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Evolving Roles, Innovative Practice, and Rapid Technology Growth: Remaining Ethical in Modern Clinical Neuropsychology

Chriscelyn M. Tussey[1,2,3] · **Bernice A. Marcopulos**[4,5] · **Shane S. Bush**[6]

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Abstract Neuropsychologists face many opportunities and challenges in the modern health care system. New technologies such as the electronic medical record, pressure to provide services to an increasing number of patients, especially in rural areas, and health care professionals expanding their scope of work, can present with ethical challenges. This article outlines several potential ethical dilemmas in modern health care and offers possible solutions utilizing an ethical decision-making strategy. A positive ethics approach is emphasized, and neuropsychologists are encouraged to adopt this perspective to aspire to the highest level of ethical practice.

Keywords Ethics · Neuropsychology · Electronic medical record · Test data

✉ Chriscelyn M. Tussey
info@metroforensicneuropsych.com

[1] Department of Psychology, Bellevue Hospital Center, New York, NY, USA

[2] Department of Psychiatry, New York University School of Medicine, New York, NY, USA

[3] Metropolitan Forensic & Neuropsychological Consultation, PLLC, New York, NY, USA

[4] Department of Graduate Psychology, James Madison University, Harrisonburg, VA, USA

[5] Department of Psychiatry and Neurobehavioral Sciences, University of Virginia Health System, Charlottesville, VA, USA

[6] Long Island Neuropsychology, P.C., Lake Ronkonkoma, NY, USA

Introduction

The field of clinical neuropsychology, much like many areas of healthcare, has been undergoing significant growth and evolution over the past decade. While the ethical guidelines provided by the American Psychological Association (APA, 2010) lays the foundation for practice in this specialty of psychology, neuropsychological organizations such as the National Academy of Neuropsychology and the American Academy of Clinical Neuropsychology (AACN), have regularly published contemporary position papers and guidelines for practicing neuropsychologists (e.g., AACN, 2007; Johnson-Greene & the NAN Policy & Planning Committee, 2005). The onus is on neuropsychologists to be proactively aware of such ethical principles and guidelines, legal requirements, and aspirational statements.

Although ethical guidance has traditionally focused on clinical errors and potential patient harm, over the past decade, the notion of positive ethics, or a change in focus from remedial work to a proactive ethical pursuit, has emerged and gained notice in the literature and in application in clinical psychology in general (Knapp & VandeCreek, 2006) and in neuropsychology more specifically (Bush, 2007). The concept of positive ethics as applied to neuropsychologists encourages clinicians to strive for exemplary ethical conduct, and to integrate personal ideals with one's professional life (Bush, 2007; Handelsman, Knapp, & Gottlieb, 2002; Knapp & VandeCreek, 2006). The current authors concur with the notion that neuropsychologists must be proactive in recognizing, and avoiding when possible, potential ethical pitfalls, as well as striving for excellence in this field, which can be facilitated by genuine integration of one's personal and professional ideals.

Numerous strategies have been proposed for how to engage in ethical practice (e.g., Knapp & VandeCreek, 2006). Utilizing the positive ethics approach, Bush (2007) created a problem-solving model with eight distinct steps that can assist

in an ethical decision-making strategy amongst neuropsychologists. The eight steps of this model are:

(1) Identify the problem(s) or dilemma(s), (2) consider the significance of the context and setting, (3) identify and utilize ethical and legal resources, (4) consider personal beliefs and values, (5) develop possible solutions to the problem, (6) consider the potential consequences of various solutions, (7) choose and implement a course of action, and (8) assess the outcome and implement changes as needed.

