



NORTH CAROLINA
STATEWIDE TELEPSYCHIATRY PROGRAM

Quarterly Progress Update



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East Carolina University
CENTER FOR TELEPSYCHIATRY

NC-STeP Quality Management and Outcomes Monitoring Processes: July-September 2017

- 66 hospitals in network, 50 hospitals live
- 1,041 assessments for both Model-1 and Model-2 hospitals
 - 561 patient assessments were billed for Model-1 hospitals
- The Median Length of Stay was 28.5 hours
- The Average Length of Stay* was 51.9 hours
 - 49.8 hours for those discharged to home
 - 54.3 hours for those transferred to another facility



NC-STeP Quality Management and Outcomes Monitoring Processes: July-September 2017

- 578 ED patients who received telepsychiatry services had an IVC in place during their ED stay.
 - 249 (43%) of those patients did not have an IVC in place when discharged.
- Of the ED patients who received telepsychiatry services, 42.4% were discharged to home. 40.3% were discharged to another facility.

*Note: Data for Bladen hospital not submitted yet. Data for Cone hospitals did not include a discharge disposition, so Cone is not included in the average LOS calculation by discharge (i.e. Home, Transfer). They are included in the overall average LOS and median LOS.





	Since project inception in November 2013	During Calendar Year 2014	During Calendar Year 2015	During Calendar Year 2016	During Quarter Jan- Mar 2017	During Quarter Apr- June 2017	During Quarter July- Sep 2017
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Total Patient Encounters	18,082	5,144	7,128	1,896	916	1,096	960
Model-1 Hospital Patient Encounters	13,605	4,578	5,849	706	463	587	480
Model-2 Hospital Patient Encounters	4,477	566	1,279	1,190	453	509	480
Total Number of Assessments (Billed Assessments for Model-1 Hospitals + Number of Patient Encounters for Model-2 Hospitals)	27,742	8,130	13,573	1,942	993	1,189	1041



NC-STeP Status as of September 30, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2017	TARGET TO BE REACHED BY 06/30/2018	VALUES/MEASURES REACHED AS OF 09/30/2017
1. The number of full-time equivalent (FTE) positions supported by these contracts	2.1 FTEs	2.3 FTEs	1.9 FTEs
2. The number of overturned involuntary commitments	396	1,034	249 in this quarter Cumulative total since program inception 3,065
3. The number of participating consultant providers	30	47	48

NC-STeP Status as of September 30, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2017	TARGET TO BE REACHED BY 06/30/2018	VALUES/MEASURES REACHED AS OF 09/30/2017
4. The number of telepsychiatry assessments conducted.	2,024	5,743	1,041 in this quarter Cumulative total since program inception 27,742
5. The number of telepsychiatry referring sites	43	59	66 50 Live
6. The reports of involuntary commitments to enrolled hospitals	999	2,584	578 in this quarter Cumulative total since program inception 10,709

NC-STeP Status as of September 30, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2017	TARGET TO BE REACHED BY 06/30/2018	VALUES/MEASURES REACHED AS OF 09/30/2017
7. The average (mean) Length of Stay for all patients with a primary mental health diagnosis across all dispositions.	53.2 hours	53 hours	QTD = 51.9 Median = 28.5
8. The rate of "satisfied" or "strongly satisfied" among emergency department staff participating in NC-STeP.	55.4%	85%	68%



NC-STeP Status as of September 30, 2017

EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2017	TARGET TO BE REACHED BY 06/30/2018	VALUES/MEASURES REACHED AS OF 09/30/2017
9. The rate of "satisfied" or "strongly satisfied" among hospital CEOs/COOs participating in NC-STeP.	NA (no responses received)	85%	100%
10. The rate of "satisfied" or "strongly satisfied" among consulting (hub) providers participating in NC-STeP.	72%	85%	90%



NC-STeP Status as of September 30, 2017

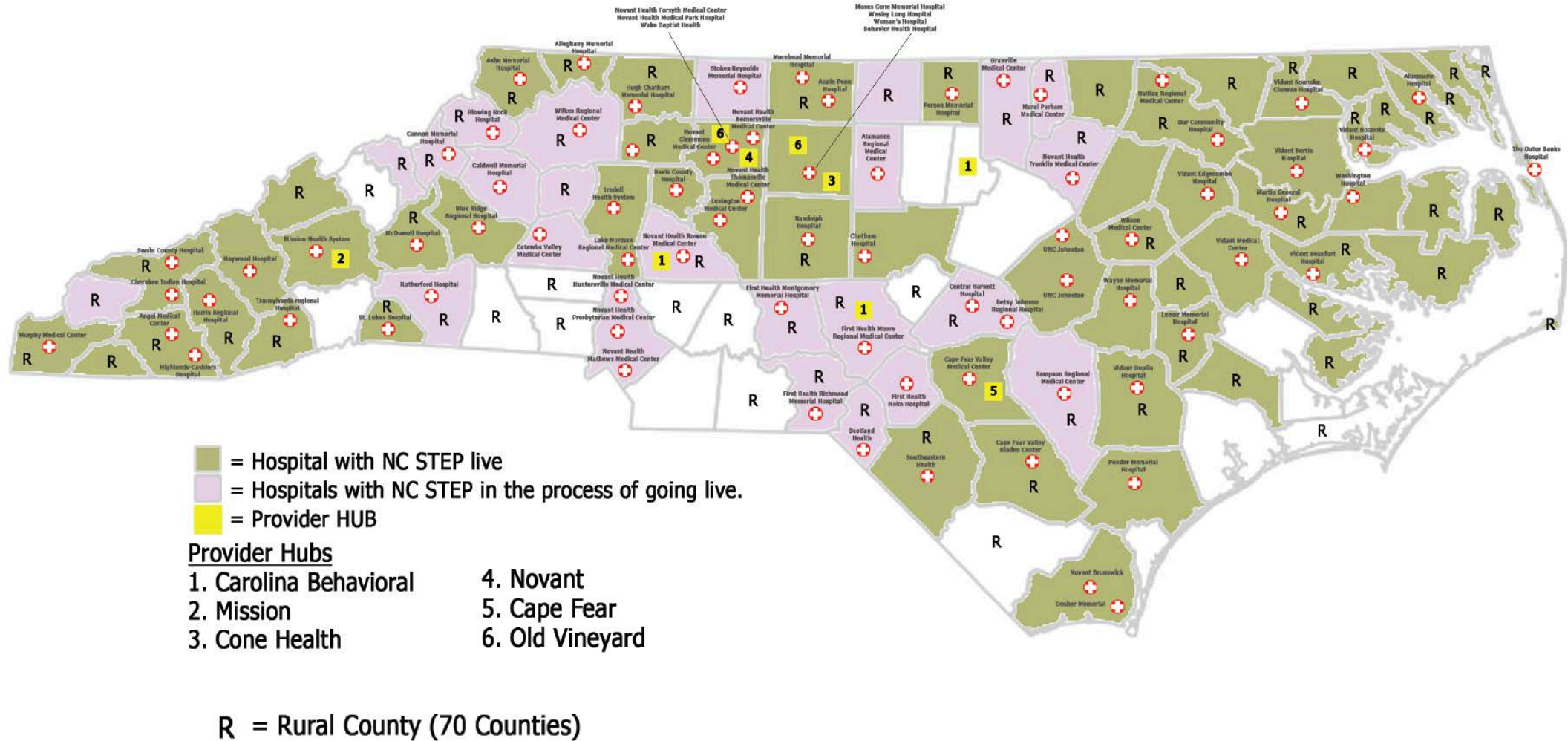
EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2017	TARGET TO BE REACHED BY 06/30/2018	VALUES/MEASURES REACHED AS OF 09/30/2017
11. The rate of "satisfied" or "strongly satisfied" among emergency department physicians participating in the statewide telepsychiatry program.	80%	85%	75%
12. The ratio of overall revenues (billing, subscription fees), exclusive of grant funding, to program costs (exclusive of start-up costs).	0.97:1.00	>1.00:1.00	0.08:1.00

NC-STeP Status as of September 30, 2017

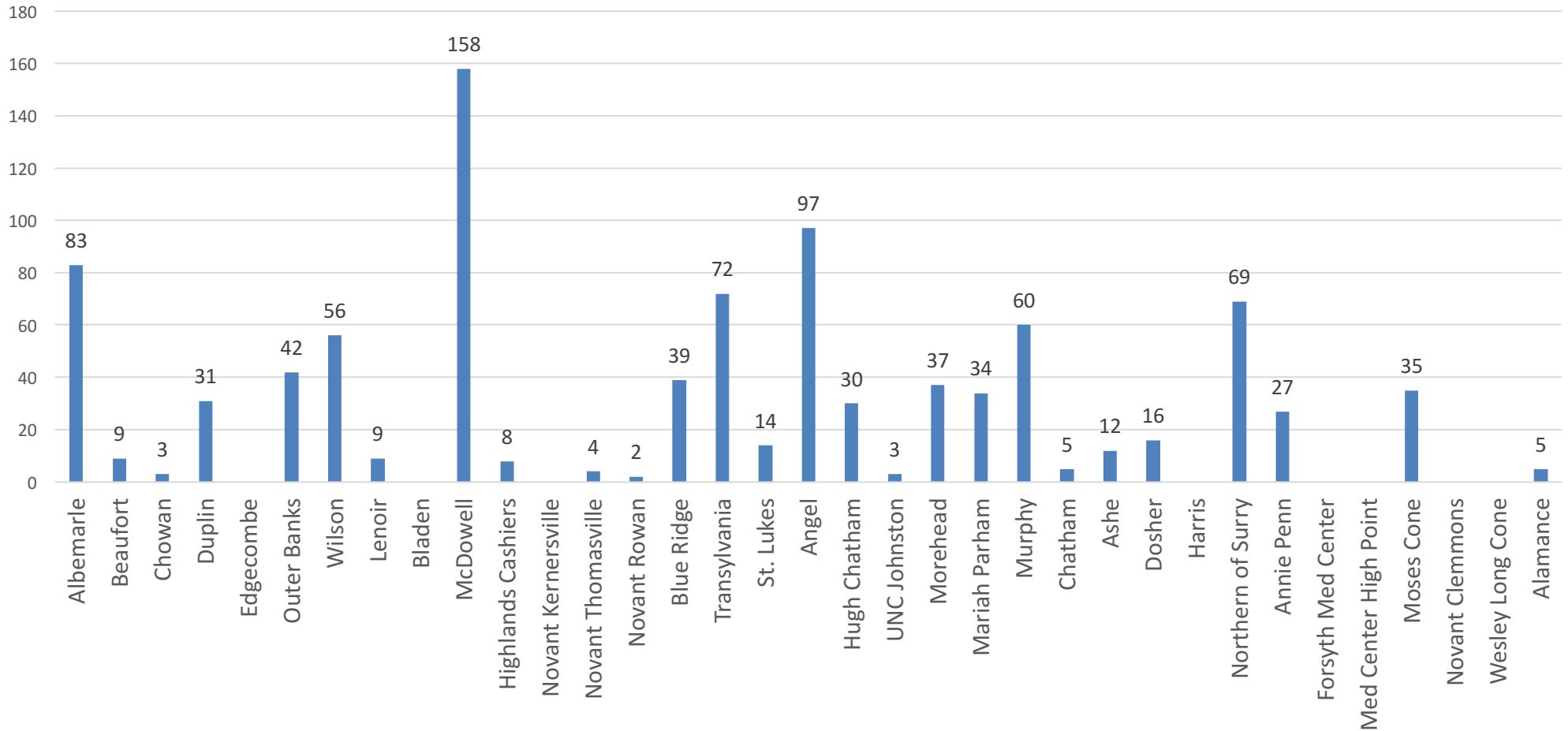
EVALUATION CRITERIA	BASELINE VALUES/MEASURES AS REPORTED ON 03/31/2017	TARGET TO BE REACHED BY 06/30/2018	VALUES/MEASURES REACHED AS OF 09/30/2017
14. Cumulative return on investment to state psychiatric facilities through overturned involuntary commitments.	\$2,138,400	\$5,583,600	<p>\$1,344,600 in this quarter</p> <p>Cumulative total since program inception \$16,410,600</p>



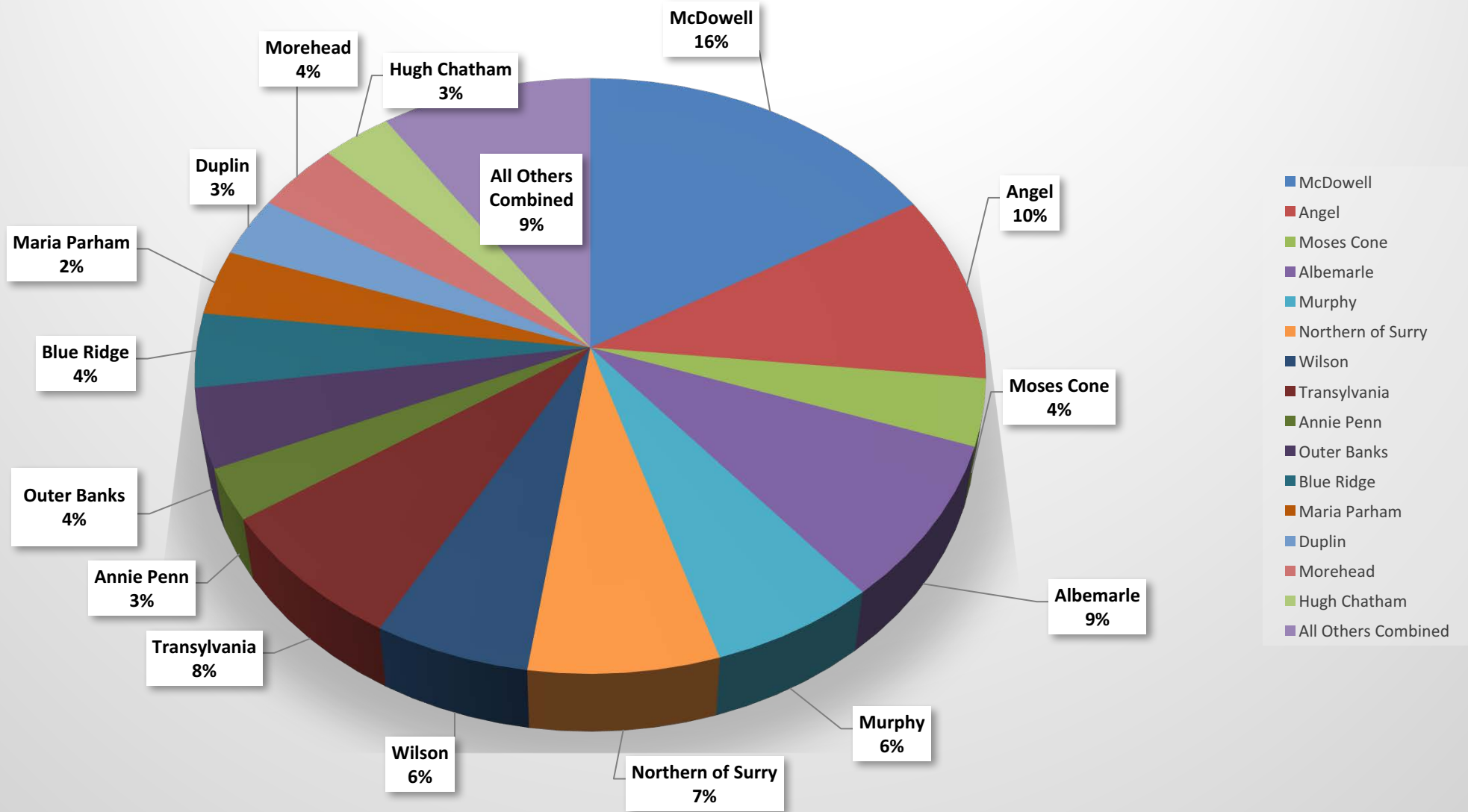
NC-STeP Status as of September 30, 2017



Number of Patients for July - September 2017



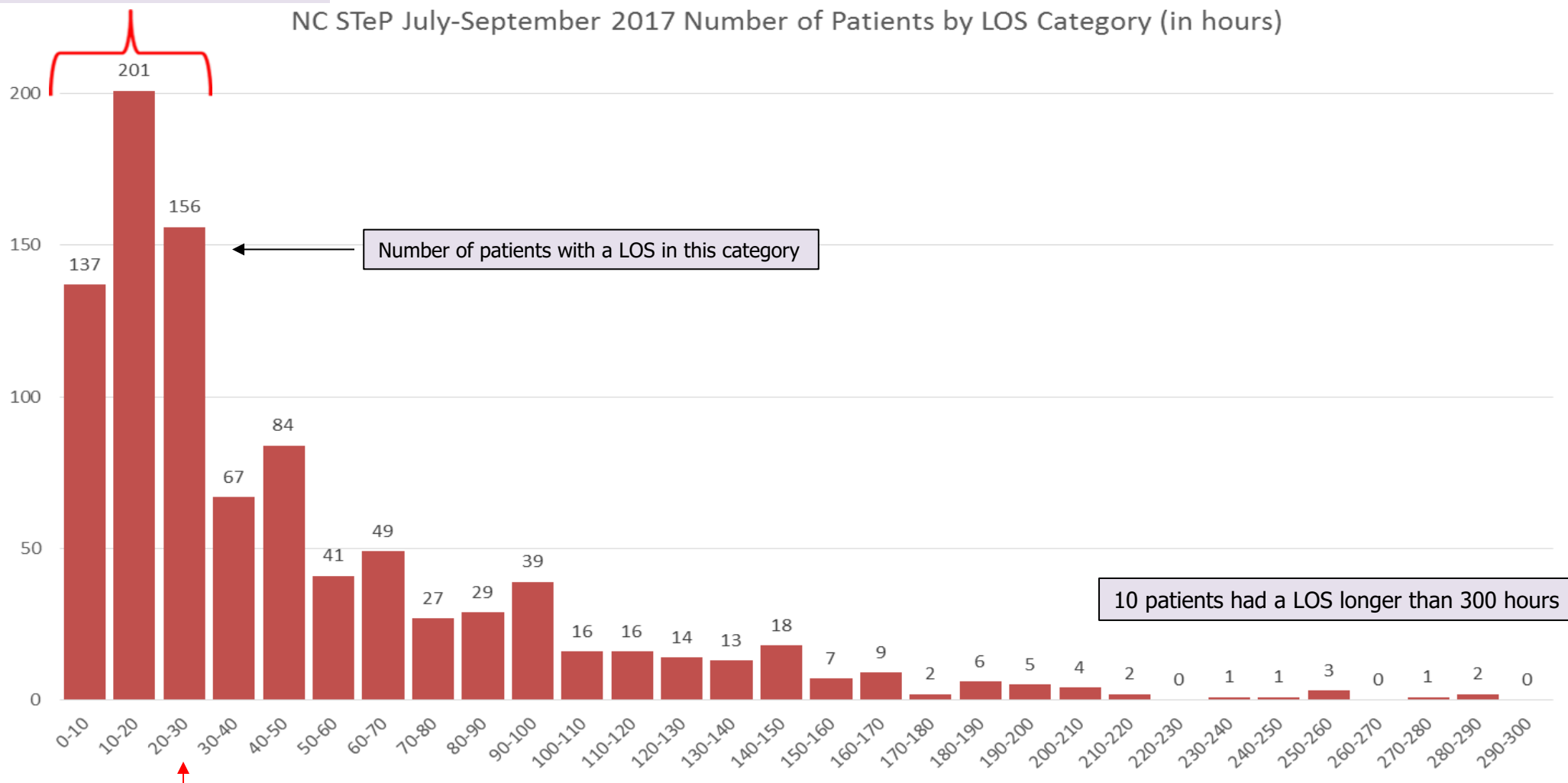
Percent of Use by Hospital July - September 2017 (based on number of patient encounters)



Length of Stay (in hours): July - September 2017

51.4% percent of patients had a LOS of 30 hours or less

NC STeP July-September 2017 Number of Patients by LOS Category (in hours)

