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An Efficient Standardized Method of Maintaining Quality Assurance in Therapeutic Treatment Record Keeping

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AN EFFICIENT STANDARDIZED METHOD OF MAINTAINING QUALITY

ASSURANCE IN THERAPUTIC TREATMENT RECORD KEEPING

By

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ABSTRACT

**An Efficient Standardized Method of Maintaining Quality
Assurance in Psychological Treatment Record Keeping**

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Quality assurance (QA) within the field of mental health is the practice of monitoring and

reviewing services to ensure adherence to specified standards of care. Agents within

State governments and various organizations influence record keeping procedures

through ethical guidelines and law. For instance, client records must be maintained for all

clients receiving mental health services, including informed consent, releases of

information, treatment plans, and progress notes. Accurate and timely record keeping

procedures assure quality mental health services. However, professionals sometimes err

in the maintenance of client records, which can have a negative impact on services,

clients, and practitioners. To assist proper record keeping practices, QA programs have

been developed to facilitate training in managing and monitoring records. The effects of

QA programs specific to mental health record keeping have yet to be examined in

controlled experimental context. Therefore, this study was conducted to empirically

develop and initially evaluate a QA program to assist in monitoring records within the

context of a mental health clinic. The number of errors in client records committed

before and after implementation of the developed QA program was examined. It was

hypothesized that the QA program would be feasible to implement and significantly

decrease record keeping errors. An intra-class correlation was computed to examine

inter-rater reliability, revealing a moderate level of agreement regarding individual errors

using the QA Fidelity of Client Records Form. Separate MANOVA's indicated

significant differences between QA and non-QA records for types of errors but not for

errors based on specific record forms. Specifically, QA records exhibited fewer missing

forms and missing dates compared to non-QA records. An independent samples t-test

revealed significant group differences for total number of errors. Thus, QA records

exhibited fewer total errors compared to non-QA records. Chi-square analysis also

resulted in significant group differences, indicating QA records were more organized than

non-QA records. Correlational analysis revealed significant negative linear relationships

between frequency of QA audits and missing forms, missing dates, and total errors. Thus,

as QA audits increased the number of missing forms, dates, and total number of errors

decreased. Results suggest that the current QA program may assist in reducing errors,

and organizing, mental health records. The QA program utilized in the current study was

also determined to be cost-effective and feasible, requiring little time to implement. The

current study has implications for improvement in client record keeping through the

implementation of QA programming within community-based mental health agencies.

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DEDICATION

I would like to dedicate this dissertation to my wife who is my strongest supporter and

has been by my side through 7 years of graduate school and 9 years of my life! I love

you!

I also want to dedicate this to Dr. D for giving me a chance and helping me achieve my

dreams of becoming a clinical psychologist. You da man!

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CHAPTER 1

INTRODUCTION

Within the delivery of mental health services, quality assurance (QA) involves on-going monitoring of health care activities to assure appropriate standards of quality (Nabors, Weist, Tashman, & Myers, 1999). Implementing QA procedures ensures close monitoring of client progress and favorable treatment outcomes. These determinations are based upon specified standards of quality. QA is a chronological process; the auditor initiates a search for quality related problems, generates relevant solutions, and disseminates ongoing changes to improve quality in the future. QA is also a continuous cycle, improving accountability and increasing the likelihood clients receive enhanced treatment. QA programs play an important role in monitoring evidence-based mental health treatments. The current study examined methods of improving record keeping in a mental health setting, which is an often-overlooked component of QA (McMillen, Zayas, Books, & Lee, 2008) that may affect treatment implementation.

The practice of record keeping, including documentation of discussions, clinical decisions, referrals, consultation, assessment, treatment planning, and progression of mental health services (Mary et al., 2007) is an integral part of psychotherapy (American Psychological Association [APA], 2002). Accurate and timely record keeping procedures assure quality mental health services, and are guided by ethics and law (Harris et al., 2009). Consistent with ethical practice, keeping accurate records provides accountability for practitioners and offers protection against liability. This is very important to mental health professionals as they are responsible for ensuring that supervisees, office staff, and billing personnel who manage records are appropriately

trained in ethical and legal standards of proper record keeping procedures (see Mary et al., 2007). Furthermore, quality record keeping provides accountability and permits supervisors to accurately monitor services provided by trainees and/or subordinates (Farkas, Gagne, Anthony, & Chamberlin, 2005).

Appropriate documentation of mental health records is vital to examination of the intervention process (Haglund, Hallberg, & Pettersson, 2004), including treatment outcomes, and continuity of communication between involved practitioners throughout treatment. It is the responsibility of the mental health practitioner to complete timely treatment records. Client records become especially important when there are significant lapses of time between services, or when services involve multiple professionals. Documentation of treatment planning and progression of services is also important because these procedures ensure that practitioners have set treatment related goals and monitor their work appropriately (Mary et al., 2007). Another benefit of documentation is being aware of a client's availability and attendance through accurate recording of date and time of contact (Kleschinsky, Boswoth, Neslon, Walsh, & Shaffer, 2009). Accurate documentation assists supervisors with training mental health practitioners (see Prieto & Scheel, 2002) and assists with monitoring fidelity to evidence-based treatments (see Sheidow, Donohue, Henggeler, & Ford, 2008). Unfortunately, practitioners are often negligent or inaccurate in their documentation of service processes. Therefore, QA programs have been developed to assist practitioners in efficiently identifying record related problems, devising solutions to these problems, implementing solutions to identified problems, and monitoring fidelity to evidence-based mental health treatments. QA of treatment records is a process of reviewing records that involves ensuring that all

forms are present and completed in the correct manner, which is important to the integrity of the treatment record.

The current study involves examination of a QA program specific to record keeping within a randomized control treatment trial involving women referred by Child Protective Services due to child neglect and drug abuse. This sample serves as an exemplary in which to test QA procedures because the presenting problems necessitate the protection of client records within multiple systems of care. Thus, results are expected to be generalizable to elaborate systems of care and community-based mental health agencies.

CHAPTER 2

LITERATURE REVIEW

Record keeping in mental health generally involves documenting information

about the client with regard to demographics, treatment planning, and course of

treatment. Mental health practitioners are trained in record keeping practice (i.e.,

professional and/or scientific work) to meet institutional requirements, facilitate service

provisions for themselves and other professionals, comply with laws, and ensure

accuracy of billing, payments, and/or funding (APA, 2002). The process of record

keeping is heavily influenced by federal and state laws, as well as various organizations

that are responsible for appropriate delivery of health care (i.e., American Psychological

Association, American Association for Marriage and Family Therapy, American

Counseling Association, and National Association of Social Workers). Practitioners have

an ethical obligation to organize and maintain records to ensure their accuracy and to

facilitate their use by the practitioner and other professionals with legitimate access to

them (Harris et al., 2009). To assist proper record keeping practices, QA programs have

been developed to facilitate training in managing records, continuous monitoring of

records, and to make improvements to record keeping practice. Thus, QA programs

generally consist of standardized procedures, which assist auditors in routinely

monitoring client records for potential errors, allowing for edification, correction, and

prevention of errors.