In addition to the Bush (2007) book referenced above, many other publications that cover ethical practice in neuropsychology exist (e.g., see reference list by Bush, 2014). The present article, informed by prior publications, focuses on select ethical considerations which span the evolving roles of neuropsychologists, issues related to technology and electronic medical records, and practice dilemmas which have emerged in the recent experience of the authors. Indeed, these issues are consistent with research by Brittain, Frances, and Barth (1995) who found that the majority of dilemmas that were faced by neuropsychologists included boundaries of competence, appropriateness of assessments, and interpretation of assessment results. Years later, Bush (2007) identified 12 issues that are common sources of ethical conflict in clinical neuropsychology. The ethical dilemmas chosen for this current article parallel some of those found by Brittain et al. (1995) and Bush (2007). It is hoped that this review will encourage the reader to consider contemporary issues facing neuropsychologists, such as the responsibility of the field as a whole, emerging conflicts of interest in the face of institutional and patient demands, and the impact of today's rapidly growing technology and its implementation in healthcare.

Several ethical principles are discussed in the following section, along with a vignette used to illustrate possible related ethical dilemmas. A potential professional response is provided, with the decision-making model proposed by Bush (2007) integrated into the response. The goal of this article is to provide a practical examination, and sample application, of the ethical issues described herein. The reader is provided with practical examples on how to utilize a decision-making model to address the numerous ethical dilemmas with which a clinical neuropsychologist could be faced. Although the potential solution offered is not prescriptive, it can lend insights into a unique method to contend with each issue. All references to specific ethical standards and general principles refer to the 2010 APA Ethics Code.

Evolving Roles and Responsibilities of Neuropsychologists

Neuropsychologists are ethically mandated to perform services, including teaching, clinical work, and research, within the boundaries of competence according to their training, supervised experience, consultation, self-study, and/or professional experience (Ethical Standard 2.01, Boundaries of Competence). Neuropsychologists are also expected to avoid the promotion of psychological assessment by individuals who are not qualified to conduct such measures. Ethical Standard 9.07, Assessment by Unqualified Persons, asserts: "Psychologists do not promote the use of psychological assessment techniques by unqualified persons, except when such use is conducted for training purposes with appropriate supervision." In recent years, demands on health care institutions and individual providers have increased, while the time to meet these demands has declined. In an effort to meet the demands of today's psychiatric patient population, many new opportunities for clinical practice have been created (e.g., Master's degree-level mental health counselors), and those already in existence have exploded in utilization (e.g., nurse practitioners; Kellerman, Saultz, Mehrotra, Jones, & Dalal, 2013).

As these new opportunities have unfolded, the field of neuropsychology has experienced an encroachment on evaluations typically provided by neuropsychologists. For instance, the current authors have observed some speech and occupational therapists that administer and interpret attention and executive functioning measures, as well as pediatric medical residents who learn and administer the Wechsler Intelligence Scale for Children-IV (Wechsler, 2003). While health care professionals are called upon to meet the needs of today's society, which will require professional flexibility and innovative practice, neuropsychologists must also strive to adhere to the General Principle B: Fidelity and Responsibility. This Principle encourages psychologists to be mindful of their professional and scientific responsibilities to society, but also to "uphold professional standards of conduct, clarify their professional roles and obligations, accept appropriate responsibility for their behavior and seek to manage conflicts of interest that could lead to exploitation or harm. Psychologists consult with, refer to, or cooperate with other professionals and institutions to the extent needed to serve the best interests of those with whom they work. They are concerned about the ethical compliance of their colleagues' scientific and professional conduct."

The notion that psychologists must cooperate with other professionals is highlighted in Ethical Standard 3.09, Cooperation with Other Professionals: "When indicated and professionally appropriate, psychologists cooperate with other professionals in order to serve their clients/patients effectively and appropriately." While doing this, neuropsychologists must carefully balance the need to preserve the integrity of the field with demonstrating, and making known, the utility of neuropsychological evaluation conducted by those specifically trained in this niche.

