

Adult Psychiatric Inpatient Capacity Demand Analysis for the State of Vermont

Presentation to the Senate Institutions Committee
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Inpatient Mental Health Facility Planning

- Spring 2018: Green Mountain Care Board order
 - Invest \$21M to “measurably increase inpatient mental health capacity in Vermont”
 - Build in 3-4 years
- Design and create a UVM Health Network inpatient psychiatric facility/unit on the Central Vermont Medical Center Campus that will substantially improve access to inpatient mental health care as part of an integrated system of care in Vermont.
- Anchor planning in data-driven, evidence-based process.
- Create opportunities to share information publicly, including community forums, legislative briefings, media relations, public reporting, etc.

Commitment to Community Engagement

10/1/18 – present

Date	Tactic	Audiences
10/4/2018	Presentation: PIC Modeling Analysis	Community Collaborative
10/5/2018	GMCB Meeting	Green Mountain Care Board and Staff
10/12/2018	Presentation: PIC Modeling Analysis	VAHHS Board meeting
10/12/2018	Presentation: PIC Modeling Analysis	VAHHS CMO Meeting
10/15/2018	Presentation: PIC Modeling Analysis	Howard Center (Catherine Simonson and Charlotte McCorkel)
10/15/2018	GMCB Report Distribution	Green Mountain Care Board
10/16/2018	PIC overview	Program Quality Meeting
10/16/2018	CVMC Community Town Hall	CVMC key influencers and public
10/23/2018	Presentation: PIPs Follow-up Deep Dive	Rep. Anne Donahue, Ward Nial and Daniel Towle
10/25/2018	GMCB Report Distribution	PIPs Committee; UVMC Program Quality Committee
10/26/2018	Meeting with Legislators	Rep. Lori Houghton and Rep. Ben Jickling
11/6/2018	AHS Meeting	AHS Secretary
11/27/2018	Legislative Update	Rep. Mary Hooper

Date	Tactic	Audiences
11/28/2018	GMCB Hearing	Green Mountain Care Board
12/5/2018	AHS Meeting	AHS Secretary and key staff (Al Gobeille, Michael Costa, Ena Backus,
12/20/2018	Inpatient Psych Presentation	Vermont Medical Society
12/20/2018	PIPS Meeting	Community Stakeholders Group
1/4/2019	VAHHS ED Medical Directors	ED Medical Directors
1/8/2019	Meeting with Peer Advocates	Elaine Toohey , Vicki Warfield and Ward Nial
1/15/2019	GMCB Report Distribution	Green Mountain Care Board, PIPS
1/17/2019	UVMC Community Leaders Breakfast	AHS, GMCB, PIPS, Community members
1/24/2019	PIC Update Presentation	VAHHS Designated Hospitals
2/6/2019	PIC Update Presentation	House Corrections and Institutions Committee
2/12/2019	PIC Overview Presentation	CVMC Clinical and Administrative Leadership Meeting (CALM)
2/20/2019	GMCB Hearing	Green Mountain Care Board
3/20/2019	PIC Overview Presentation	CVMC Clinical and Administrative Leadership Meeting (CALM)

Analysis Scope

Objective:

Estimate the number of additional beds needed for adult inpatient psychiatry, focusing particularly on the problem of psychiatric patients waiting in EDs statewide for bed placement

Key Assumption:

Currently existing adult inpatient bed capacity across the state remains in place (i.e., IMD issue for VPCH, Brattleboro Retreat is set aside while quantifying the incremental bed requirement issue)