In the following sections ethical and legal issues pertaining to record keeping will

be reviewed, highlighting the importance of record keeping and potential consequences

of poor record keeping. Common documents maintained within a client record will then

be reviewed, focusing on general procedures, purpose, benefits, and potential errors. Evidence-based treatments will then be discussed to assist the reader with understanding how QA supports monitoring treatment fidelity. Moreover, the QA program in the proposed study was developed and implemented for use with an evidence-based treatment, Family Behavior Therapy. Auditing by outside organizations will also be reviewed to demonstrate how they utilize QA procedures to find record related problems and to reveal the benefits of preventative internally based QA programs. Finally, studies involving QA procedures specific to record keeping will be examined to demonstrate the dearth of research investigating QA procedures within the mental health field, and to make evident the benefits of record keeping QA.

Influence of Ethics in Record Keeping Practice

Practitioners are accountable to legal and ethical guidelines of record keeping, which also includes ensuring that supervisees, office staff, and billing personnel who are capable of effectively managing psychological records are appropriately trained, and in compliance with ethical and legal standards of proper record keeping (APA, 2002). According to the APA *Record Keeping Guidelines* (2007):

Based on various provisions in the Ethics Code, in decision making about content of records, a psychologist may determine what is necessary in order to (a) provide good care; (b) assist collaborating professionals in delivery of care; (c) ensure continuity of professional services in case of the psychologist's injury, disability, or death or with a change of provider; (d) provide for supervision or training if relevant; (e) provide documentation required for reimbursement or required administratively under contracts or laws; (f) effectively document any decision

making, especially in high-risk situations; and (g) allow the psychologist to effectively answer a legal or regulatory complaint (p. 995).

To summarize, ethical guidelines influence record keeping, such that client records need to be useful, accurate, understandable to other professionals, and meet legal requirements.

Documents Maintained within Client Records

Individual client records consist of a variety of different documents. The following section will review important record-keeping documents that are typically maintained by mental health practitioners, including informed consent, intake forms, termination summaries, treatment plans, progress notes, and releases of information. Informed consent is the quintessential document maintained by professionals in the provision of mental health services. It is typically the first document gathered, even before the practitioner sees most clients. This document substantiates that the practitioner and client have discussed the treatment to be provided, including its potential benefits and limitations, and of course, documents consent of the client to be treated. Consent should be obtained from every client, and if the client is a minor, consent must be obtained from the parent or guardian and possibly assent from the minor (Piazza, & Baruth, 1990). Consent should be time-limited, content-specific, signed, and witnessed (Center for Substance Abuse Treatment, 1993). Within treatment related research, informed consent also outlines information about the study, procedures, and the purpose of the study. Failure to obtain or document consent can result in serious consequences. For example, clients may be uniformed or state they are uninformed, which may affect the therapy relationship or result in legal action.

Intake forms and demographic information. Client demographics and presenting problems are gathered at the beginning of treatment. Intake forms are used to document a client's history and current concerns and typically include contact information, identifying characteristics, relevant background information (e.g., treatment history, previous diagnoses, medical information, family history), insurance information, and reasons for seeking treatment (Heller, Gilliam, Chenail, & Hall, 2010). This information allows practitioner to make informed decisions when making or confirming diagnoses, and permits practitioners to determine if the required services are within their scope or specialization. Intakes document client risk factors (i.e. family history) and outcomes from previous treatments received, assisting practitioners with treatment planning. Intakes also document client contact information, which is important when practitioners are collecting treatment outcome data, and crucial for clients mandated to receive treatment by courts. Having multiple methods of contact for a client (i.e., home phone, cell phone, significant other phone, email, and address) assists with locating or getting in touch with clients, especially those who may be prone to neglect treatment sessions.

Intake forms are prone to errors related to accurate information or a lack thereof, which could be due to utilizing an unstructured intake process or use of non-standardized forms. It is important for practitioners to gather as much relevant information as possible during the intake process. A lack of information can affect treatment, possibly resulting in poor treatment decisions and time inefficiencies. It is also beneficial to ensure accuracy of information through follow-up (e.g., reported diagnosis, previous services, medications). Correspondence with previous and current mental health providers is the

best way to ensure accuracy of information and assists with clarifying outstanding treatment related questions.

Release of information. Continuity of care generally refers to the efficient transition of services between mental health practitioners (e.g., social workers, marriage and family therapists, counselors) and assists with verifying treatment information. Thus, practitioners commonly gather a release of information, to have permission to speak with and acquire information or documents from previous, current, and future providers. This is necessary when clients have received previous services or if various mental health professionals need to collaborate for treatment planning (e.g., practitioners discussing psychotropic medications with psychiatrists). Moreover, practitioners must assume potential transfer of records to ensure continuity of treatment and appropriate access to client records when the current provider is no longer in direct control (Mary et al., 2007). There are two types of release forms. One form includes relevant information to permit the practitioner to obtain information from others (i.e., release to obtain information), while the other permits the practitioner to provide information to others (i.e., release to provide information to others). A final important aspect is determining whether clients have the right to decide how to use, or disseminate, information in their records (Clark & Abeles, 1994).

Practitioners have numerous ethical, professional, and legal obligations regarding the release of client records (Behnke et al., 2006). They are responsible legally and ethically to ensure that signed releases are on file whenever there are discussions concerning the client with professionals outside the treatment facility. However, disclosure of information must also be delimited. Specifically, the APA Ethics Code

(2002) states, "Psychologists discuss confidential information obtained in their work only

for appropriate scientific or professional purposes and only with persons clearly

concerned with such matters" (p. 7). Releases of information ensure appropriate

confidentiality of client information by specifying information about the client that can be

reported to others.

Errors affecting releases tends to center on failure to obtain appropriate releases,

mistakes within the record, mistakes within the release (e.g., missing signature, missing

date, incorrectly filled out) or disclosing and/or acquiring confidential information not

specified within a release. For instance, if a practitioner confirms that a client is

receiving treatment to an individual without the client's consent, the practitioner could

not only damage rapport but could be at-risk for a lawsuit for failing to meet client

obligations (Eberlein, 1990). Another important aspect to consider regards populations

whose confidentiality may be more vulnerable (e.g., minors, clients mandated to

treatment). Concerning minors, some state laws may differ in the right to consent to

treatment and release of treatment information. This may be further complicated if

minors are court mandated to treatment and sensitive information about their treatment

(e.g., substance use) is released to either parents, court officials, or probation officers (see

Brody & Waldron, 2000). These same challenges may also affect adults mandated to

treatment programs. For practitioners working with these types of populations, it

becomes essential to ensure that applicable laws and ethics related to releasing

information are followed and monitored appropriately. In summary, it is crucial to

ensure client records are accurate, complete, contain any required releases, and document

record transfers. Further, when practitioners collaborate with other professionals or

previous service providers, they must make certain they document correspondence within the treatment record.

