



Published in final edited form as:

J Telemed Telecare. 2019 January ; 25(1): 59–63. doi:10.1177/1357633X17735559.

Perceived Risks and Use of Psychotherapy via Telemedicine for Patients at Risk for Suicide

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Abstract

Introduction—Suicide is a major public health problem and its human, emotional, and economic costs are significant. Individuals in rural areas are at highest risk for suicide. However, telemedicine services are typically not rendered to individuals who are actively suicidal. The goals of the current study were to identify the risks of using telemedicine for mental health care from the perspective of licensed mental health providers and to determine factors associated with use of telemedicine with patients who are at high-risk for suicide.

Methods—A total of 52 licensed mental health providers were recruited online through several professional organization listservs and targeted emails. Providers completed online questionnaires regarding demographics, caseload of suicidal patients, perceived risks for using telemedicine with patients at risk for suicide, attitudes towards telemedicine, and use of telemedicine with patients at risk for suicide.

Results—Three key perceived risks associated with using telemedicine were identified including assessment, lack of control over patient, and difficulties triaging patients if needed. It was also found that individuals who had more positive attitudes towards telemedicine, younger providers, and more experienced providers were more likely to use telemedicine with patients who are at high-risk for suicide.

Discussion—To our knowledge, this is the first study to examine perceived risks and use of telemedicine with patients at high-risk for suicide. It is essential to continue this line of research to develop protocols for provision of evidence-based therapy via telemedicine for this high-risk group.

Keywords

telemedicine; suicide; provider attitudes

Suicide is a major public health problem and its human, emotional, and economic costs are significant¹. Despite decades of research, suicide rates in the United States have remained relatively stable; in fact, rates are slowly increasing in some demographic groups^{2–3} and in

Declaration of Conflicting Interests

The authors declare that there is no conflict of interest.

2015 suicide was the 10th leading cause of US death overall⁴. Although prior research has focused on developing and evaluating treatments for individuals at risk for and experiencing suicidal thoughts and urges, unfortunately most people who die by suicide do not engage in mental health treatment in the time immediately preceding death. In fact, up to 81% of people who die by suicide do not have contact with mental health services in the month before death and approximately 68% do not have contact in the year before death⁵⁻⁶. Of note, Ahmedani and colleagues⁵ reported mental health visits by counting health care contacts with a mental health diagnosis and is likely an overestimation of visits with a provider with mental health-specific training and expertise.

One critical factor related to low rates of treatment engagement for suicidal individuals is the availability of qualified mental health providers⁷. The Health Resources and Services Administration⁷ estimates that 43% of all counties in the United States are “mental health professional shortage areas” based on 1) the population-to-provider ratio, 2) the percentage of the population below 100% of the Federal Poverty Level, 3) the travel time to the nearest source of care outside the designated shortage area, 4) the elderly and youth ratios in the population, and 5) the alcohol and substance abuse prevalence in the area. Beyond these designation criteria, available providers often have limited experience with evidence-based practice⁸ and may still be inaccessible to many individuals in need of services (e.g., providers do not accept insurance, patients do not have insurance)⁹.

Adults living in rural counties of the country are at particularly elevated risk for suicide, with rates increasing more quickly in these regions relative to the overall increases seen in urban and suburban counties³. One reason for this disparity is the limited availability of treatment in rural settings; in fact, 53% of rural Americans live in counties designated as “mental health professional shortage areas”⁷ whose populations total more than 24 million. Despite effective treatments for high-risk suicidal patients such as dialectical behavior therapy (DBT)¹⁰, providers with experience delivering evidence-based treatments are in high-demand across the country. Rural mental health services are at an additional disadvantage because their limited resources are unlikely to support the training required to learn these treatments or the community structure to support their effective provision.

While increasing and sustaining opportunities for rural health providers is needed, one way to immediately improve access is to make DBT (and other evidence-based treatments) available within the current settings using telemedicine. Telemedicine technology provides an effective and acceptable approach to address the gap between suicidal individuals in need of mental health services and limited qualified mental health providers. Emerging research has revealed that there are no differences in mental health outcomes when an evidence-based therapy is delivered via telemedicine compared to in person delivery¹¹⁻¹². Active suicidality is not listed as an exclusion factor to consider within the American Psychological Association guidelines for Telepsychology¹³ or in the American Telemedicine Association practice guidelines¹⁴. Although there are several technology-based interventions for individuals who are actively suicidal including suicide hotlines, social network campaigns, outreach through emails and texting, and mobile health applications¹⁵, to our knowledge there has been no research assessing the efficacy of the delivery of traditional psychotherapies for actively suicidal individuals via telemedicine.

