

Staff Perspectives on the VISN 20 Tele-Neuropsychology Program

Ana C. Messler, PhD, ABPP^a; David D. Hargrave, PsyD, ABPP^b; Christine E. Gould, PhD, ABPP^{c,d}; Chalise Carlson, MA^c; Jeffrey A. Sordahl, PsyD, ABPP^a

Background: The use of tele-neuropsychology (teleNP) is increasing within Veterans Integrated Service Network (VISN) 20. A quality improvement survey was conducted to better understand VISN 20 staff opinions of teleNP, how to improve the services, and whether it is preferred over face-to-face (F2F) neuropsychology evaluations in community-based settings.

Methods: The authors surveyed US Department of Veterans Affairs (VA) VISN 20 staff from February 7, 2024, to June 15, 2024. Eighteen of 33 respondents had referred patients for neuropsychology services during the previous year.

Results: The mean (SD) rating of teleNP usefulness was 1.5 (0.8) (between very much so and mostly useful on the scale) and the

rating of non-VA F2F neuropsychology evaluation usefulness was 1.7 (0.9). A Wilcoxon signed rank-test of related samples indicated no differences between the pairs of ratings ($Z = 1.50$; $P = .41$). Respondents serving rural veterans were more likely to refer patients for teleNP services compared with those serving nonrural veterans ($\chi^2 = 5.7$; $P = .02$). However, ratings of teleNP usefulness did not significantly differ for those serving rural compared with nonrural veterans ($\chi^2 = 1.4$; $P = .49$).

Conclusions: While response rate was low, the survey provides initial support for the acceptability and utility of teleNP among VA staff who responded to the survey, with favorable comparisons of teleNP to existing F2F neuropsychology resources.

Author affiliations can be found at the end of this article.

Correspondence:

Ana Messler
(ana.messler@va.gov)

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There are 2.7 million (48%) rural veterans enrolled in the Veterans Health Administration (VHA).¹ Many VHA-enrolled rural veterans are aged ≥ 65 years (54%), a medically complex population that requires more extensive health care.¹ These veterans may live far from US Department of Veterans Affairs (VA) medical centers (VAMCs) and often receive most of their care at rural community-based outpatient clinics (CBOCs). In addition to face-to-face (F2F) services provided at these clinics, many patient care needs may be met using telehealth technology, which can connect veterans at CBOCs with remote health care practitioners (HCPs).

This technology is used across medical specialties throughout the VA and has expanded into neuropsychology services to improve access amid the shortage of rural neuropsychologists. Prior research suggests that access to neuropsychology services improves the functional outcomes of people with diverse medical conditions, including dementia, brain injury, and epilepsy, and reduces emergency department visits, hospitalization duration, and health care costs.²⁻⁶ Given that veterans unable to access neuropsychology services may be at risk for poorer outcomes, identifying ways to improve access is a priority. Tele-neuropsychology (teleNP) has been used to expand access for rural veterans in need of these services.^{7,8}

TeleNP is the application of audio-visual technologies to enable remote clinical encounters for neuropsychological assessments.⁹ TeleNP has been shown to be generally equivalent to F2F care, without significant differences compared with in-person visits.¹⁰⁻¹³ TeleNP was increasingly implemented following the COVID-19 pandemic and remains an enduring and expanding feature of neuropsychology care delivery.^{8,14-18} TeleNP services can increase access to care, especially for rural veterans and those with limited transportation.

Research in non-VA samples suggests a high level of clinician satisfaction with teleNP.¹⁶ In VA samples, research has found high levels of patient satisfaction with teleNP both within Veterans Integrated Services Network (VISN) 20 and in a VA health care system outside VISN 20.^{7,19} Investigating staff perceptions of these services and their utility compared with non-VA F2F visits is pertinent to the overall feasibility and effectiveness of teleNP.