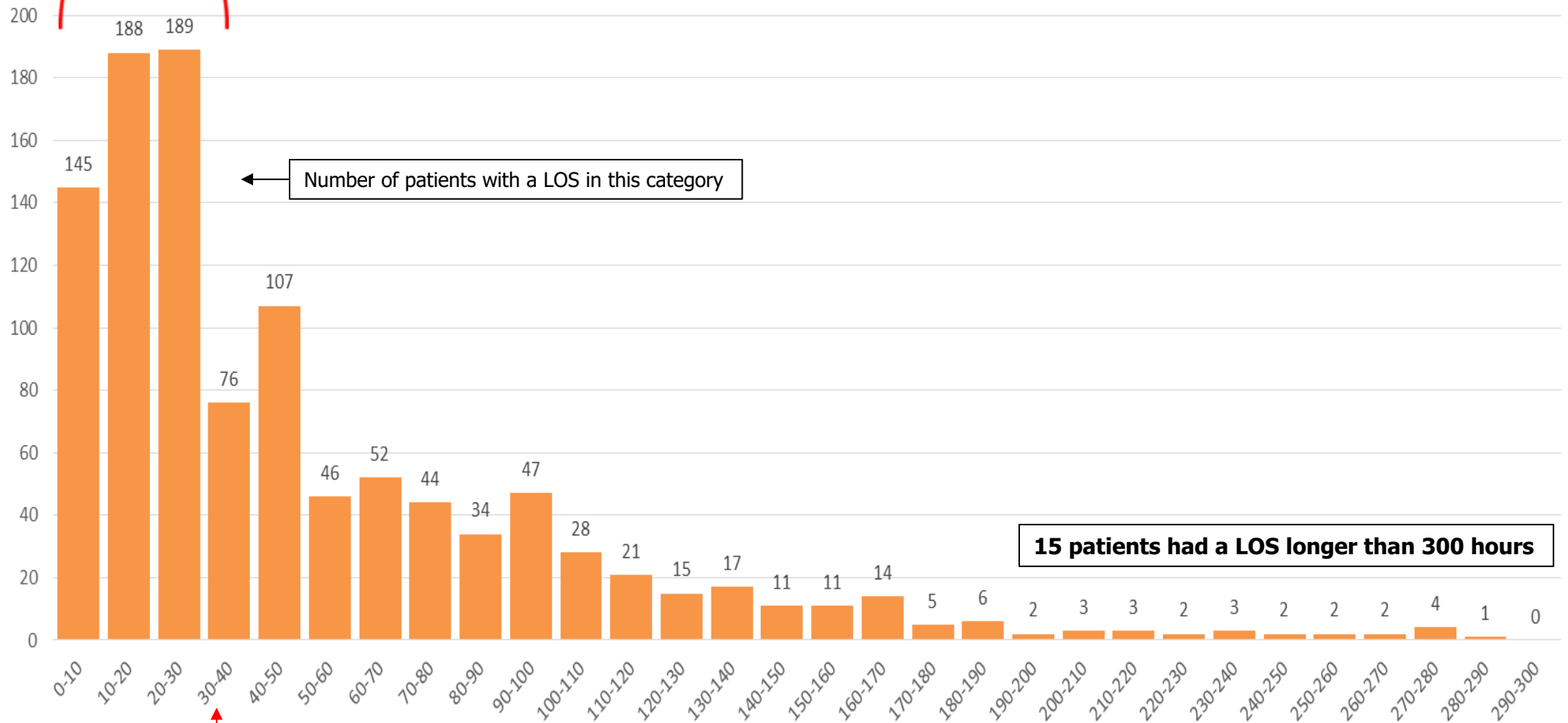


Median Length of Stay for July – Sept 2017 = 28.5 Hours



47.6% percent of patients had a LOS of 30 hours or less

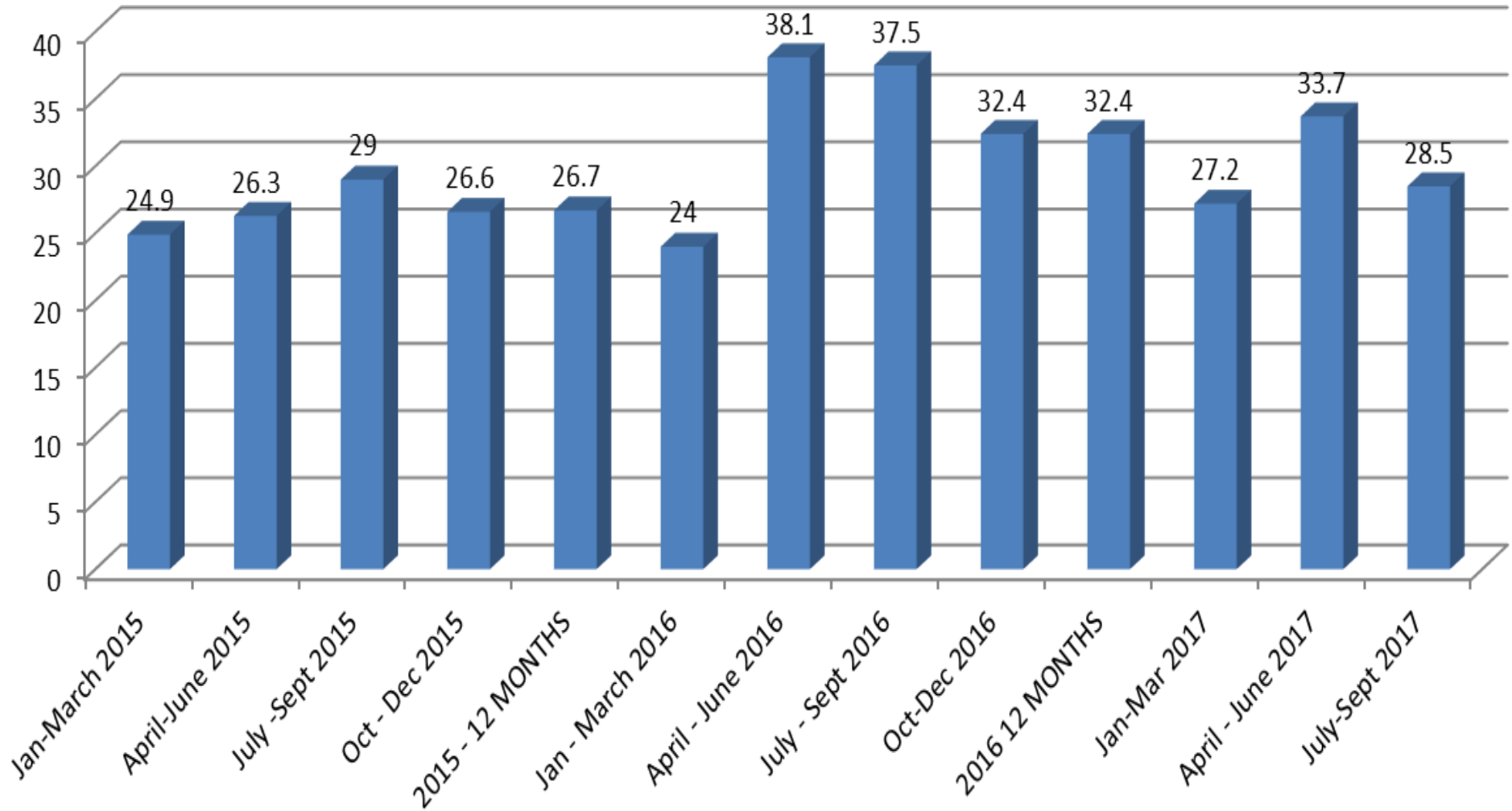
NC STeP April - June 2017 Number of Patients by LOS Category (in hours)



Median Length of Stay for April - June 2017 = 33.7 Hours

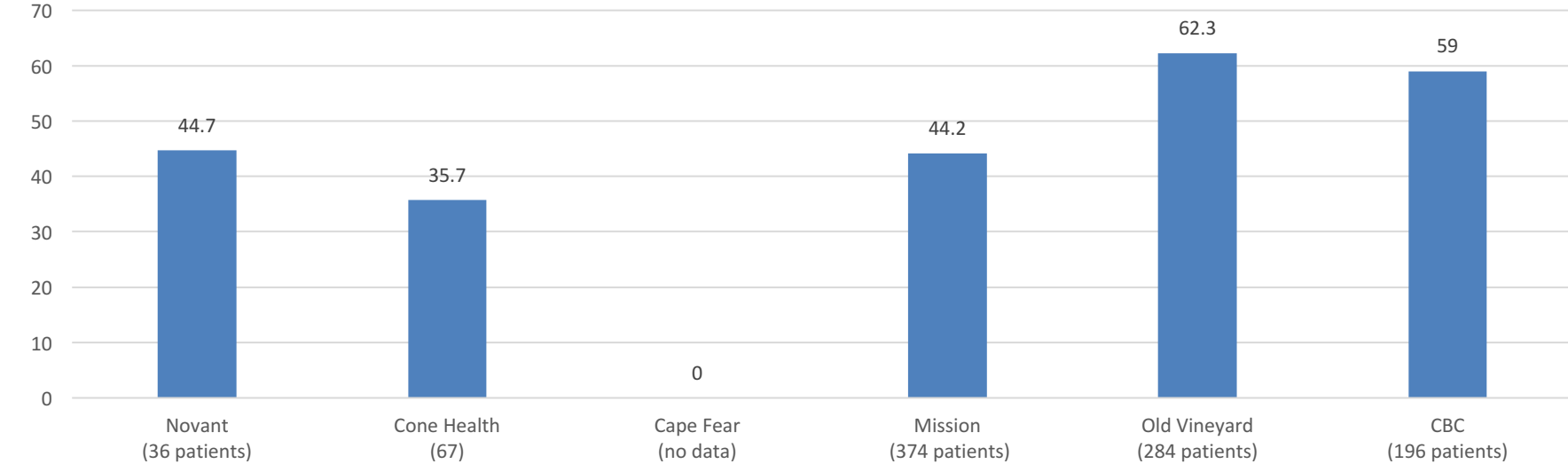


Median Length of Stay in Hours

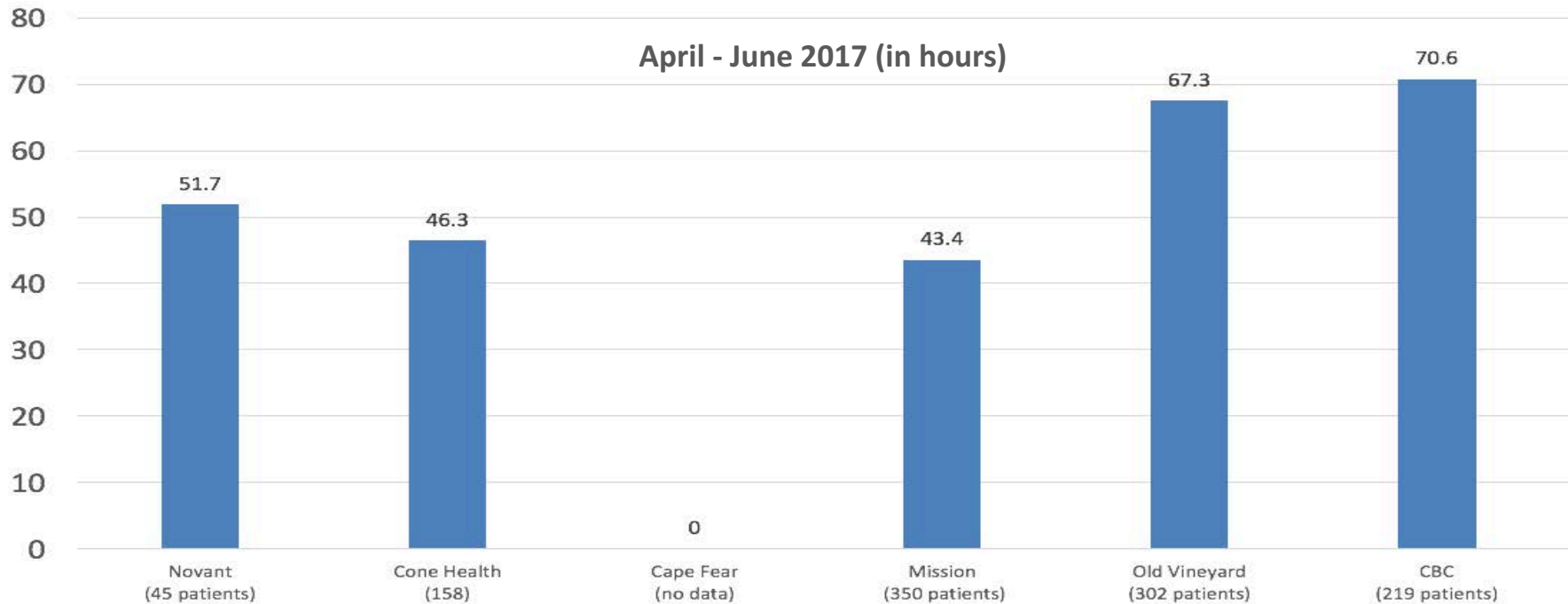


Average Length of Stay by Provider (in hours)

July - September 2017

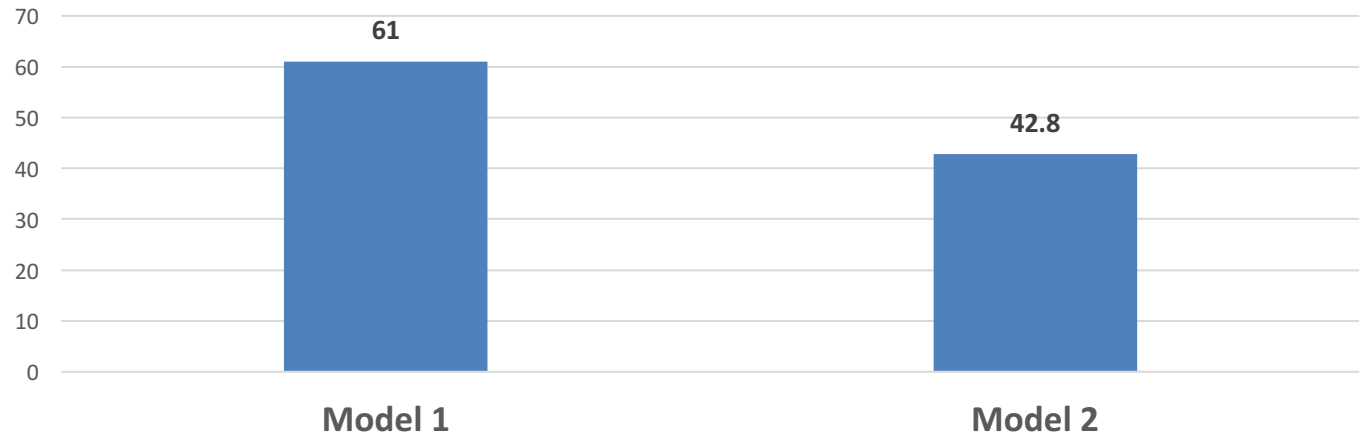


April - June 2017 (in hours)