The protocols that outline active suicidality in the context of telemedicine treatment typically include stopping treatment¹⁶ and/or hospitalization¹⁷. However, to our knowledge, there are no protocols for actually providing evidence-based psychotherapy for suicidal behaviors and/or non-suicidal self-injurious behavior via telemedicine. One randomized clinical trial did examine the effect of a brief mobile phone-based treatment for individuals who had made a suicide attempt in Sri Lanka, however, this intervention was brief and at most included 15 minute telephone calls after receiving an in-person intervention¹⁸. Importantly, suicide risk assessment¹⁹ and psychotherapy^{11–12} can be effectively completed via telemedicine and suicide risk assessment conducted via telemedicine is as effective as risk assessment completed in person¹⁹. Further, the benefits of telemedicine including reduced travel and costs as well as increased anonymity to patients may be appealing to individuals who are suicidal who do not currently access mental health treatment. Reducing barriers among this population is needed. First, it is necessary to understand why mental health providers opt to not provide evidence-based treatments for suicidal and non-suicidal self-injurious behavior via telemedicine to ensure that treatment protocols can be developed to make providers more comfortable and willing to treat this high-risk behavior.

The first aim of the current study was to identify the risks of using telemedicine for mental health care from the perspective of licensed mental health providers. Specifically, we sought to understand the perspectives of a range of licensed mental health professionals (i.e., providers with expertise treating suicidal patients, with expertise in DBT, and with experience providing psychotherapy via telemedicine) to inform future efforts to increase willingness and comfort using telemedicine with patients at high-risk for suicide. The second aim was to determine factors associated with use of telemedicine with patients who are at high-risk for suicide. We hypothesized that individuals who had more positive attitudes towards telemedicine, more experience treating suicidal patients, and younger providers would be more likely to use telemedicine with patients who are at high-risk for suicide.

Methods

Participants

Licensed mental health providers were recruited online through a single email to several professional organization listservs (e.g., American Association of Suicidology, Dialectical Behavior Therapy, Rural Mental Health) as well as via targeted emails to individuals with experience using telemedicine for psychotherapy and in rural areas. Providers that belong to these listservs are typically Masters- or PhD-level psychotherapists. A total of 68 providers completed some or all of the study questionnaires. Listwise deletion was utilized for 16 cases due to missing data on the majority of measures and/or illogical or impossible responding patterns (e.g., seeing 101 individual psychotherapy outpatients per week), leading to a sample size of 52 participants from 26 states.

Materials and Procedure

The current study was approved through the Institutional Review Board of a northeastern university. In study advertisements, a link directed potential participants to the IRB-

approved study consent form and questionnaires using Qualtrics (Provo, UT and Seattle, WA) online survey software. The electronic consent form informed participants that participation was voluntary and their responses would be kept confidential. By clicking “Agree,” participants provided consent to take part in the study. Completion of the questionnaires took approximately 15 minutes and participants received a \$15 Amazon gift card following their participation. Participants provided demographic information including their age, gender, years of treatment experience, relevant expertise, prior experience with telemedicine, and caseload of suicidal patients.

Perceived Risks of Telemedicine with Patients at High-Risk for Suicide—

Participants were asked to “please consider patients with acute suicide risk (e.g., current persistent suicidal ideation; recent suicide attempt; ongoing self-injurious behavior).” Participants were asked in an open-ended response to “please list any potential risks of providing mental health treatment through video (telehealth/telemedicine) to patients who have high acute suicide risk.” The authors completed the following steps to qualitative coding: separate examination of the responses to generate themes, sharing the themes to develop a consensus, coding of the themes separately, comparing responses, revising the coding scheme, coding themes separately, and finally meeting to decide on items coded differently.

Attitudes towards Telemedicine—Participants completed an adapted version of a questionnaire assessing positive and negative attitudes regarding use of telemedicine²⁰. This 10-item questionnaire assesses attitudes toward and willingness to use telemedicine. Question wording was modified to more generally assess attitudes toward telemedicine in civilian settings given that the original questionnaire included treatment within veteran settings and language specific to the Veterans Health Administration.