TELE-NEUROPSYCHOLOGY PROGRAM

A clinical resource hub (CRH) is a VISN-governed program that provides veteran health care when local VHA facilities have service gaps.^{20,21} CRH 20 serves several Pacific Northwest VISN 20 health care systems and began providing teleNP in 2015. The CRH 20 teleNP service serves older adults in rural settings with > 570 teleNP

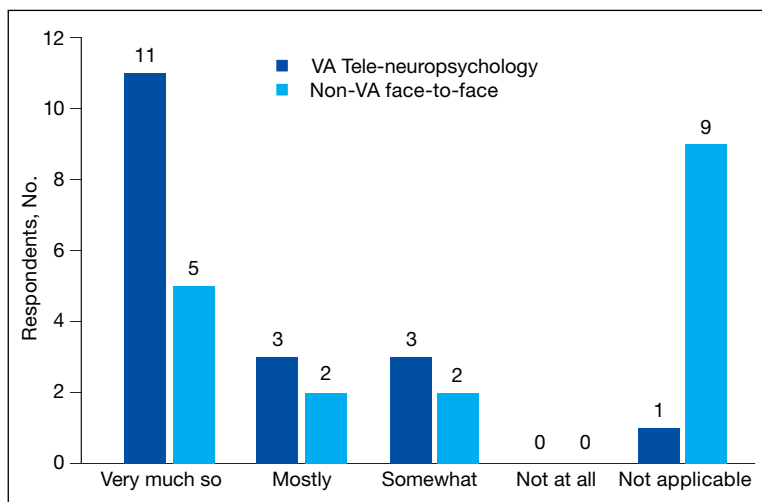


FIGURE. Usefulness of face-to-face and tele-neuropsychology evaluations and reports (N = 18).

Abbreviations: VA, US Department of Veterans Affairs.

evaluations completed over a recent 12-month period (May 2023 to May 2024). In the CRH 20 teleNP program, veterans are offered services by CRH 20 neuropsychologists via telehealth to a patient's local VAMC, larger health care clinic, CBOC, or via Veterans Video Connect to the home.

Referral pathways to the CRH 20 teleNP program differ across sites. For VISN 20 sites that do not have any in-house neuropsychology services, referrals are initiated by HCPs from any discipline. At 2 sites with in-house neuropsychology programs, CRH 20 teleNP referrals typically are forwarded from the in-house service whenever the veteran prefers to be seen at an outlying clinic. All sites, including the CBOCs, are equipped fully for testing, and the HCP encounters veterans in a private office via video-based telehealth technology after a telehealth technician orients them to the space. The private office minimizes environmental disruptions and uses standardized technology to ensure valid results. A limited number of evaluations are offered at home (< 5% of the evaluations) if the veteran is unable to come to a VHA facility, has access to reliable internet, and a minimally distracting home setting.

In VISN 20, teleNP is a routine practice for delivering services to rural sites, most of which lack neuropsychologists. However, there is limited information about the extent to which the referral sources find the service useful. This quality improvement

(QI) project aimed to better understand how well-established teleNP services were received by referral sources/stakeholders and how services could be improved. Prior to the advent of the CRH 20 teleNP program, staff had the option of referring for F2F evaluations in the local community (outside the VA) at some sites, an option that remains. This QI project examined staff perspectives on the usefulness of CRH 20 teleNP services compared with non-VA F2F services. We administered an anonymous, confidential survey examining these factors to VISN 20 staff within 4 VA health care systems.

METHODS

This QI project used a mixed quantitative and qualitative descriptive survey design to elicit feedback. The authors (3 neuropsychologists, 1 geropsychologist, and 1 research coordinator) developed the survey questions. The 13-question survey was voluntary, anonymous, and confidential, and respondents were given an opportunity to ask questions, with the first author serving as the point of contact.

The survey ascertained information about respondents and their work setting (ie, facility type, specific work setting and location, profession, and rurality of patients). First respondents were asked whether they have referred patients to neuropsychology services in the past year. Those who had not referred patients during the past year were asked about reasons for nonreferral with an option to provide an open-ended response. Respondents who did refer were asked how they refer for neuropsychology services and about the usefulness and timeliness of both teleNP and non-VA F2F services. Respondents were asked to respond with their preference for teleNP vs non-VA F2F with an open-ended prompt. Finally, respondents were invited to share any feedback for improvement regarding teleNP services.

A link to the survey, hosted on the VA Research Electronic Data Capture system, was emailed to facility and service line leaders at the 4 VISN 20 health care systems for distribution to the staff. All staff were included because in many of the facilities, particularly those that are highly rural with

low staffing, it is not uncommon for technicians, nurses, and other support staff to assist with placing consults. In particular, VISN 20 nurses often have an optimal understanding of referral pathways to care for patients and are positioned to give and receive feedback about the utility of neuropsychological evaluations. The Research and Development Committee at the Boise VA Medical Center determined this project to be QI and exempt from institutional review board oversight. The VISN 20 employee labor relations HR supervisor approved this survey, with union awareness. Responses were anonymous.

