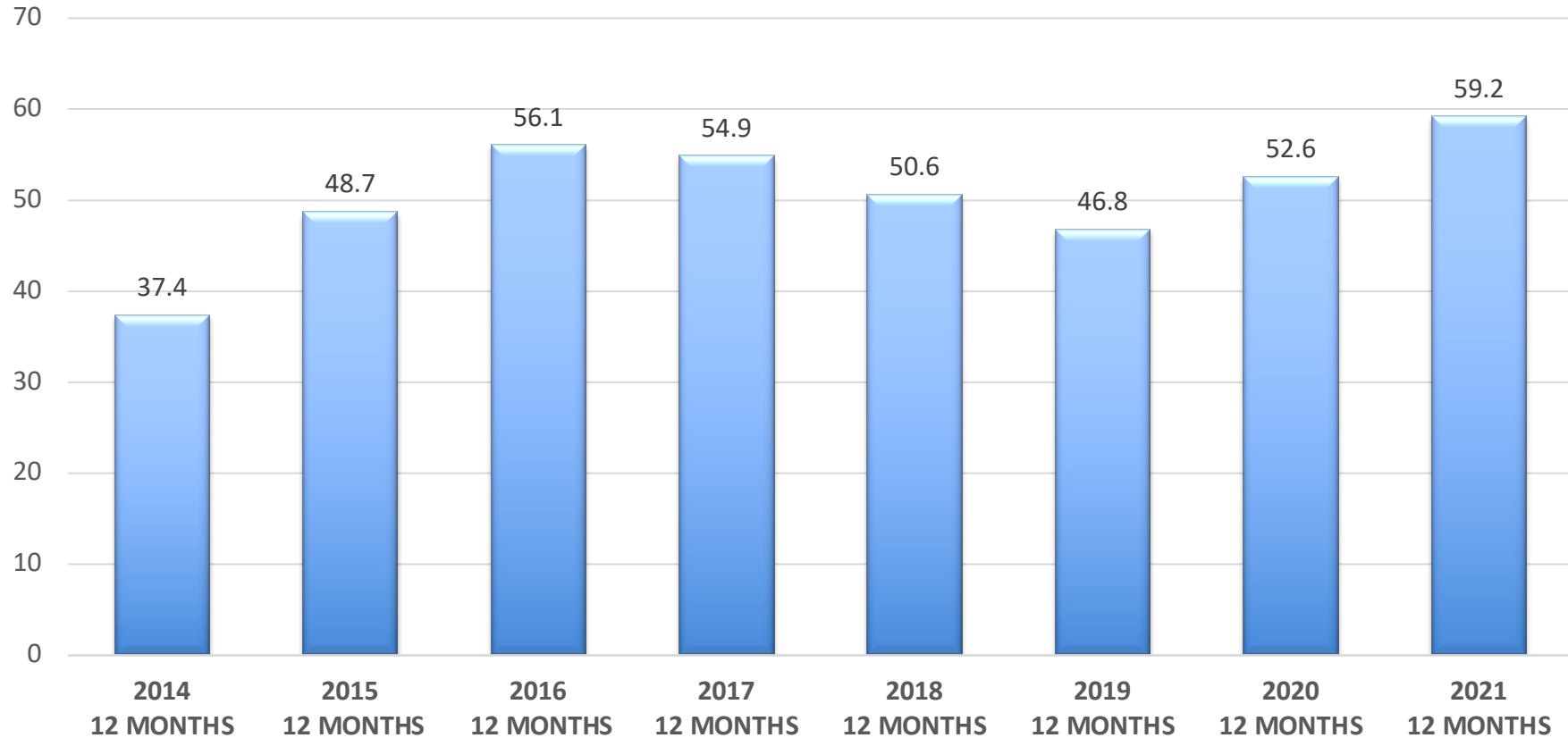


Average Length of Stay by Quarter

(in hours)



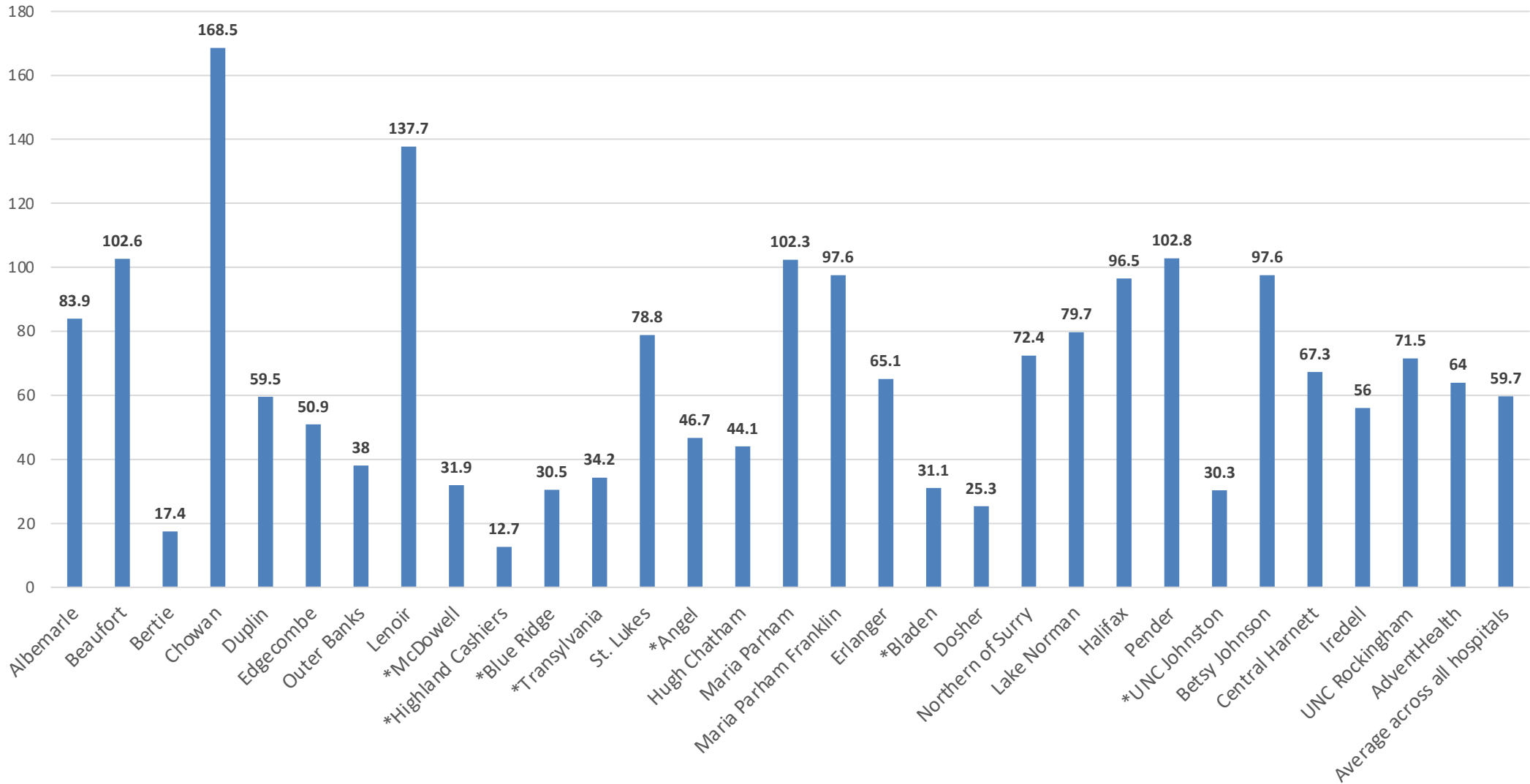
Average Length of Stay by Year (in hours)



Average Length of Stay for NC-STeP Patients by Hospital

October - December 2021

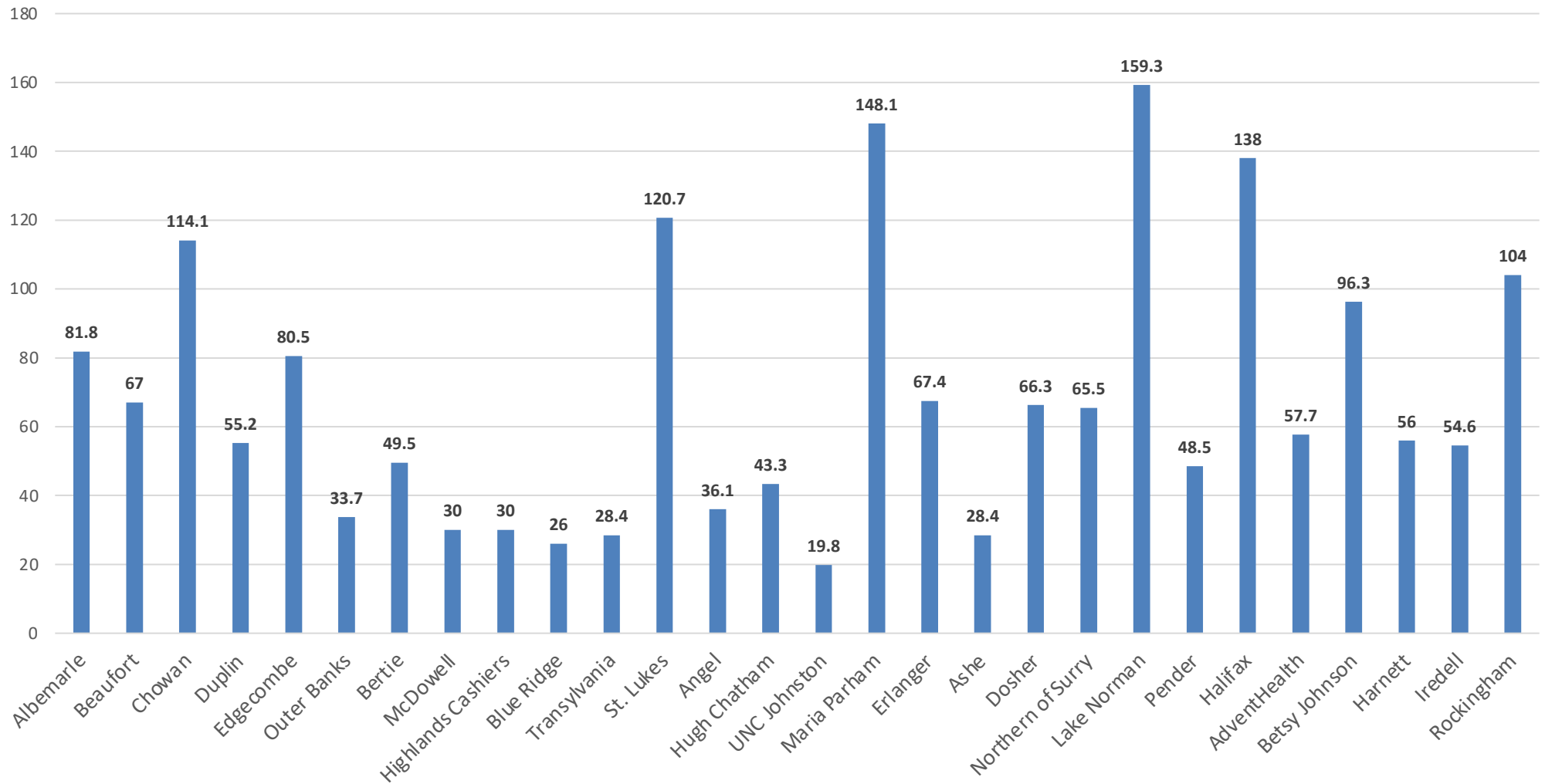
(in hours)