Vignette

A forensic neuropsychologist, Dr. P, who works on a forensic psychiatric inpatient unit, often finds himself reviewing

Montreal Cognitive Assessments (MoCAs; a brief cognitive screening measure for mild cognitive impairment; Nasreddine et al., 2005) administered incorrectly by clinicians from multiple disciplines (e.g., nursing, social work, medical students). The MoCA scores alone have incorrectly led some unit clinicians to diagnose patients with "dementia," in the absence of convergent clinical data (e.g., lab work, neuroimaging), or even an attempt to obtain such data. When Dr. P has reviewed the MoCAs, he has found multiple administration and scoring errors. Despite Dr. P's ongoing efforts to educate the staff regarding the administration of the MoCA, as well as the utility of, and when and how to refer to, neuropsychology (especially when a neurodegenerative disorder is suspected), this practice issue continues. One day after receiving a new referral for a 60-year-old patient, Dr. P was approached by the relatively new unit psychiatrist who informed him, "No need to do a personality or IQ test, I already did the WAIS and the PAI. Plus, we already have the MoCA score. Perhaps a little neuropsych testing to assess executive functioning more thoroughly could be helpful, but may not even be necessary because I could just do the Trails. Actually, would you be willing to train me on the Trail Making Test? I already know it from the MoCA, but it would be great to review."

Discussion and Potential Solution Multiple ethical concerns emerge in this scenario. First, despite education from Dr. P, several disciplines are incorrectly conducting cognitive screenings and making diagnostic leaps with minimal substantiating data. Although Dr. P is not to blame for their actions, his knowledge of such is relevant for patient care, institutional outcomes, and his own ethical practice. Dr. P is directly faced with an ethical impasse when he is asked by a new psychiatrist to teach a standard neuropsychological measure so that it could be administered by the psychiatrist who had apparently already administered several measures that typically fall in the purview of psychologists. It is relevant to consider that these events are unfolding on an inpatient unit where interdisciplinary teamwork is routine and collaboration is expected.

Although the expectation is that psychologists will be competent in assessment and can thus describe the purpose, norms, validity, reliability, and applications of the procedures they administer, this situation is complicated in that neither state nor federal law, nor even test publishers, dictate exactly which other disciplines can administer which measures. For instance, from Pearson, a large publisher of psychological tests, in order to buy measures requiring the highest level of qualification, Level C:

Tests with a C qualification require a high level of expertise in test interpretation, and can be purchased by individuals with:

- A doctorate degree in psychology, education, or closely related field with formal training in the ethical administration, scoring, and interpretation of clinical assessments related to the intended use of the assessment.
  or
- Licensure or certification to practice in your state in a field related to the purchase.
  or
- Certification by or full active membership in a professional organization (such as APA, NASP, NAN, and INS) that requires training and experience in the relevant area of assessment.

Such broad requirements can make it challenging to assert clinical boundaries in these situations. In addition to patient considerations (e.g., who can provide the most accurate and appropriate evaluation which can lead to the highest quality of care), the neuropsychologist must consider the possible forensic implications (e.g., what if Dr. P had to testify about teaching such tests to a non-psychologist). Further, a candid neuropsychologist may feel a mixture of emotions about the above scenario, including feeling indignant or offended. It is worth noting that the issue in this scenario is not one of territoriality, as could be surmised, but rather one of both clinical and forensic standards and professional ethics.

Dr. P can consider several solutions, ranging from a complete refusal to teach such a test to a non-psychologist with a brief explanation such as, "This test should be completed by a psychologist" to teaching, demonstrating, and supervising the administration of the test by the psychiatrist. Consequences must be thoughtfully considered, such as how Dr. P's response will affect patient care, his relationship with the psychiatrist, other unit colleagues, etc.

Ultimately Dr. P chose to explain to the psychiatrist the unique multi-year training involved in becoming a neuropsychologist including, for instance, how to select, administer, score, and interpret neuropsychological measures. Also, Dr. P discussed the forensic considerations of non-psychologists administering such tests, such as cross-examination risks (e.g., explaining the need to possess knowledge of instrumental utility, reliability, validity, and other psychometric principles, being challenged about using and interpreting measures without adequate training). Dr. P offered to provide fundamental information about the purpose of the measure and support the physician in becoming an informed and sophisticated consumer of neuropsychological reports, but explained that given the aforementioned knowledge, it was most prudent for any such measures to be administered by a neuropsychologist. The objectives of this consultation were to provide optimal patient care, enhance the working relationship between Dr. P, the psychiatrist, and the unit, and hopefully increase understanding of the roles and utility of a neuropsychologist. To assess the outcome of Dr. P's decision, which is the final step in the Bush (2007) decision-making strategy, it would be useful to (a) consider qualitative feedback from the patient and the team, (b) monitor

the utilization of unnecessary services (e.g., redundant assessment), and (c) note whether the neuropsychological evaluation adds incremental diagnostic clarification.

