2022 Vermont Emergency Telepsychiatry Network Needs Assessment
Appendix 1. Annotated Bibliography

1. Brenner R, Madhusoodanan S, Logiudice J, et al. A comparison study of the turnaround time for telepsychiatry versus face-to-face consultations in general hospital nonpsychiatric emergency rooms. Annals of Clinical Psychiatry : Official Journal of the American Academy of Clinical Psychiatrists. 2020 Feb;32(1):12-16. PMID: 31990965.

   This study looked at data on turnaround time for emergency psychiatric consultations using telepsychiatry in general hospital EDs and compared with that of turnaround time for face-to-face consultations. A patient satisfaction survey was also conducted after the telepsychiatry consultation. The resulting data showed a reduction in the turnaround time and improved patient satisfaction when using tele-psychiatry and the authors concluded that telepsychiatry services can improve the quality of care for patients in need of emergency services.

2. Freeman RE, Boggs KM, Zachrison KS, Freid RD, Sullivan AF, Espinola JA, Camargo CA Jr. National Study of Telepsychiatry Use in U.S. Emergency Departments. Psychiatr Serv. 2020 Jun 1;71(6):540-546. doi: 10.1176/appi.ps.201900237. Epub 2020 Feb 5. PMID: 32019430.

   A 2016 survey found that 20% of EDs in the US received telepsychiatry services, and most receiving telepsychiatry had no other emergency psychiatric services. The latter finding suggests that telepsychiatry is used to fill a critical need. telepsychiatry may be an effective alternative for creating accessible services and streamlining the ED process, with favorable effects on ED boarding and crowding and better utilization of limited resources.

3. Narasimhan M, Druss BG, Hockenberry JM, Royer J, Weiss P, Glick G, Marcus SC, Magill J. Impact of a Telepsychiatry Program at Emergency Departments Statewide on the Quality, Utilization, and Costs of Mental Health Services. Psychiatr Serv. 2015 Nov;66(11):1167-72. doi: 10.1176/appi.ps.201400122. Epub 2015 Jul 1. PMID: 26129992; PMCID: PMC4699583.

   This paper covers a study out of South Carolina on the impact of a statewide, centralized telepsychiatry service provided in nonpsychiatric emergency departments (EDs). Individuals treated via telepsychiatry were compared with a matched control group of individuals with mental health diagnoses who were treated in nonparticipating hospitals. The study compares differences between the two groups in outpatient follow-up, hospital admission following the ED visit, length of hospital stay if admitted, and inpatient and total costs.

4. Natafgi N, Childers C, Pollak A, Blackwell S, Hardeman S, Cooner S, Bank R, Ratliff B, Gooch V, Rogers K, Narasimhan M. Beam Me Out: Review of Emergency Department

Telepsychiatry and Lessons Learned During COVID-19. Curr Psychiatry Rep. 2021 Oct 6;23(11):72. doi: 10.1007/s11920-021-01282-4. PMID: 34613436; PMCID: PMC8493776.

> This paper summarizes the findings of 12-peer reviewed articles that evaluated emergency department telepsychiatry interventions and impact patient outcomes. The evidence shows that the use of telepsychiatry in the emergency room decreased patient wait time, resulted in shorter lengths of stay, reduced ED revisit rates, improved ED patient disposition and reduced follow-up encounters involving self-harm diagnosis.

5. Patel SY, Huskamp HA, Barnett ML, Zubizarreta JR, Zachrison KS, Busch AB, Wilcock AD, Mehrotra A. Association Between Telepsychiatry Capability and Treatment of Patients With Mental Illness in the Emergency Department. Psychiatr Serv. 2022 Apr 1;73(4):403-410. doi: 10.1176/appi.ps.202100145. Epub 2021 Aug 19. PMID: 34407629; PMCID: PMC8857309.

> This study reviewed Medicare claims over an 8-year period (2010-2018) for ED visits with a primary diagnosis of mental illness. Claims from EDs across 22 states that had implemented telepsychiatry were matched 1:1 with control EDs that had not. Telepsychiatry adoption was associated with a lower likelihood of admission to a medical-surgical bed but an increased likelihood of admission to a psychiatric bed.

6. 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. Psychiatr Q. 2022 Jun;93(2):527-536. doi: 10.1007/s11126-021-09967-y. Epub 2021 Nov 18. PMID: 34792742.

> The authors of this study evaluated the impact of the North Carolina Statewide Telepsychiatry Program on reducing unnecessary psychiatric hospitalizations and associated cost savings over a 6½ year period. Patient encounter data was used and involuntary commitment (IVC) rates assed to determine total number of patient encounters, the number of encounters with an IVC, and the number of encounters with an IVC that was overturned. The study found the cost savings generated by the NC-STeP program from November 2013 to June 2020 were $ 20,821,500. The authors concluded that implementing telepsychiatry services in the emergency department can decrease unnecessary hospitalizations and contribute to significant cost savings.

7. Zhong C, Freeman RE, Boggs KM, Zachrison KS, Gao J, Espinola JA, Camargo CA Jr. Receipt of Telepsychiatry and Emergency Department Visit Outcomes in New York State. Psychiatr Q. 2021 Sep;92(3):1109-1127. doi: 10.1007/s11126-021-09886-y. Epub 2021 Feb 15. PMID: 33587257; PMCID: PMC7882855.

> This study examines the potential role of telepsychiatry in EDs across the state of New York. The authors compared visit dispositions for psychiatric visits in EDs that did (versus did not) receive telepsychiatry services. The study found that psychiatric visits in

EDs with telepsychiatry services had lower odds of using observation services compared to visits in EDs without telepsychiatry.

8. Zun, L. (2016). Care of Psychiatric Patients: The Challenge to Emergency Physicians. *Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health*, 17(2). http://dx.doi.org/10.5811/westjem.2016.1.29648

This paper presents the challenges emergency physicians (EPs) face when caring for patients with psychiatric needs. The author notes that EPs have little training in behavioral emergencies in emergency medicine residencies and may not realize that their attitudes towards a psychiatric patient may lead to poor patient outcomes and experience. Improved staff education for psychiatric patients in the emergency room can help resolve the challenges, along with enhanced treatment protocols and reduced wait times and boarding.