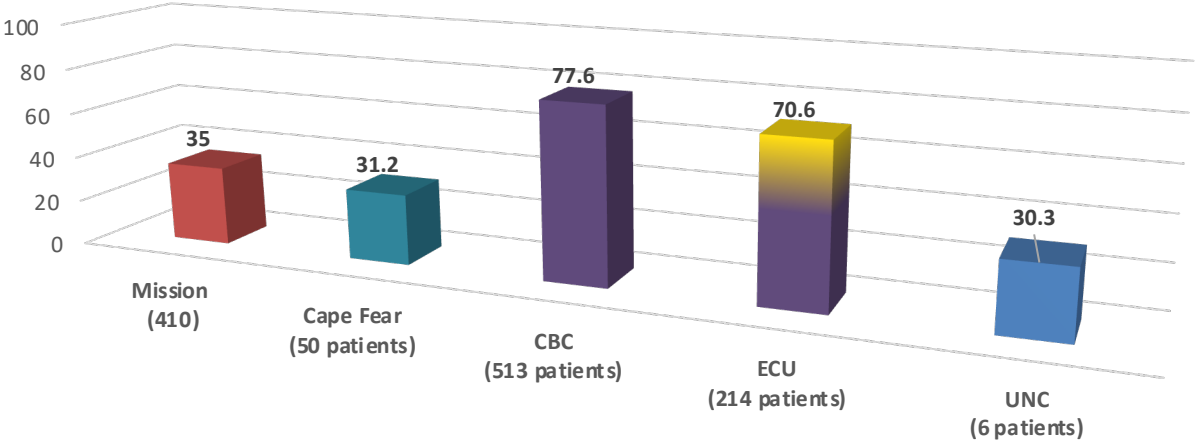
Average Length of Stay for NC-STEP Patient by Hospital

January - December 2021

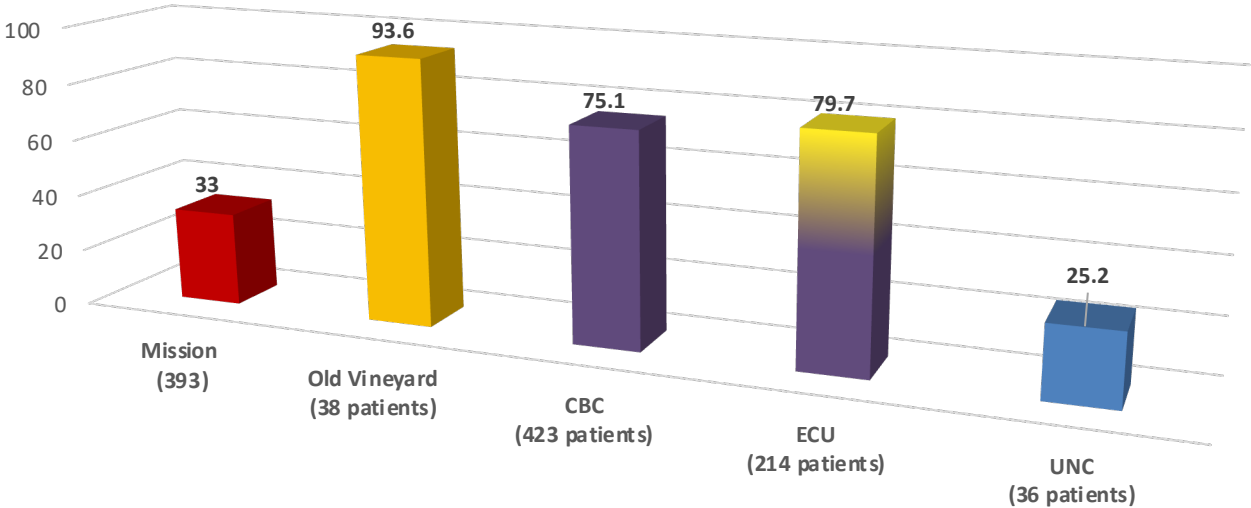
(in hours)



Oct-Dec 2021 (in hours)



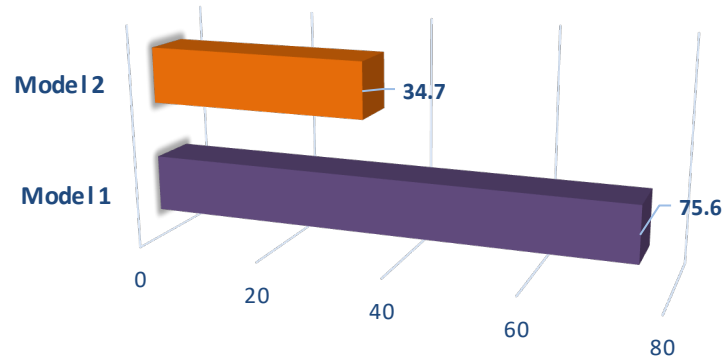
Jul-Sep 2021 (in hours)



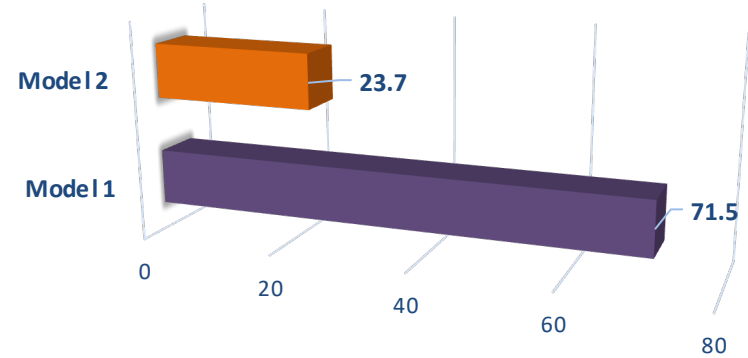
Average Length of Stay by Provider

Average LOS by Model

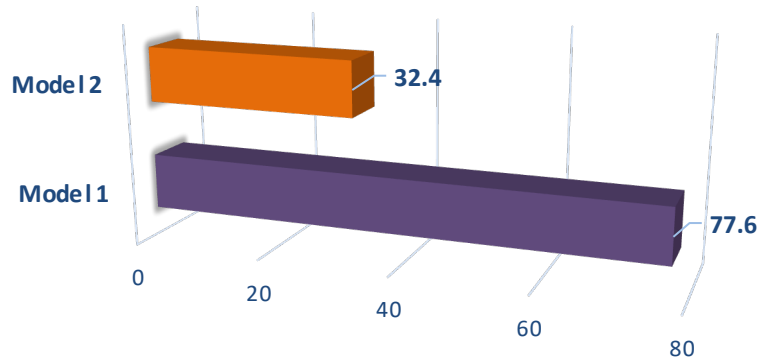
Oct-Dec 2021 (in hours)



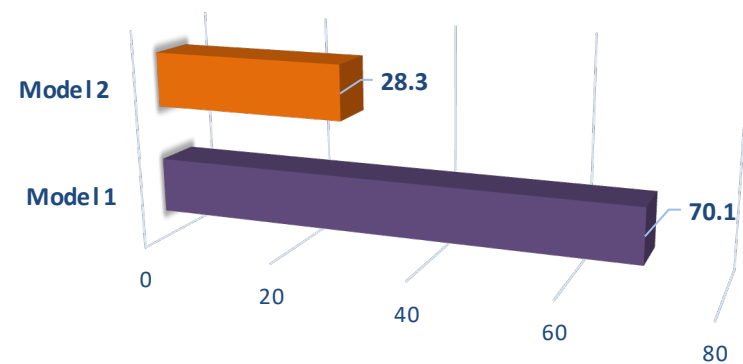
Jan-Mar 2021 (in hours)



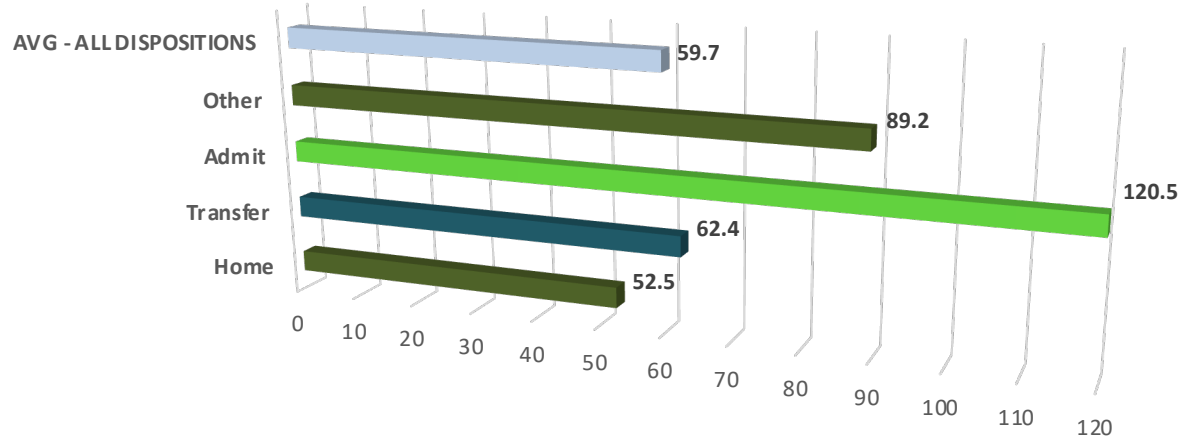
Jul-Sep 2021 (in hours)



Apr-Jun 2021 (in hours)

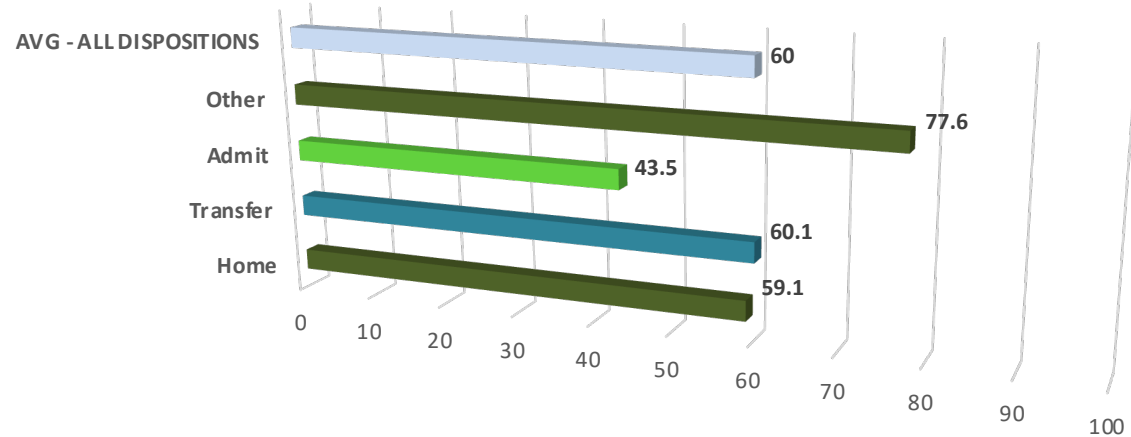


Oct-Dec 2021(in hours)