Multiple Roles and Conflicts of Interest

Psychologists are recognizing the need to expand the breadth of clinical services as health services providers, in order to offer the most effective, and efficient, care to patients (Belar, 2012). This expansion marks an exciting time in our field, but also, as mentioned previously, a time when defining the parameters of abilities, competence, and roles are important. This need for clarity is especially true in this era of health care when clinicians from myriad disciplines are being tasked with increasing amounts of work and less time to complete it. Neuropsychologists must be cautious to avoid engaging in harmful multiple relationships and in relationships in which there are conflicts of interest as a result of the pressure to do more and be more for our patients.

Vignette

Dr. L is a rehabilitation neuropsychologist who works in a rural hospital on a traumatic brain injury (TBI) unit. After engaging the patient in psychotherapy for several months, a noticeable improvement is seen in the patient's functioning on the unit. The unit chief, a physiatrist, requests that Dr. L conduct a full neuropsychological evaluation to determine if the patient is cognitively able to be released to a step-down unit. Dr. L asserts that she does not typically conduct a neuropsychological evaluation with patients with whom she has established a treatment relationship. Her boss, the unit chief, insists, adamantly stating that it does not make financial, logistical, or clinical sense for the other neuropsychologist on the unit to conduct the evaluation.

Discussion and Potential Solution In this scenario, Dr. L risks a conflict of interest per Ethical Standard 3.06, if she were to engage in assessment with the patient with whom she has an established treatment relationship. That is, it would be difficult to remain objective during testing, and it would be naive to assume that the therapeutic relationship would have no impact on the evaluation process and conclusions. If the chronology was different and a patient was seen for a neuropsychological evaluation first and then the neuropsychologist was asked to provide a few sessions of cognitive rehabilitation to implement the recommendations, the ethical problem or conflict would be less clear. That is, even after scrupulous examination of the APA Ethics Code (2010), the question would likely remain whether such behavior was even unethical. The reason why there would be less concern is that the prior evaluator-patient relationship would be much less likely to adversely affect a subsequent course of treatment.

In this non-forensic context and temporal sequence, one must ask whether it is unethical to engage in both evaluation and rehabilitation, or if, quite the opposite, given the already established rapport and the clinician's understanding of the patient, it is most prudent. Indeed, as health care practices continue evolving, the need for neuropsychologists to be perceived as an integral component of an interdisciplinary, intraprofessional health care team and to work as efficiently and effectively as possible has never been more essential (Hilsabeck, Hietpas, & McCoy, 2014). Neuropsychologists must simultaneously evolve in order to remain relevant. Expansion of the traditional evaluator role of the neuropsychologist to one which includes, for instance, a minimum of a few follow-up sessions after testing feedback (e.g., to teach cognitive skills strategies and/or provide emotional or behavioral intervention), may be necessary to best meet the ever-changing needs of patients and the health care industry. On the contrary, in both the example of a therapist turned evaluator above and in a forensic context, it is easier to understand how impartiality can significantly impact testing and interpretation.

It is essential to consider the rural hospital setting of this vignette. If Dr. L were the only neuropsychologist in the hospital or community, it would be wise for her to examine both the APA Ethics Code and any relevant legal or institutional policy to guide her decision-making. If she proceeded in these roles, Dr. L would need to explain to the patient the reason for the dual role, the expectations of each role, and the confidentiality associated with being both a therapist and an evaluator. Also, Dr. L would need to explain any foreseeable risks and changes to the therapeutic relationship after engaging in the evaluation. Per the vignette, there is at least one other neuropsychologist on the unit; thus, this is a moot point, but one that always bears consideration. Also, it is prudent to note that clinicians in hospitals are routinely faced with increasing job and productivity demands and may be expected either implicitly or explicitly to take on multiple roles to help the team. Such contextual factors play a role in ethical decision-making.