Adult IP Psych Capacity: Current State

200 Adult Beds in VT

Location	Type	Age	Subject to IMD Waiver	Capacity
Brattleboro Retreat Osgood 2 (LGBT)	In-Patient	Adults 18+	✓	15
Brattleboro Retreat Osgood 3 (Emerging Adult)	In-Patient	Adults 18+	✓	14
Brattleboro Retreat Tyler 1 (Co-Occurring)	In-Patient	Adults 18+	✓	22
Veterans Affairs – White River Jct	In-Patient	Adults 18+		12
Brattleboro Retreat Tyler 2 (Acute Adult)	In-Patient	Adults 18+	✓	24
Brattleboro Retreat Tyler 4 (Level 1 Adult)	In-Patient-Level1	Adults 18+	✓	14
Central Vermont Medical Center	In-Patient	Adults 18+		15
Rutland Regional Medical Center PSIU (acute care)	In-Patient	Adults 18+		17
Rutland Regional Medical Center PSIU South Wing (Level 1 acuity)	In-Patient-Level1	Adults 18+		6
University of VT Medical Center Shep 3	In-Patient	Adults 18+		12
University of VT Medical Center Shep 6	In-Patient	Adults 18+		16
Windham Center (Springfield)	In-Patient	Adults 18+		10
Vermont Psychiatric Care Hospital	In-Patient-Level1	Adults 18+	✓	25
TOTAL				200

63 Focused Beds

Brattleboro Retreat:
65% VT

137 General Beds

45 Level One
92 General IP Psych



Adult IP Psych Capacity: Current State

- 200 Adult IP Psych Beds today:
 - 137 “general” beds
 - 45 Level One
 - 92 General IP Psych
- 95% or higher occupancy, 100% for Level 1 Beds (DMH reports, June 2018)
- Increase in patient acuity driving longer average length of stay (ALOS)
- Constrained to meet mental health needs for additional patients

46% (63 beds) of general beds under IMD reimbursement

Hospital	Mental Health Inpatient Discharges (MDC = 19)								
	Discharges			Total Patient Days			ALOS		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
CVMC	379	370	408	4,013	3,979	4,572	10.6	10.8	11.2
Rutland	583	486	523	7,381	6,340	6,239	12.7	13.0	11.9
Springfield	357	329	322	2,383	2,700	2,349	6.7	8.2	7.3
UVMMC	502	497	530	8,599	8,859	10,750	17.1	17.8	20.3
Total	1,821	1,682	1,783	22,376	21,878	23,910	12.3	13.0	13.4

VAHHS Mental Health Data:
ALOS = 23 days for discharged patients,
151 days for non-discharged patients

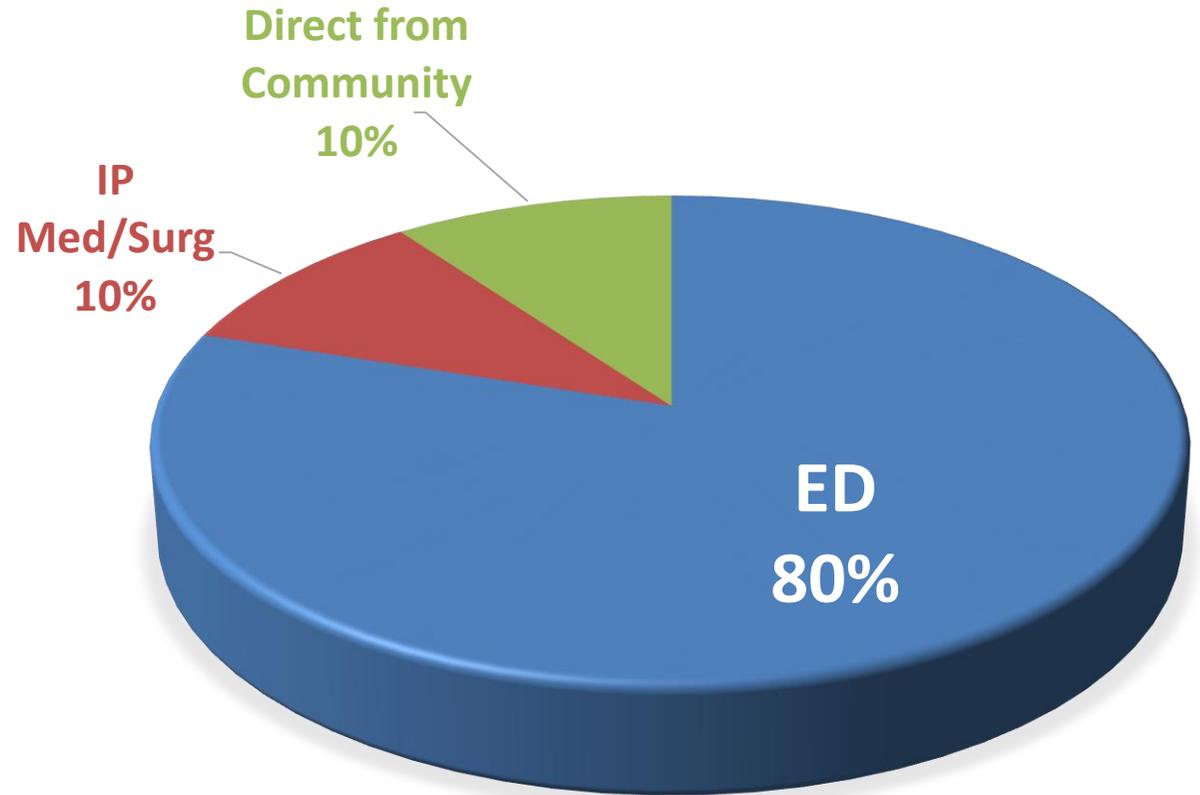
Adult Inpatient Psychiatric Patients: Sources