Outside session progress notes. Outside correspondence between the practitioner and client or others involved in treatment, must be recorded to ensure an efficient timeline of contacts attempted or made throughout treatment. This is especially true when services are provided as part of a treatment outcome study or for clients mandated to treatment.   It permits assessment of missed and attended sessions and provides detailed information about discussions with other professionals or the client during non-session times. Also of importance, once documents relevant to treatment (e.g., previous assessments, medical records, psychiatric records) are received, practitioners should ensure they are secured within the client's record.

It is suspected that documenting correspondence occurring outside of a treatment session is commonly overlooked. Anecdotally, practitioners have been known to contact clients or other professionals for treatment planning, while neglecting to document these contacts or conversations within a client's record. Thus, there is no record of conversations related to discussing medication, previous treatment, collaboration, or treatment scheduling. This information may be just as important as information contained within a treatment session. When information about contacts made outside of treatment sessions is not documented, it may lead to forgotten appointments, failure to review referrals or files, and unreturned phone calls, which impair client rapport (Eberlein, 1990). Furthermore, proof of outside session activities and contacts does not exist and quality of care may become compromised. Further research and examination of documentation procedures for outside session correspondence is needed.

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Treatment plans. Another central document within client records is the

treatment plan. Treatment plans include personalized goals based upon presenting

concerns of the client and are crucial for ensuring that symptoms and presenting concerns

are being addressed. Although a review of the literature did not come across

standardized treatment plans, they typically document diagnoses, symptoms to be treated,

treatment goals, and treatment approach. Treatment plans also confirm that the

practitioner has set a course or plan for treatment. Problems that may arise with

treatment plans include absence of a plan, failure to document discussion of treatment

plan with client, vague or irrelevant goals, or poor assessment of client symptoms and

concerns. Once a treatment plan is in the place, or when the client has begun services,

practitioners must then document the course of treatment, which should reflect progress

specific to the treatment plan. This is achieved through the progress note and is perhaps

the most frequent record maintained by practitioners.

Progress notes. Well-documented records are essential to the effective recovery

of clients (Hargrave & Hiatt, 2000), as it structures the treatment process and keeps track

of important information. Progress notes are written records of individual session content

and include anything that occurs in the session that the clinician deems significant. They

are designed to convey the overall content of the session (e.g., discussing recent

symptoms, reviewing assignments), techniques or interventions utilized by the

practitioner (e.g., model self-control, role-play, behavioral activation), client

comments/responses (e.g., client reports missing work due to symptoms of depression),

assessment (e.g., client appeared dysphoric), and progress (e.g., client has recently

regressed in mood, client has increased use of coping skills). The inclusion of relevant

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treatment information helps to ensure the client is receiving care in an ethically and legally competent manner (Gutheil & Hilliard, 2001). Practitioners should also ensure that each progress note includes start and stop times, the client name and/or identification number, signatures, and date of session (e.g., Adler, 2012).

Progress notes assist practitioners in documenting critical decisions, including the rationale for diagnosis and treatment. Documenting such rationales is the best protection against legal claims related to misdiagnosis or improper treatment (Tan & McDonough, 1990). Moreover, documenting treatment session content and client progress reveals a practitioner's ability to conceptualize cases and evaluate client progress (Gehart, 2009). Thus, progress notes allow supervisors the opportunity to evaluate trainees' skills. Another pertinent reason to maintain accurate records is to ensure continuity within client's treatment. Properly documented progress notes allow practitioners to quickly review previous session material to help focus attention to pertinent clinical topics in subsequent sessions (Harris et al., 2009) which guides appropriate treatment (Prieto & Scheel, 2002; Somers, Benjamin, & Chenail, 2009) and assists with continuity. Progress notes should serve as a timeline of presenting problems, progress, and treatments utilized.

The use and documentation of progress notes is especially vulnerable to errors. Practitioners may fall short in appropriately detailing mental health strategies implemented with their clients or rush to get notes written. These missteps often cause documentation errors. Specific documentation errors may include illegible writing, missing documents, missing signatures, failing to record decisions regarding critical incidents, absence of consent or authorization for release of information, failing to obtain and review past records, and omitting important information (Falvey & Cohen, 2003).

These errors result in poor assessment of client functioning, redundancy of ineffective treatments, unawareness of relevant treatment events, failure to document critical events and safety concerns, and loss of productivity in long standing treatment services. It is without saying that any of these problems threaten the health of clients and may result in the loss of licensure due to malpractice (Gutheil & Hilliard, 2001). Thus, proper documentation is needed to ensure treatments are effective and to inform ongoing and future treatment, as previously described. One reason why progress notes are vulnerable to various errors, is the lack of a universally agreed upon approach to creating them. To this end, semi-standardized progress note formats have been developed to assist with improving documentation practices and recording of relevant information.

　　　Semi-standardized progress note formats. In a review of the literature, some of the semi-standardized formats that have been utilized include SOAP (Subjective, Objective, Assessment, Plan), DAP (Data, Assessment, Plan), and STIPS (Symptoms, Topics of discussion, Interventions, Progress and plans, Special client issues). The primary benefit of using a semi-standardized format for documenting progress notes is consistency across client cases, practitioners, and trainees (Prieto & Scheel, 2002). The SOAP format has been noted to support practitioners with documenting and assessing clinical information to assist and validate therapeutic decisions (Harris et al., 2009). The STIPS format was created with the intent of enhancing treatment and record documentation skills of trainees; specifically assisting with improved understanding of clients' presenting problems, better monitoring of the treatment processes, and continued evaluation and adjustment of treatment interventions (Prieto & Scheel, 2002). Thus, semi-standardized formats have been found to assist in training and development of

trainee skills and help ensure practitioners are following specific methods of record keeping. Moreover, utilization of semi-standardized formats is unknown and limitations may still exist within semi-standardized formats. For instance, progress notes may look very similar in style and content across clients within an agency or within a client's record, thus failing to provide discernibly useful information. This may lead to increased difficulties when practitioners and/or supervisors tease out important treatment information.

Although it appears more beneficial to utilize a semi-standardized format, some may argue that they are cumbersome and time consuming, especially for experienced practitioners. Formats such as STIPS may not be useful for all clinical or training settings (Prieto & Scheel, 2002), and may be impractical once practitioners are no longer in training. On the other hand, established formats will likely improve record keeping for individuals who have not been trained on specific progress note documentation procedures, especially with regard to consistency. To this end, further research and evaluation of progress notes within mental health services is needed. Future research should focus on methods to improve efficiency and use. Specifically, progress notes should incorporate standardized training/implementation and include relevant treatment information, while staying within the confines of confidentiality. As will be discussed later, utilizing QA procedures becomes crucial due to the current lack of standardized methods for creating progress notes and other client records (Harris et al., 2009).