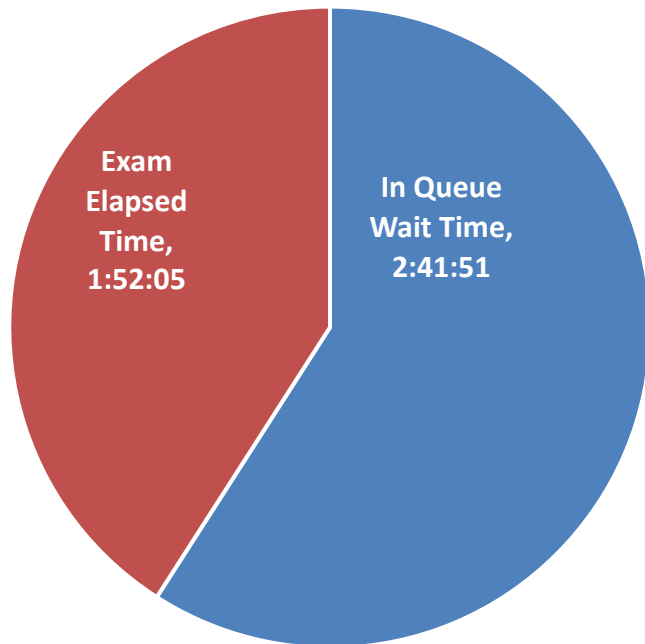
Average LOS by Discharge Disposition

Jul-Sep 2021 (in hours)

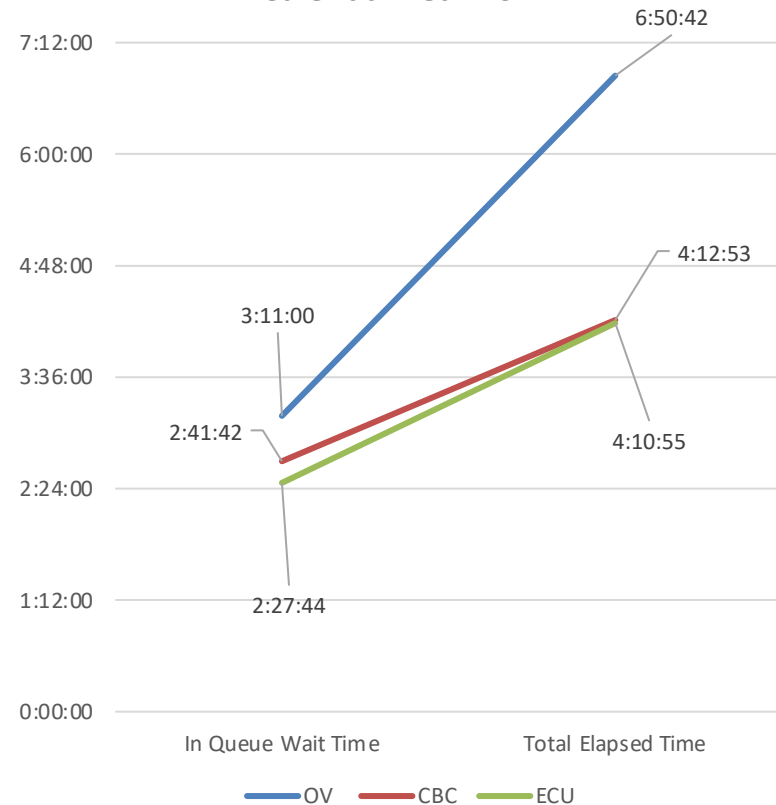


Consult Elapsed Time: January - December 2021

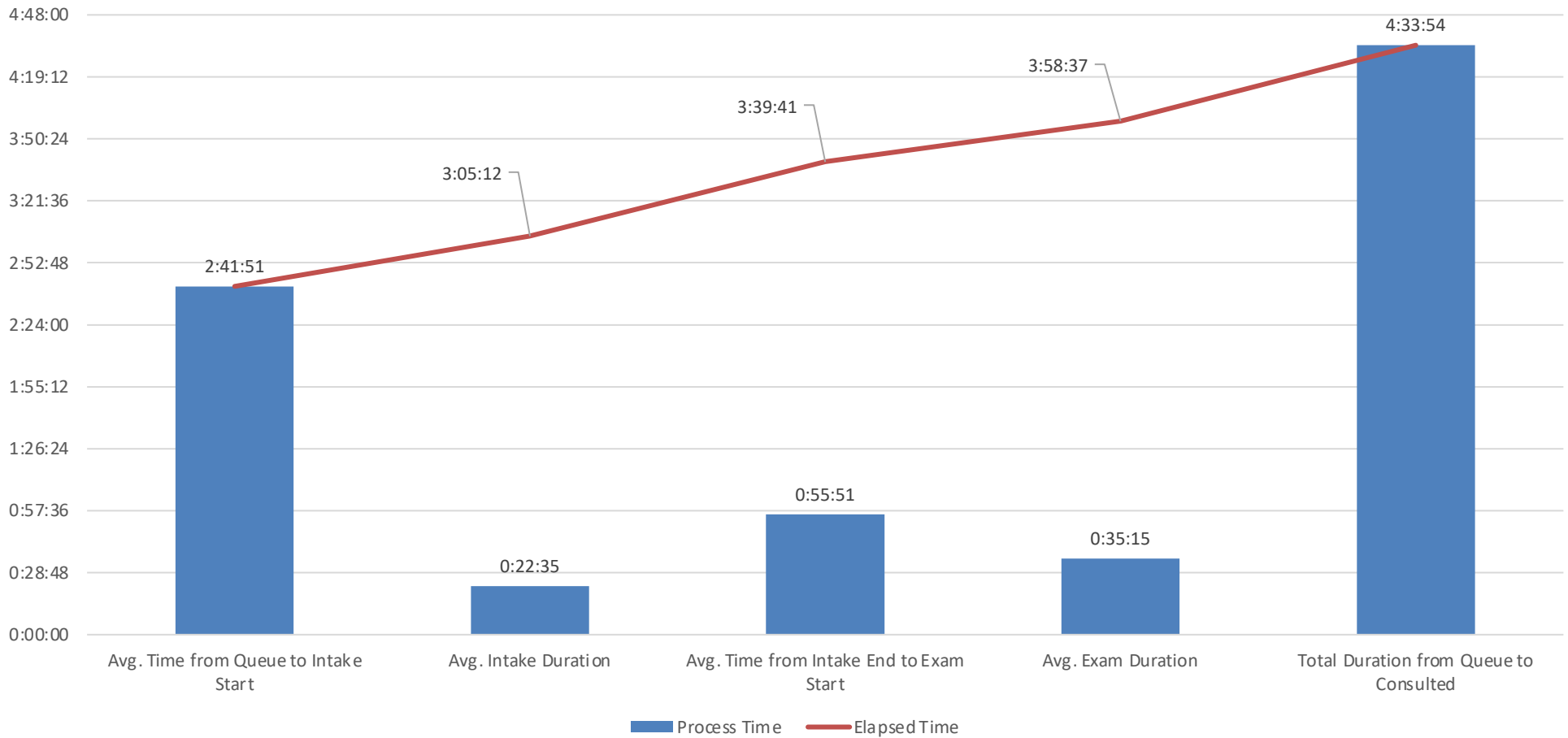
CBC, OV & ECU
 Average Consult Exam Elapsed Time
 In Queue to Exam Complete
 Calendar Year 2021
 (4 hrs. 34 min.)



Comparison CBC, OV & ECU
 Average Consult Elapsed Time
 In Queue to Exam Complete
 Calendar Year 2021