ED

IP
Med/Surg
Bed

Direct
Admit from
Community



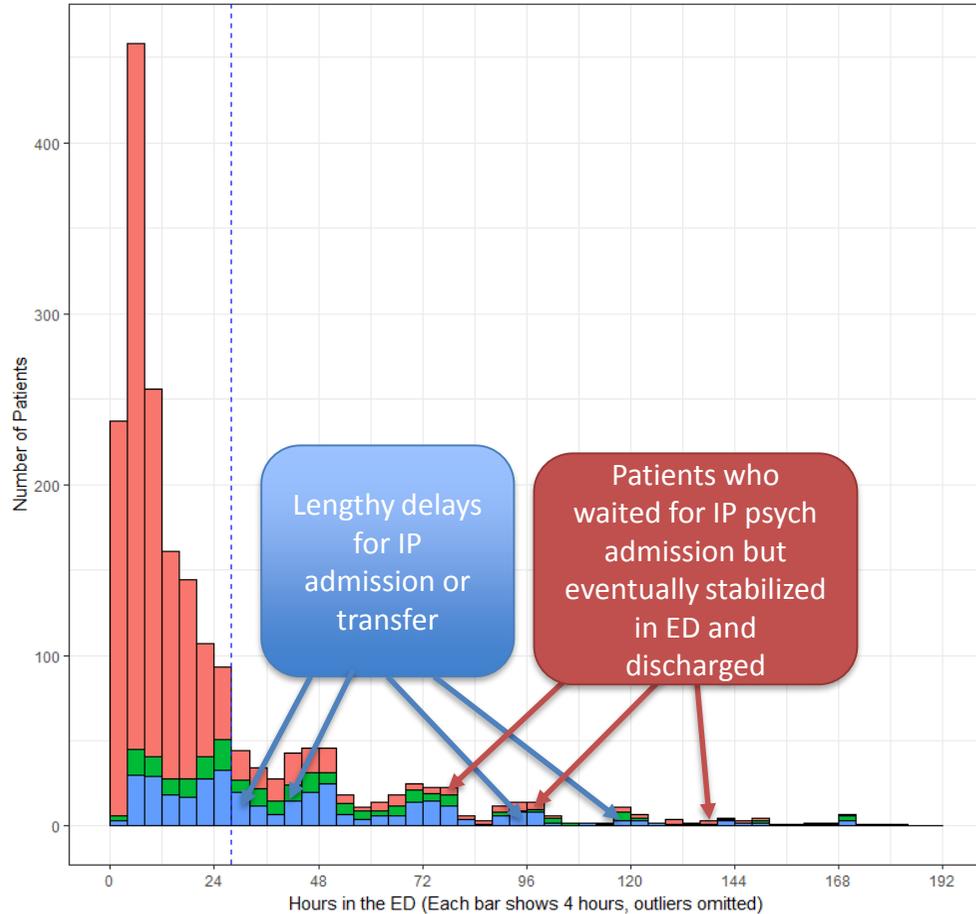
UVMHC Adult IP Psych Patients May 2017-April 2018