Termination summary. The aforementioned documents within a client's record assist with compiling and documenting important information with regard to ongoing treatment. A final document assists with summarizing services when a client has

terminated treatment or transfers their services to a different provider. Completion of

treatment occurs for various reasons (i.e., successful completion of treatment program,

change in practitioner, relocation of client, etc.). A summary of treatment provides a

synopsis of the course of treatment. The termination summary should contain an

overview of any assessments, identified problems, interventions implemented and final

outcome of treatment (Piazza, & Baruth, 1990). To this end, ensuring progress notes are

accurate and creating a treatment summary assist with transferring and/or transitioning

clients. This allows for continuity and efficiency when treating clients.

Some potential issues that may arise that are specific to treatment summaries

include failure to maintain continuity of care and legal problems related to inappropriate

disclosure of confidential information. This is generally the case when practitioners do

not obtain releases of information to disclose client records, as previously mentioned.

Another concern would be whether clients receive the best possible services. For

example, failure to document appropriate treatment progress and outcomes, or failure to

collaborate with professionals (e.g., past/future treatment providers, medical doctors,

psychiatrists) leads to poor integration of treatment related information and progress. As

a result, it is the duty of the practitioner to ensure that records are accurate, summarize

treatment, and include proper record releases.

In summary, there are many important documents to maintain within a client's

treatment record. The documents described are more common within mental health

records but are not meant to be an exhaustive list. Each document serves an important

function within the record, which if not properly created or maintained can lead to

problems with treatment quality, ethical dilemmas, or even legal problems. Although

there are general guidelines about various record keeping procedures, there is a lack of standardized methods to guide the creation and maintenance of client records. To this end, additional research in record keeping practice is needed within the field of mental health. Aside from the creation and maintenance of various client record documents, storage of client records is also of great importance. The storage of records affects confidentiality and continuity of care. Thus, practitioners must adhere to regulations regarding the amount of time to keep records (e.g. storing for 7 years before destroying), and proper methods of security.

Access to Records

Throughout a practitioners career they will create and maintain many client records, which will have to be securely stored during the course of treatment and after termination. A primary concern in ethical record keeping is guaranteeing information contained in client records remains confidential and secure. Practitioners must be knowledgeable of applicable laws and regulations regarding the retention of client records for mandated periods (Mary, et al., 2007). Practitioners and/or supervisors are obligated to ensure that any personnel who handle client records are familiar with confidentiality and methods to secure records (Clark & Abeles, 1994). This may include the use of policies that stipulate keeping records locked and secure at all times in locked cabinets within locked offices or storage rooms (Mary et al., 2007), to protect them from damage, destruction, and improper access.

Bongar (1988) asserts that storage is the most important weakness in client confidentiality, especially with regard to electronic storage of client records. However, at the time of his concerns, computers were not as advanced or widely used. Recent

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advances in technology have resulted in changes to the storage and access of client records. As such, mental health practitioners are increasingly switching to electronic record keeping practices (Stahl, Granlund, Gare-Anderson, & Enskar, 2011; Steinfeld & Keyes, 2011), although not as quickly as the medical field (Drake, Teague, & Gersing, 2005). Therefore, some may argue that computer security should be highly scrutinized due to the widespread use of modern computers and the increasing number of viruses that can steal personal information or destroy documentation. Thus, storage of personal information (i.e., client records and assessments), electronic or otherwise, must be a high priority concern and proper methods of securing and accessing client records must be utilized.

There appears to be support for switching to electronic records, as recent studies cite benefits, including cost effectiveness (Harrison & Palacio, 2005), increased efficiency, and error reduction (Tsai & Bond, 2008). Moreover, in a recent review of record keeping practices, Steinfeld and Keyes (2011) state that utilization of electronic client records assists with improved accuracy of mental health diagnoses, improved practitioner adherence to evidence-based treatment, and improvements in continuity of care. Indeed, there appear to be many benefits of electronic based record keeping. These benefits have also influenced state and federal laws. It is highly probable that the majority of health care providers will be required to utilize electronic based records based on the Economic and Clinical Health Act (Steinfeld & Keyes, 2011). As a result, electronic records will become increasingly prominent within the mental health field.

Aside from potential benefits of electronic record keeping, some practitioners have expressed concern over potential risks. Specifically, Van Allen and Roberts (2011)

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state that many practitioners are worried about inappropriate access and disclosure of confidential client information using technology (i.e., computers and email). These concerns are magnified by electronic record keeping regulations that increase civil and criminal enforcement of HIPAA rules (Health Information Technology for Economic and Clinical Health (HITECH) Act, 2009), in an effort to ensure confidential information is not breached. Along these lines, practitioners must be cognizant of potential problems related to transferring and discussing confidential information via electronic media. For instance, standards of enforcing confidentiality, especially as related to use of technology, may not be consistent between agencies. For example, it may be impossible to determine the level of security for a recipient's email. Potential inconsistencies in security or inattentiveness to confidentiality may permit third parties to inadvertently breach confidentiality.

As previously stated, another potential risk involved in electronic record keeping is computer security. Computers are at-risk for unpermitted access, infection by viruses, or crashes. Thus, the security and integrity of client records may be a risk when client records are stored solely within individual computers or broader computer networks. However, it should be noted that even antiquated paper-based records, could be breached when they are left out of locked storage or when susceptible to inappropriate access. Certainly, whether records are in physical or electronic format, if left accessible to others, the risk of breaching confidentiality and misplacing important documents amplifies.

Currently, the HIPPA Security Rule and APA Record Keeping Guidelines (2007) stipulate that practitioners must be aware of security risks, perform risk analysis, and strive to be aware of ongoing issues related to use of electronic media. Practitioners must

also seek out continued training and consultation to stay current with security risk

management. Even though various agencies have established general ethical principles

and laws that apply to providing services and ensuring confidentiality of client

information in all contexts, there has yet to be developed, standardized methods to

manage issues surrounding electronic records and dissemination of confidential

information. To this end, it becomes imperative for practitioners to be aware of identified

risks and implement specific QA protocols within the maintenance and dissemination of

client records. For example, when documenting charts or conducting QA it is important

to ensure all confidential info is kept secure when accessed and stored immediately upon

completing tasks. Hence, standardized QA protocols for documenting client records and

subsequent review of records should outline procedures for storing and securing client

records, whether in physical or electronic format.

The Influence of Legal Implications on Record Keeping

There are great benefits to ensuring client records are appropriately maintained

and stored. As previously alluded too, appropriate documentation becomes especially

important when outside agencies (e.g., Department of Family Services) or courts make

requests for client records. Court mandates sometimes conflict with the responsibility of

practitioners to uphold confidentiality of client records (Behnke et al., 2006).

Practitioners need to be aware of the possibility for records to be subpoenaed, especially

records of clients who may be mandated to treatment by judicial systems (i.e., court). To

prevent problems with breaking confidentiality, practitioners must be cognizant of

information that is included in client records to safeguard privacy.

