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COLUMN: EDUCATIONAL CASE REPORT

A Pilot Program in Telepsychiatry for Residents: Initial Outcomes and Program Development

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Telepsychiatry, the use of video teleconferencing to deliver psychiatric services, has expanded dramatically in recent years [1]. Telepsychiatry is equally effective compared to face-to-face care for the provision of medication management and a variety of psychotherapies [2–6]. Telepsychiatry can be deployed on a very large scale with very positive impact. For example, a study of 98,609 patients at the US Department of Veterans Affairs (VA) demonstrated a significant reduction in inpatient hospitalizations after initiation of telepsychiatry [7]. Telepsychiatry has the potential to deliver care directly into the patient's environment in a way that reduces sigma, increases access, and, along with other technologies, creates a paradigm shift in how we provide care [8].

Given this potential, it is vital that training in telepsychiatry become a standard component of psychiatry residency programs. A recent survey of psychiatry residents across the USA revealed that although the majority of the 283 respondents expressed interest in telepsychiatry, only 17.6 % had any clinical exposure and 48 % of those with exposure had received less than 6 h of training [9]. These findings clearly indicate telepsychiatry training has yet to become a standard part of psychiatry residency. In the literature, information on training program best practices is only beginning to be addressed [10–15]. In this report, we describe our experience developing a 6-month, required training rotation in telepsychiatry for third year psychiatry residents.

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Methods

Development of Training Program Structure We began training second year residents in telepsychiatry in 2010 as an elective. This brief experience involved shadowing a telepsychiatrist as part of a 2-month introductory rotation in outpatient care. Based on the success of this rotation, we expanded the program in 2012 into a 6-month outpatient rotation required for all residents except those few on a research track.

At the beginning of the rotation, residents were given an orientation packet and training that included an outline of the rotation, Veterans Administration (VA) clinical video telehealth (CVT) training requirements [14, 16–18], and a location-specific emergency safety plan. Before their first session, each resident had a 30-min hands-on individual training by our Telehealth Coordinator using the videoconferencing equipment during which time they were introduced to the remote site Telehealth Clinical Technician (TCT) and mental health staff. The TCT works at the patient site and is responsible for setting up patient site equipment, checking the patient in, escorting patients, obtaining vital signs, and helping to facilitate clinic management.

There were five to six residents per rotation with each attending physician supervising 1–2 residents. In general, residents were scheduled for three to four patients during a 3-hour clinic as well as using telepsychiatry during their half-day addiction clinic. Residents were also involved in other clinics during this outpatient rotation (psychotherapy, clozaril, and serious mental illness clinic). Supervising attendings were on-site and available for in-person supervision as needed. Attendings sat in with residents during initial sessions to help

familiarize residents with conducting treatment via telepsychiatry. Although some attendings continued to sit in on all sessions, most provided a mix of in-person supervision with secure instant messaging and telephone supervision. All attended sessions in person as needed to further evaluate resident competency or at the request of the resident. Residents were able to instant message or telephone the TCT and other clinicians at the remote clinic.

Data Collection Data on the population served was obtained from the VA EMR database for analyses. In addition, survey data was collected from an optional, anonymous, 21-item, five-point Likert scale (strongly disagree to strongly agree) online survey sent to resident and attending participants. The survey also included several open-ended questions. The intention of the survey was to assess strengths and weaknesses of the training experience to allow for further curriculum development. Both data and survey collection were approved by the Institutional Review Board (IRB) for Stanford University and VA Palo Alto Health Care System Administration Research and Development Committee.

Results

Patients Served From January 2012 to July 2013, 15 psychiatry residents completed the 6-month rotation. These 15 residents treated 263 telepsychiatry patients that involved 640 individual encounters. The rotation experience included providing care to either a rural clinic or a temporarily understaffed urban clinic. The interventions provided by the residents consisted of 57 % medication evaluations, 40 % psychotherapy with medication evaluations, and 3 % new patient evaluations. The standard appointment was 45 min in length (72 % of the total; range 30–90 min). The range of diagnoses is shown in Fig. 1.

Resident Feedback The rotation overall has received very high ratings from the residents during reviews with residency program leadership, and residents expressed a desire for it to continue as a required rotation. Ten out of 15 residents completed the survey. Their feedback indicated that, by the end of the rotation, the majority of surveyed residents felt comfortable with providing medication management and treating