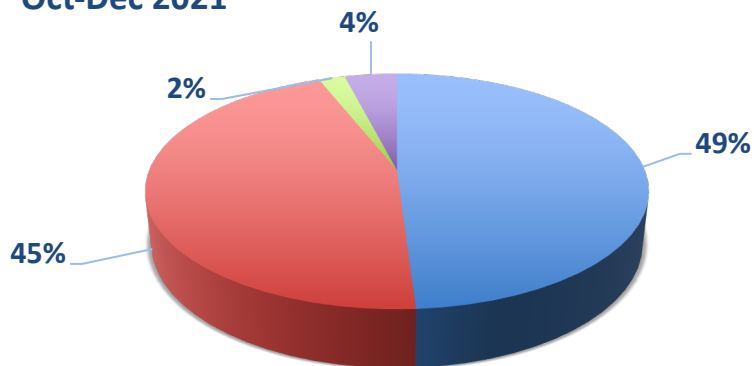


Key Processes and Elapsed Times Averages CBC, OV, ECU: January - December 2021

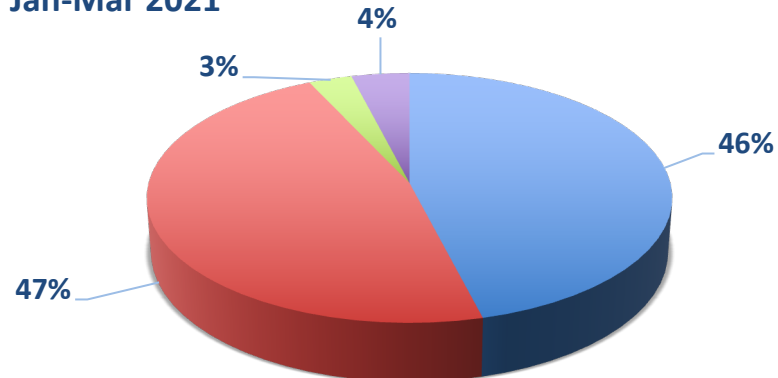


Percent of Patients by Discharge Disposition

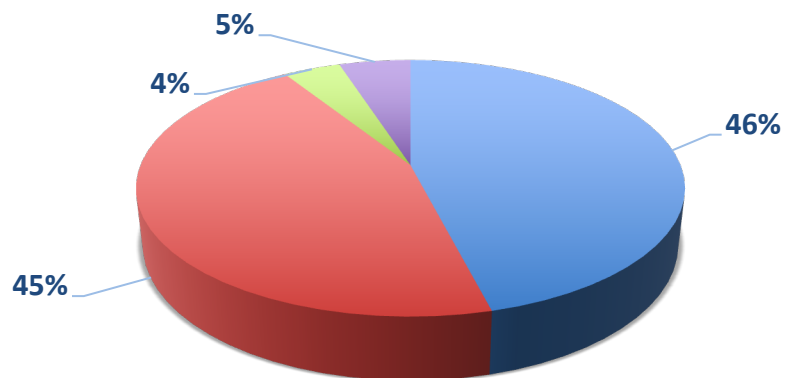
Oct-Dec 2021



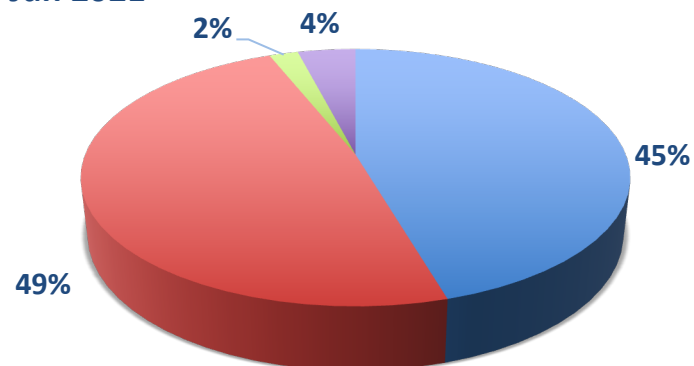
Jan-Mar 2021



Jul-Sep 2021



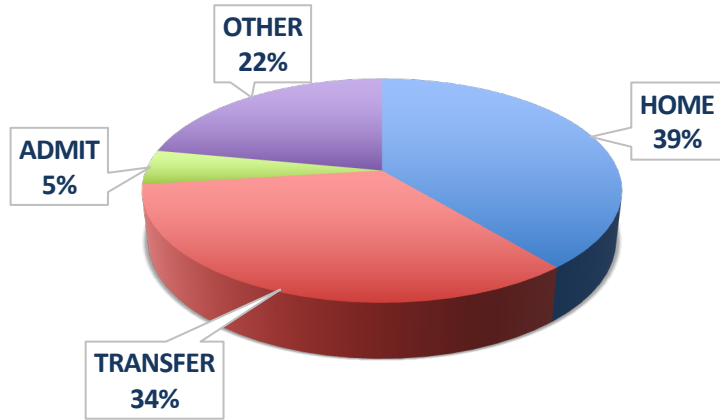
Apr-Jun 2021



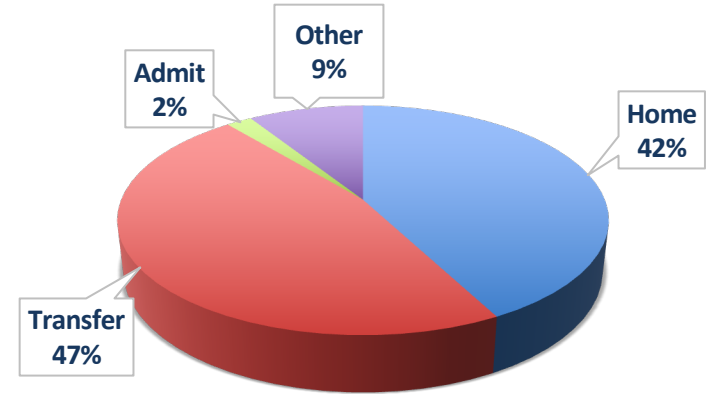
■ Home ■ Transfer ■ Admit ■ Other

Percent of Patients by Discharge Disposition

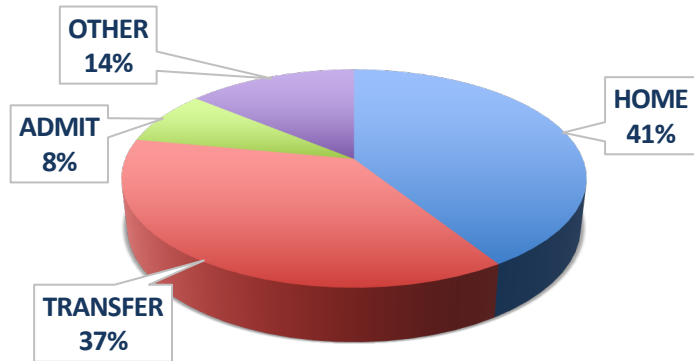
January - December 2019



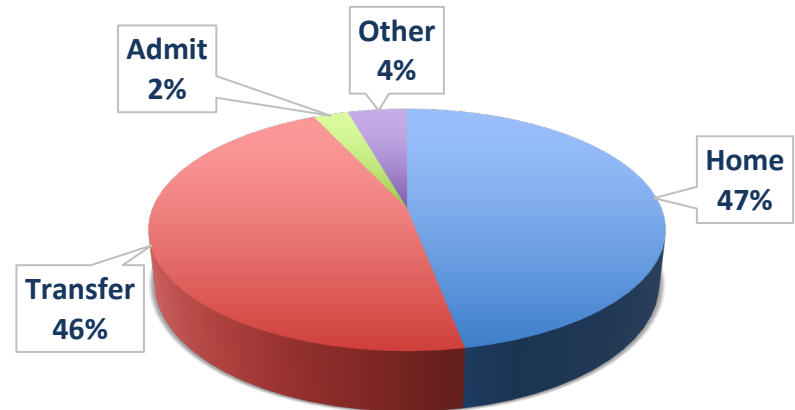
January - December 2020



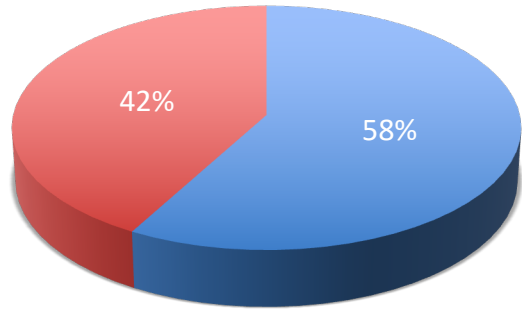
January - December 2018



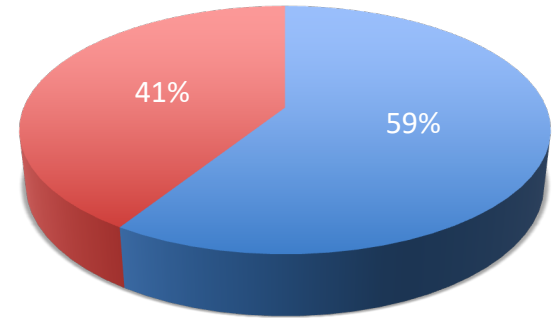
January - December 2021



Oct-Dec 2021



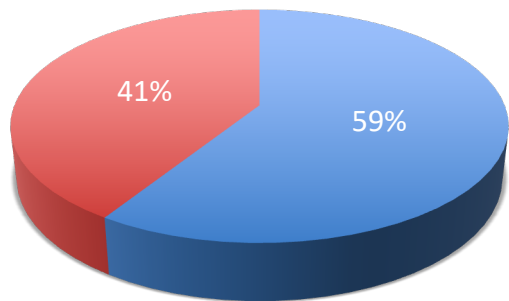
Jan-Mar 2021



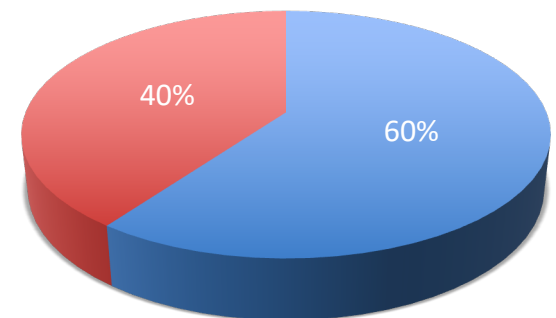
**IVCs –
By Release Status**

- IVCs - percent not released
- IVCs - percent released

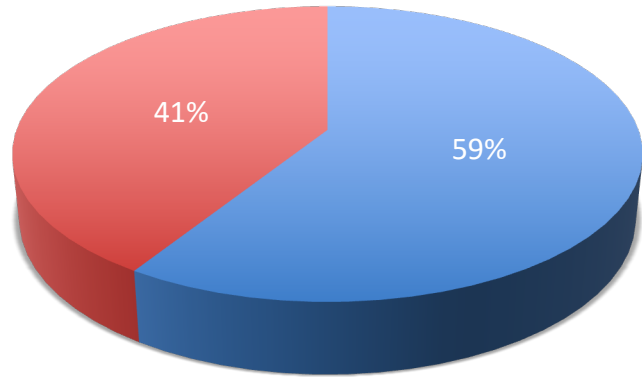
Jul-Sep 2021



Apr-Jun 2021



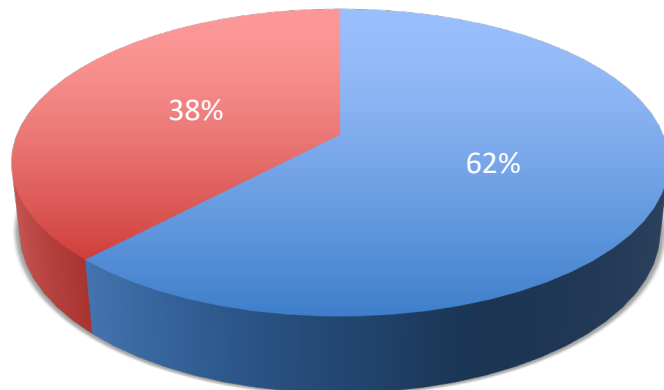
January – December 2021



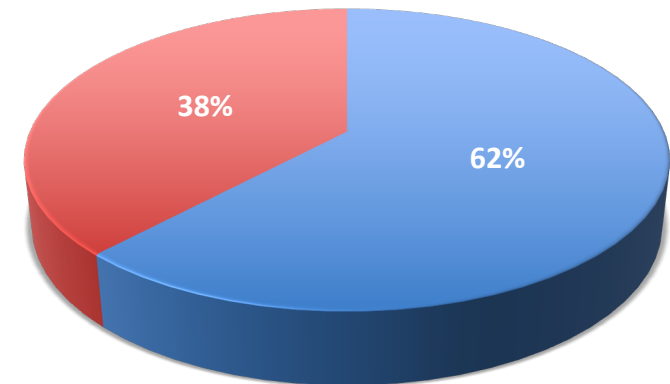
IVCs – By Release Status

- IVCs - percent not released
- IVCs - percent released

January – December 2020



January – December 2019





The Impact of NC Statewide Telepsychiatry Program (NC-STeP) on Cost Savings by Reducing Unnecessary Psychiatric Hospitalizations During a 6½ Year Period

Sy Atezaz Saeed¹ · Katherine Jones² · Kalyan Muppavarapu¹

Accepted: 26 October 2021

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Abstract

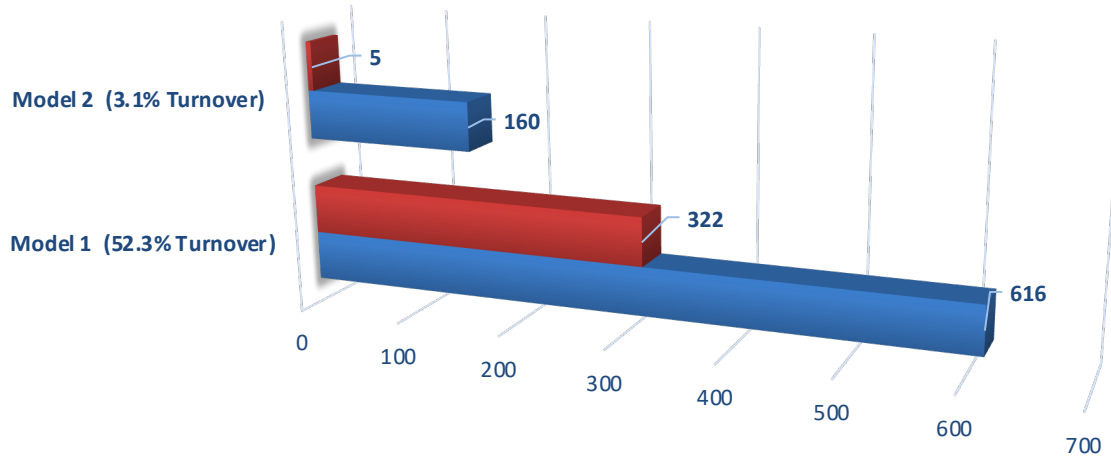
Objective To study the impact of the North Carolina Statewide Telepsychiatry Program in reducing unnecessary psychiatric hospitalizations and cost savings during a 6½ year period.