The APA Ethics Code (2002) reports that practitioners should only include information in client records that is relevant to the purpose for which the respective communication is developed. Indeed, the provision of sensitive information (e.g., illegal behavior, sensitive information about client or relatives, sexual practices) may result in embarrassment, and is seldom required or appropriate for the record (Soisson, VandeCreek, & Knapp, 1987). To further stress the implications of documenting client information, practitioners must be aware that some state laws provide clients the right to access their records. Additionally, practitioners may be required or requested to release records or be audited by third-party payers (i.e. insurance). To address the tension between the needs of the practitioner, client, and legal professionals; practitioners should write notes as if they expect the client to read them. It is prudent that records not include personal opinions, guesses, or judgments, and practitioners must assume that their records will be examined and scrutinized.

Practitioners who fail to be aware of record keeping guidelines create risks for their clients and themselves. When practitioners are required to participate in court proceedings, either due to malpractice claims or for professional purposes, it is important for the practitioner to appear competent (Harris et al., 2009). Quality documentation prepares practitioners for court proceedings and improves risk management. To exemplify potential risks, Tan and McDonough, (1990) examined psychiatric claims of improper care for the previous 12-years. They found that 33% of claims involved suicide, attempted suicide, or violence to self or others. Providers who have failed to document progress notes sufficiently have been found in court to act in bad faith (see Donaldson v. O'Connor; 493 F. 2d 507; 5th Cir., 1974; as cited in Soisson et al., 1987).

Conversely, documentation of relevant treatment details evidences responsible behavior of the practitioner, which is crucial when records are subpoenaed (see Dalian v. State, 1970; Johnson v. United States, 1976; as cited in Soisson et al., 1987). John Monahan (1993) wrote:

> It would be an exaggeration to state that in a court case what is not in the written *record* does not exist-- but not much of an exaggeration. The violent event that gives rise to the suit may occur weeks or months after the patient was last seen. The resolution of the case through settlement or trial will be a minimum of several years from the time of the violent event. Memories fade or become compromised when numerous, or innumerable, other clients are seen in the interval. (p. 83).

Indeed, memories are not always accurate and may rely on the assistance of documentation. Moreover, without proper documentation, practitioners do not have proof of what occurred. This has been illustrated in practitioner accounts of court cases. For example, Hargrave and Hiatt (2000) reported a practitioner informed them that documentation of risk factors within a client's record resulted in being cleared in a legal case. As shown, prompt, ethical, and thorough documentation assists with keeping practitioners organized, prepared, and in accordance with ethical and legal statutes. In turn, this reduces risk for legal problems.

Revocation of Service Payments Due to Poor Record Keeping

Although, there are specific record requirements mandated by state and federal governing agencies, practitioners may also have to adhere to documentation procedures stipulated by insurance providers. Since many practitioners provide services through insurance providers (i.e., Medicaid or private insurance), insurance guidelines must be

balanced with agency guidelines (i.e., APA, state government, etc.). Insurance agencies may even outline specific content standards. For example, United Behavior Health (UBH) stipulates that treatment record entries must include the date, start and stop time of service, billing codes, notation of session attendees, the responsible clinician's name, professional degree, license, and relevant identification number (Adler, 2012, p. 53). They also report progress notes should include client's strengths and limitations in achieving treatment plan goals, treatment interventions that are consistent with treatment goals, follow-up dates, and missed appointments (p. 54). Many of these requirements are similar to general guidelines of good note taking but also include content for insurance purposes (i.e., billing codes, clinician license number). Within the UBH network manual, they also outline specific criteria related to treatment plans, discharge from treatment, and other record keeping procedures.

When client records do not meet the requirements of the insurance providers, negative consequences may arise which could lead to possible revocation of payments (Gutheil & Hilliard, 2001) or an audit of client records, as will be discussed later. However, it is considerably the responsibility of the practitioner to ethically determine what specific documents will be maintained in the record and content to be documented. Since clients have a right to confidentiality, and insurance agencies require information about the client to approve services, practitioners must be aware of specific insurance guidelines and balance these with the rights of the client.

To summarize, there are many guidelines, ethics, and regulations involved with proper documentation of client records. These guidelines assist practitioners with awareness of appropriate construction and retention of records. Further, client records

benefit both client and practitioner by facilitating appropriate treatment. However, practitioners are susceptible to making errors in various areas. There are grave consequences that may occur due to these mistakes. The following sections will discuss evidence-based treatment (EBT) within the field of mental health and the use of client records in research. EBTs will be discussed within the context of QA procedures that help to reduce errors. This will assist the reader with understanding the benefits of utilizing EBTs to implement and examine QA procedures.

Importance of Utilizing QA Procedures in Evidence-Based Treatment

Within the medical field, doctors and surgeons utilize specific techniques, tools, and medications to treat illness and disease. However, the treatment of psychological disorders and mental health problems is not always specialized. This is influenced by the large number of approaches utilized to treat similar psychological problems. Routine mental health services vary significantly between different regions and providers (Wolbrock, Weinmann, Falkai, & Gaebel, 2009), and many treatments remain unsupported by research, while others with strong evidence of efficacy are rarely implemented (Miller, Sorensen, Selzer, & Brigham, 2006). To this end, it has become increasingly important to develop specialized mental health interventions and evaluate their effectiveness.

In an effort to improve mental healthcare, evidence-based treatments (EBTs) have become increasingly prevalent, expanding in development and use every year. EBTs are typically determined in randomized controlled trials (RCT; Oshana, 2006), which are considered the gold standard in evaluating treatment effects (Singh & Oswald, 2004). EBTs are important since they bridge the gap between non-evidence based community

treatments and research. For a treatment to be considered evidence-based, it must undergo rigorous empirical examination. Research has become progressively more influential within mental health treatment, as consumers and funders of treatment want to be certain that they are getting the best possible treatment. As a result, various agencies that fund research and services are increasingly focusing on EBTs (Chaffin & Friedrich, 2004). Miller and colleagues (2006) state that the influence to use EBTs is expanding, noting that the state of Oregon set requirements that 75% of state funds go to evidence-based practice.

QA procedures to be examined in the proposed study were developed within an RCT, examining the effectiveness of Family Behavior Therapy (FBT) for the treatment of substance abuse and child neglect. FBT (see Azrin et al., 1994; Azrin, Donohue, Besalel, Kogan, & Acierno 1994; Azrin et al., 1996; Azrin et al., 2001; Donohue et al., 1998) consists of 20 sessions over 6 months and includes several interventions, including (1) an innovative treatment planning procedure that enables participants to actively determine the order of interventions (2) the use of behavioral goals procedures that establish positive reinforcement for performance of drug incompatible goals, (Eberlein, 1990) implementation of a stimulus control intervention that assist in spending less time with individuals and situations that involve drug use and other problem behaviors, (4) a self-control procedure that assists in decreasing urges to use drugs and other impulsive behavior problems, (5) communication skills training that assists in assertiveness training and establishing social relationships with others who do not use substances, and (6) financial training for skills that are associated with getting a job and managing finances.