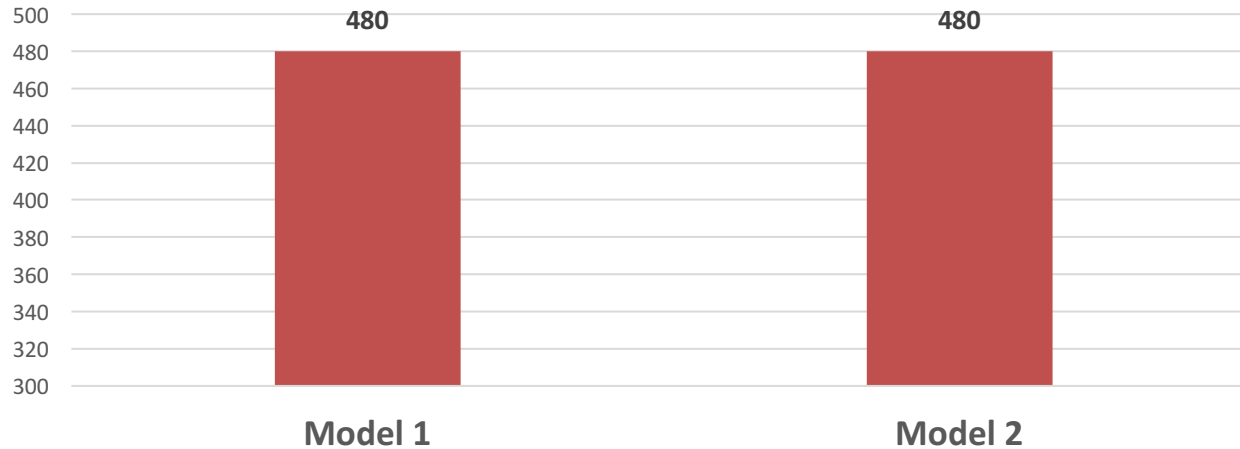
Average LOS (in hours) by Model

July - September 2017

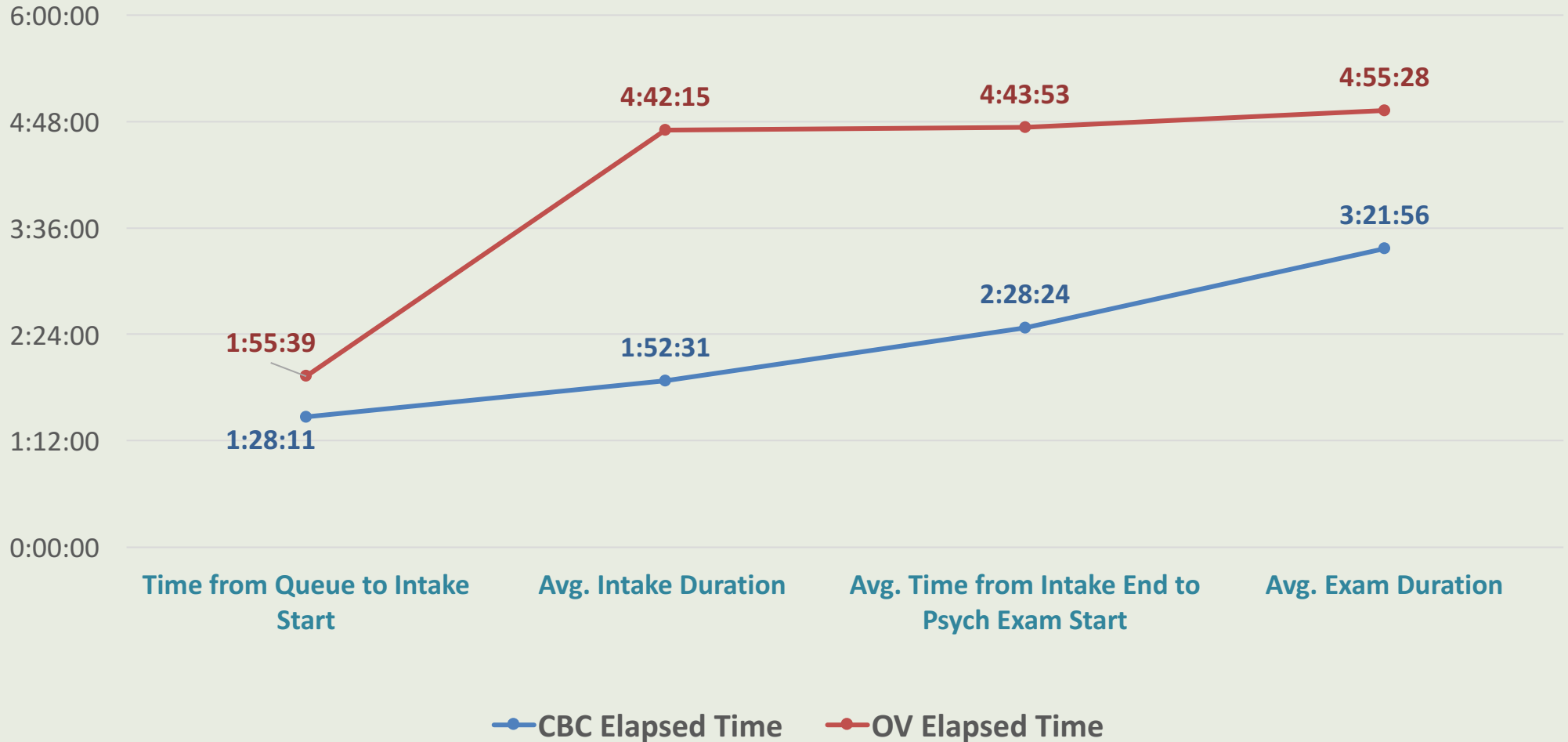


Number of Patients by Model

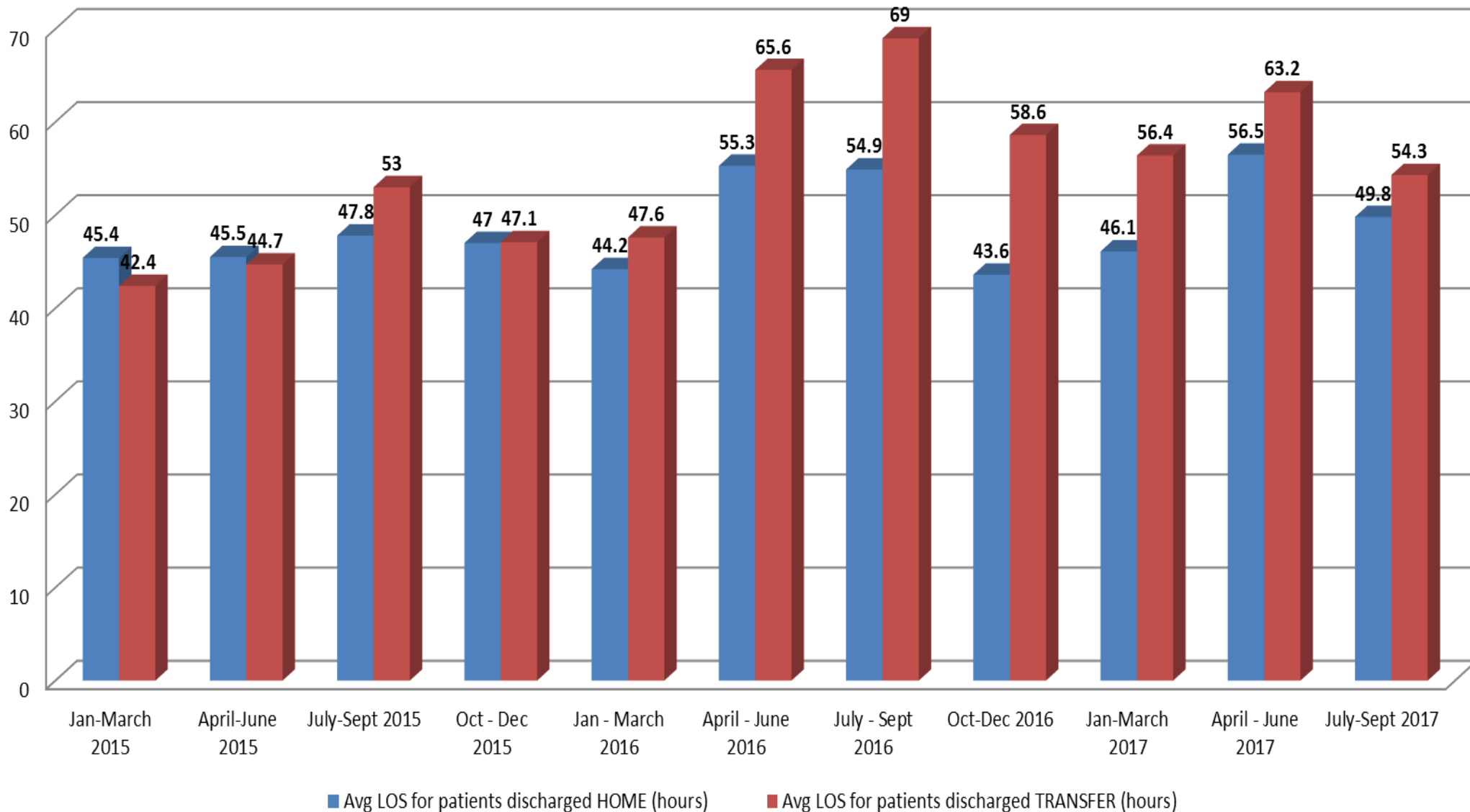
July - September 2017



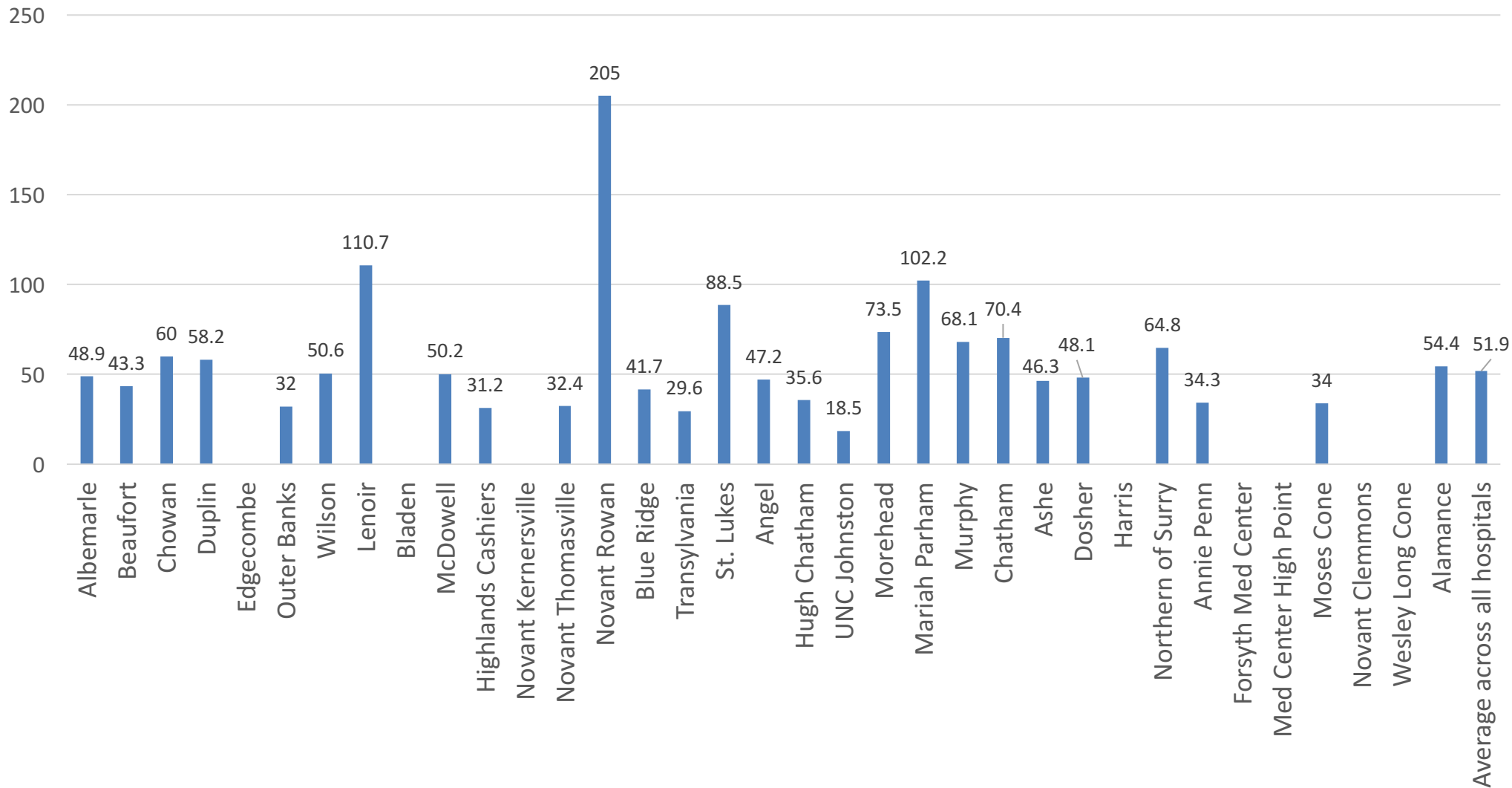
Exam Duration for Model-1 Provider Hubs



Average Length of Stay for Patients Discharged to Home or Transfer

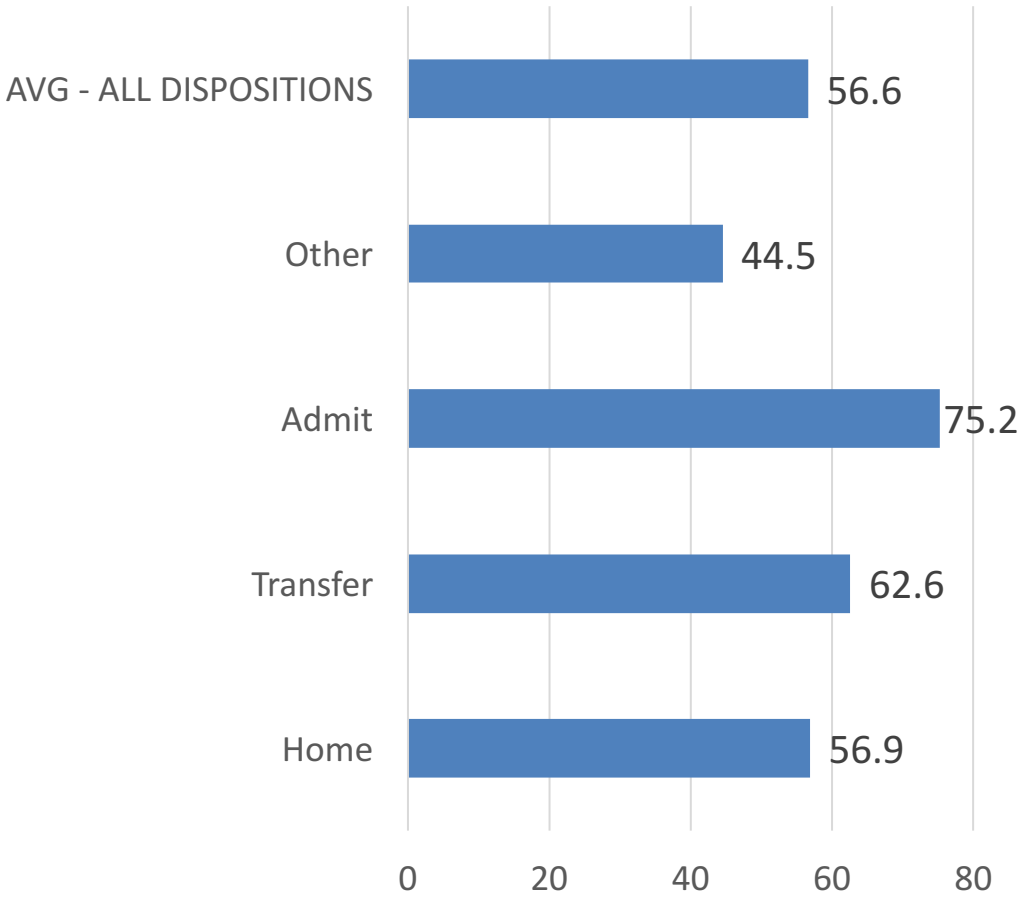


Average Length of Stay (in Hours) by Hospital July - September 2017



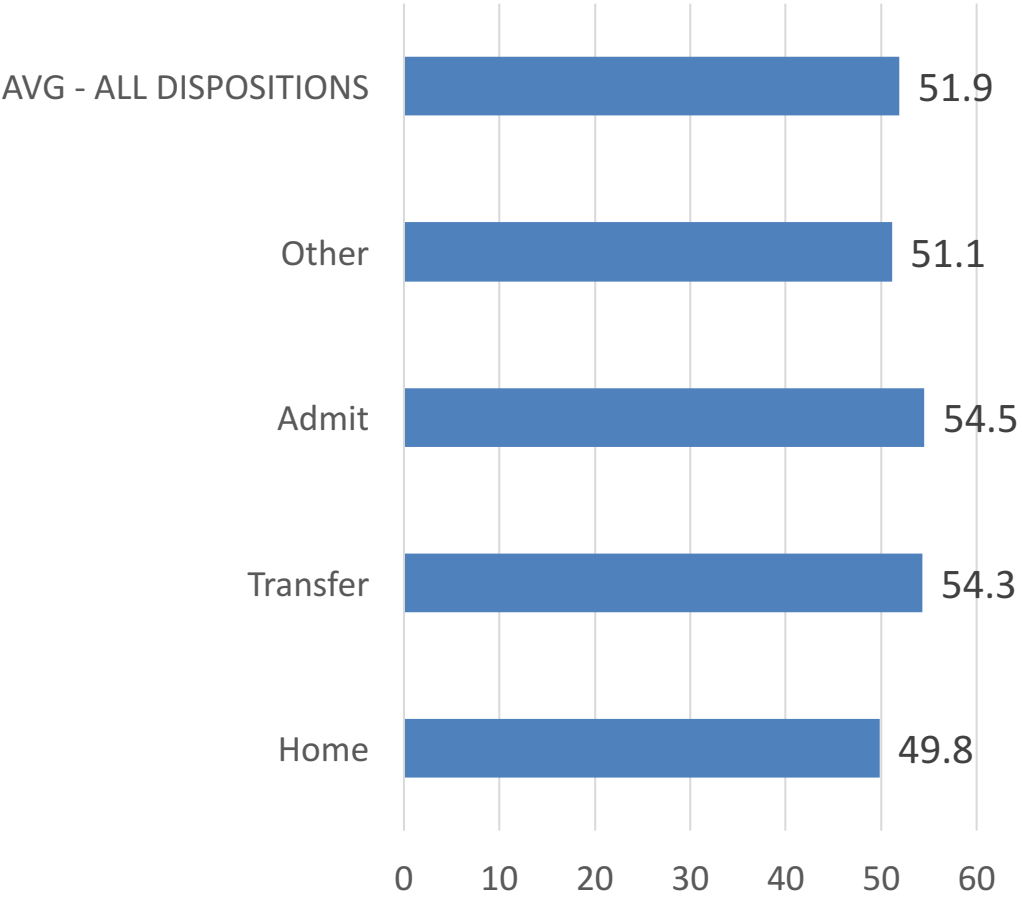
Average LOS by Disposition

April - June 2017 (in hours)

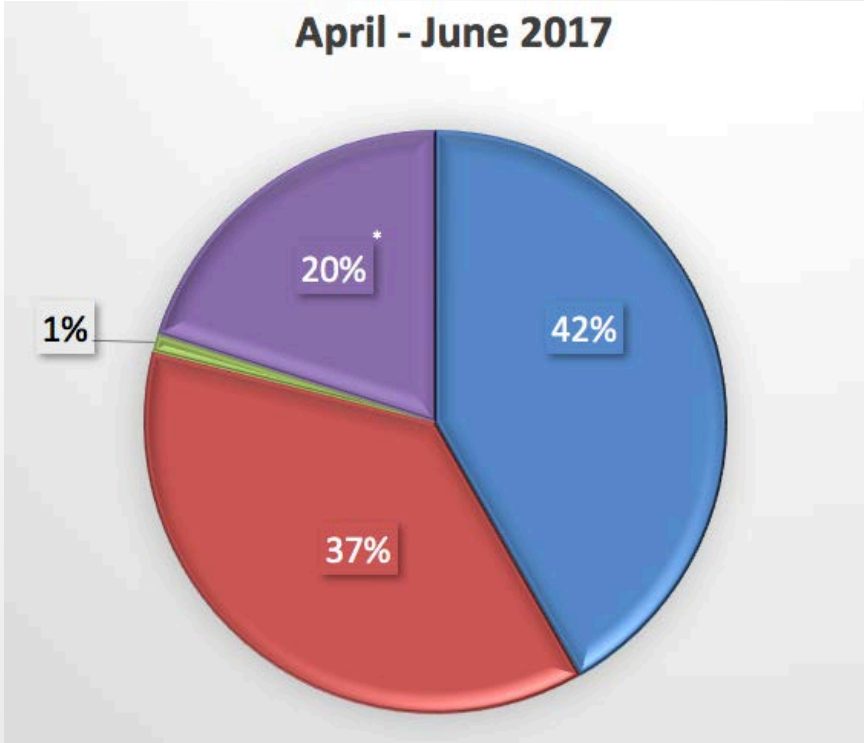
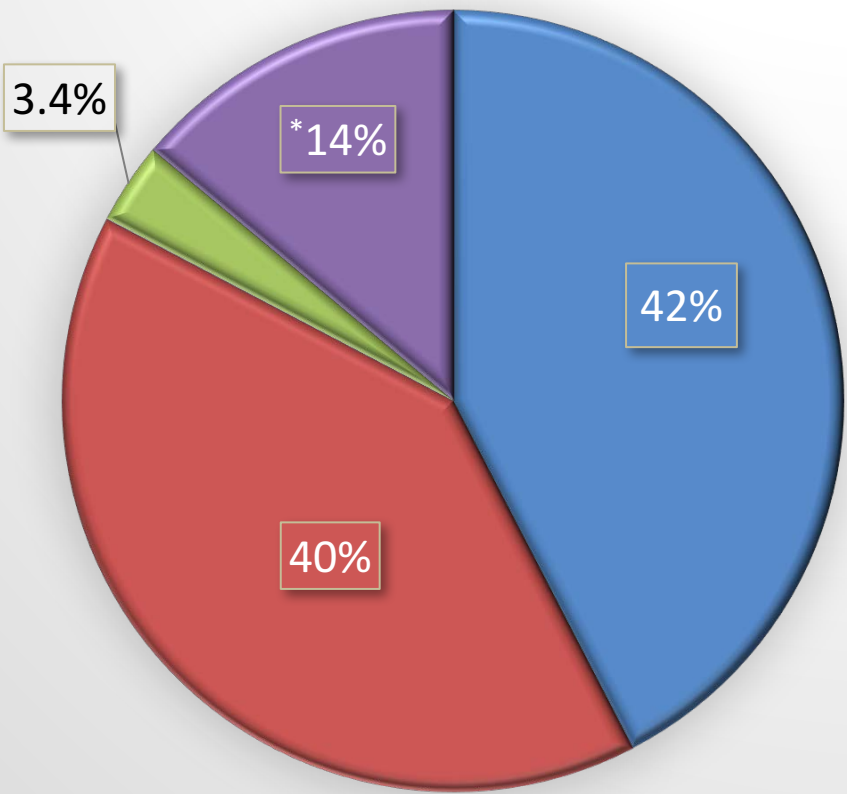


Average LOS by Disposition

July - September 2017 (in hours)



Percent of Patients by Discharge Disposition July - September 2017



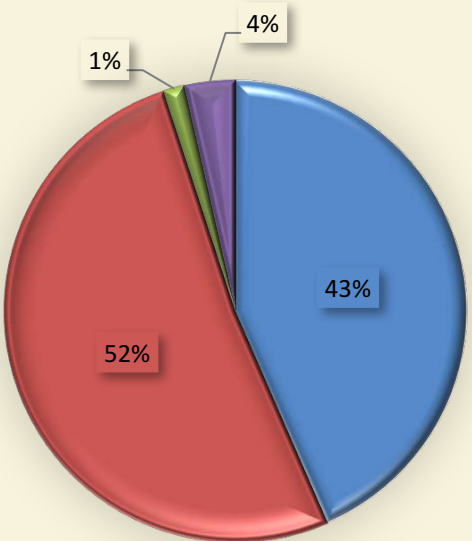
*This category is high because the data from Cone this quarter did not include any discharge disposition information, coded as "unknown" and included in with the "other" category. If taken out, the other category would be a more typical 10.2% and the unknown would be 3.6%.