Methods Patient encounter data was extracted from the NC-STeP database that captured records of 19,383 patients who received services over a 6½ -years' period. We analyzed the data to calculate the total number of patient encounters, the number of encounters with an IVC, and the number of encounters with an IVC that was overturned. For encounters with an overturned IVC, we also determined the patient discharge disposition. We estimated the cost of a typical mental health hospitalization to measure the savings generated by the overturned IVCs in the NC-STeP program.

Results Over the 6½ year period there were 19,383 NC-STeP patient encounters at partner hospital emergency departments. There were 13,537 encounters where the patient had an IVC in place during the ED stay, and 4,627 where the IVC was overturned (34%). For patients where there was an IVC that was overturned, 85.9% of those patients were ultimately discharged home. Using the “three-way bed” cost estimate of \$4,500 for each overturned IVC, the cost savings generated by the NC-STeP program from November 2013 to June 2020 were \$20,821,500.

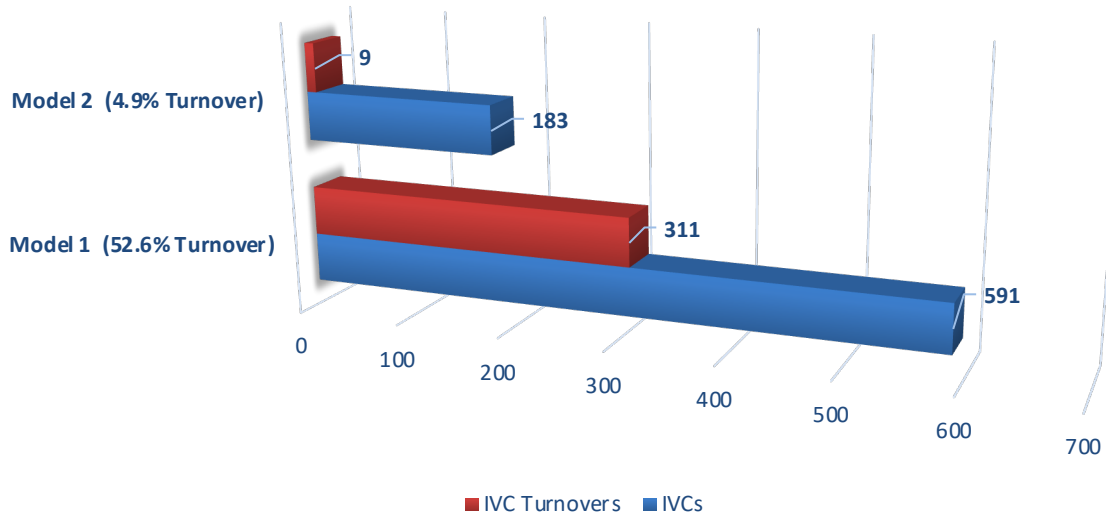
Conclusions Telepsychiatry consultation services in the emergency departments can decrease unnecessary psychiatric hospitalizations and contribute to significant cost savings to the healthcare system and society and improve the outcomes for patients and families by decreasing financial burden and stress associated with a hospital stay.