Dr. L's situation is rife with threats to objectivity, test validity, and risks to the therapeutic relationship. For instance, imagine that the patient enjoys the therapy and hospital milieu and therefore is motivated to remain on the TBI unit. Such feelings can impact a patient's test engagement and performance, because he/she may be motivated to perform in a certain way in order to stay in the hospital. In addition to patient feelings and experiences, from a positive ethics standpoint, the personal beliefs and values of the neuropsychologist must be considered. In this context, as a result of their ongoing therapy, Dr. L has a detailed knowledge of the patient's emotional and social issues, which may affect objectivity of the testing process. For example, in this case, it is known that the patient does not have substantial familial support and that being released from the hospital will likely mean that the patient will have relatively no day-to-day support. Dr. L realizes that this

may be a common scenario for some patients; however, she is also aware that this patient has a history of depression and has a particularly critical sibling who is trying to take advantage of this vulnerable time in the patient's life. Dr. L feels guilty about being so intricately involved in the patient's discharge planning, realizing that by confirming via testing that the patient is cognitively intact, she will play a direct role in the patient being one step closer to his/her chaotic home life. While of course Dr. L is mindful to remain objective and of the need to be aware of all factors that can impact her judgment and reduce the accuracy of her interpretations (in accordance with Ethical Standard 9.06, Interpreting Assessment Results), this conflict of interest is certain to influence the outcome of testing, and likely the therapeutic relationship after testing.

Dr. L can approach this ethical dilemma in a variety of ways. She could refuse to do the evaluation, citing the aforementioned ethical considerations. Again, this would be more nuanced if she were perhaps the only neuropsychologist in the community. However, given the availability of one other neuropsychologist, Dr. L decides to discuss the case with her boss and thoroughly explain her concerns about conducting this evaluation with an established therapy patient. Dr. L offers to meet with the other neuropsychologist and discuss the case in order to provide a "warm hand-off" or facilitate the next step of this patient's care. The discussion will also include exploration into how the evaluation process and results can be discussed and utilized in treatment with the patient. The objective in each case is for one neuropsychologist to perform the evaluation and the other to provide treatment. Such collaboration can result in clear roles and relationships for all parties and ultimately accurate evaluation results and helpful information for guiding the patient's care and potential discharge planning. Dr. L has an opportunity here to work with her supervisor and the other neuropsychologist to establish policies and procedures that clarify the collaborative and mutually beneficial nature of the neuropsychological services. The outcome of Dr. L's decision to split clinical responsibilities with the other neuropsychologist can be evaluated by assessing the utility of the neuropsychological evaluation for the treatment team and the patient, and by continual examination of her therapeutic relationship with the patient, even throughout the evaluation process with the other neuropsychologist.

Organizational Conflicts 1: Release of Raw Data and Test Security

Psychologists often work for large organizations such as hospital systems, with many different types of professionals. Neuropsychologists must follow institutional procedures and policies as a requirement of their employment, but sometimes these policies are in direct conflict with APA ethics. According to Ethical Standard 1.03 (Conflicts Between Ethics and Organizational Demands), the psychologist is obligated to "clarify the nature of the conflict, make known their commitment to the Ethics Code, and take reasonable steps to resolve the conflict consistent with the General Principles and Ethical Standards of the Ethics Code." In some cases, the conflict can be simply resolved by educating colleagues and administrators regarding the nature of the conflict and offering solutions which accomplish the task but do not threaten the ethical provision of patient care.

Vignette

Dr. R, a neuropsychologist, works in a community hospital that was recently taken over by a large corporation. The hospital recently adopted an electronic medical record-keeping system. Unbeknownst to Dr. R., the medical records administrator scanned the neuropsychological "raw data" and test protocols into the patient's records. Dr. R. became aware of this practice when a patient contacted him to inquire why he received 1 point instead of 2 on a particular answer to a vocabulary question on the WAIS-IV. The neuropsychologist spoke with the administrator but was told that, according to HIPAA (1996), the patient has a right to the medical record. Furthermore, the administrator said that the policy to scan the test records came down from "central office," and he had no authority to change it.