- Home
- Transfer
- Admit
- Other

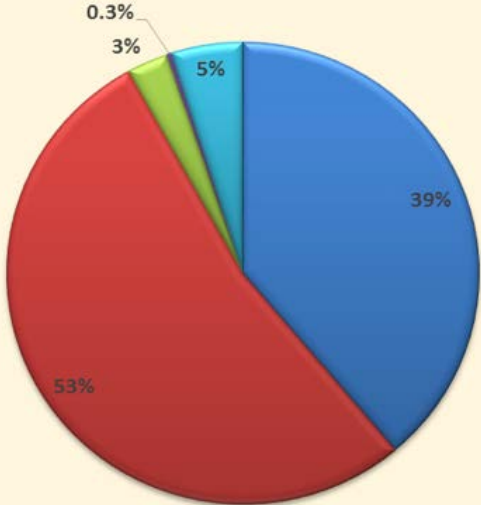
Percent of Patients by Discharge Disposition

- Home
- Transfer
- Admit
- Other

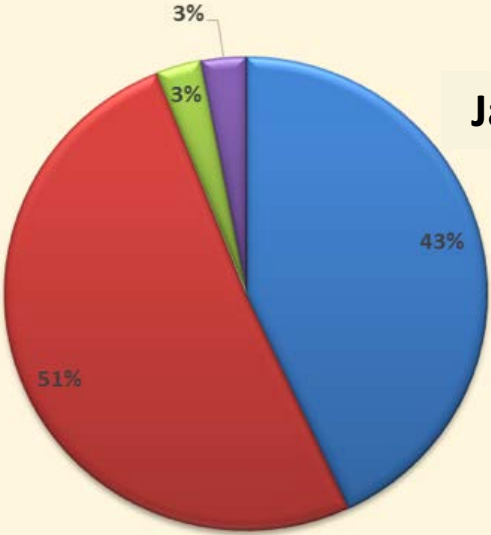
January - March 2017



January – December 2015

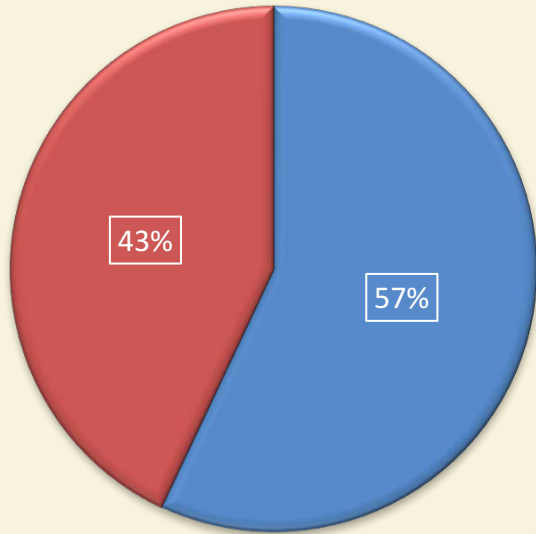


January – December 2016

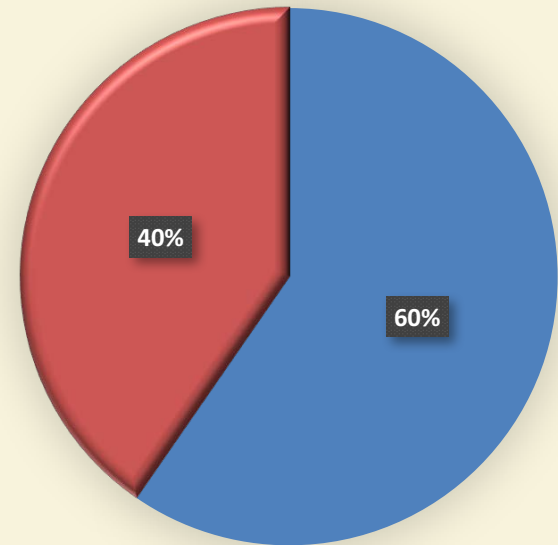


IVCs - By Release Status

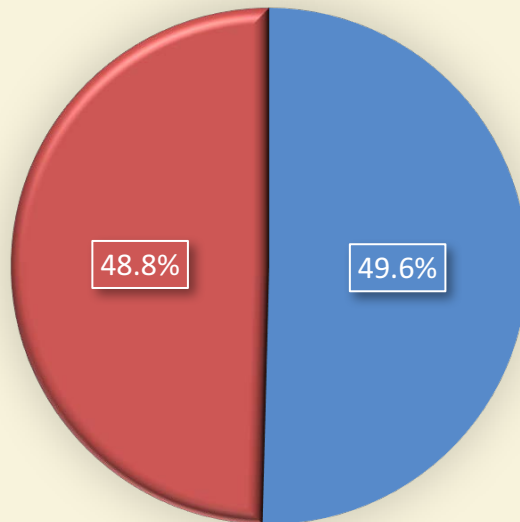
July - September 2017



January - March 2017



April - June 2017

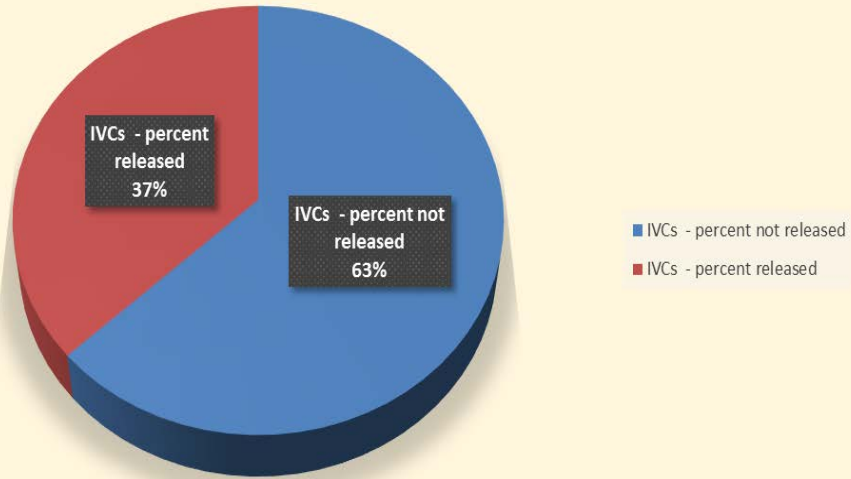


■ IVCs - percent not released

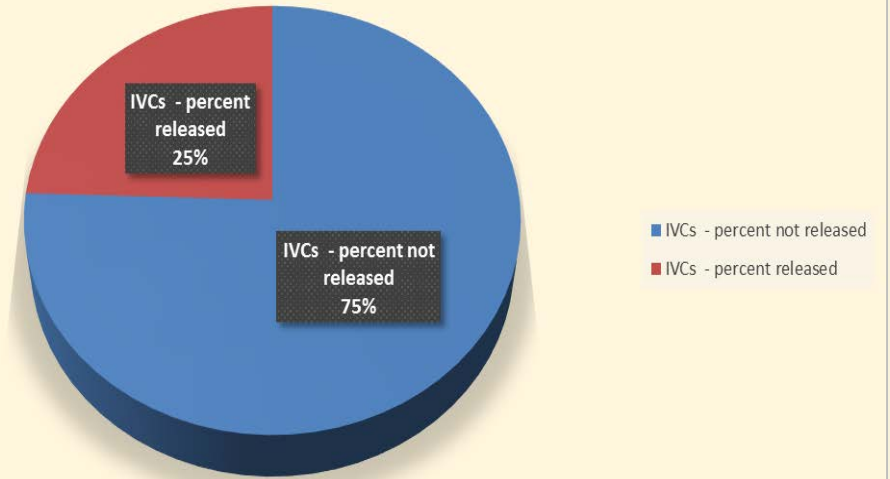
■ IVCs - percent released



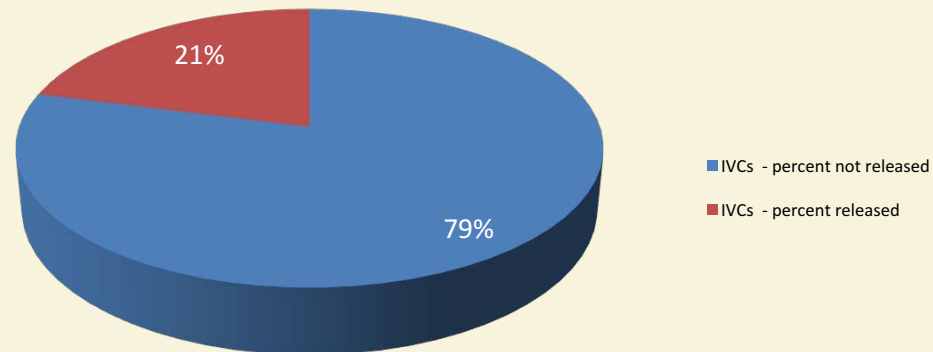
IVCs - By Release Status for January - December
2016



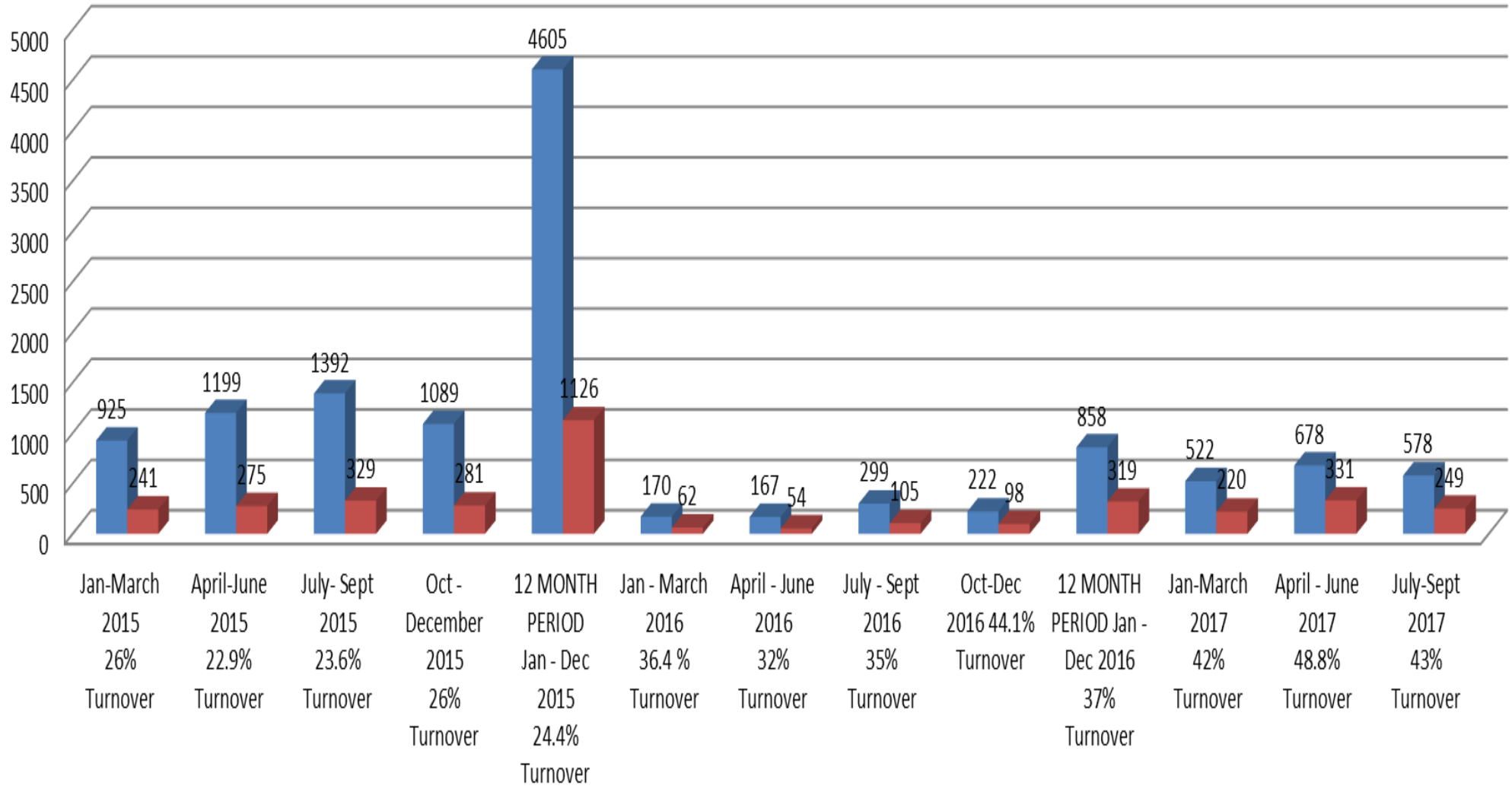
IVCs - By Release Status for January - December
2015



IVCs - By Release Status for January - December
2014



NC STeP: Number of IVCs for Participating Hospitals by Quarter

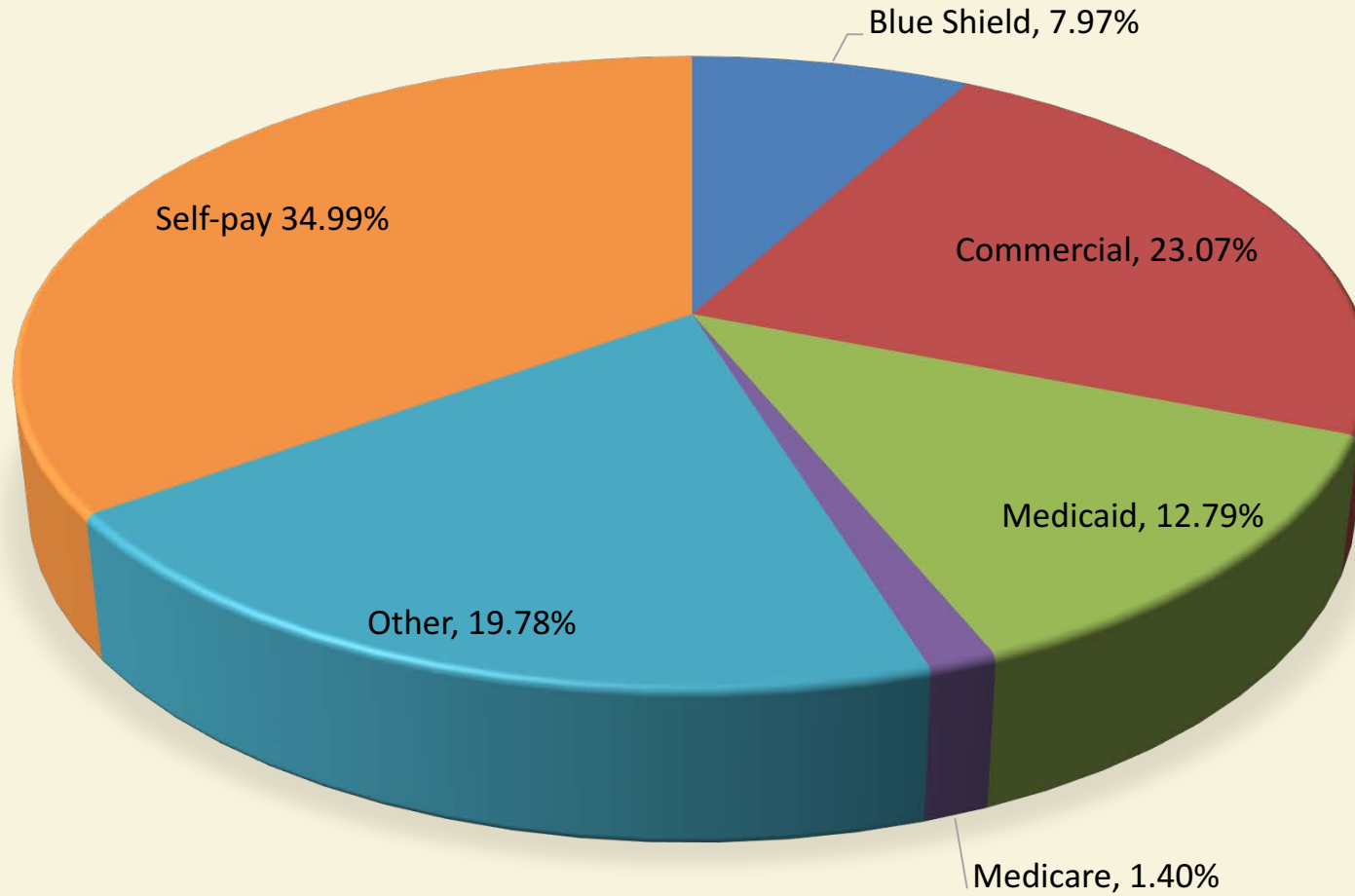


■ Number of IVCs
 ■ Number of IVCs Turned Over



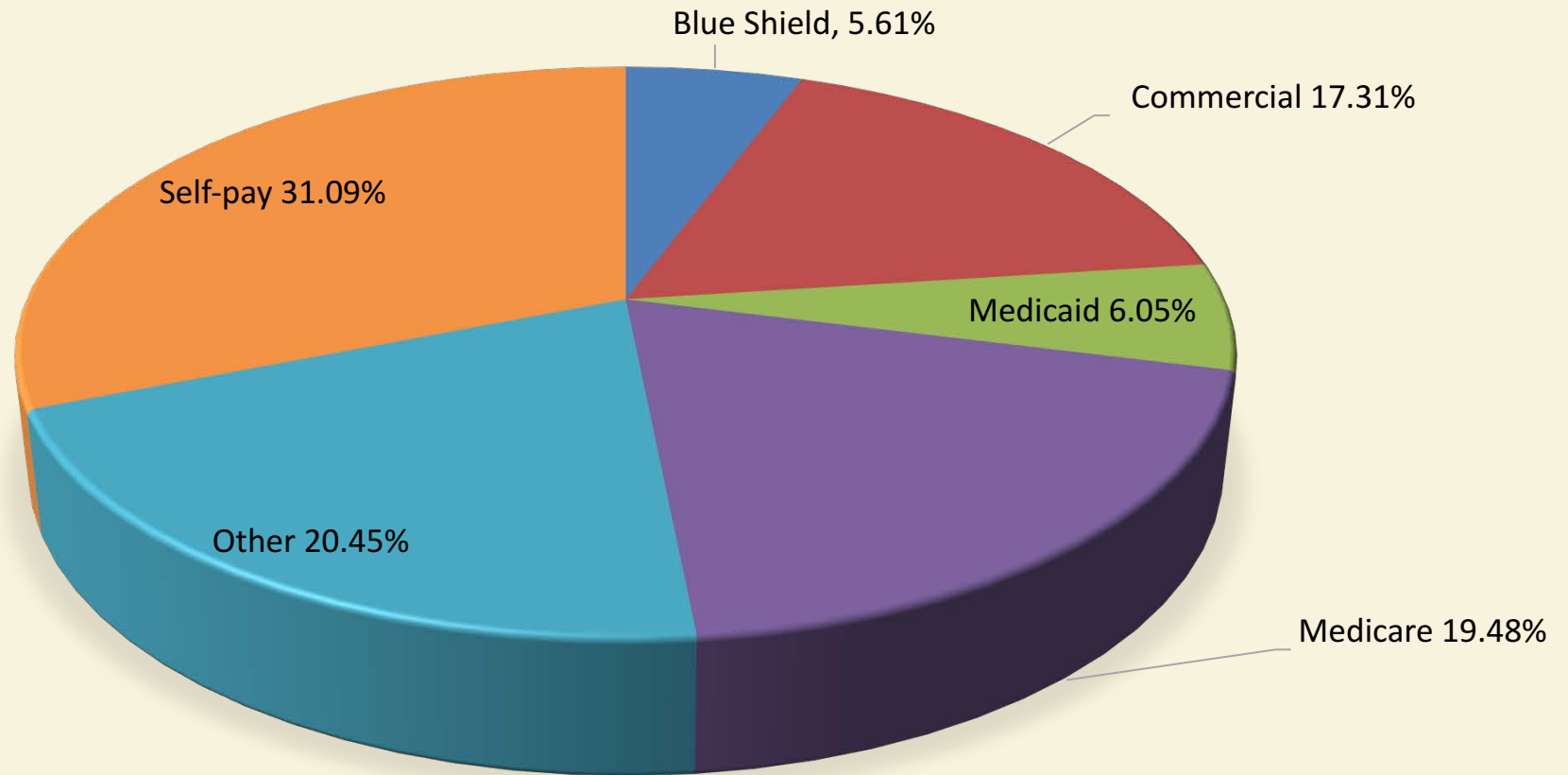
NC-STeP Charge Mix

FYTD 2018- Quarter 1



NC-STeP Charge Mix – Project to Date

Service Dates 10/01/2013 – 09/30/2017



Satisfaction Survey Results

Satisfaction surveys were conducted in September 2017 with 9 groups

- Invitations to participate were sent via electronic mail
- Surveys were completed online via Qualtrics software
- Each group was given a different survey (with different questions) based on their role in the telepsychiatry program

Survey Groups and N

- | | |
|---|----------------|
| • Model 1 Emergency Department Physicians | 6 responded |
| • Model 1 Emergency Department Staff | 30 responded |
| • Model 1 Provider Psychiatrists | 9 responded |
| • Model 1 Psychiatric Intake Specialists | 8 responded |
| • Model 1 Hospital CEOs | 7 responded |
| • Model 2 Emergency Department Physicians | 2 responded |
| • Model 2 Emergency Department Staff | 4 responded |
| • Model 2 Provider Psychiatrists | 2 responded |
| • Model 2 Hospital CEOs | none responded |

For each group, one summary question was selected for an overall “satisfaction” rate.