FBT is capable of addressing a wide-array of mental health problems, including conduct disorders, depression, family discord, and unemployment (Donohue et.al, 2009). FBT has also demonstrated efficacy for the aforementioned populations (see reviews by Carroll & Onken, 2005; Dutra et al., 2008; Waldron & Turner, 2008). Utilizing an established EBT to study QA procedures permits more control of the treatment and QA process. This is in contrast to using a plethora of treatments, which may be eclectic in nature and non-evidence-based. It would be suspected that examination of standardized QA procedures within a clinic providing various types of non-prescribed treatment, with various client record documents, and progress note formats would be more difficult to evaluate. In contrast, developing a QA infrastructure around an EBT would likely be easier for the purposes of evaluation.

Although EBTs are possibly beneficial for the purposes of developing and evaluating a QA program, adherence and fidelity to EBT treatment approaches is not always scrutinized. For example, in a review of behaviorally based EBTs in both psychological and medical journals, Spring, Pagoto, and Kozak (2007) found that while treatment adherence was frequently reported in manuscripts (73%), treatment fidelity was not (38-47%). It should be noted that treatment fidelity generally refers to how accurately or closely a specified treatment is followed based on the model and consists of adherence and practitioner competence. Adherence refers to the extent to which treatment techniques or protocols are utilized within a session (Hogue et al., 2008).

Fidelity and Adherence within EBT Implementation

When treatments are complex, lengthy, and involve multiple clients, it is important to utilize QA procedures, including monitoring to detect drifting in treatment

fidelity and methods to prevent drift (Yeaton & Sechrest, 1981). Fidelity to intervention

protocols is essential when implementing EBTs. Further, practitioners must be aware of

how strictly protocols must be followed and to what extent practitioner creativity, style,

and individualized approaches can be retained (Chaffin & Friedrich, 2004). Some EBT

developers create dissemination standards when attempting to train practitioners. For

example, to be certified in cognitive processing therapy (CPT), practitioners first attend a

two-day workshop; implement CPT with at least four clients, followed by participating in

10 consultation calls to assist with implementing CPT protocols successfully. Finally,

practitioners must submit fidelity measures, progress notes, and treatment summaries

before being certified (McHugh & Barlow, 2010). Accordingly, as EBTs continue to

advance dissemination standards will likely incorporate treatment records and fidelity

measures to ensure the quality of treatment.

Monitoring treatment fidelity is a method of assuring the quality of treatment. A

common procedure for monitoring and evaluating fidelity involves identifying specific

elements of the treatment to be implemented and then using independent evaluators to

rate completion of elements, either within a live session or through taped reviews

(McHugh, Murray, & Barlow, 2009). Farkas, Cohen, and Nemec (1988) assessed fidelity

through examination of client records, while Sexton, Alexander, and Harrison (1998)

have emphasized the use of progress notes to examine fidelity (as cited in Sheidow,

Donohue, Hill, Henggeler, & Ford, 2008). Farkas and colleagues (1988) reviewed, and

rated, client records at 40 various mental health agencies using a checklist examining

diagnostic and intervention criteria that would reflect a "model" client record. The

authors' criteria for a model record came from 10 elements of a psychiatric rehabilitation

program (see Anthony, Cohen, & Farkas, 1982) and were used to assess how frequently the agency's policies, procedures, activities, and documentation adhered to standards of diagnosis, planning, and intervention elements. More recently, Alexander and colleagues (2000) assessed practitioner adherence to family functional therapy (FFT) guidelines by using progress notes, adherence scales, and recorded sessions. FFT practitioners are encouraged to complete progress notes after each session to focus the practitioners' post-session processing into intervention concepts (Alexander et al., 2000). However, a limitation of Alexander and colleagues study was reliance on practitioner adherence to quality record documentation. Thus, if progress notes are not accurate or if they lack relevant information they will not correctly reflect treatment adherence and fidelity.

A recent study by Henggeler, Sheidow, Cunningham, Donohue, and Ford (2008), examined the use of a QA monitoring program to improve practitioner fidelity with contingency management techniques within multisystemic therapy (MST). They randomly assigned practitioners to a workshop only condition versus an intensive QA training condition. The standard MST QA program consists of four manualized components (i.e., treatment, expert consultation, supervision, and organizational support/ ongoing training). For the purposes of the study, practitioners and supervisors were extensively trained to utilize a modified QA program, which integrated contingency management protocols into the standard QA program. Those trained to utilize the QA program received weekly training and consultation in contingency management implementation, whereas the control group simply had access to materials (i.e., manuals and protocols) and consultants. Results provided some support for use of a more

intensive QA program to increase utilization of fidelity procedures when implementing

contingency management techniques compared to reliance on protocols alone.

Increased fidelity to treatment is significant as it is suspected to improve treatment

outcomes. However, in a review of EBT fidelity and treatment outcomes literature,

McHugh et al. (2009) found mixed results. Whereas some studies supported utilization

of fidelity training and measures within treatment outcomes (see Henggeler, Melton,

Brondino, Scherer, & Hanley, 1997; Schoenwald, Carter, Chapman, & Sheidow, 2008;

Schoenwald, Chapman, Sheidow, & Carter, 2009), others have found curvilinear

relationships. These curvilinear relationships suggest poor fidelity and high fidelity result

in poorer outcomes (see McHugh et al., 2009). Therefore, treatment fidelity likely

supports improved outcomes but may depend on the type of treatment implemented.

As the literature has suggested, EBTs benefit from QA monitoring procedures to

ensure fidelity of treatment implementation. Moreover, there is some research to suggest

that fidelity of implementation may improve treatment outcomes, depending on the ideal

level of fidelity and the treatment implemented. It can be argued that a crucial aspect of a

QA program used to monitor treatment fidelity would incorporate examination of client

records to ensure they are completed in an accurate and timely manner and include

information relevant to interventions implemented. QA of client records assists with

ensuring pertinent treatment data are documented, which can then be used as a method to

examine treatment fidelity and efficacy.

Use of Client Records for Research Data

Aside from treatment fidelity and efficacy studies, client records have also been

used to measure and track treatment related variables including, length of treatment,

premature termination of services, entry into treatment programs, completion of treatment programs, referral sources, and demographics (Downey, Rosengren, Jackson, & Donovan, 2003; McCusker, Bigelow, Luippold, Zorn, & Lewis, 1995; Scogin, Belon, & Malone, 1986). To this end, it can be seen that within the context of treatment related research, it is all the more important for client records to be maintained accurately for purposes of treatment and research. For example, within longitudinal studies, there are various challenges related to research changes over time, tracking research subjects, changes in equipment or assessment materials, and staff turn- over (Whitney, Lind, & Wahl, 1998). Thus, QA procedures become crucial within these methods of research to ensure accuracy of data and procedures. QA is expected to consist of routine monitoring and standardized protocols.