ED Psych Patient Volumes High, Significant Number of Longer Stays



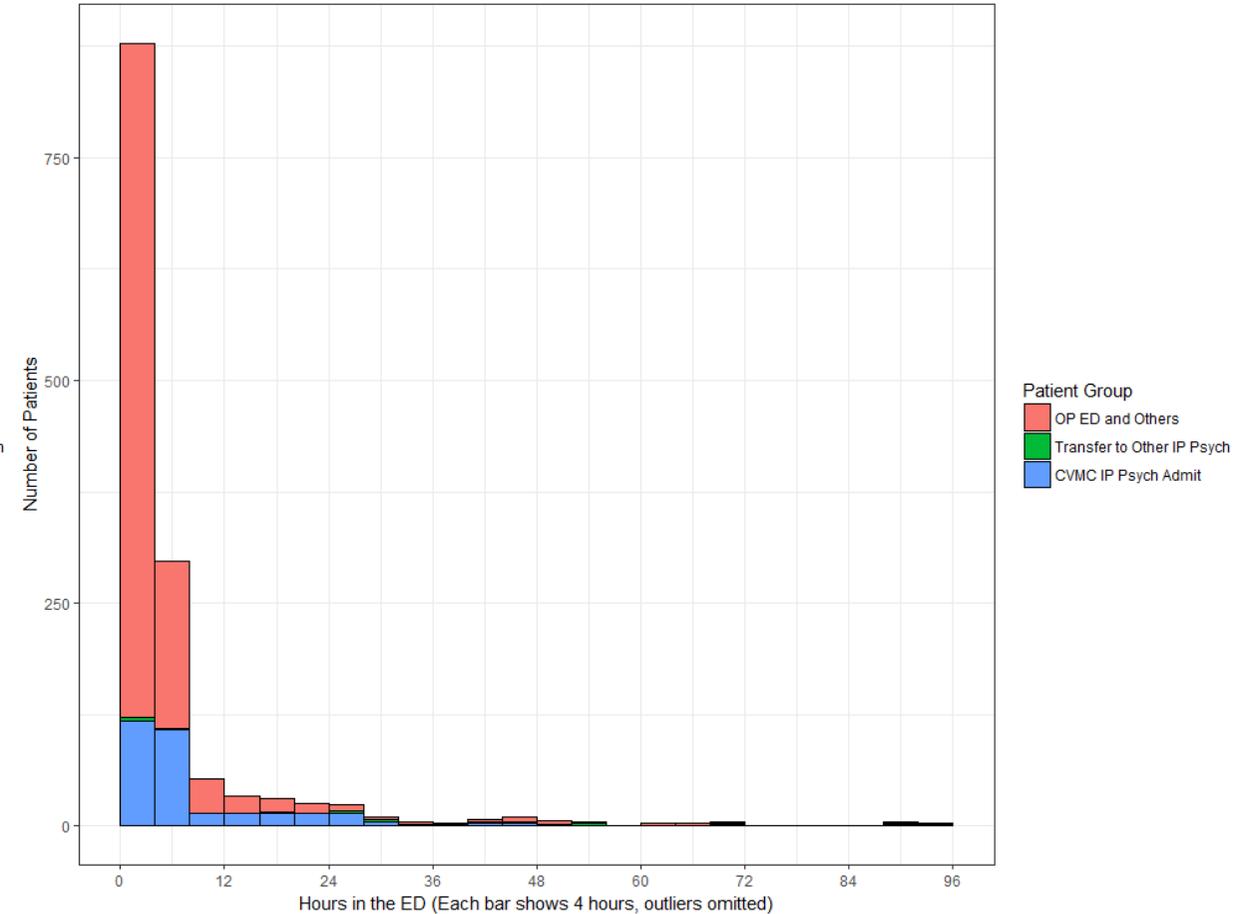
UVMHC Adult Psych Patient Wait Times in the ED

Patients Arriving Between May 2017 and April 2018



CVMC Adult Psych Patient Wait Times in the ED

Patients Arriving between May 2017 and April 2018



Note: while outliers are not shown on the graphs above for improved readability, models and simulations include all patients, including outliers.

Additional Adult IP Psych Bed Need: Our Approach

What is the number of additional beds to address the needs of adult patients needing IP psychiatric care?