Data were imported into Microsoft Excel and IBM SPSS Statistics for further analysis. Data were summarized using descriptive statistics, frequencies, and percentages. Non-parametric χ^2 and Wilcoxon signed-rank tests were used to test for differences. An inductive approach to develop codes was used for the 3 open-ended questions. Two authors (CC, CEG) independently coded the responses and reviewed discrepancies. Final code applications were based on consensus.

RESULTS

The survey was deployed for 1 month between February 7, 2024, and June 15, 2024, at each of the 4 health care systems. Thirty-three staff members responded; of these, 1 person did not respond to an item on whether they referred for neuropsychology services. Eighteen of 33 respondents reported referring patients to teleNP or F2F neuropsychology services in the past year. Fourteen of the 33 respondents stated they did not refer; of these, 2 were unfamiliar with the teleNP service and 12 provided other reasons (eg, new to VA, not in their professional scope to order consults, did not have patients needing services).

The analysis focused on the 18 respondents who referred for neuropsychology services. Thirteen were within health care system A, and 5 were within health care system B (which had no nearby non-VA contracted neuropsychology services) and none were in the other 2 health care systems. Ten of 18 respondents (56%) stated they practiced primarily in a rural setting. Five respondents worked in a CBOC, 12 in a main VA facility, 9 in a primary care setting, 8 in

a mental health setting, and 3 in other settings (eg, domiciliary). Participants could select > 1 setting. The 18 respondents who referred to neuropsychology services included 7 psychologists, 1 nurse, 2 social workers, 1 social services assistant, 4 nurse practitioners, 2 physicians, and 1 unknown HCP.

When asked to categorize the usefulness of services, more respondents characterized teleNP as very much so (1 on a 5-point scale) than F2F referrals (Figure). The mean (SD) of 1.5 (0.8) for teleNP usefulness fell between very much so and mostly and 1 respondent indicated not applicable. Similarly, the mean (SD) for non-VA F2F usefulness was 1.7 (0.9); 9 respondents rated this item as not applicable. A Wilcoxon signed-rank test of related samples indicated no significant differences between the pairs of ratings ($Z = 1.50$; $P = .41$).

Respondents with rural patients were more likely to refer them to teleNP services compared with respondents with nonrural patients ($\chi^2 = 5.7$; $P = .02$). However, ratings of teleNP usefulness did not significantly differ for those serving rural vs with nonrural patients ($\chi^2 = 1.4$; $P = .49$). Mean (SD) rating of teleNP usefulness was 1.3 (0.7) for the 9 rural subgroup respondents (between very much so and mostly) vs 1.8 (0.9) for the 8 nonrural subgroup respondents (between very much so and mostly). The mean (SD) rating for non-VA F2F usefulness was 1.8 (1.0) for the 4 rural subgroup respondents and 1.6 (0.8) for the 5 nonrural subgroup, between very much so and mostly for both groups.

Most respondents had no preference between teleNP or F2F. Notably, the responses underlying this group were multifaceted and corresponded to multiple codes (ie, access, preference for in-person services, technology, space and logistics, and service boundaries and requirements). According to 1 respondent, “the logistics of scheduling/room availability, technological challenges, and client behavioral issues that are likely to occur could possibly be more easily addressed via in-person sessions for some clients and providers.”

Six of 18 respondents preferred teleNP, citing timeliness, ease of access, and evaluation quality. One respondent noted that the

“majority of my veterans live in extremely remote areas” and may need to take a plane for their visit. The 3 respondents who preferred in-person neuropsychology services cited veterans’ preference for in-person services.

Open-Ended Feedback

Thirteen respondents offered feedback on what is working well with teleNP services. Reasons mentioned were related to the service (ie, timeliness, access, quality) and the neuropsychologist (ie, communication and HCP skills). One respondent described the service and neuropsychologists positively, stating that they were “responsive, notes are readily available, clear assessments and recommendations, being available by [Microsoft] Teams/email.”

Ten respondents provided suggestions for improvement. Suggestions focused on expanding services, such as to “all veterans with cognitive/memory concerns that desire testing,” individuals with attention-deficit/hyperactivity disorder and co-occurring mental health concerns, and those in residential programs. Suggestions included hiring psychology technicians or more staff and providing education at local clinics.