Clinical trials are another method of research that requires oversight that is more stringent. Since many clinical trials involve multiple sites that gather data, it is imperative that all researchers and staff are implementing consistent research methods and QA procedures. These procedures help to ensure that data collection and maintenance are safe from potential errors. Errors frequently occur during data collection, data entry, or when data are manipulated for analysis (Whitney et al., 1998). Freedland and Carney (1992) state this is likely due to the process of data management (i.e., tedious, complex, and time consuming), which may interfere with researchers ensuring the quality of their work. They further state that poor data management may cause difficult to detect errors, thereby rendering data uninterpretable, interfering with analyses, preventing replication of results, and creating uncertainty as to whether data correspond to results.

To prevent data errors it is vital to incorporate QA procedures specific to data and record management. In fact, regular training reinforces proper record keeping (Whyte, 2005) and data management practice (Frugoli, Etgen, & Kuhar, 2010), which is necessary in research and clinical settings. QA procedures should focus on ensuring quality of data through creation and utilization of standardized protocols, and specialized training of staff (Gassman et.al., 1995) and use of appropriate technologies and agency policies (Frugoli et al., 2010; Whyte, 2005). Once properly trained it is important that QA procedures are implemented frequently to ensure that researchers are accurate in their documentation (Miller, 1997). Moreover, early implementation is important because use of statistical analysis to find unusual patterns within data is effective only after a certain amount of data has been placed within the database (Knatterud et.al, 1998).

Within the milieu of examining treatment effectiveness and other important treatment related factors, accurate documentation is compulsory. If client records are not accurate, investigators cannot be certain of the accuracy of their results. Thus, investigators may unknowingly accept or reject their hypothesis due to poorly managed data. This could cause investigators to publish results that cannot be replicated and may interfere with their ability to secure funding for future projects. Therefore, when investigators utilize client records to measure research variables, they need to utilize methods to accurately document and review client records, thus ensuring quality.

As can be seen, investigators and practitioners must make certain they accurately document client records for a multitude of reasons. Within the evaluation of mental health treatments, accurate record documentation can assist with monitoring treatment fidelity. Accurate documentation also benefits research data; ensuring analyses are

reliable and correct. Another critical reason for practitioners and investigators to ensure

proper documentation and QA procedures is due to oversight agencies that routinely

conduct their own QA reviews, otherwise known as audits. The following section will

focus on audits performed by outside organizations, including organizational guidelines

and risk factors.

External Auditing of Client Records by Various Organizations

An audit focuses on the compliance of record keeping (Pyle, 2000). Typically,

audits are conducted by individuals independent of the institution, clinic, or agency. It is

important for practitioners to be aware that everyone may face scrutiny through various

types of audits. From the private practitioner to the grant-funded researcher, everyone

can be subject to an audit. Audits are initiated for various reasons including: client

requests, federal service agency practices, determination of services through insurance

companies, Institutional Review Board practices, and research institutions and/or

foundation procedures, and   investigations by licensing boards. Furthermore, some state

laws provide clients with access to their records (e.g., Nevada Revised Statutes [NRS]

433.504). However, any client with a complaint can take steps that may ultimately result

in an external audit. Thus, even practitioners' accepting only cash payments and with

presumably less oversight, can be audited.

Government based audits. Aside from client record requests, Federal Service

Agencies regularly initiate audits (e.g., Medicare, Medicaid, SAMHSA) and generally list

criteria for ensuring the quality of records on their websites or in manuals. Practitioners

that choose to provide services to Medicaid recipients are required to follow additional

guidelines beyond more typical State/Federal laws and ethical guidelines.   For example,

practitioners in Nevada who provide services to Medicaid recipients must adhere to standards within chapter 400 of the Medicaid Services Manual (MSM, 2011). To assist in their audits, the Center for Medicare & Medicaid Services (CMMS) utilizes multiple oversight bodies (i.e., Medicaid Integrity Contractors, State Medicaid agencies, and the Inspector General of the State or the U.S. Department of Health & Human Services) to regularly audit providers. A common goal of these oversight bodies may be to identify overpayments of funding to providers and work to decrease payment for inappropriate Medicaid claims (CMMS, 2009). Of direct importance, Medicaid also stipulates that providers must develop, implement, and maintain their own Quality Assurance program (MSM, 2011, Sec. 403). This is likely due to government agencies being aware of the benefits of utilizing QA procedures, and attempting to assist practitioners in preventing failed external audits.

Private insurance based audits. As stated previously, insurance companies may outline expectations of specific record keeping practices and audit records when complications arise over payment for services or when determining authorization for services to be provided. For example, California's College Health Individual Practice Associations (CHIPA) requires all providers maintain records in a manner that conform to applicable laws and regulations and stipulates specific treatment record content standards (CHIPA Network Manual, 2010, p. 14). Furthermore, they provide circumstances that may lead to an audit including: reviews of facilities without national accreditation, practitioners servicing a high-volume of clients, routine random audits for quality of care, and audits concerning identified quality of care issues (p. 14). Aside, from listing various guidelines and procedures to adhere to, CHIPA also includes

treatment record forms that adhere to auditing guidelines, including use of the SOAP

format for progress notes. Thus, insurance agencies have become increasingly aware of

poor record keeping practices and have attempted to assist practitioners in understanding

risks and the importance of utilizing specific procedures to prevent poor record keeping

and resulting negative consequences.

As previously discussed, UBH stipulates documentation requirements, as well as

auditing procedures in their Network Manual. They stipulate that client records must be

stored in a secure area, and practitioners must have an established procedure to maintain

confidentiality (Adler, 2012, p. 56). They further state that practitioners and agencies

should maintain an organized record-keeping system that allows for easy access by

authorized personnel. Audits by UBH focus on the quality of documentation within

client records. They stipulate corrective action and initiate follow-up audits when records

do not meet the performance goal (i.e. 85%).

Research institutions and foundations. Additional oversight bodies consist of

research institutions and foundations (e.g., CDC, NIH, Carnegie Corporation). These

oversight bodies audit various aspects of research projects they fund. For example, the

National Institutes of Health (NIH, 2011) lists various guidelines and procedures to be

followed based upon the research being funded, the amount of funding, and the

classification of the individual or agency being funded. They specifically stipulate that

researchers funded by grants that expend $500,000 or more in Federal awards during a

fiscal year be subject to audit requirements. However, research projects expending less

than $500,000 are not required to have an annual audit, but must make their records

available to NIH or other designated officials for review or audit. Funding agencies may

also enforce policies that mandate QA procedures within the funded agency. For example, the Substance Abuse and Mental Health Services Administration's Center for Substance Abuse Treatment (CSAT) Treatment Improvement Protocol (1993) states that:

> Each treatment program must ensure that internal policies and procedures comply with both Federal and State confidentiality and reporting regulations. Once compliance is ensured through the development of policies and staff training, a process of quality assurance monitoring should be developed to routinely review a sample of all program records (Appendix F).