- Timely placement in IP Psych bed
- Include impact of forecasted growth for next 5-10 yrs





Results from Delay Models: 5-9 Beds Needed

IP Admit Delay Model: Add'l Need

UVMHC	1 - 3 beds
CVMC	0.5 bed
<i>Rutland est</i>	0.5 bed
<i>Springfield est</i>	0.5 bed

Total 3 - 4 beds

Transfer Model: Additional Need

Total Statewide Need: 2 – 5 beds

Model Totals: 5 -9 beds

To reduce ED wait time to 8 hrs or less for patients who were admitted for IP Psych care

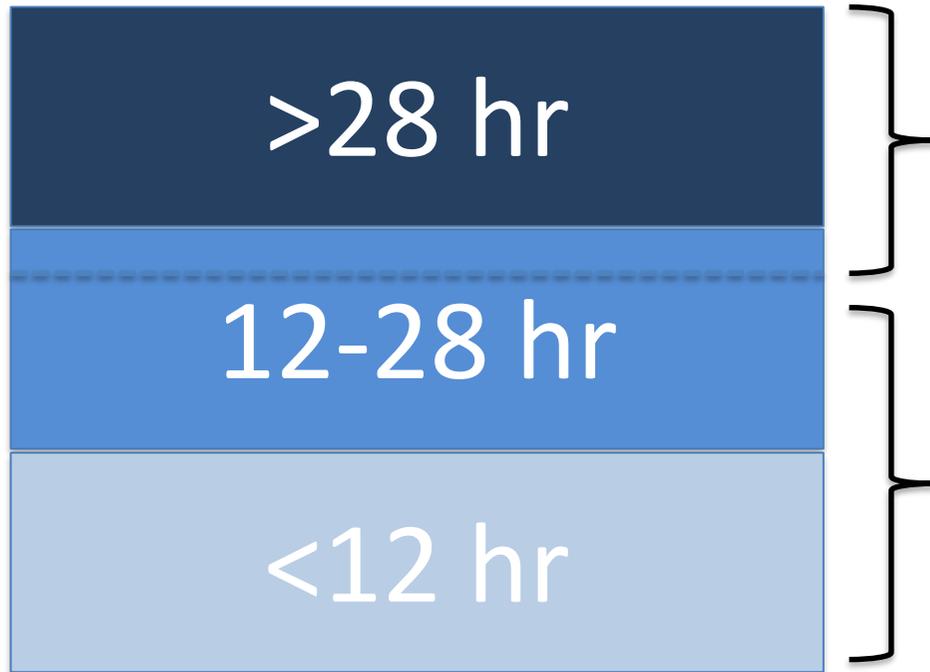
- **IP Admission Delays Model**

- Take actual IP admissions
- Admit on arrival <=8 hr
- Discharge after actual LOS
- Move PT who can't be admitted w/o wait to new bed need

- **Transfer Delays Model**

- Similar approach to above
- Model statewide for all EDs
- Includes additional capacity needed at VPCH, Brattleboro Retreat
- Estimated LOS based on VAHHS IP Psych LOS Data (all patients)