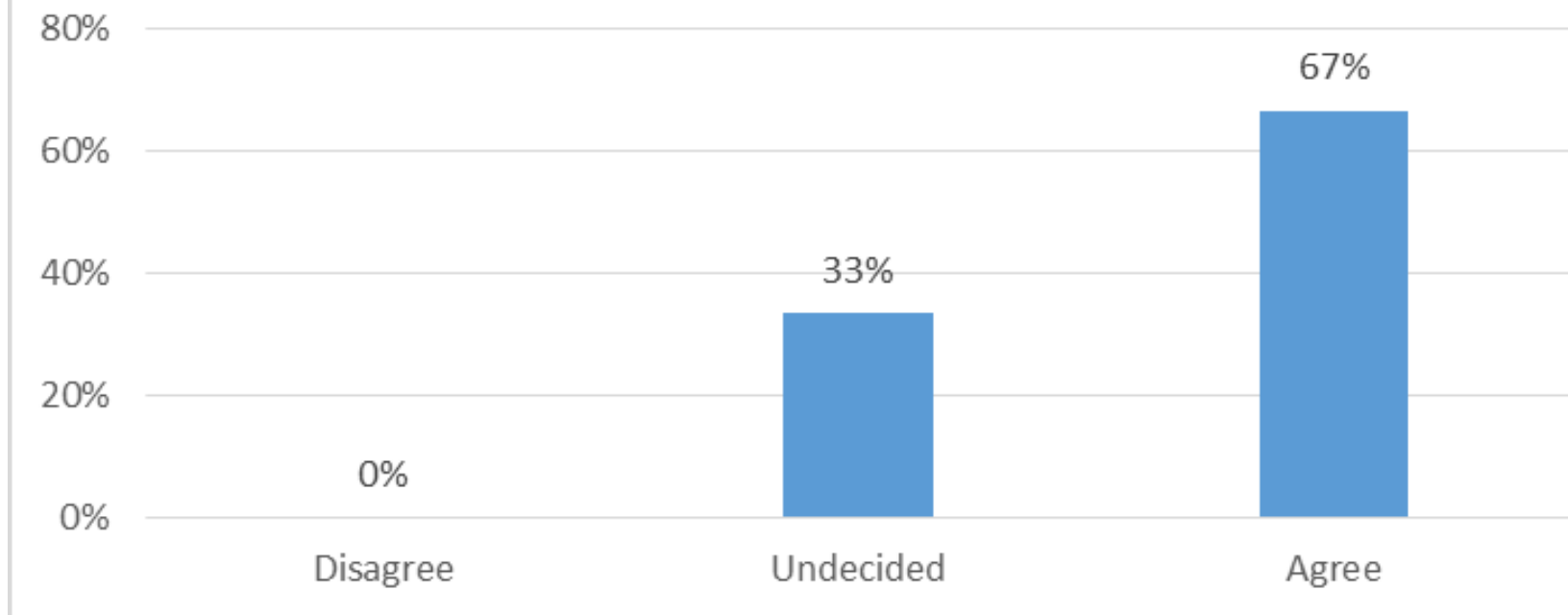
The overall satisfaction rate was 79%.



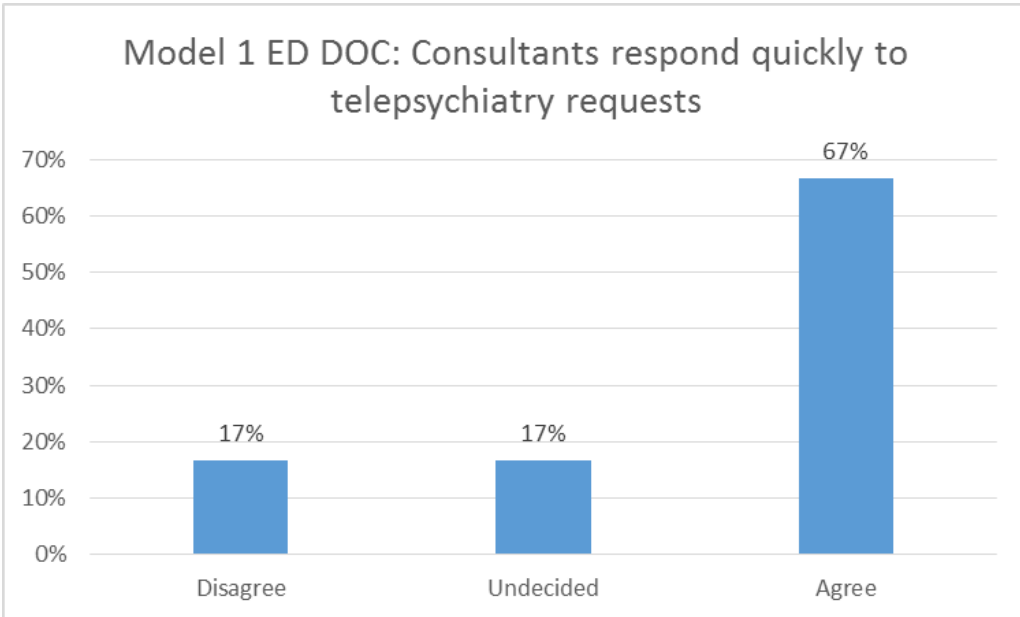
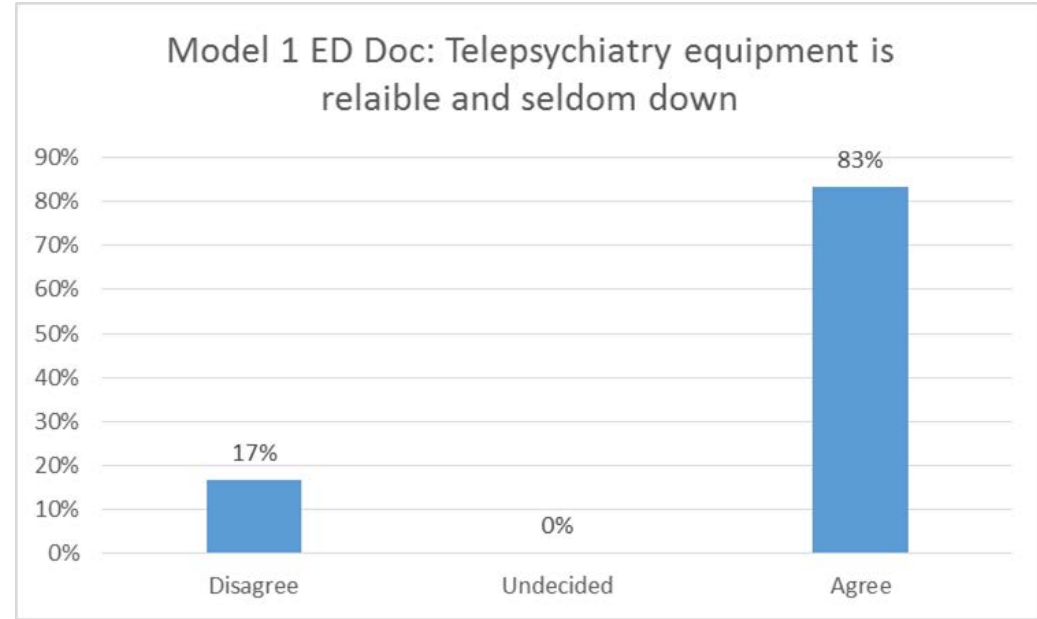
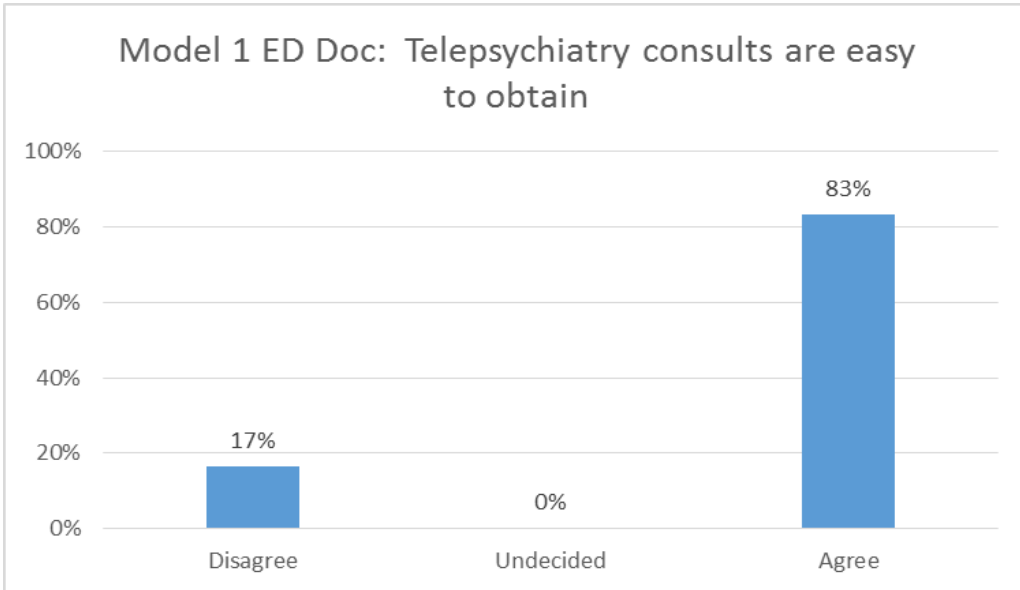
Model 1 Hospital ED Physicians Results

Model 1 ED Doc: Telepsych consults have improved the quality of care for mental health and substance abuse patients in the ED

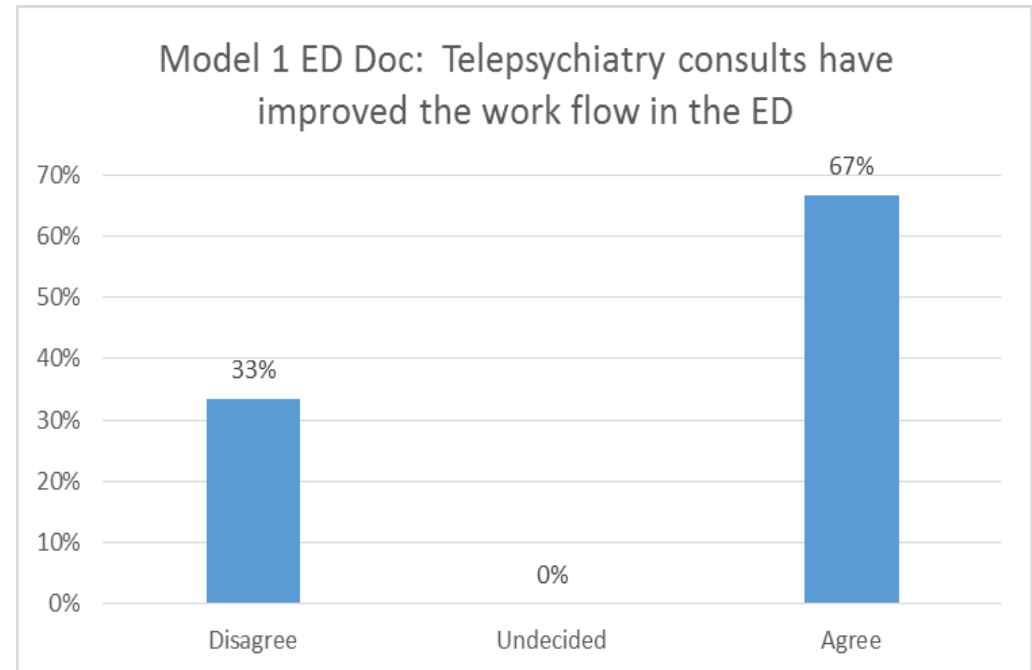
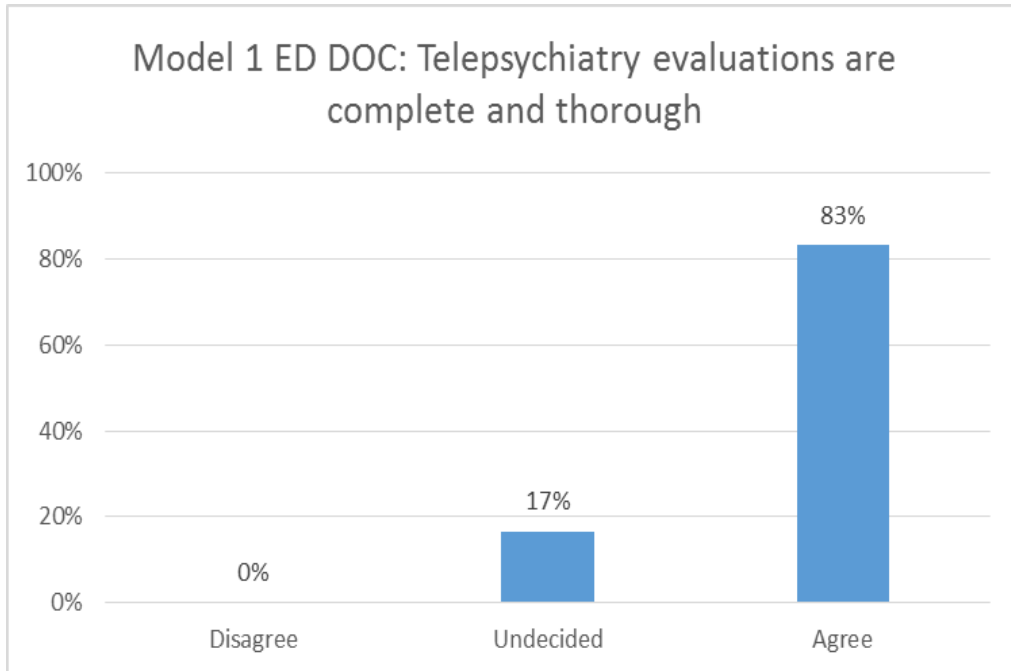
**this question used to measure overall satisfaction



Model 1 Hospital ED Physicians Results



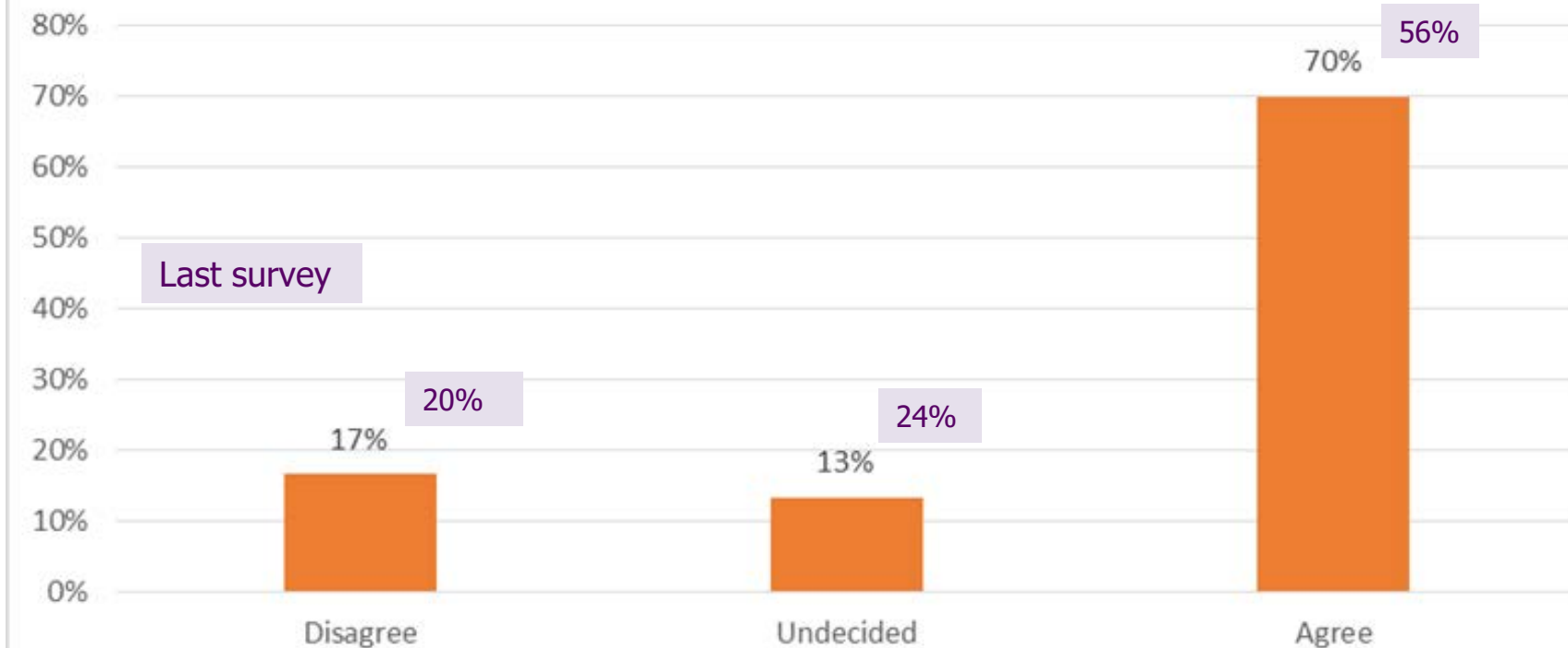
Model 1 Hospital ED Physicians Results



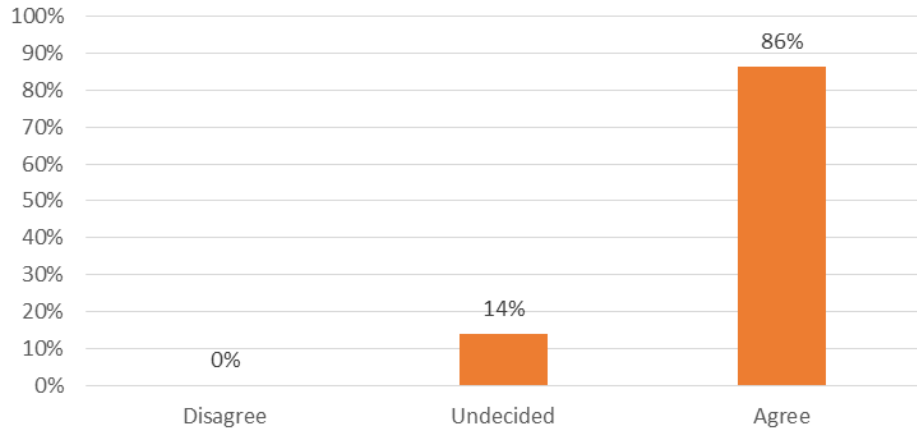
Model 1 Hospital ED Staff results: "The program has improved patient care in our ED."