Oct-Dec 2021

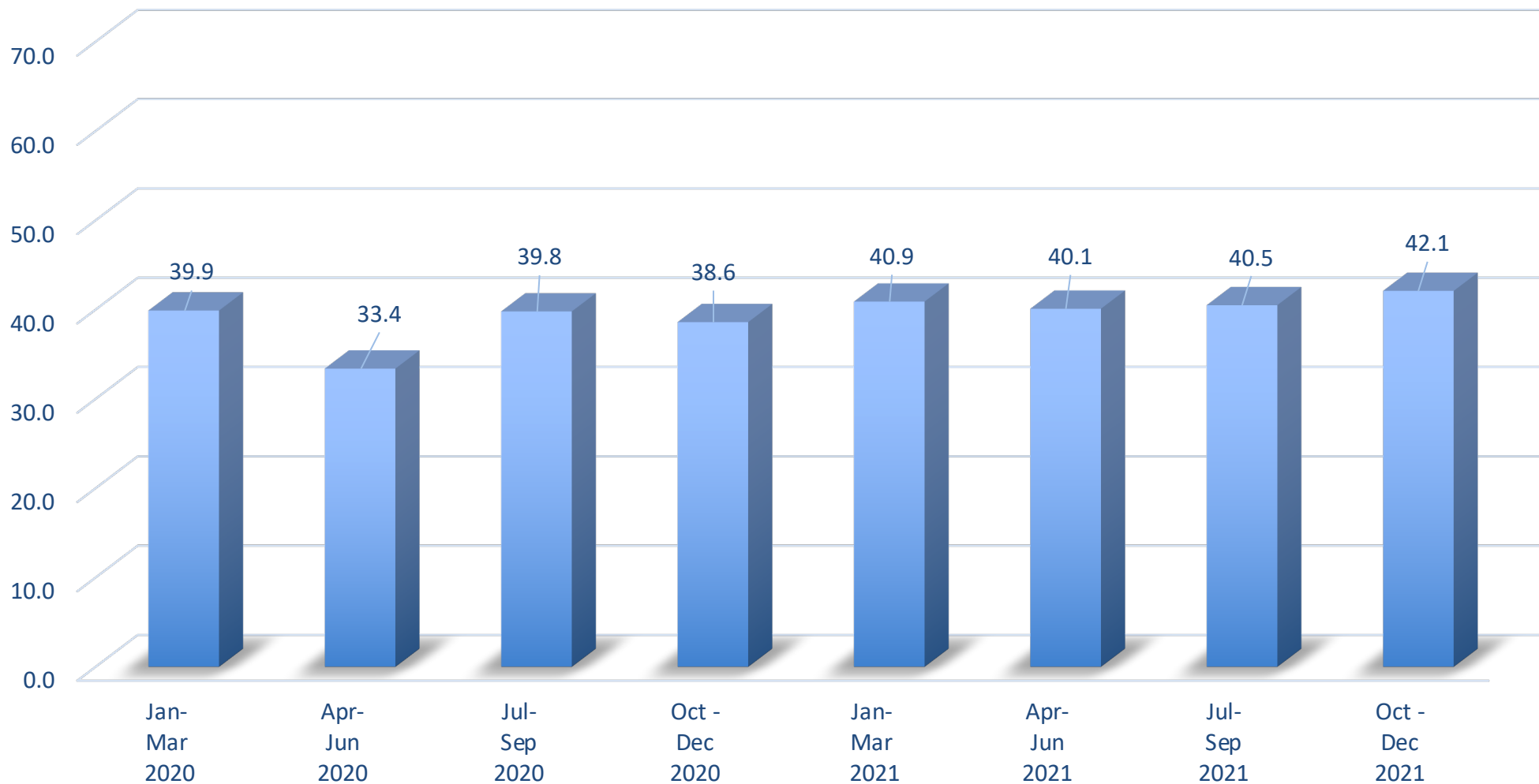


Number of IVCs and IVC Turnovers by Model

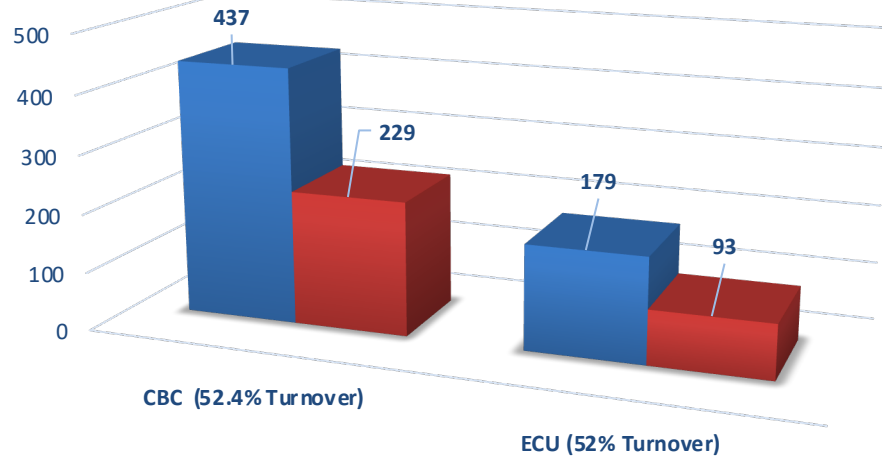
Jul-Sep 2021



Percent of IVCs Turned Over by Quarter January 2020 - December 2021

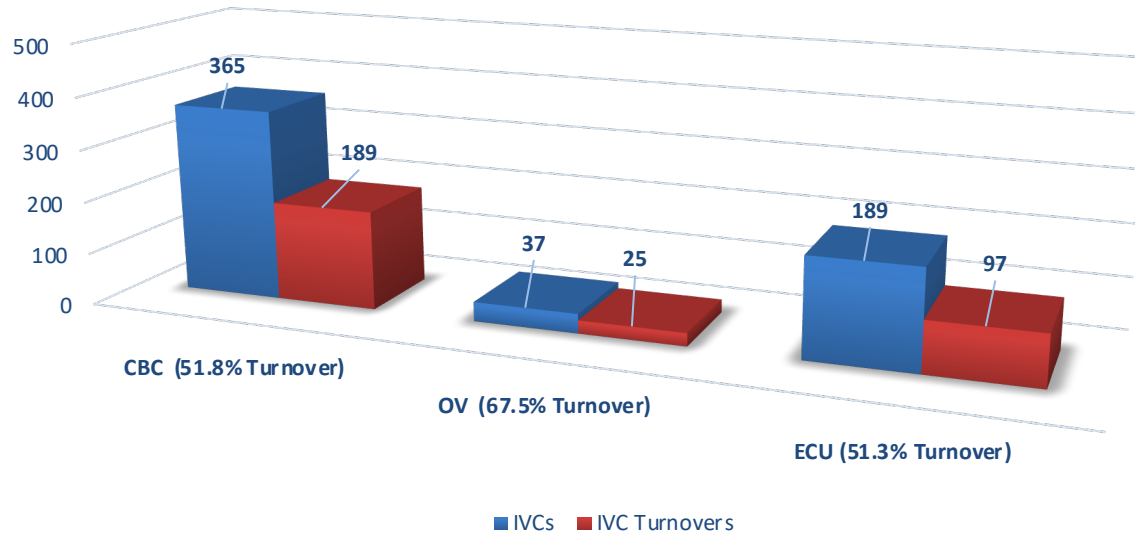


Oct-Dec 2021



Number of IVCs and IVC Turnovers by Provider

Jul-Sep 2021



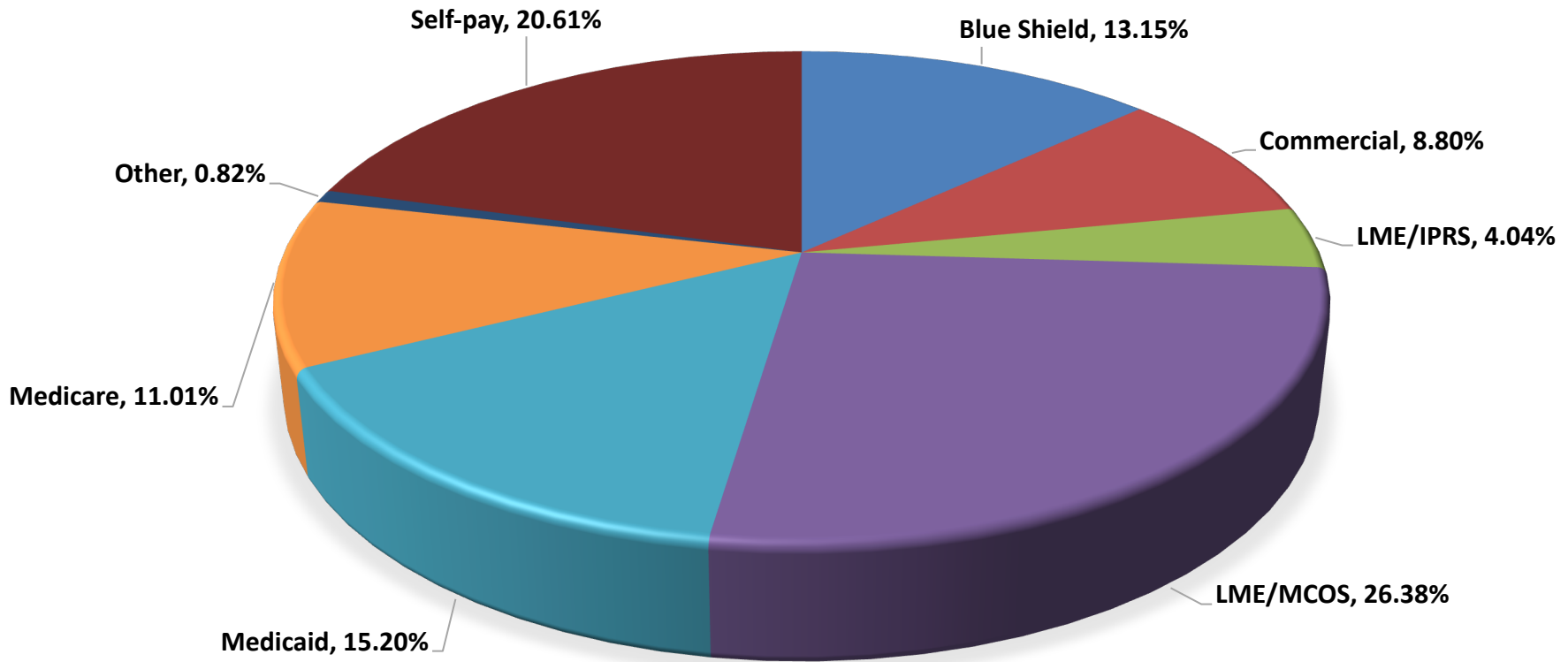
Satisfaction Surveys

- Satisfaction surveys are done twice a year.
- Satisfaction surveys were not done during this last quarter.
- Most recent surveys conducted in September 2021
 - 65 individuals responded to the survey (N = 65).
 - **The overall satisfaction rate is 85%.**



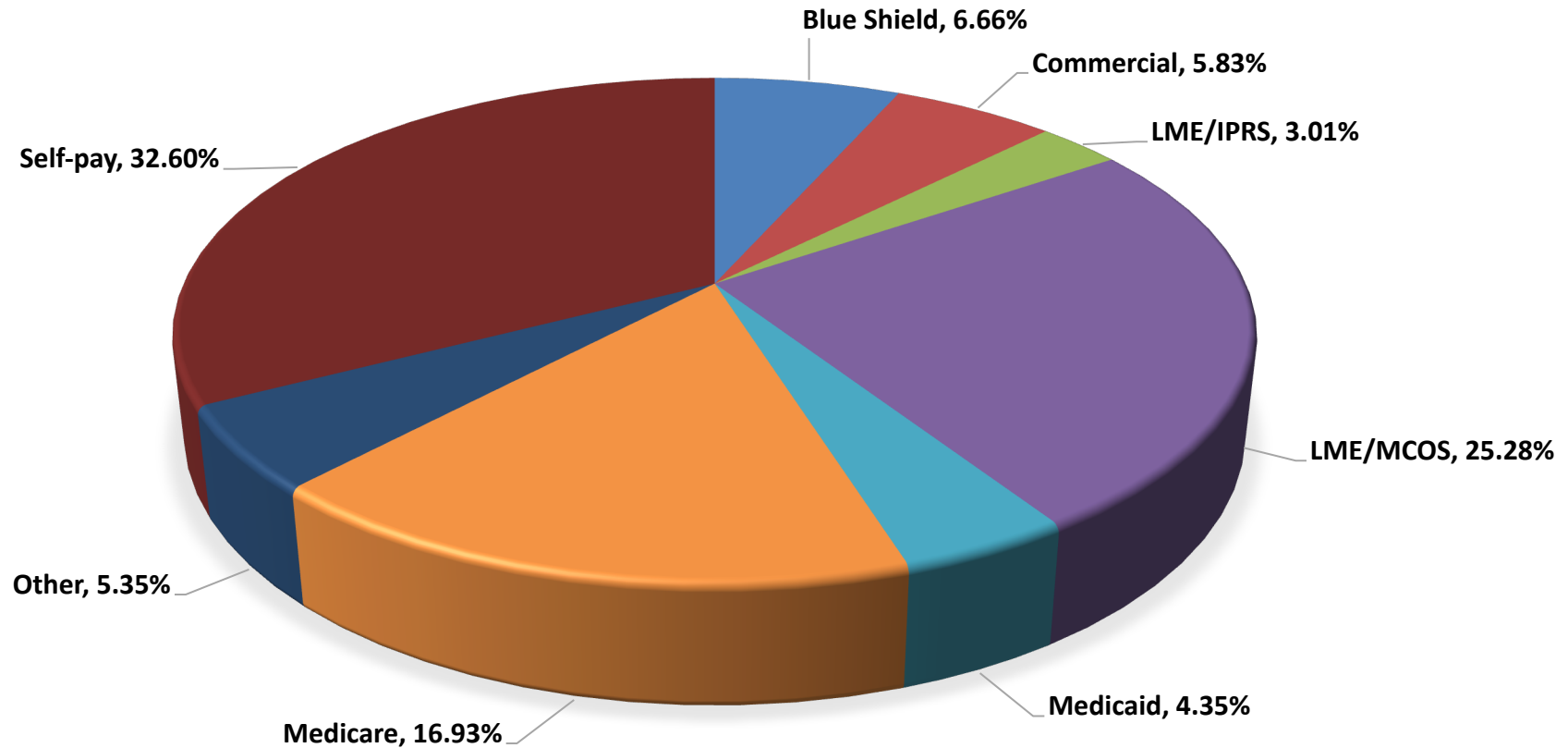
NC-STeP Charge Mix

QTD FY2022 - Quarter 2



NC-STeP Charge Mix - Project to Date

Service Dates: October 1, 2013 – December 31, 2021



Community-Based Sites as of December 31, 2021

EVALUATION CRITERIA	VALUES/MEASURES REACHED AS OF 12/31/2021
1. The number of full-time equivalent (FTE) providers supporting the program	.50 FTEs
2. The number of community-based sites contracted	18
3. Number of patient visits with medical (psychiatric) doctor	109 PTD= 1,125
4. The number return visits	975 PTD= 8,366
5. The number of patient visits with a mid-level provider	1,109 PTD= 9,352
6. The number of new patient visits	244 PTD= 2,162