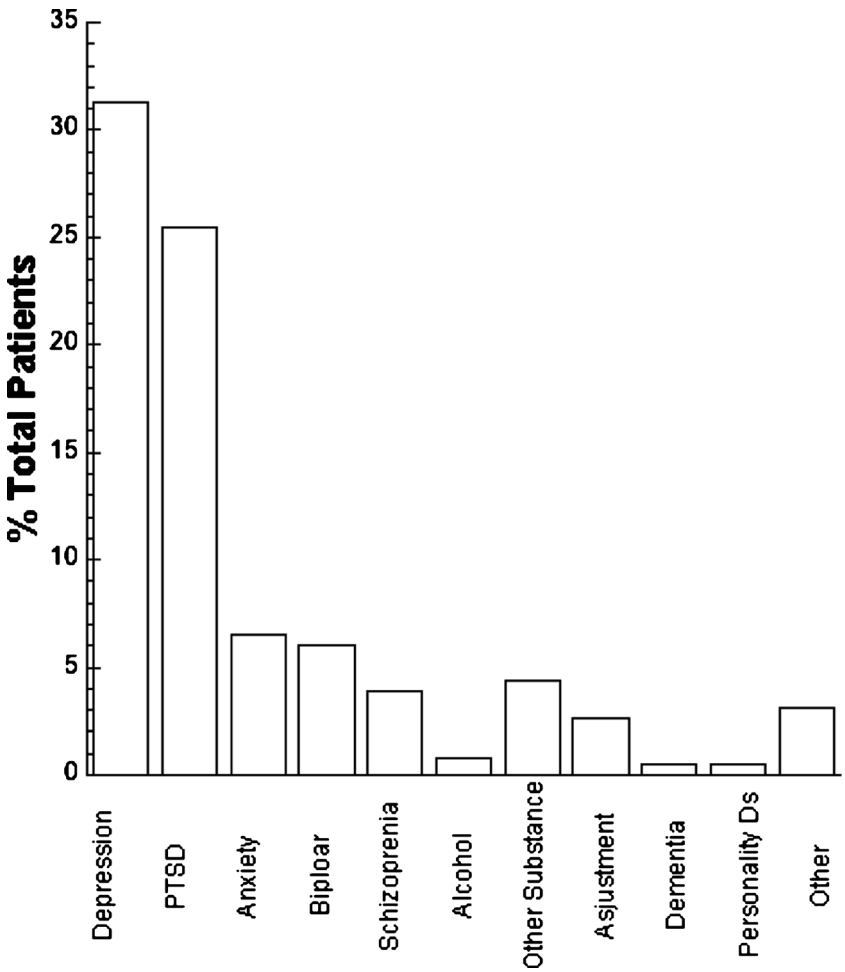

Fig. 1 Primary diagnoses treated

most, but not all, diagnoses by telepsychiatry (Fig. 2). Survey data indicated that none of the residents felt equipment problems interrupted sessions, only 2/10 thought scheduling was a problem, and almost all felt the TCTs and instant messaging were important in facilitating telepsychiatry care. Open-ended comments included "people seemed comfortable with it" and the "TCTs were quite good, caring, and helpful". The residents generally reported that no special skills were needed to effectively deliver telepsychiatry.

Areas of weakness identified included 4/10 who agreed or strongly agreed that collaboration with staff at the distant site was limited, 5/10 who felt that suicide assessments were difficult through telemedicine, and 5/10 who had concerns about the implementation of the emergency plan, even though all but one reported being aware of the steps in the plan. Open-ended comments included "harder to remember who the patient was", "a challenge to pick up on some of the non-verbal cues", "veterans with psychosis and dementia had difficulty with the concept", "management of psychosis is fine but new evaluations without a prior visit by an MD was difficult", and "I felt like telepsychiatry care was tenuous for substance abusers as I wasn't sure if I could entirely trust what they were reporting."

Attending Feedback Of eight telepsychiatry attending physicians involved during the period of this report, seven completed an anonymous attending survey. The attendings' responses generally matched those of the residents with the treatment of psychotic disorders by telepsychiatry being a notable exception (Fig. 2). All of the attendings agreed or strongly agreed that the residents they supervised became comfortable with the use of telepsychiatry. The surveys revealed concerns held by a minority of the attendings (two to three out of seven agreed or strongly agreed) that the following were problematic: Collaboration with staff at the distant site was limited, suicide assessments were difficult, there were concerns about the implementation of the emergency plan, equipment problems interrupted sessions, and scheduling was a problem.

All the attendings felt the TCTs and the use of instant messaging technology were important in facilitating telepsychiatry care.

Discussion

Our experiences with a required 6-month telepsychiatry training rotation for psychiatry residents have overall been very