Model 1 ED Staff: Telepsychiatry consults have improved patient care in our ED

**this question used to measure overall satisfaction

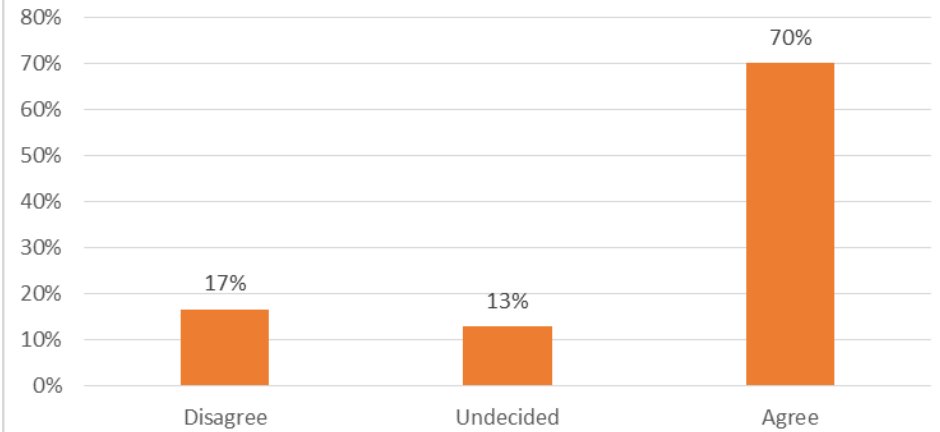


Model 1 ED Staff: The telepsychiatry cart is easy to use



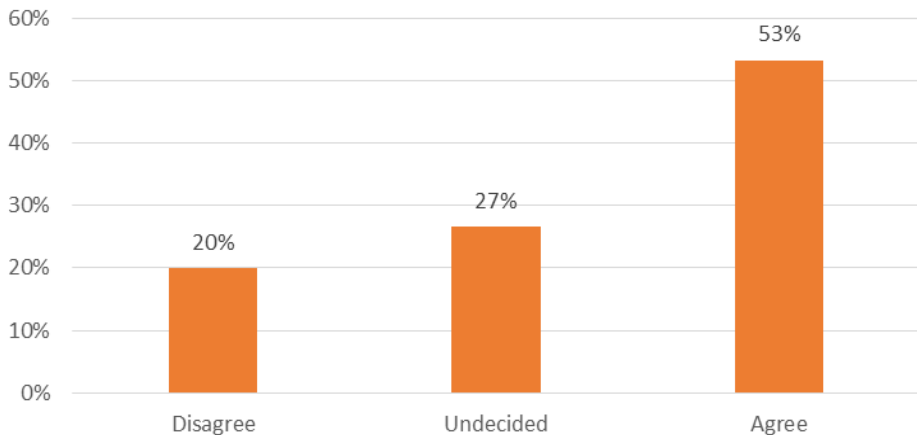
Last survey 69%

Model 1 ED Staff: I received adequate training/instruction preparing me to use the cart

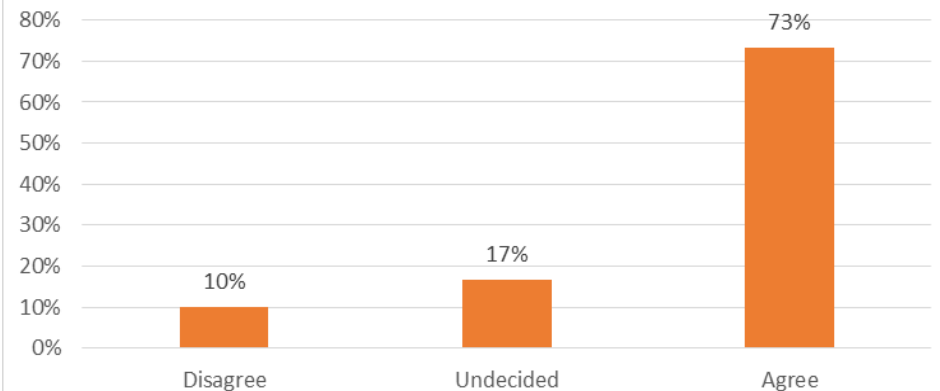


Last survey 61%

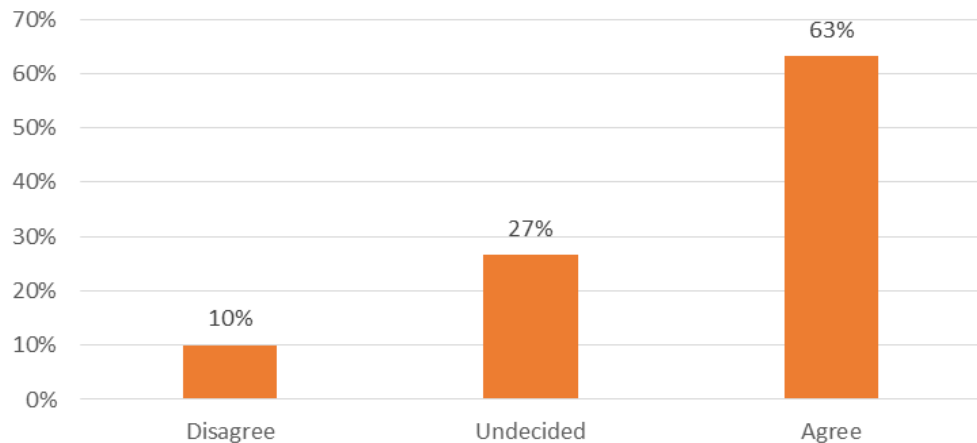
Model 1 ED Staff: I can do simple trouble shooting when the cart does not work



Model 1 ED Staff: The cart system works well without static, delays in transmission, or limits of picture or audio

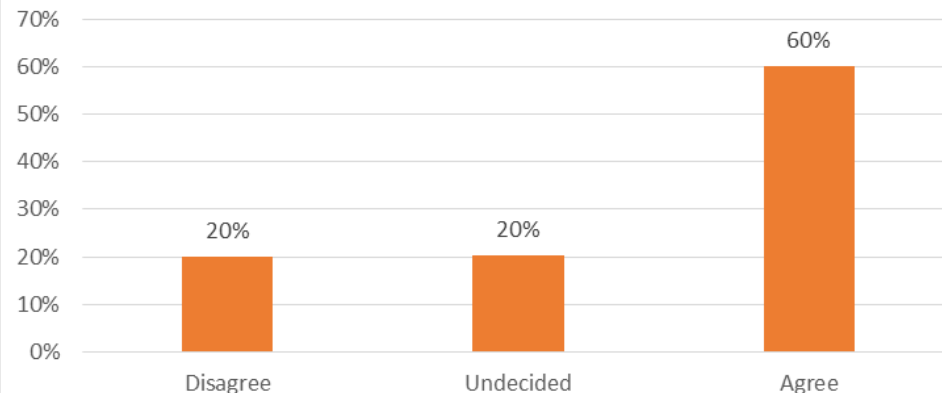


Model 1 ED Staff: Assisting in telepsychiatry consults is an efficient use of my time



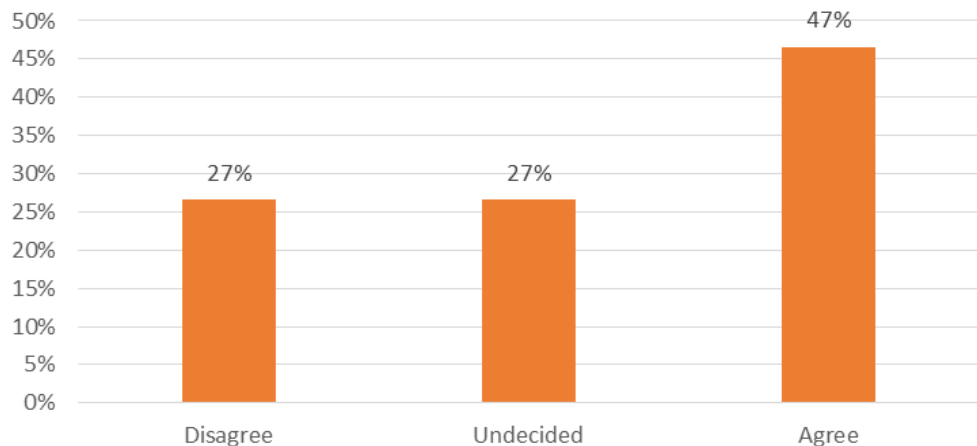
Last survey 48%

Model 1 ED Staff: The portal system of requesting the consultation is straight forward to use



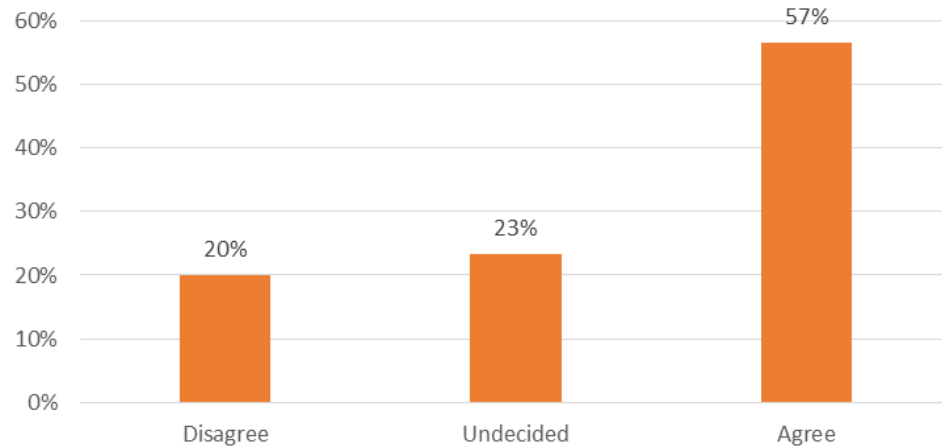
Last survey 52%; survey before 15%

Model 1 ED Staff: The portal system works well without excessive delays or downtime



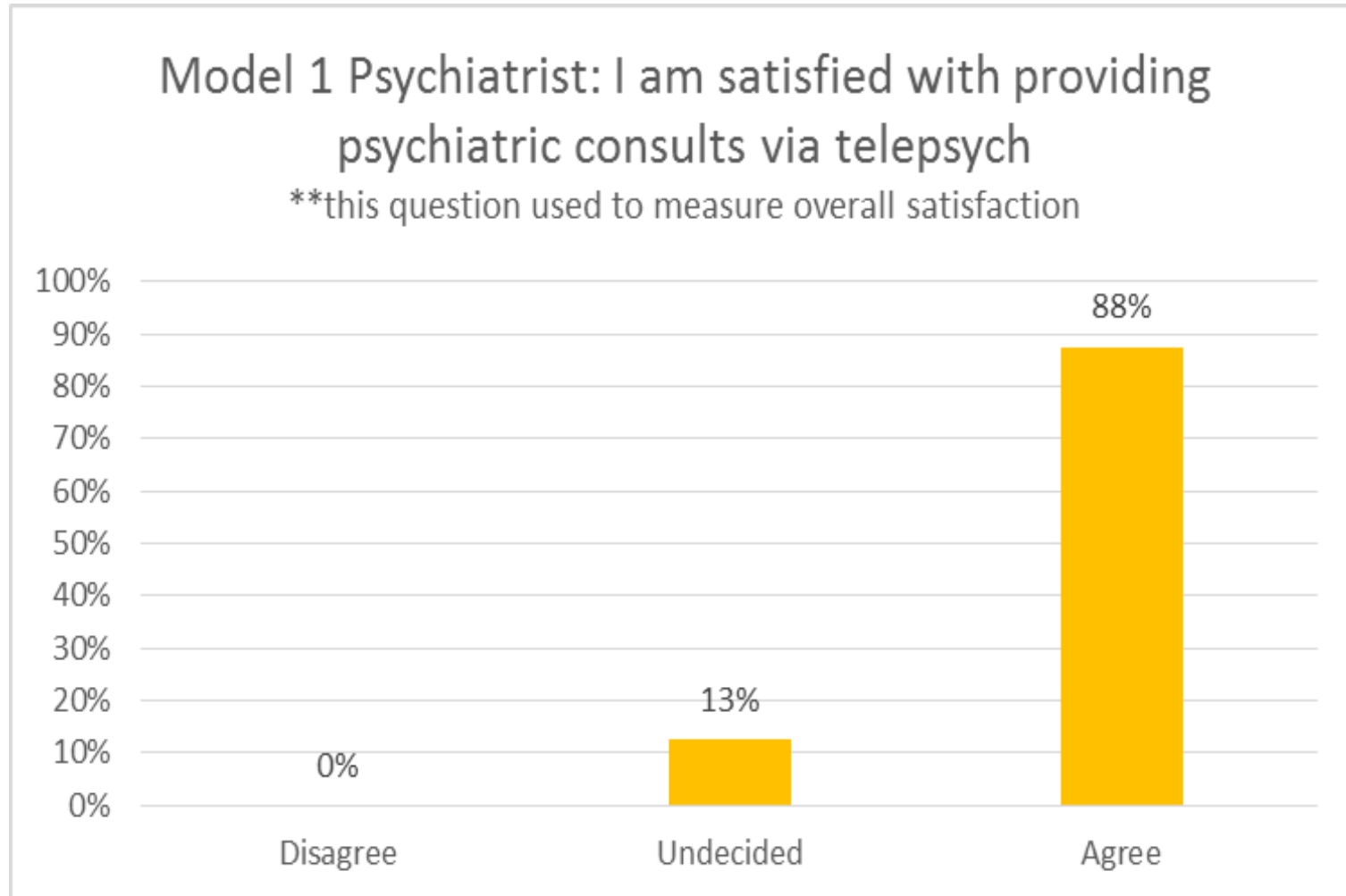
Last survey 54%

Model 1 ED Staff: I received adequate training preparing me to use the portal

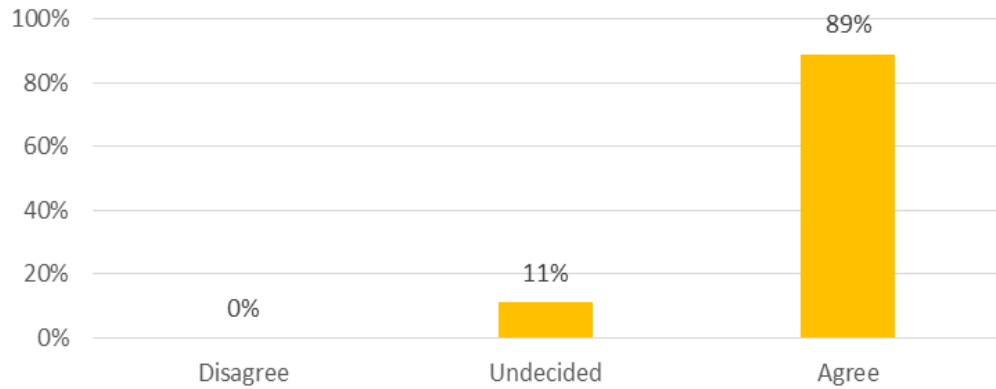


Model 1 Provider Psychiatrist Results

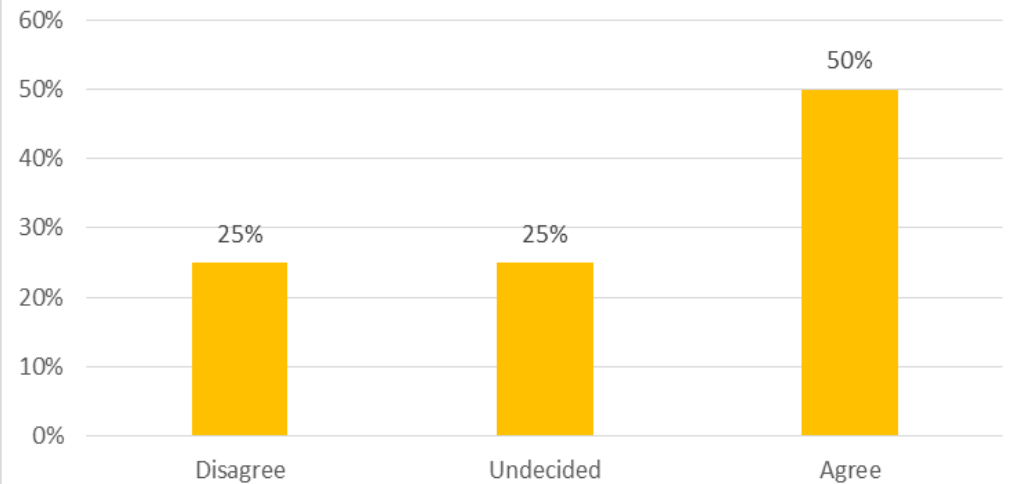
“I am satisfied with providing psychiatric consults via telepsychiatry”



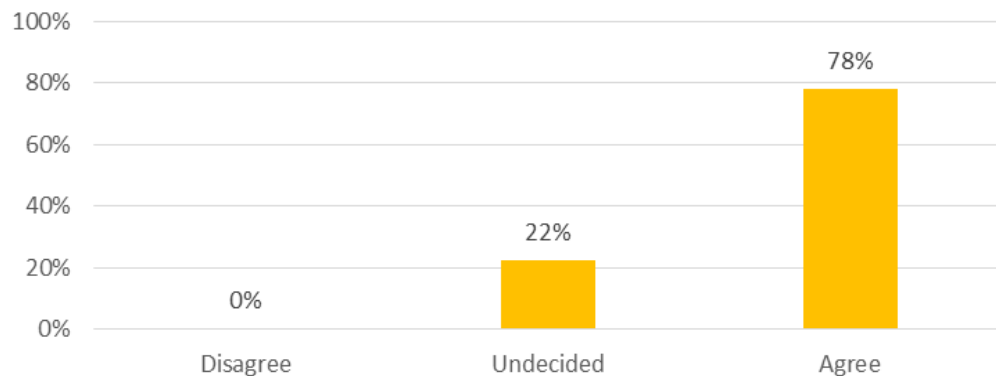
Model 1 Psychiatrist: Providing telepsych services is an effective and efficient way of assessing and treating patients with mental health/substance abuse issues



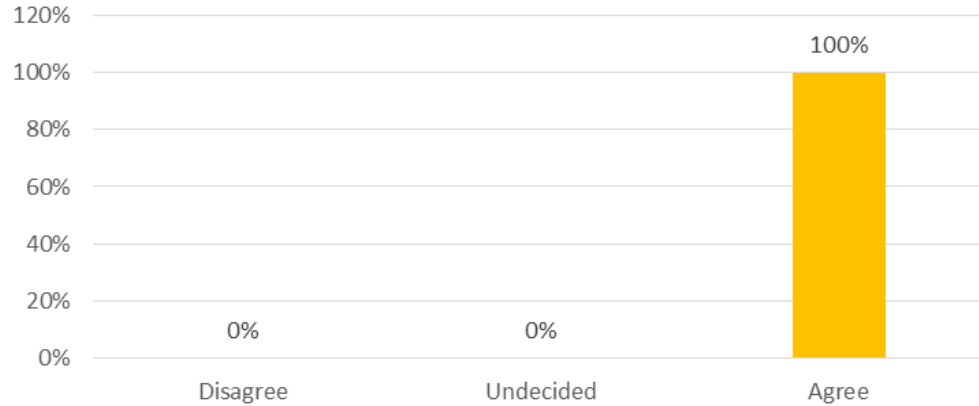
Model 1 Psychiatrist: The portal system works well without excessive delays or downtime



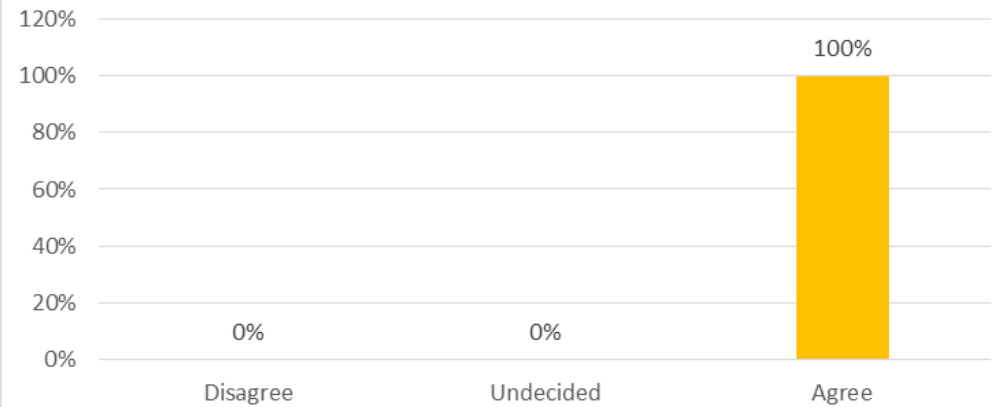
Model 1 Psychiatrist: I believe the quality of psychiatric care provided via telepsychiatry is comparable to the quality of care delivered via face to face care



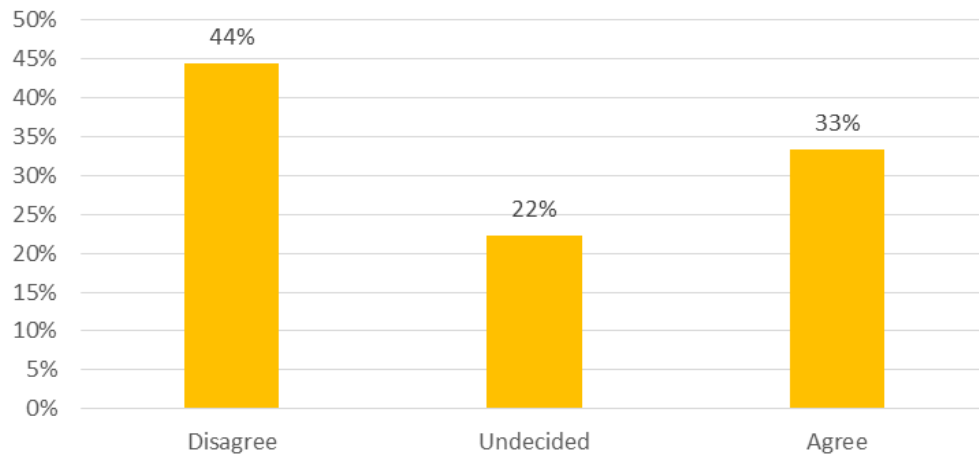
Model 1 Psychiatrist: I am satisfied with the ability to provide disposition recommendations via telepsychiatry