NC-STeP Community Patient Visits

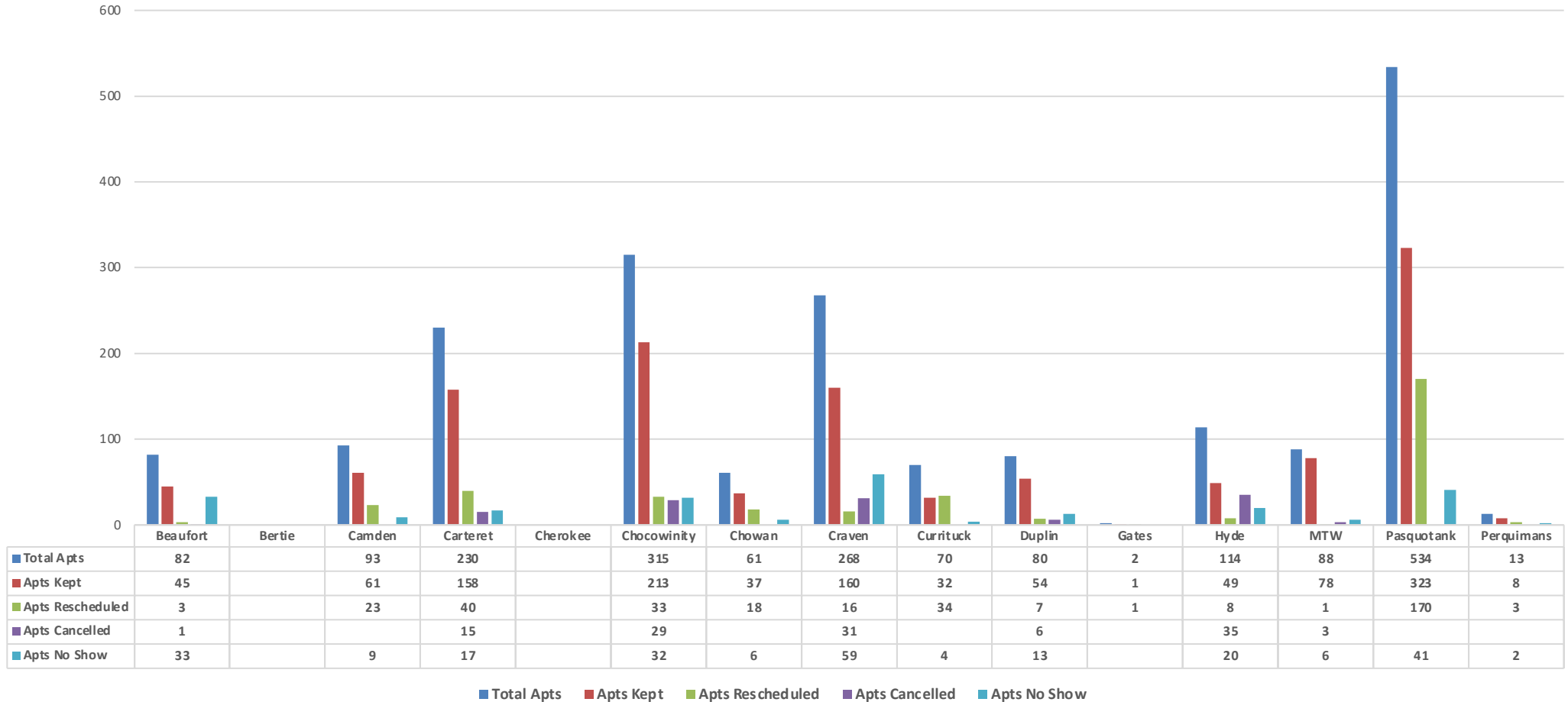
Patient Visits	Since project inception in October 2018	During Calendar Year 2018	During Calendar Year 2019	During Calendar Year 2020	During Calendar Year 2021	During Quarter Jan-Mar 2021	During Quarter Apr- Jun 2021	During Quarter Jul- Sep 2021	During Quarter Oct- Dec 2021
With Medical Doctor	1,125	8	536	265	316	77	59	71	109
With Mid-Level Provider	9,352	7	2,006	3,217	4,122	1,015	1,001	997	1,109
Total Patient Visits	10,565	15	2,633	3,477	4,440	1,092	1,060	1,069*	1,219

* There was 1 visit that didn't say whether it was with MD or LCSW, and it is in the total but not in the breakouts.

NC-STeP Community Appointments by Site

Appointments, Visit Kept, Rescheduled, Cancelled, No Show

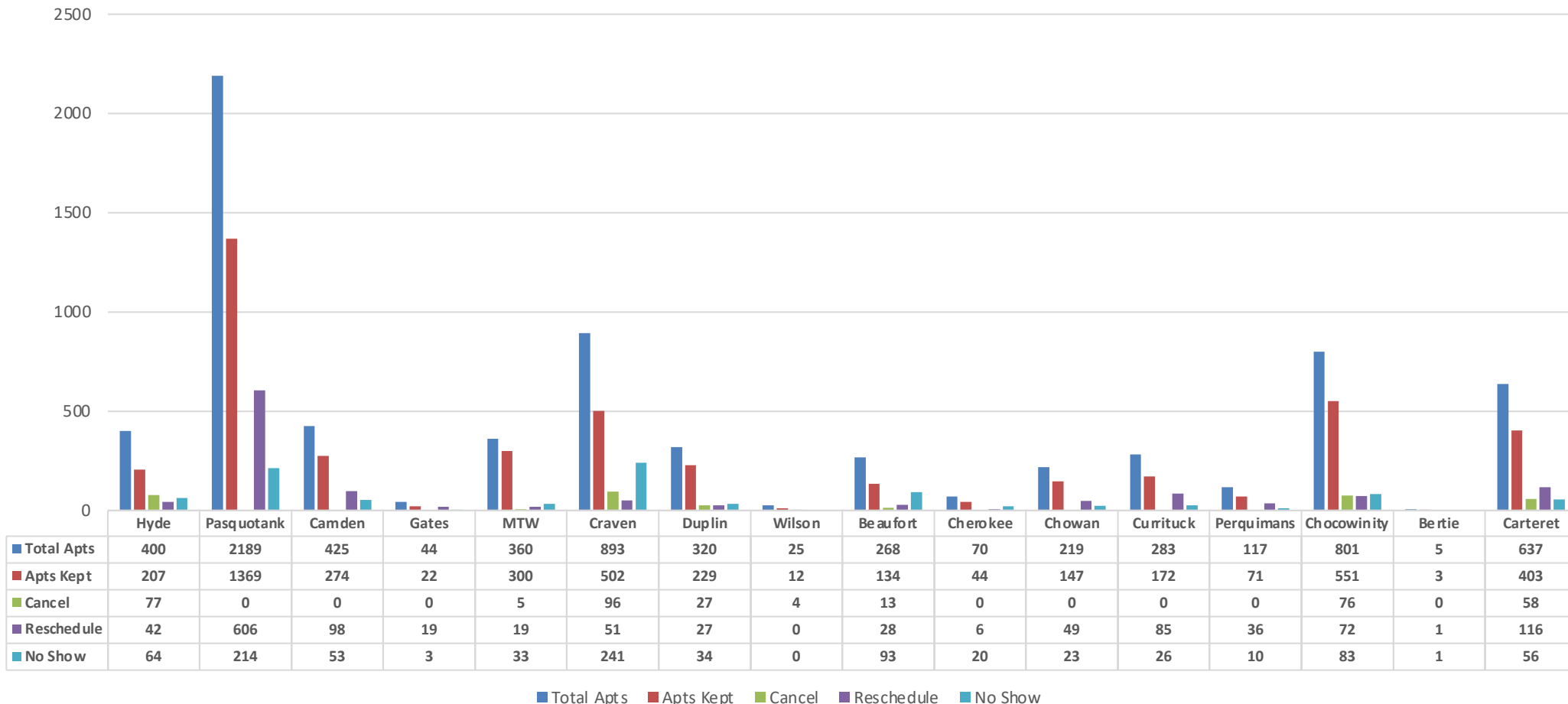
October - December 2021



NC-STeP Community Appointments by Site

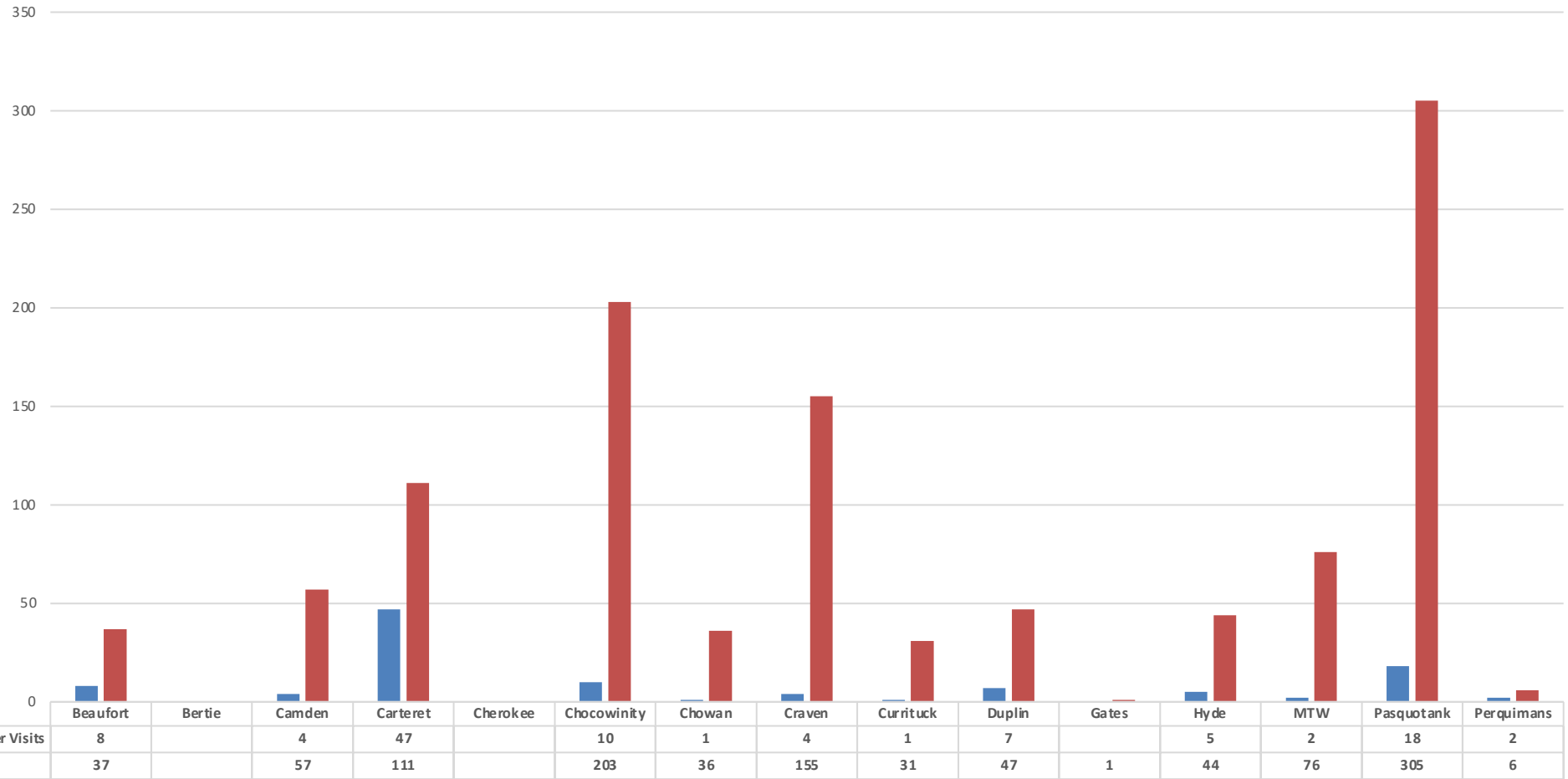
Appointments, Visits Kept, Rescheduled, Cancelled, No Show