DISCUSSION

This QI project examines VA staff perspectives on the usefulness of CRH 20 teleNP services and non-VA F2F services. While the small sample size limits generalizability, this preliminary study suggests that VA teleNP evaluations were similar to those conducted F2F in non-VA settings. While ratings of teleNP usefulness did not differ significantly for those serving rural vs nonrural veterans, respondents serving rural patients were more likely to refer patients to teleNP, suggesting that teleNP may increase access in rural settings, consistent with other studies.^{7,8,13} This article also presents qualitative suggestions for improving teleNP delivery within the VHA. This is the first known initiative to report on VHA staff satisfaction with a teleNP service and expands the limited literature to date on satisfaction with teleNP services. The findings provide initial support for continued use and, potentially, expansion of teleNP services within this CRH remote hub-and-spoke model.

Limitations

A significant limitation of the current work is the small sample size of survey respondents. In particular, while teleNP turnaround time was perceived as faster than non-VA F2F care, only 8 respondents reported on timeliness of F2F evaluation results, which renders it difficult to draw conclusions. Interestingly, not all respondents reported referring to neuropsychology services within the previous year; the most common reasons reflect the perception that referral to neuropsychology was outside of that staff member’s role or not clinically indicated.

One additional possible explanation for the absence of reporting on utility of teleNP specifically is that respondents did not track whether their patient was seen by teleNP or F2F services, based on how the referral process varies at each health care system. For example, in health care system C, a large number of referrals are forwarded to the service by local VA F2F neuropsychologists. This may speak to the seamlessness of the teleNP process, such that local staff and/or referring HCPs are unaware of the modality over which neuropsychology is being conducted. It is plausible that the reason behind this smaller response rate in health care systems B and C relates to how neuropsychology consults are processed at these local VAMCs. We suspect that in these settings, the HCPs referring for neuropsychological evaluations (eg, primary care, mental health) may be unaware that their referrals are being triaged to neuropsychologists in a different program (CRH 20 teleNP). Therefore, they would not necessarily know that they used teleNP and didn’t complete the survey.

The referral process for these 2 sites contrasts with the process for other VISN 20 sites where there is no local neuropsychology program triaging. In these settings, referrals from local HCPs come directly to teleNP; thus, it is more likely that these HCPs are aware of teleNP services. There were only 2 physicians who completed the survey, which may relate to their workload and a workflow where other staff have been increasingly requested to order the consults for the physician. This type of workflow results in an increase in the number of VHA staff involved in patient

care. Ratings of usefulness were highest in health care system B, which does not have neuropsychology services at the facility or in the community; this may relate to elevated teleNP satisfaction ratings.

Further work may help identify which aspects of a teleNP service make it more useful than F2F care for this population or determine whether there were HCP- or setting-specific factors that influenced the ratings (ie, preference for VA care or comparison of favorability ratings for the HCPs who conduct teleNP and F2F within the same system). The latter comparisons could not be drawn in the current systems due to the absence of HCPs who provide both teleNP and F2F modalities within VISN 20. Another consideration for future work would be to use a previously published/validated survey measure and piloting of questions with a naive sample before implementation.

CONCLUSIONS

This analysis provides initial support for feasibility and acceptability of teleNP as an alternative to traditional in-person neuropsychological evaluations. The small number of survey respondents may reflect the multiple pathways through which consults are forwarded to CRH 20, which includes both direct HCP referrals and forwarded consults from local neuropsychology services. CRH 20 has completed > 570 teleNP evaluations within 1 year, suggesting that lack of awareness may not be hindering veteran access to the service. Replication with a larger sample that is more broadly representative of key stakeholders in veteran care, identification of populations that would benefit most from teleNP services, and dissemination studies of the expansion of teleNP services are all important directions for future work. The robustness and longevity of the VISN 20 teleNP program, coupled with the preliminary positive findings from this project, demonstrate support for further assessment of the potential impact of telehealth on neuropsychological care within the VHA and show that barriers associated with access to health care services in remote settings may be mitigated through teleNP service delivery.

Author affiliations

^aBoise Veterans Affairs Medical Center, Idaho

^bMontana Veterans Affairs Health Care System, Fort Harrison

^cVeterans Affairs Palo Alto Health Care System, California

^dStanford University, Palo Alto, California

Author disclosures

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Disclaimer

The opinions expressed herein are those of the authors and do not necessarily reflect those of *Federal Practitioner*, Frontline Medical Communications Inc., the US Government, or any of its agencies.

Ethics and consent

The Boise Veterans Affairs Medical Center Research and Development Committee determined this project to be quality improvement and exempt from institutional review board review.

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