Model 1 Psychiatrist: I received adequate training and resources preparing me to use the portal system



Model 1 Psychiatrist: Telepsychiatry increases my productivity

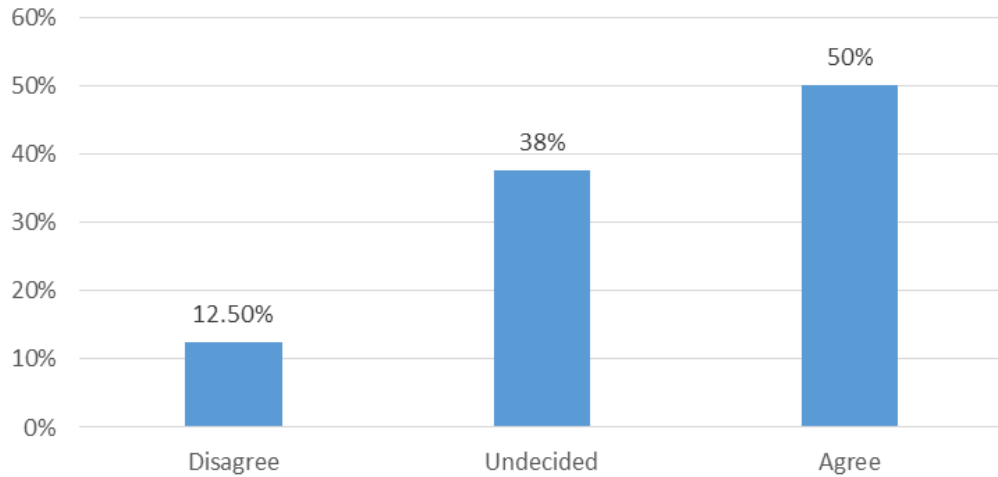


Model 1 Psychiatric Intake Specialist Results

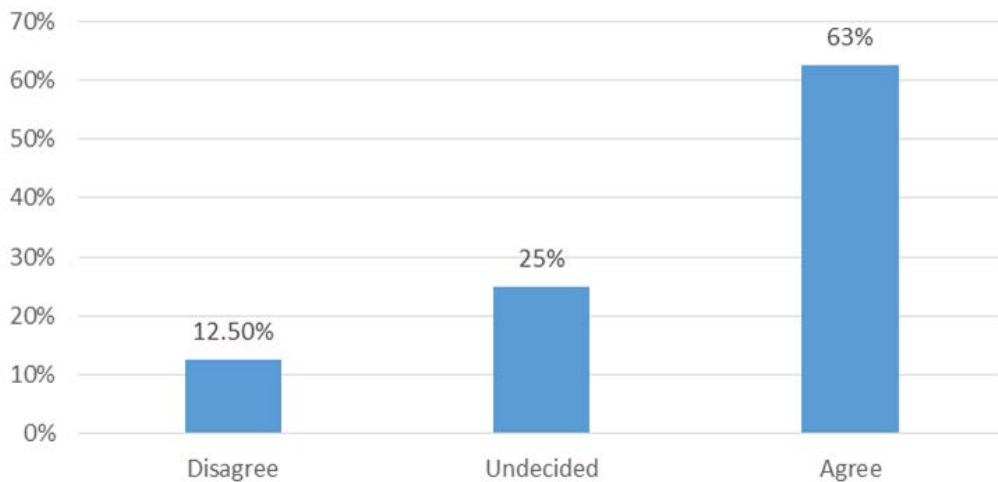
“I am satisfied with providing psychiatric consults via telepsychiatry”



Intake Specialist: Telepsychiatry increases my productivity



Intake Specialist: The portal system of sending consultations is straightforward to use

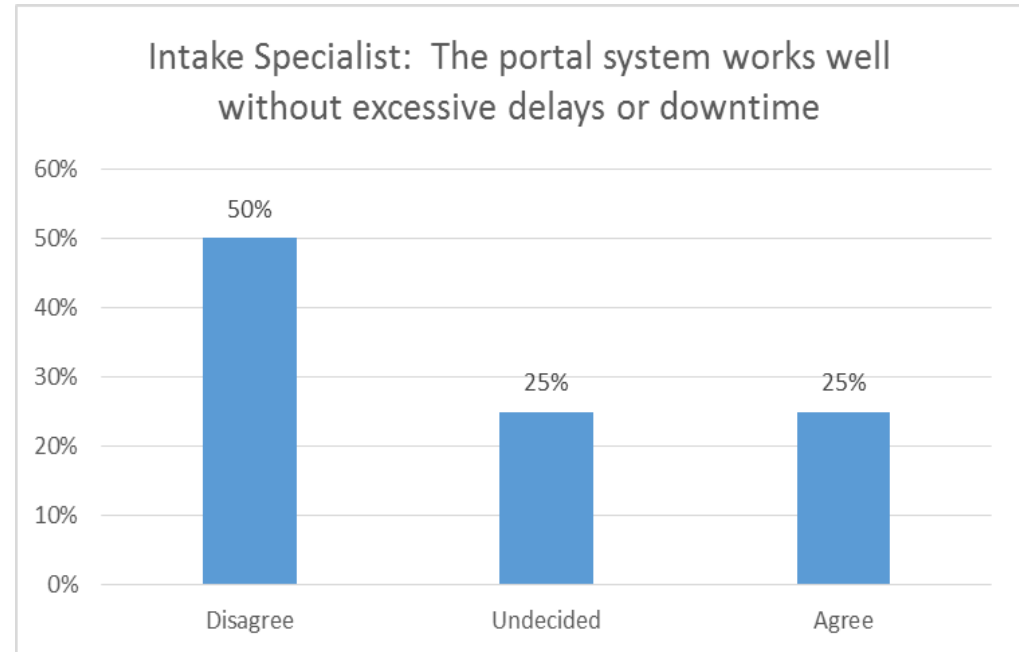
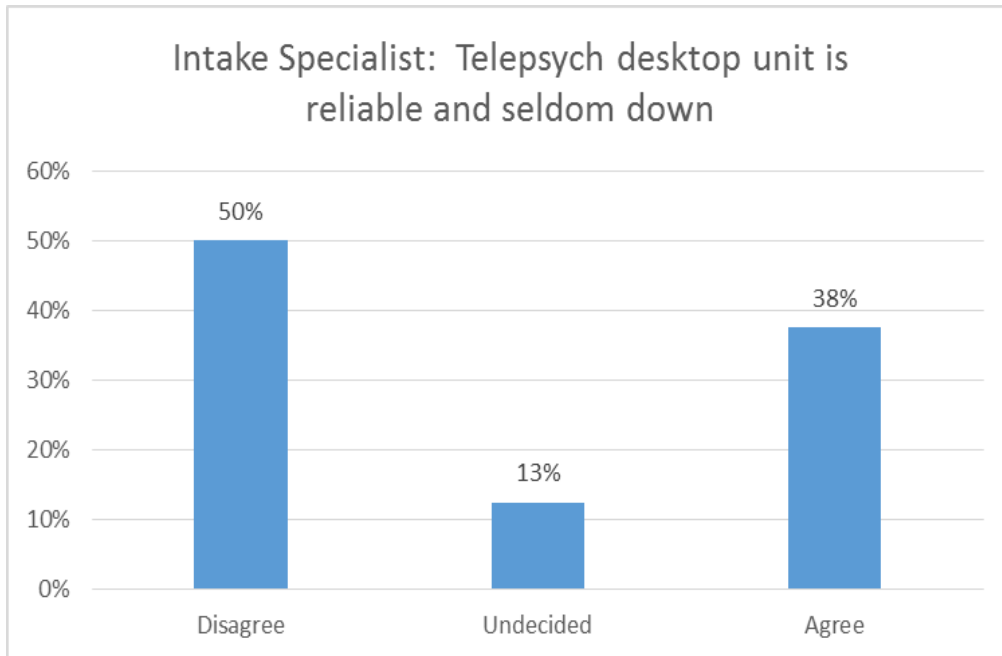


Intake Specialist: I received adequate training and resources preparing me to use the portal system



October 9, 2016



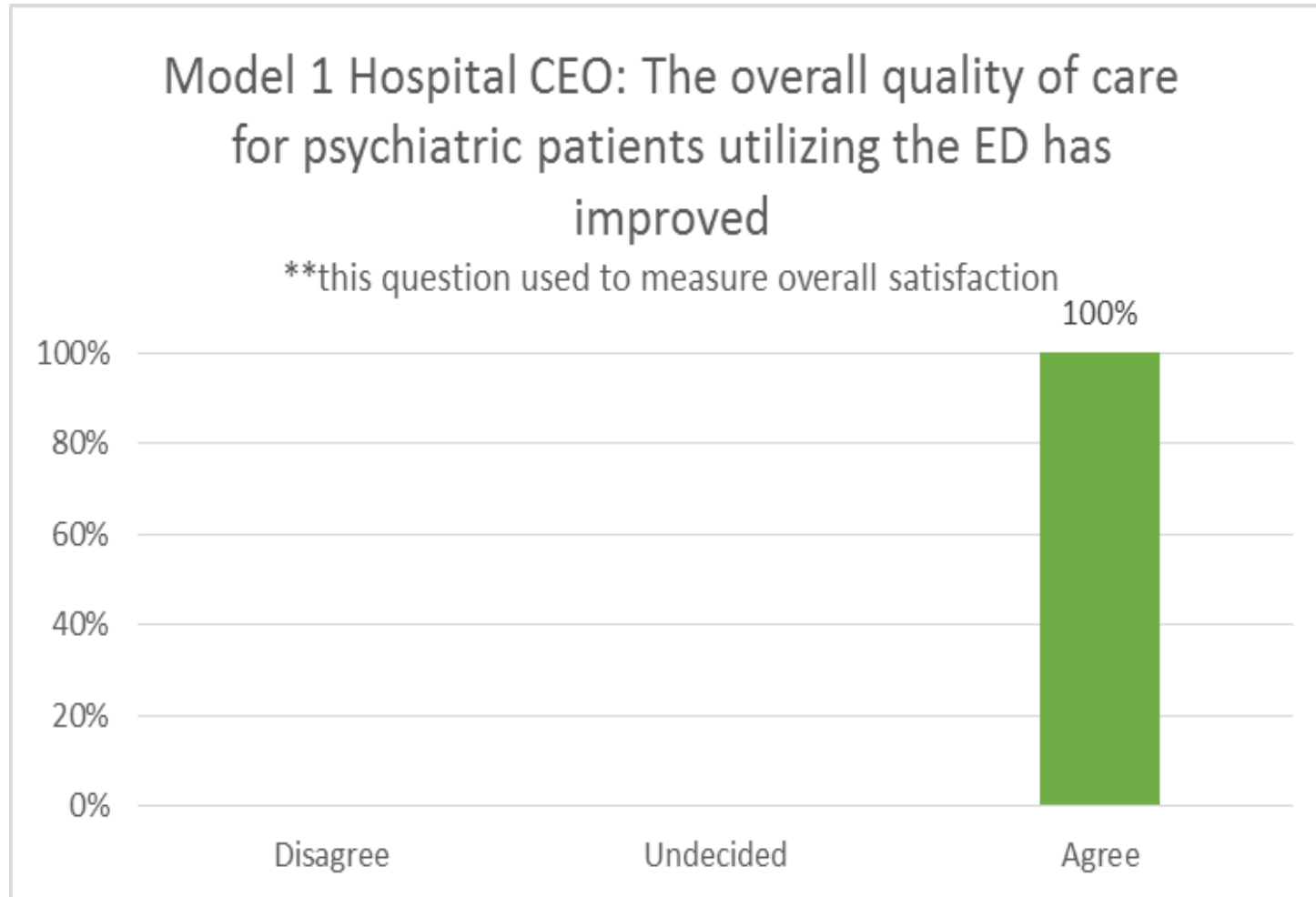


October 9, 2016

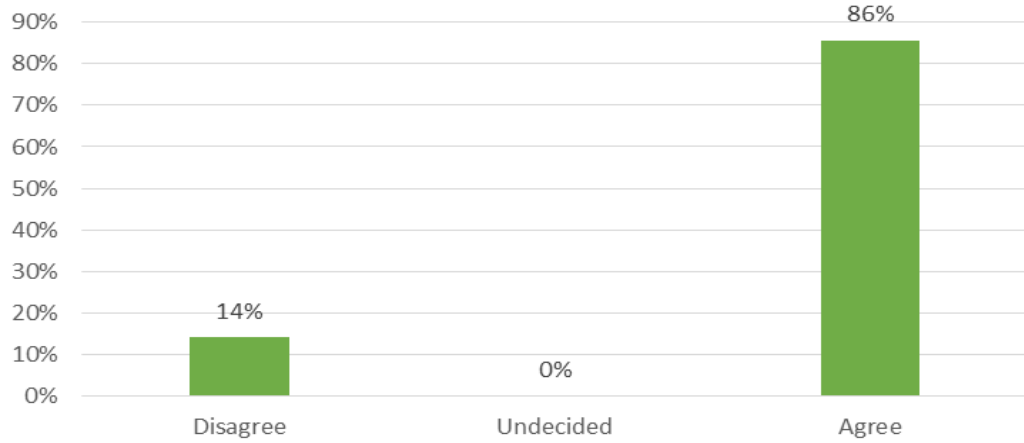


Model 1 CEO/COO/CNO/ED Manager Results

“The overall quality of care for psychiatric patients utilizing the ED has improved”



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

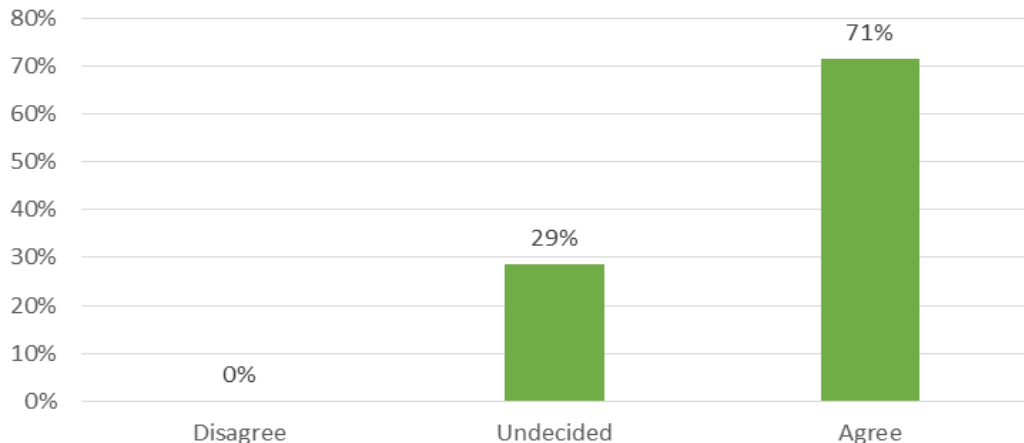


Model 1 CEO/COO/CNO/ ED Manager Results

Model 1 Hospital CEO: I would recommend this program to other hospitals



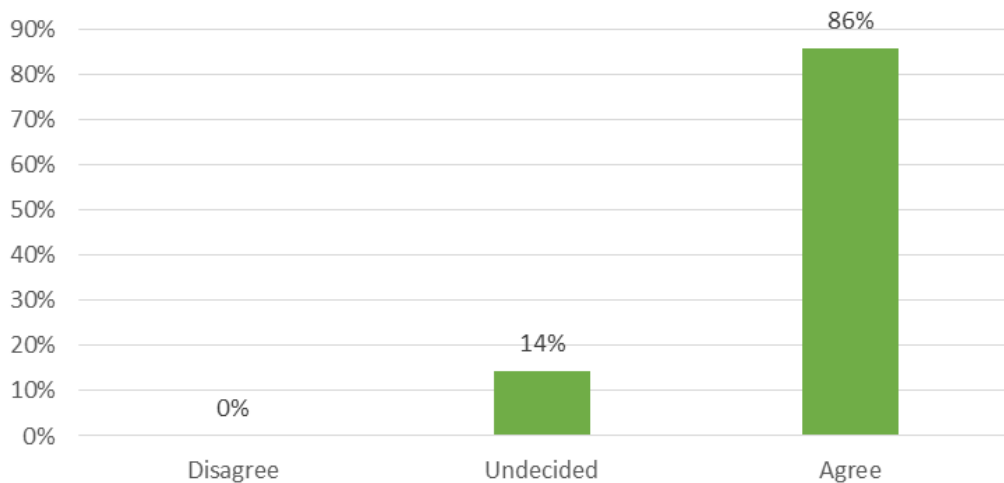
Model 1 Hospital CEO: Overall ED costs have been reduced



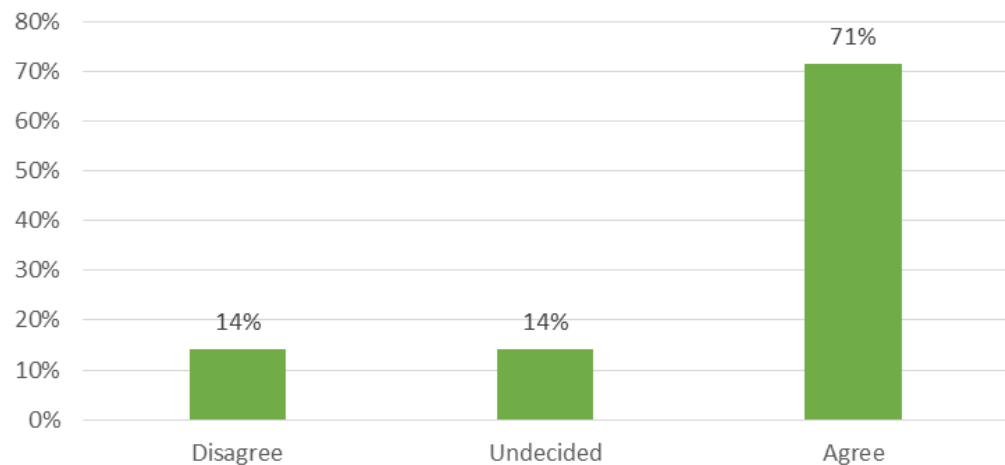
October 9, 2016

Model 1 CEO/COO/CNO/ ED Manager Results

Model 1 Hospital CEO: Our hospital's use of
telepsych consults has been cost effective