January - December 2021



NC-STeP Community Visits by Site by Provider Type

October - December 2021

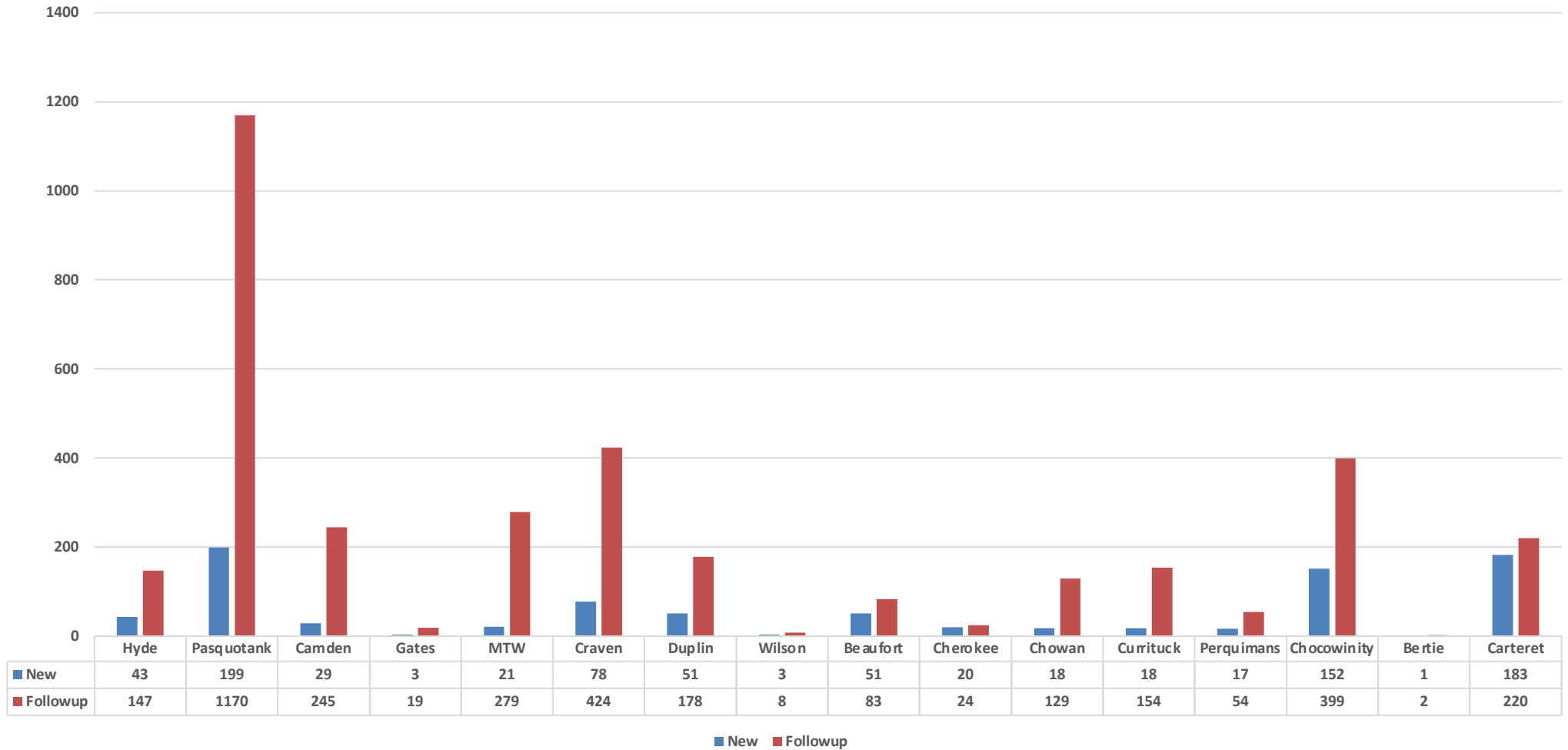


■ Psychiatric Provider Visits ■ BH Mgr Visits



NC-STeP Community Visits by Site by provider type

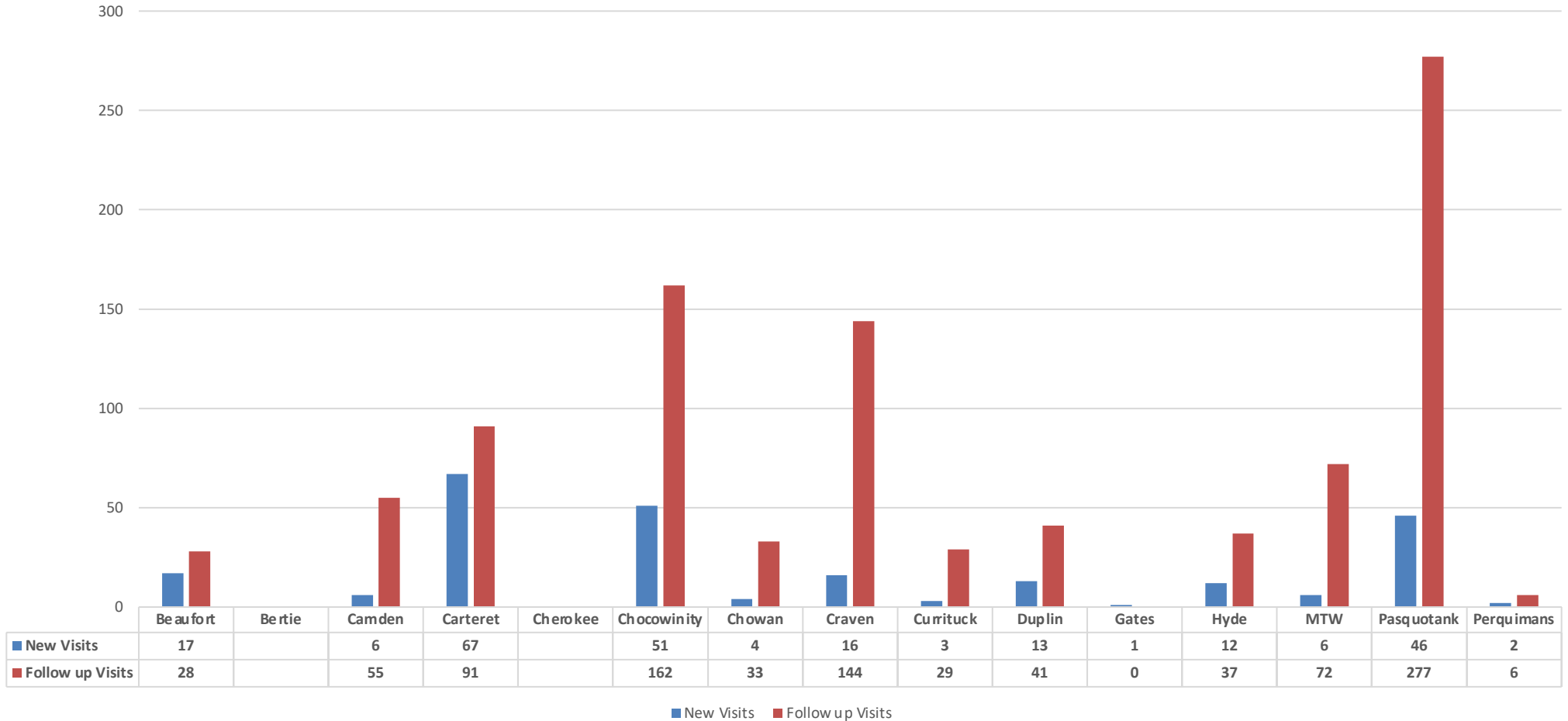
January - December 2021



NC-STeP Community Visits by Site

New and Follow-Up

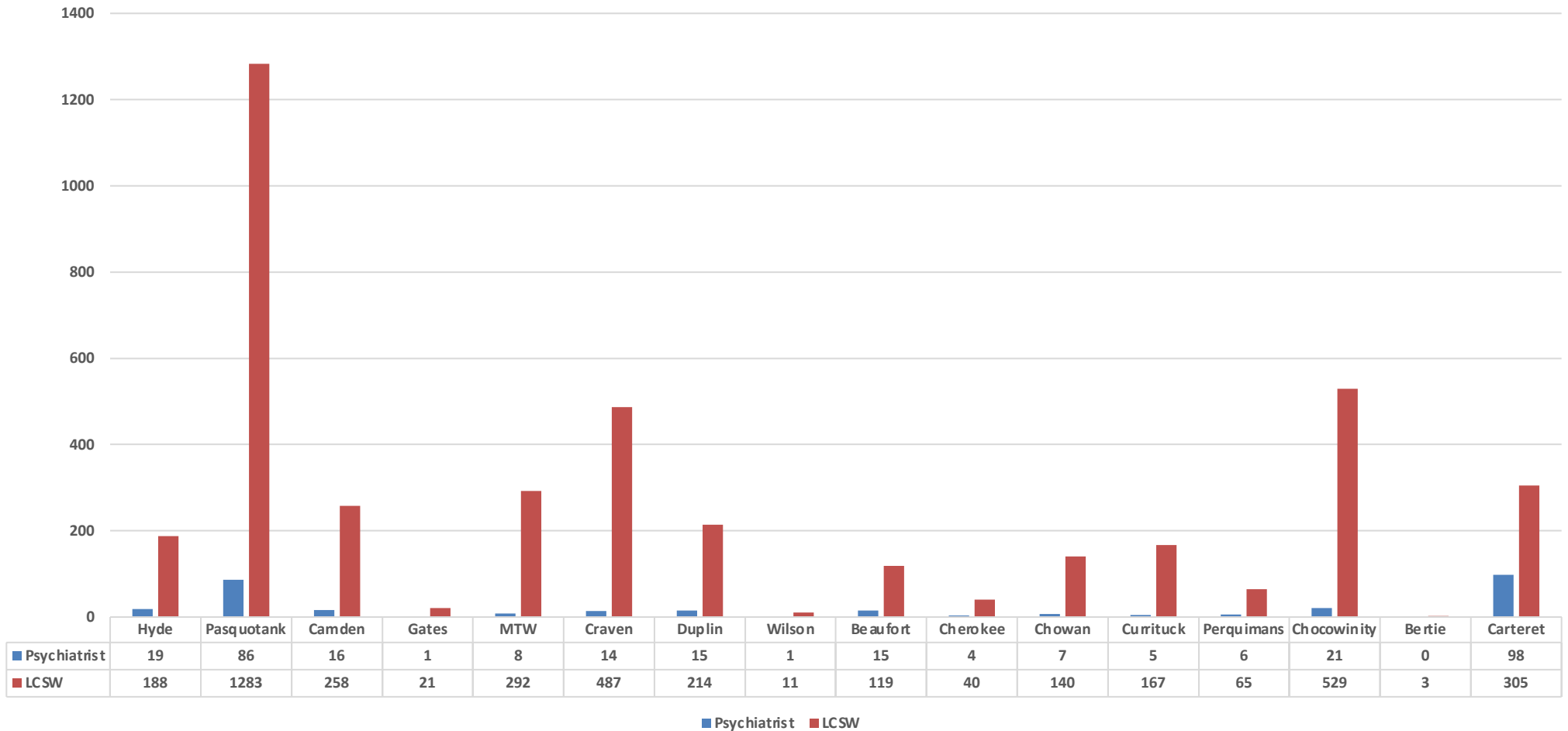
October - December 2021



NC-SteP Community Visits by Site

New and Follow-up

January - December 2021



NC-STeP Status as of December 31, 2021

- 39 hospitals in the network. 38 live.
- 51,192 total psychiatry assessments since program inception
- 8,001 IVCs overturned
 - Cumulative return on investment = \$43,205,400
(savings from preventing unnecessary hospitalizations)
- Four Clinical Provider Hubs with 52 consultant providers
- Over 32% of the patients served had no insurance coverage*

*From program inception

NC-STeP Status as of December 31, 2021

- 18 community-based sites.
- 10,477 total patient visits since program inception in October 2018.
 - 1,125 total patient visits with a psychiatrist
 - 9,352 total patient visits with a mid-level provider



East Carolina University
CENTER FOR TELEPSYCHIATRY



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