Use of Telemedicine with Patients at High-Risk for Suicide—Participants indicated modalities of treatment (i.e., individual psychotherapy, group psychotherapy, contact outside of sessions but during business hours, 24-hour on call services, colleague/provider consultation) using a video (telehealth/telemedicine) method of provision they have provided to patients at high risk for suicide. For this question, participants were asked to “please consider patients with acute suicide risk (e.g., current persistent suicidal ideation; recent suicide attempt; ongoing self-injurious behavior).”

Results

Descriptives of Providers

Participant age ranged from 27–67 ($M=42.7$), with an average of 12.6 years in practice. Participants were predominantly female (76.9%), White/Caucasian (98.1%), and obtained doctoral-level training (55.8%). Additional demographic information is provided in Table 1.

Perceived Risks of Telemedicine with Patients at High-Risk for Suicide

Potential risks in this study were included if more than 5% of the providers identified the topic as a risk. Participants identified three key potential risks associated with treating

acutely suicidal patients via telemedicine. The two coders (authors) were consistent with their coding ($Kappa_{average} = 0.68$). Coding was completed independently and then compared. Disagreements were resolved by the two coders making a mutual decision on coding. There were no instances where coders could not come to a mutual decision. A total of 32.7% ($n = 17$) of providers identified assessment as a potential risk. Providers were concerned that a thorough assessment would not be possible via telemedicine. For example, “may be more difficult to read emotional cues” and “may not be able to see some nonverbals.” A total of 30.8% ($n=16$) of providers identified lack of control over the patient as a potential risk. Providers were concerned that they would not be able to physically detain the patient if they were providing services via telemedicine. For example, “not knowing how to emergency detain someone though video” and “concerns about follow through with hospitalization if needed if they’re not in my office.” A total of 17.3% ($n=9$) of providers identified difficulties with triaging as a potential risk. Providers were concerned that they would not be able to adequately navigate the triaging process if a visit to the emergency department was required. For example, “If someone needs to be hospitalized and they are not on site, it may be more difficult to arrange” and “not having access to family members or police department.”

Use of Telemedicine with Patients at High-Risk for Suicide

A total of 21.2% ($n = 11$) of participants endorsed use of telemedicine with patients at high-risk for suicide. Only 3 individuals (5.8%) used telemedicine for individual psychotherapy so we were unable to look at that variable in itself. Instead, we examined use of telemedicine with these high-risk patients for any reason (including individual psychotherapy, group psychotherapy, contact outside of scheduled sessions but during business hours, 24-hour on call services, and colleague/provider consultation). A logistic regression was used to examine factors associated with using telemedicine with patients at high-risk for suicide. The overall logistic regression model was significant, $chi-square = 19.49$, $df = 5$, $p = 0.001$. Individuals with more positive attitudes towards telemedicine had higher odds of using telemedicine with patients at high-risk for suicide, AOR (Adjusted Odds Ratio) = 1.63, $p = 0.008$. Individuals who were older had lower odds of using telemedicine with patients at high-risk for suicide, $AOR = 0.619$, $p < 0.042$. Individuals who had more years in practice had higher odds of using telemedicine with patients at high-risk for suicide, $AOR = 1.583$, $p = 0.040$. There was not a significant association among number of suicidal patients treated weekly, $AOR = 1.176$, $p = 0.334$, or gender, $AOR = 4.434$, $p = 0.164$.

Discussion

The goals of the current study were to identify the risks of using telemedicine for mental health care from the perspective of licensed mental health providers and to determine factors associated with use of telemedicine with patients who are at high-risk for suicide. We identified three key perceived risks associated with using telemedicine which included assessment, lack of control over patient, and difficulties triaging patients if needed. Further, we found that individuals who had more positive attitudes towards telemedicine, younger providers, and more experienced providers were more likely to use telemedicine with patients who are at high-risk for suicide, partially supporting our hypotheses.