Vermont Emergency Department (ED) Patients with Mental Health Needs



IP Psych Unmet Need:
 100% >28 hr ED Stay
 1 of 5 pts 12-28 hr ED Stay

617 patients

OP Mental Health Need:
 100% <12 hr ED Stay
 4 of 5 pts 12-28 hr ED Stay

871 visits
12-28 hr



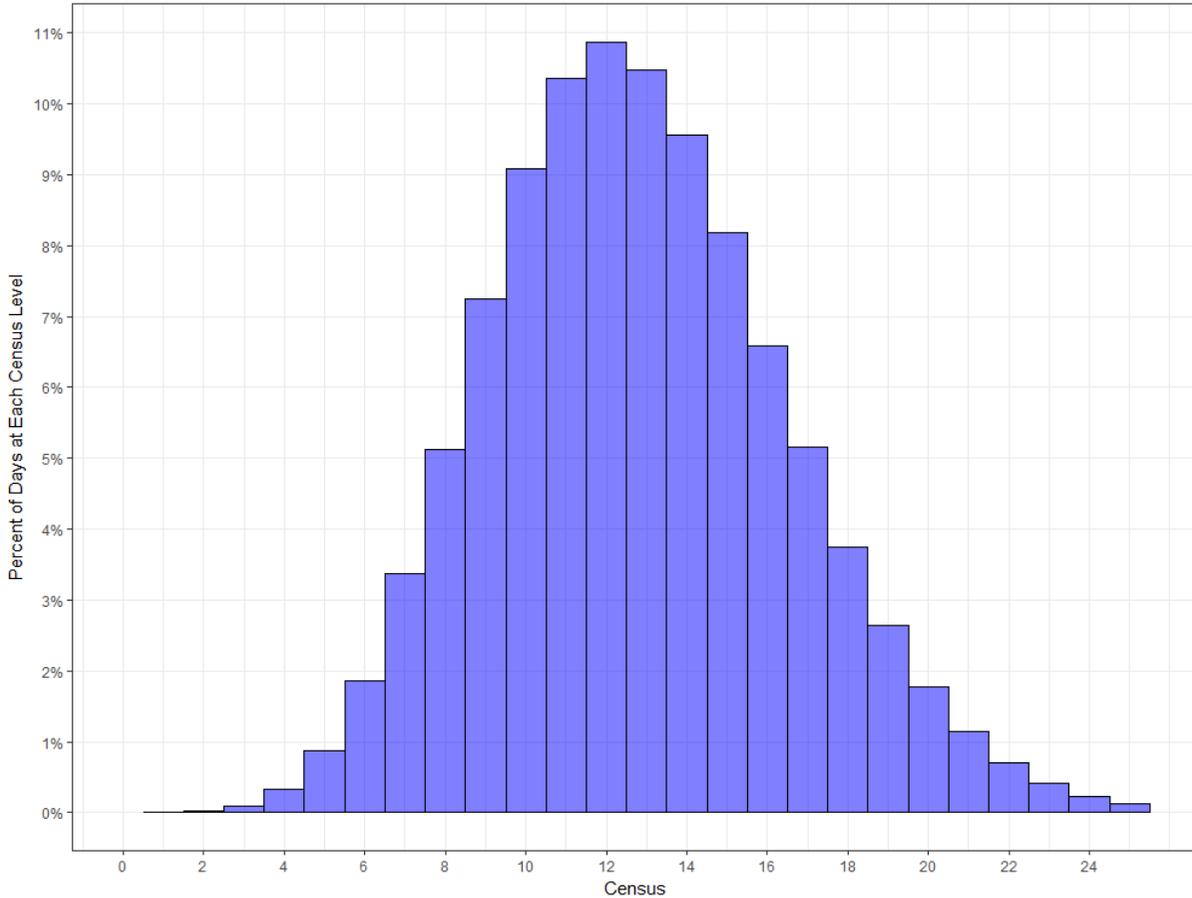
9,045 visits
<12 hr

ED patient visits with primary psychiatric diagnosis or secondary diagnosis = suicide ideation or suicide attempt, with or without a psychiatric assessment