Discussion and Possible Solution Dr. R believed it was a possible ethical problem that confidential, protected patient test data was copied into the medical record without consulting him. He was particularly concerned that the "raw data" in the form of original test protocols were included in the chart and that his patient saw the materials. According to Ethical Standard 9.04 (Release of Test Data, section a), patient test data is defined as patient responses, raw and scaled scores, psychologist notes, patient statements, and behavior. Dr. R was concerned that the action of the medical records administrator violated Ethical Standard 9.11 regarding test security. The code states: "The term *test materials* refers to manuals, instruments, protocols, and test questions or stimuli and does not include *test data* as defined in Standard 9.04, Release of Test Data. Psychologists make reasonable efforts to maintain the integrity and security of test materials and other assessment techniques consistent with law and contractual obligations, and in a manner that permits adherence to this Ethics Code." (p. 13). Dr. R felt that exposing the test materials most likely compromises the validity and integrity of tests in making clinical decisions. In addition, the patient was disturbed by the scores and questioned Dr. R on specific test items. Patients often have questions and concerns when accessing their medical record because of unfamiliar terms (Pyper, Amery, Watson, & Crook, 2004).

In addition to the patient misunderstanding the meaning of the test scores, Dr. R understands that many health care organizations have transitioned to electronic medical records

(EMRs) and, as a hospital employee, he must use the new system. He understands there is often tension between the obligation to the employer/institution, to the patient, and to the profession. Dr. R also understands that HIPAA (1996) does not exclude test data from patient access but nevertheless, he does not think it is appropriate to have raw test data in the EMR. He is concerned about possible harm that could come from misuse or misrepresentation of the materials and considers taking a strong stance with hospital administration by refusing to make the test data available. He consults the literature for guidance (e.g., Kaufmann, 2009) and learns that the law regulates protection and release of confidential information under these circumstances.

Dr. R proposed a solution to this dilemma to the hospital administration. He will scan in the appropriate data (summary sheet) into the EMR himself. He will educate the administration about test copyright and test security and the importance of balancing patient rights to the record, and test security. He asked that the administration alert him if patients request to see their record, and that they delay entering the data summary sheet into the patient EMR until he was sure that he had first provided feedback about the results.

Dr. R considered the practical and logistical implications of his solution. He does not have administrative support dedicated to his neuropsychology service at the hospital and wondered how he would be able to scan each patient's records himself. He also realized that to delay access to the assessment results would mean neuropsychological information would not be available to inform patient care. Furthermore, he was aware that there was not an easy link or procedure in place to allow medical records to alert him when patients requested their hospital records. Dr. R held a meeting with the medical records department and the hospital administration, to explain how placing all the test materials in the patient chart would be a test security ethics violation. They discussed how HIPAA (1996) does not require that test protocols be placed in the medical record. As indicated above, Dr. R offered to prepare a data summary sheet with raw test scores, standardized scores, and their interpretation for the EMR. He explained to the hospital administration and medical records that he will keep the actual test protocols in a separate file and release them only to other psychologists who are bound by ethical principles to maintain test security.

Organizational Conflicts 2: Delegation of Work to Others and Assessment by Unqualified Persons

There are few specialists, such as clinical neuropsychologists, in rural areas (Nies & Marcopulos, 2003). Telehealth neuropsychological assessment and intervention offer a low cost solution to limited health care access in remote areas (Allott & Lloyd, 2009; Schopp, Johnstone, & Merrell, 2000), but also present new ethical challenges (Koocher, 2007). In addition to "telepsychology," rural practitioners often rely on non-doctoral level personnel, such as test technicians or psychological assistants, to extend their services. Neuropsychologists employing these personnel must ensure that they are closely supervised and they have the proper training and education to perform the clinical service. Per the Ethical Standard 2.05 (Delegation of Work to Others): "(2) authorize only those responsibilities that such persons can be expected to perform competently on the basis of their education, training, or experience, either independently or with the level of supervision being provided; and (3) see that such persons perform these services competently."