Model 1 Hospital CEO: Overall ED staff
satisfaction has improved

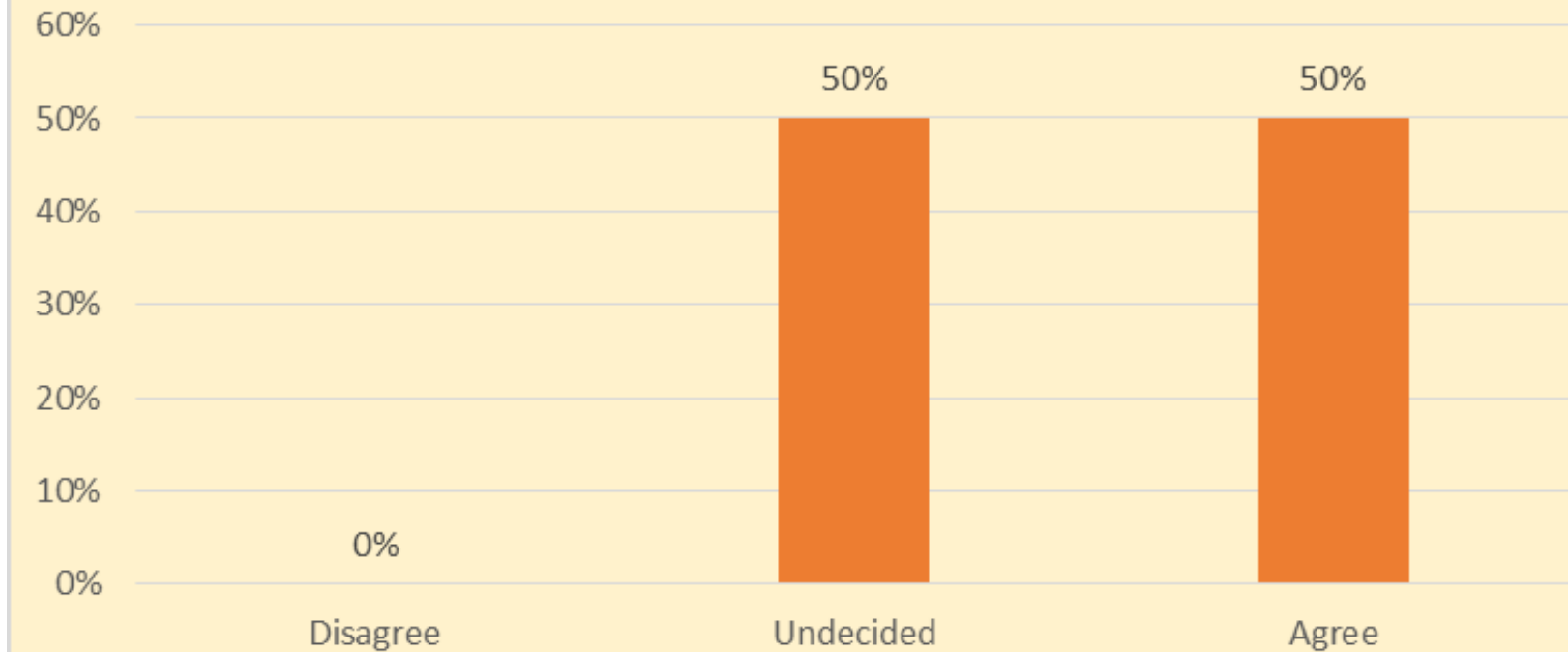


Model 2 Hospital ED Staff Results

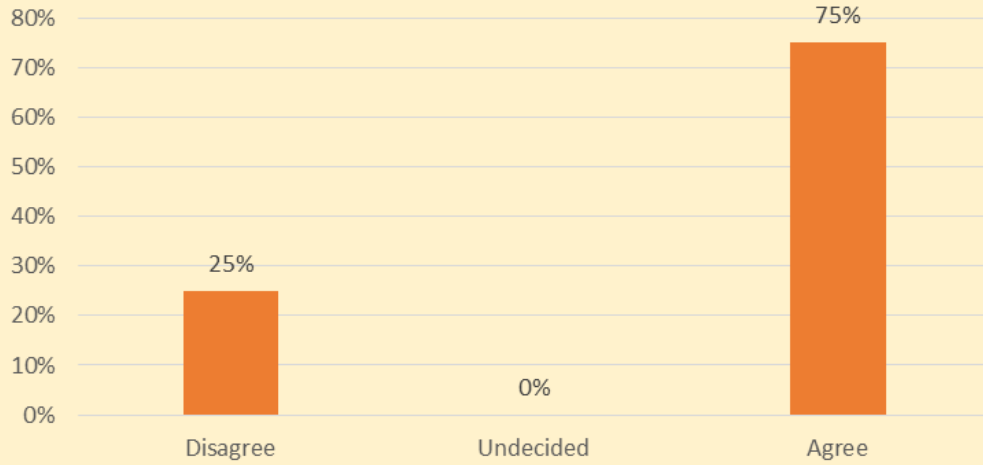
“The program has improved patient care in our ED”

Model 2 ED Staff: Telepsychiatry consults have improved patient care in our ED

**this question used to measure overall satisfaction

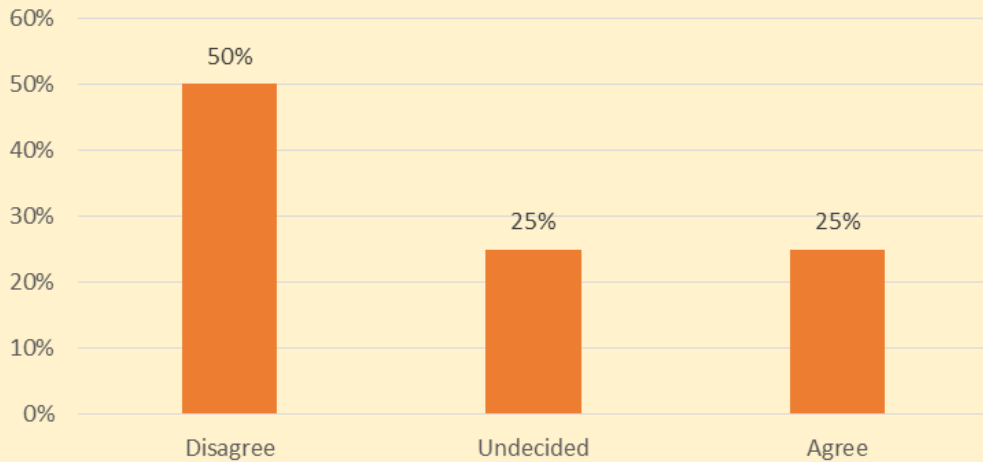


Model 2 ED Staff: The telepsychiatry equipment is easy to use



Model 2 Hospital ED Staff Results

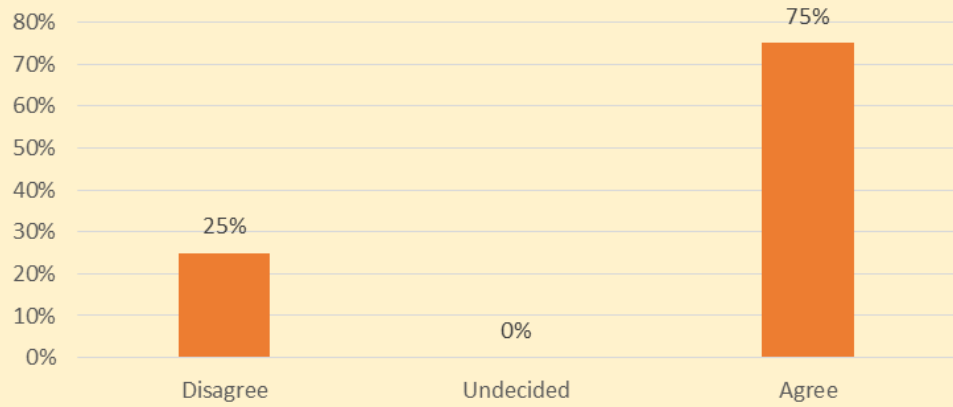
Model 2 ED Staff: I can do simple trouble shooting when the system does not work



Model 2 ED Staff: The system rarely goes down

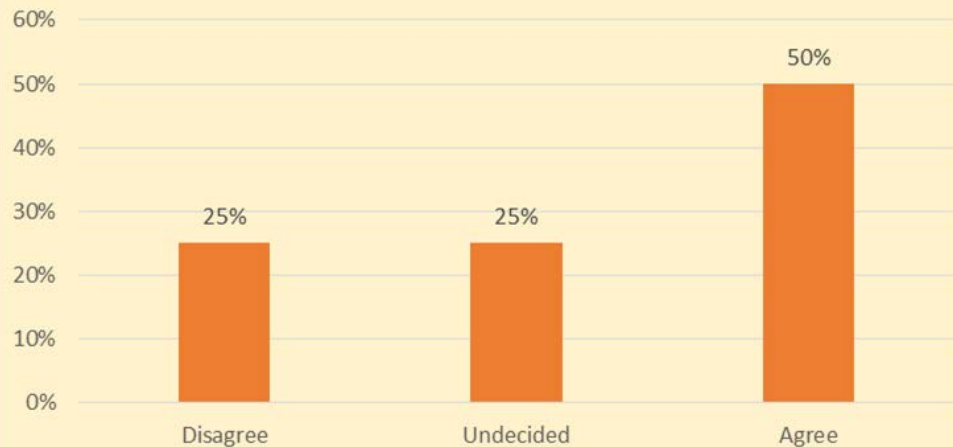


Model 2 ED Staff: The system works well without static, delays in transmission, or limits of picture or audio

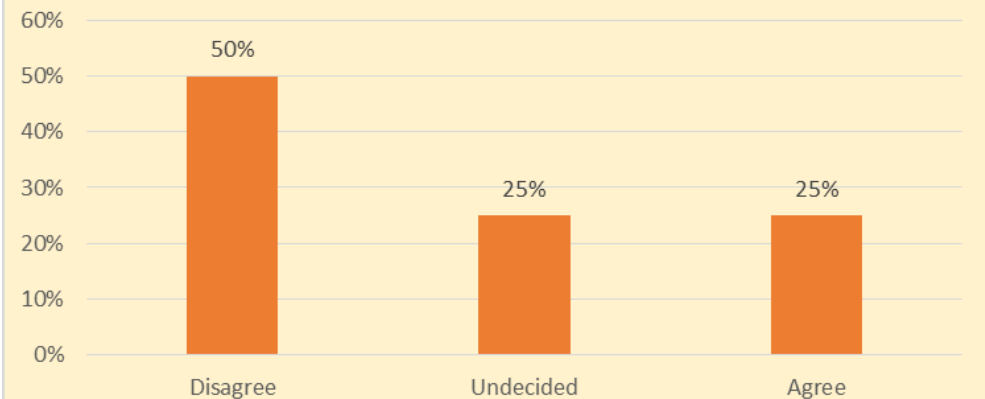


Model 2 Hospital ED Staff Results

Model 2 ED Staff: Assisting in telepsychiatry consults is an efficient use of my time



Model 2 ED Staff: I received adequate training/instruction preparing me to use the system



NC-STeP Status as of Sept 30, 2017

- 66 hospitals in the network. 50 live.
- 27,742 total psychiatry assessments since program inception
- 3,065 IVCs overturned
 - Cumulative return on investment = \$16,410,600
(from savings from preventing unnecessary hospitalizations)
- High levels of satisfaction
- Six Clinical Providers' Hubs with 48 consultant providers
- Administrative costs below industry's standard
- Over 31% of the patients served had no insurance coverage



Hospital Status Report as of September 2017

Hospital Name	Portal Go Live
Vidant Outer Banks Hospital	8/8/2016
Vidant Bertie Hospital	8/15/2016
Vidant Chowan Hospital	8/15/2016
Vidant Edgecombe Hospital	8/15/2016
Sentara Albemarle Medical Center	8/17/2016
Vidant Beaufort Hospital	8/22/2016
Vidant Duplin Hospital	8/22/2016
Lenoir Memorial Hospital	9/6/2016
St Lukes Hospital	9/7/2016
Wilson Medical Center	9/20/2016
Morehead Memorial Hospital	10/5/2016
DLP Harris Regional Medical	10/14/2016
DLP Swain Community Hospital	10/14/2016
Murphy Medical Center	10/26/2016
DLP Maria Parham Medical Center	11/15/2016
UNC Chatham Hospital	12/21/2016
J. Arthur Doshier Memorial Hospital	1/7/17
Ashe Memorial Hospital	1/26/17
Northern Hospital of Surry County	3/7/17
Southeastern Regional Medical Center	8/8/17
Halifax Regional Medical Center	8/8/17
DLP Person Memorial Hospital	8/17/17
DLP Haywood Regional Medical Center	8/22/17



Model 1 – Live

Hospital Status Report as of September 2017

Model 1 – In Process



Hospital Name	Portal Go Live
FirstHealth Regional Hospital – Hoke	Fall 2017
FirstHealth Montgomery Memorial Hospital	Fall 2017
FirstHealth Moore Regional Hospital	Fall 2017
FirstHealth Richmond Memorial Hospital	Fall 2017
FirstHealth Sandhills Regional Medical Center	Fall 2017
Alleghany Memorial Hospital	Fall 2017
DLP Rutherford Regional Medical Center	Fall 2017
Lake Norman Regional Medical Center	Fall 2017
Pender Memorial Hospital	Fall 2017
Our Community Hospital	Fall 2017

Hospital Status Report as of September 2017

Model 1 – Participation Pending



Hospital Name	Program Status
DLP Central Carolina Hospital	Reviewing Contract
Granville Medical Center	Reviewing Contract
Pioneer Community Hospital of Stokes (Greene)	Reviewing Contract
Pioneer Community Hospital of Stokes (King)	Reviewing Contract
Washington County Hospital	Reviewing Contract
Wayne Memorial Hospital	Reviewing Contract

Hospital Status Report as of September 2017



Model 2

Hospital Name	Go Live Date/Status
Cape Fear Valley Medical Center	6/14
Cape Fear Valley Bladen Hospital	7/14
Cone Health Behavioral Health Hospital	7/14
Cone Health MedCenter High Point	7/14
Forsyth Medical Center	7/14
McDowell Hospital	7/14
Mission Hospital	7/14
Novant Health Clemmons Medical Center	7/14
Novant Health Kernersville Medical Center	7/14
Wesley Long Hospital	7/14
Mission Children's Hospital	8/14
Annie Penn Hospital	8/14
Moses H. Cone Memorial Hospital	8/14
Blue Ridge Regional Hospital	9/14
Transylvania Regional Hospital	9/14
Women's Hospital – Cone Health	10/14
Angel Medical Center	1/15
Highlands-Cashiers Hospital	3/15
Novant Health Thomasville Medical Center	3/15
Alamance Regional Medical Center	4/15
Hugh Chatham Memorial Hospital	12/15
Cape Fear Valley Hoke Hospital	6/16
UNC Johnston, Clayton	6/16
UNC Johnston, Smithfield	6/16
Novant Health Presbyterian Hospital	11/16
Novant Health Rowan Medical Center	7/17
Novant Health Brunswick Medical Center	7/17

Hospital Status Report as of September 2017

Expressed Possible Interest



Hospital Name	Program Status	NC-STeP Model
Central Harnett Hospital	TBD	TBD
Duke Regional Hospitals	TBD	TBD
Novant Matthews Medical	TBD	Model 2
Iredell Memorial Hospital	TBD	TBD
Pioneer Community Hospital of Stokes (King & Greene)	TBD	TBD

Hospital Status Report as of September 2017

Terminated



Hospital Name	Hospital Name
Carolina East	WakeMed Apex
Carteret	WakeMed Briar Creek
Columbus Regional	WakeMed Cary
Davie Medical	WakeMed Garner
Lexington	WakeMed North Healthplex
Martin County General	WakeMed Raleigh
Nash General Hospital	WakeMed Raleigh Children's ED
Sampson	WakeMed Psychiatric Observation Unit
UNC Hillsborough	

Hospital Status Report as of September 2017

No Information Available



Hospital Name	Program Status	NC-STeP Model
Caldwell Memorial	TBD	TBD
Cherokee Indian Hospital	TBD	TBD
New Hanover	TBD	TBD
Novant Franklin Medical	TBD	TBD
Onslow Memorial	TBD	TBD
Scotland Health	TBD	TBD
Wilkes Regional Medical	TBD	TBD



Contact

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Professor and Chairman

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

Director

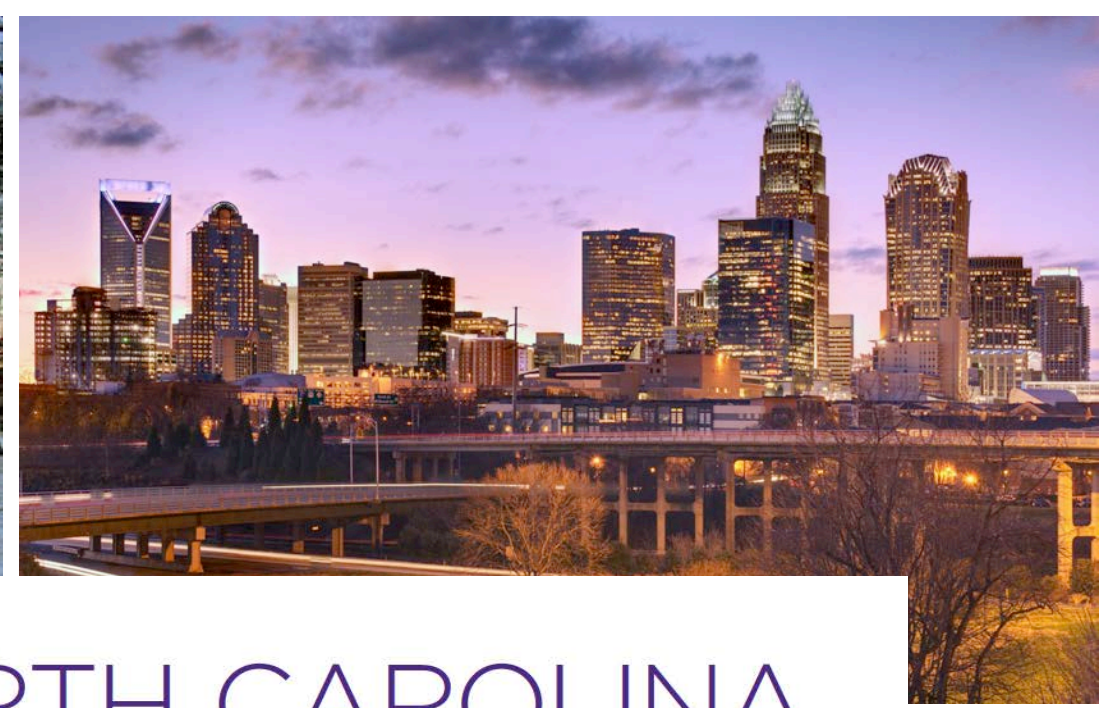
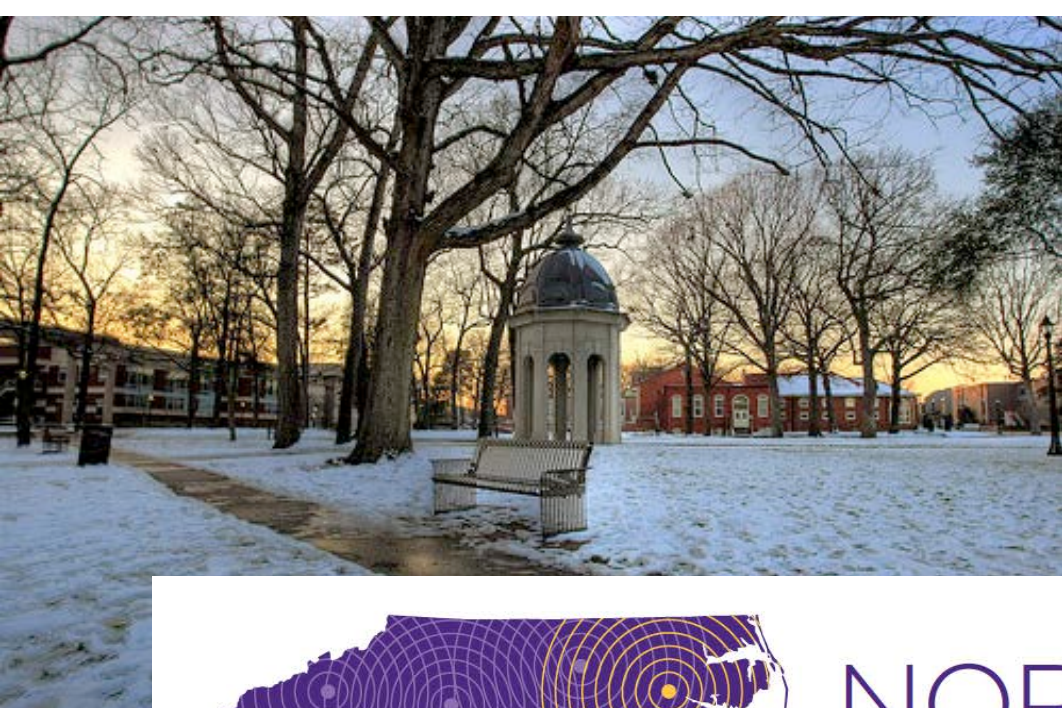
North Carolina Statewide Telepsychiatry Program (NC-STeP)

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Tomorrow starts here.



NC-STeP

NORTH CAROLINA

STATEWIDE TELEPSYCHIATRY PROGRAM