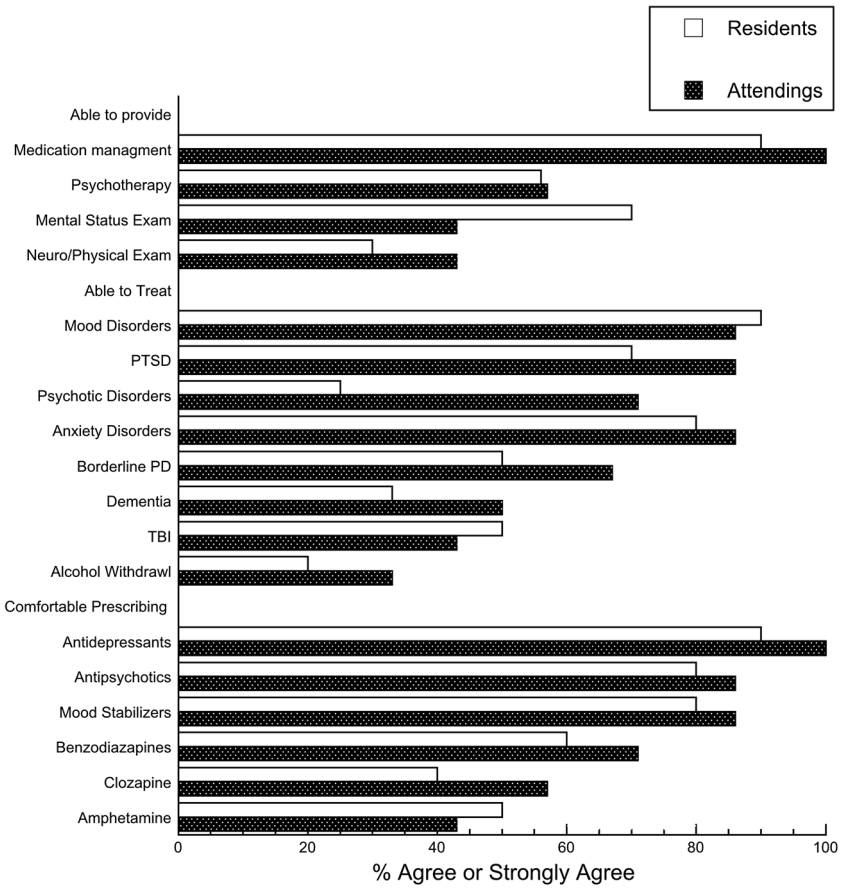

Fig. 2 Survey results

positive. Our model of a mix of in-person and instant messaging/telephone supervision is different than the in-person supervision previously described [10–12]. Instant messaging plays an important role in both clinical supervision and managing clinical logistics. A number of our residents reported that not having the attending sitting in the room with them during visits fostered their autonomy while instant messaging allowed them to be able to query their attending about treatment decisions without interrupting their session with a patient. Secondly, instant messaging allows the attending to respond to the questions from two different residents in tandem as well as affording the attending the option of reviewing the patient's electronic medical record while discussing treatment decisions. Thirdly, IM allowed the TCT and resident to quickly communicate and handle difficult clinical situations as the resident, attending, TCT, and other staff can all be on the same instant messaging thread simultaneously.

Our ongoing, site-specific survey has aided program development. For example, the survey revealed residents were less comfortable treating certain disorders, specifically psychotic disorder, borderline personality disorder, and dementia. This is similar to the findings of Dzara and colleagues whose surveys also revealed trainees did not feel as comfortable treating certain disorders [11]. While this may reflect limitations in the use of telepsychiatry or the residents' general lack of confidence treating these disorders, the demographic data show that the residents had the least training experience with these disorders. Making an effort to increase their clinical exposure to these conditions may increase their confidence. The residents also felt more comfortable with medication management compared to psychotherapy but, again, they had less experience with psychotherapy, either in person or via telepsychiatry. Likewise, their training did not specifically address the use of telepsychiatry to prescribe agents such as amphetamines or benzodiazepines, and few residents were comfortable prescribing them by telepsychiatry. The surveys also revealed some of the attendings had concerns about aspects of telepsychiatry. We have subsequently directly addressed these concerns with all the attendings. One area of potential concern was that many of the residents and a minority of the attendings expressed concern about the implementation of the emergency plan despite being aware of the steps involved. Such concerns could hamper their willingness to conduct telepsychiatry in the future and should be directly addressed. The residents had little actual experience with emergencies during telepsychiatry. Running practice emergency scenarios specific for telepsychiatry and developing training modules that address methods for conducting telesuicide assessments may alleviate their concern.

Our assessment of the rotation was limited by the use of a non-standardized, non-validated survey, a small sample size, and surveys that were not completed. The survey was intended to be used as a modest tool to gather formative information from residents and attendings to be used for rotation development. Both the survey and the structure of rotation itself are not yet as standardized or in an ideal intervention format that would be consistent with educational research. We have modified both the survey and the rotation in response to feedback obtained. We plan to continue to administer an updated survey anonymously online. Future surveys would benefit from including questions comparing resident and attending experience in telepsychiatry versus non-telepsychiatry settings. A survey administered at the beginning and end of the rotation would help measure the change in resident views and perceived competencies. Lastly, survey data from patients would help to provide a more well-rounded assessment of resident competency and as well as patient experience.

Conclusion

In summary, both feedback from residents and attendings indicate the telehealth clinical technicians, and instant messaging enhanced the training experience for residents and their ability to provide high-quality care. Their experiences with a required rotation in telepsychiatry have been generally very positive, but have also revealed areas for potential improvement. Modifying the rotation to address the challenging areas that were identified is vital to improving resident training. More objective evaluations of how components of training impact telepsychiatry clinical skills are needed as well.

Implications for Educators

- Our survey findings and informal feedback indicate that a required 6-month telepsychiatry rotation is well received by residents.
- Despite being well received, our survey results indicate several areas for improvement in training to improve confidence.
- Instant messaging facilitates efficient and effective telepsychiatry supervision.

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Disclosures On behalf of all authors, the corresponding author states that there is no conflict of interest.

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