Vignette

Dr. A is a clinical neuropsychologist who works in a community health clinic that serves a wide rural geographic area. The clinic administrator would like the neuropsychologist to start doing dementia screens via telehealth technologies, which the clinic has enthusiastically adopted to expand the ability to serve clients in remote areas. Dr. A has been tasked to train the office managers on site in the rural satellite clinics on some neuropsychological screening measures that they would administer, and the neuropsychologist can "supervise" remotely with a video camera.

Discussion and Potential Solution Per step 2 in Bush's (2007) ethical decision-making model (Consider the significance of the context and setting), Dr. A reflects on the relevance of her clinical setting in this matter. Consistent with General Principle D (Justice), Dr. A strongly believes that for psychology to be most useful, it must be widely available. Yet, she worries about how she can meet the need, which is vast in her community. Dr. A is proud that she is providing desperately needed services in a large rural geographical area. Her job at the community health clinic is also fulfilling her obligation to pay back student loans by working in an underserved area. She has several more years remaining as part of her commitment to this job.

Dr. A consulted the APA ethics code and found no explicit mention of assessment by videoconferencing. However, Dr. A found some relevant literature to help her understand how other psychologists have addressed some of the challenges of providing ethical supervision for telehealth practice in a rural area (Wood, Miller, & Hargrove, 2005). Baker and Bufka (2011) and Grosch, Gottlieb, and Cullum (2011) outlined some of the legal as well as practical ramifications of providing telepsychology services which Dr. A found quite helpful while considering possible solutions to her particular ethical dilemma. Dr. A also consulted her state psychological association because she learned that some states have specific

guidelines for telehealth. Unfortunately her state did not provide specific guidance.

Based on her understanding of Ethical Standard 2.05, Dr. A is concerned that it is unethical to train the office managers to administer neuropsychological tests. The office managers are typically high school graduates with no clinical experience, knowledge, or training in administering neuropsychological measures. Dr. A explained to the clinic director and the administrator the ethical problems involved in using non-trained personnel to administer neuropsychological tests. Dr. A could train someone on site to be a psychometrist for neuropsychological testing as psychometrists are an integral part of neuropsychological practice (Puente et al., 2006). But based on her research on the topic, she also explained that there were methods for doing some types of cognitive evaluations via teleconferencing that would likely meet the needs of the clinic patients. Dr. A learned that some neuropsychological tests can be reliably administered via a secure teleconference connection and thus do not require the use of an administrator (Cullum, Hynan, Grosch, Parikh, & Weiner, 2014; Harrell, Wilkins, Connor, & Chodosh, 2014). The office managers could be trained and oriented to the materials needed on site for administration of teleneuropsychological assessment.

Conclusions

In the evolving world of clinical neuropsychology, clinicians are bound to be faced with numerous ethical quandaries throughout the course of a career. Neuropsychologists are encouraged to be proactive in their approach toward ethical behavior, and to strive for the highest of level of accomplishment in this domain. A positive ethics approach toward practice warrants that neuropsychologists should be vigilant about ongoing changes in the health care arena, whether the changes are related to the expected role of the neuropsychologist versus other types of clinicians or to technology and health care policies, which may pose novel ethical challenges.

In closing, the "four A's" of ethical practice promote positive ethics and sound ethical decision-making (Bush, 2009). These "four A's" of practice involve first *anticipating* and preparing in advance for ethical challenges that are commonly experienced in practice. Second, preparation will help neuropsychologists *avoid* ethical misconduct, and then *address* ethical dilemmas that are anticipated or experienced. Lastly, prudent neuropsychologists are advised to *aspire* to high standards of ethical practice. As neuropsychology continues to play a vital role in the dynamic health care system of today, its leaders are reminded that by modeling this standard of positive ethics, trainees and patients alike are certain to benefit.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no competing interests.

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