Additional Census Distribution: 1000 Simulations

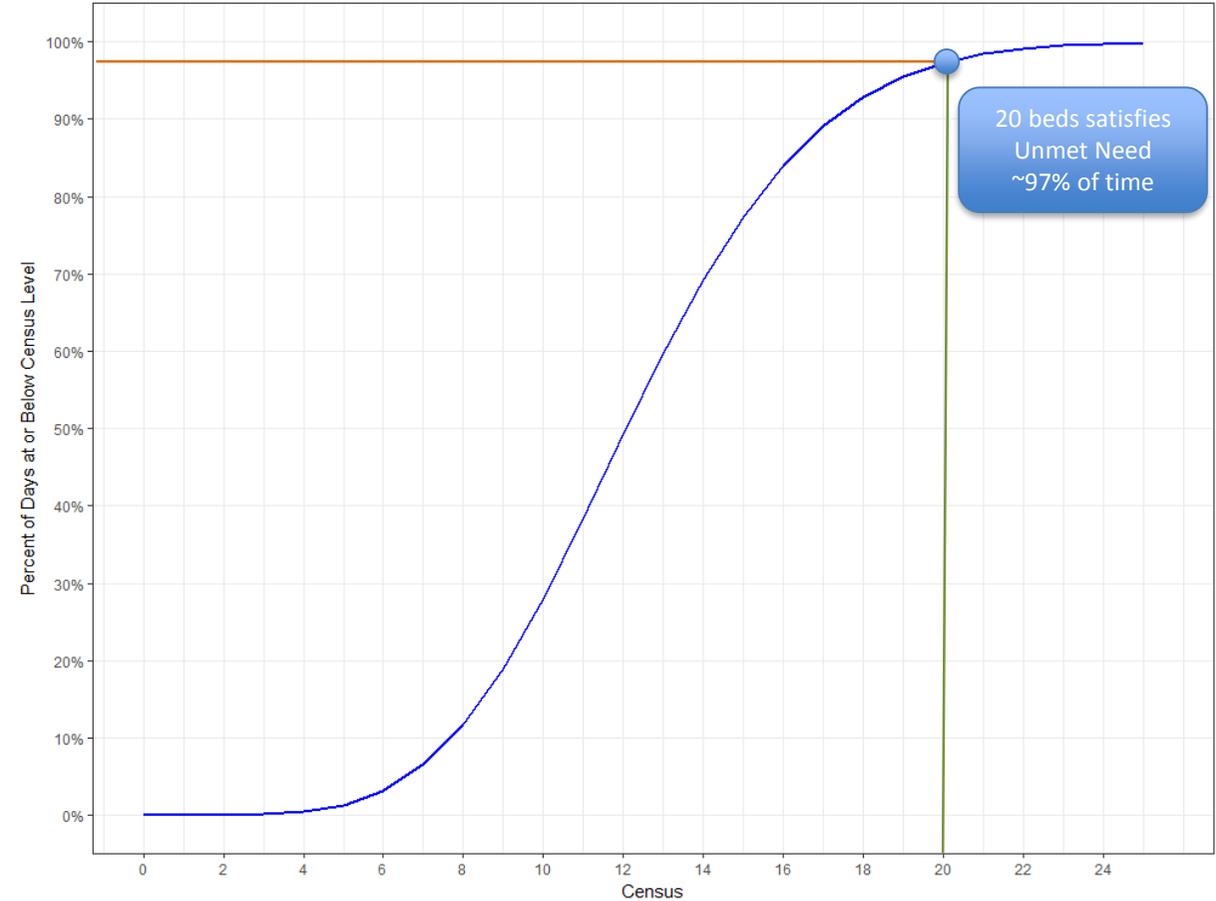
Full State Distribution of Additional Need - Patients Not Currently Admitted

New Census Histogram - LOS excludes Level I Beds



Cumulative Additional Need

Percent of Days at or Below Each Census Level - LOS excludes Level I Beds



20 beds satisfies Unmet Need ~97% of time

Estimate of Additional Bed Need



4% growth
for Adult Psych IP
Days to 2022

Simulation Results: +26 IP beds

>55% reduction in patient hours* in EDs



Combined Outpatient ED Change - Brattleboro, CVMC, Rutland, Springfield, Southwest, and UVMHC

Excludes impact of patients admitted to same hospital

Patient Disposition	Patients Affected	Patient Hours in ED		Change
		Current State	26 Additional Beds	
Admitted: New Bed	478		2,268	
Admitted: Transfer	810	31,410	6,480	-79%
OP ED	4,865	59,973	32,335	-46%
Grand Total	6,153	91,382	41,083	-55%

* Does not include reduction in wait time for patients admitted to IP bed in same facility due to data availability.

Revisiting Key Assumptions

Potential drivers to DECREASE additional need

29-35

Additional beds needed

Potential drivers to INCREASE additional need

Additional residential beds
(net of forensic needs)

Additional housing to reduce current barrier days
- need first for additional IP Psych patients
- additional could reduce barrier days

New interventions for ED Unmet Need group

up to 14 beds

Long Term Viability of IMD Waiver

Need to replace up to 63 existing beds

Next Steps

- Phase I remaining components:
 - Institution for Mental Disease (IMD) Considerations for CVMC Inpatient Psych census
 - Bed Programming

- Phase II
 - Facilities Planning
 - Programming plan and space allocation: three workgroups convened
 - Integration with CVMC Master Facilities Plan

 - Financial Impact
 - Capital Needs
 - Operating Plan and financials

Questions.....