It is essential to first understand the perceived risks of licensed providers to inform future efforts to increase willingness and comfort using telemedicine with patients at high-risk for suicide. There are clear benefits to using telemedicine for individuals at high-risk for suicide including increased access to treatment, lower costs, and increased anonymity. Further, there are several evidence-based prevention programs for emergent suicidality and for individuals who have attempted suicide that are technology-based¹⁵ or include in person and technology components¹⁸. However, the perceived risks held by licensed therapists can get in the way of providing telemedicine to this high-risk population. It is essential for individuals to expand the current protocols that exist for telemedicine provision of treatment for suicidal individuals. As already discussed, the protocols currently available focus on stopping treatment¹⁶ and/or hospitalization¹⁷ when an individual has high-risk of suicide, instead of employing evidence-based treatment for suicidal behaviors including DBT. Therefore, it may be possible to address the providers' concerns found in the current study within a protocol to reduce potential risks associated with providing telemedicine among this high-risk group. For example, protocols can be made regarding how to efficiently and comprehensively conduct assessments via telemedicine. Suicide risk assessments can be completed via telemedicine¹⁹, yet providers are indicating that they have concerns about whether they can do this effectively. Further, protocols outlining how to ensure that the therapist either feels confident that the patient will follow through with safety plans or protocols addressing therapist fears over lack of patient control could be created. Finally, procedures outlining how to ensure that triaging patients, if needed, during an intake session to ensure that if triage is needed the therapist would be prepared may be beneficial. Given the overwhelming potential benefits of telemedicine and the heightened need of treatment for suicidal behaviors in rural areas, it is imperative that protocols are made on this topic.

Although only a few participants indicated that they provide individual therapy via telemedicine, about one fifth of participants indicated that they have provided some care to individuals at high risk for suicide via telemedicine. Not surprisingly, we found that individuals who had more positive attitudes towards telemedicine, younger providers, and more experienced providers were more likely to use telemedicine with patients who are at high-risk for suicide. However, we did not find support for our hypothesis that individuals who had more experience treating suicidal patients would be more likely to use telemedicine with patients who are at high-risk for suicide. In fact, there was no association found between experience treating suicidal patients and use of telemedicine with patients who are at high-risk for suicide. This finding was surprising because it was hypothesized that the more experience one has with treating suicide, the more comfortable one is with addressing suicide in multiple contexts and treatment delivery modes. However, this was not the case and it appears that attitudes towards telemedicine, age, and provider experience was more important when determining this variable.

There are several limitations to consider when interpreting the results of the current study. First, the data collected were from a convenience sample that was recruited online and included a small sample of therapists. Future work should consider recruiting a larger sample of more diverse therapists (98% identified as White). Further, a small percentage of individuals endorsed using individual therapy via telemedicine with patients at high-risk for suicide so it could not be examined in the current study. Instead, using telemedicine in

general with patients at high-risk for suicide was examined. There are some clear limitations to this given that individual psychotherapy via telemedicine would be the most desired form of treatment for individuals who are at high-risk for suicide and who do not have access to evidence-based treatments.

Conclusions and Future Directions

To our knowledge, this is the first study to examine perceived risks and use of telemedicine with patients at high-risk for suicide. It is essential to continue this line of research by (1) conducting randomized clinical trials to compare the efficacy of providing evidence-based therapy to suicidal individuals via telemedicine and (2) develop a practice guideline for delivering psychotherapy via telemedicine to suicidal individuals. Rigorous investigation and practice guidelines could help ensure that the safety of the patient is the highest priority while also providing evidence-based care to those most in need: suicidal patients who live in rural areas or who cannot access treatment otherwise.

Acknowledgments

Portions of this study will be presented at the International Society for the Improvement and Teaching of Dialectical Behavior Therapy annual conference in November, 2017. Manuscript preparation was supported by a grant from the National Institute on Drug Abuse (K23DA042935; PI: Gilmore).

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Table 1

Participant Characteristics and Descriptives

	N (%)	M (SD)
Age		42.7 (10.9)
Gender		
Female	40 (76.9)	
Male	12 (23.1)	
Ethnicity		
White/Caucasian	51 (98.1)	
More than one race	1 (1.9)	
Highest degree		
Doctorate	29 (55.8)	
Masters'	23 (44.2)	
Years in practice		12.6 (10.9)
Primary practice setting		
Rural	9 (17.3)	
Urban	37 (71.2)	
Other	6 (11.5)	
Telemedicine experience		
Last year	26 (50.0)	
Never	20 (38.5)	
Ever used telemedicine with patients at risk for suicide	11 (21.2)	
Average weekly case load		
Average number of suicidal patients in case load		4.9 (5.6)

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