In summary, audits are initiated by various organizations for a variety of purposes. State licensing boards routinely initiate audits when investigating for malpractice due to client concerns. Moreover, practitioners providing services to Medicaid or other insurance recipients, or those providing services through grant-funded projects, are under additional scrutiny. Practitioners have to be familiar with supplementary guidelines and procedures related to accurate documentation, use or requirement of QA programs, and external audits.

Potential Errors and Concerns Regarding Audits

Within auditing, any number of aforementioned errors can create problems for the client and practitioner and possibly result in detrimental consequences. As stated in the APA record keeping guidelines (2007) contracts with third party payers (i.e., insurance) may require specific information, which if absent or impaired may result in return of previously received funds or legal actions. Disastrous audits from government agencies and insurance companies can result in decertification, penalties, retuning of reimbursements (CMMS, 2009) or loss of license (NRS 641.230). Within the field of

research, a problematic audit could result in losing funding for grant funded projects and/or difficulties with obtaining funding for future projects. To this end, QA of client records is an absolute necessity to avoid both financial and legal problems. As can be seen, audits can affect anyone providing mental health services and are designed to deter negligence and regulate the provision of services. If auditing information is not used to improve documentation or service delivery, problems will persist within these realms. For that reason, standardized QA procedures are essential to ensure the quality of record keeping and to prepare practitioners and/or agencies for external audits. Regrettably, there is an absence of work examining QA procedures used to examine the quality of client records.

Examination of QA Studies

Prevention improves practitioners' protective factors and minimizes risks for unethical behavior (Tjeltveit & Gottlieb, 2010). Utilization of QA procedures is a primary tool to prevent ethical risks through monitoring and improving record keeping practices. Unfortunately, QA procedures relevant to record keeping have yet to be examined in psychological settings. However, similar studies have been conducted in medical settings. Many of these studies have focused on finding optimum methods for preventing errors in record keeping and administration of medications. This is of importance because 11% of psychiatric claims that are specific to improper care involved problems related to medication monitoring and administration (Tan & McDonough, 1990). For instance, Jha and colleagues (1998) compared the efficacy of three QA procedures (i.e., self-report of errors by physicians, physical records reviewed by a trained reviewer, and computer monitoring) in reducing adverse drug events (ADE) in

medical record keeping. Computer monitoring consisted of a computer-based application using ADE screening rules to detect retrospective errors within medication orders placed through a computer system, while physical record reviews consisted of retrospective examination of client records by a trained reviewer (Jha et al., 1998). Results indicated that more errors were detected by physical record review and, to a lesser extent, computer monitoring than self-reporting of errors by the professional.

In another medical record QA study, a pharmacy director and nurse practitioner retrospectively reviewed 31 patient records, encompassing the patient's entire hospitalization. They detected 2,194 medication errors across the 31 records, compared with the 9 previously self-reported errors by those managing the records (Grasso, Genest, Jordan, & Bates, 2003). Medication errors were defined through specific guidelines based upon recommendations from various institutes and contracted consultants (e.g., prescribing, product labeling, order communication, packaging, dispensing, distribution, administration, education, monitoring, and use). Grasso and colleagues (2003) noted the importance of their findings, stating that 58% of errors found were rated as high risk of patient harm. Though there were noted limitations within the aforementioned studies, including retrospective review and lack of independent review by QA staff, their findings are of great importance.   To this end, utilizing QA programs to independently review concurrent record keeping is the best method to discover errors, correct them, and improve ongoing record keeping. Bowie, Sweeney, and Beattie (2004) examined the use of a peer review QA program for community nurses in Scotland. The QA program utilized record keeping criteria outlined by the Nursing and Midwifery Council Quality Improvement Scotland Generic Standards. Nurses randomly selected a sample of records

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for an assigned nurse peer. Their results suggested that the QA program was effective for monitoring and improving the quality of record keeping. However, the study was limited in discussing QA training methods and study procedures, including use of random assignment.

The use of QA reviewers to reexamine medical records has been shown to be an effective method for detecting and reporting medication errors within the medical field. These studies highlight the potential for errors when hospitals or physicians rely solely on self-monitoring (i.e., reliance on the professional to find and correct their own errors) and do not make use of a QA program (i.e., use of specific methods and/or independent reviewers to find and correct errors). Previous QA studies demonstrate additional significance due to the potential for harm when physicians or independent reviewers are not examining the quality of documentation, thereby allowing for unnecessary errors; especially those involving medication.

Methods to Enhance the Quality of Client Records

As this review has demonstrated, client records are at-risk for a variety of errors, which if left unmonitored, can create a range of problems. Thus, methods to monitor, evaluate, and improve client records must be examined. To this end, within the medical field (Opila, 1997), found that review of residents' outpatient medical records and periodic feedback from attending physicians, improved documentation. This can also be assumed to beneficial within the field of mental health. Pullen and Louden (2006) also discuss methods to improve client records based on recommendations by the Royal College of Physicians. Specifically, they state that practitioners should date and time all record entries, sign all letters and entries in the client record, periodically summarize

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records of clients in long-term care, write names in block capitals for handwritten entries,

be thorough and concise, and be mindful that the quality of the record will reflect the

quality of care received. They further state that the agency should be accountable for the

development and training of practitioners and record keeping should be subject to

continued quality development (Pullen & Louden, 2006). Although not specific to

mental health, these are practical recommendations that could be easily implemented. To

this end, there are various methods to ensure proper record keeping practices, which rely

on implementation of a QA program.

Need for Organizations to Implement QA Programs

Aside from the aforementioned regulations imposed by external auditors, various

agencies and state laws recommend or require practitioners (including agencies) to create

and maintain their own internal QA programs. The National Committee for Quality

Assurance requires managed behavioral health care organizations to regularly assess and

improve client records. Although this is a difficult task for large organizations, it has

been shown to be beneficial (Caudill, 2005). Moreover, the state of Nevada (i.e., NRS)

outlines requirements for QA programs within managed care organizations stating:

> Each managed care organization shall establish a QA program designed to direct,
>
> evaluate, and monitor the efficacy of health care services provided to its insured.
>
> The program must include a method for analyzing outcomes, peer review, system
>
> to collect and maintain information, recommendations for remedial action, and
>
> written guidelines that set forth the procedures for remedial action when problems
>
> related to quality of care are identified. Each managed care organization shall
>
> maintain written description of the quality assurance program aforementioned, the

specific actions used to promote adequate quality of health care services provided and the persons responsible for such actions, and provide necessary staff to implement quality assurance program and evaluate its efficacy (695G.180).

The CSAT (1993), states that practitioners must regularly audit client records, especially practitioners whom work with clients who have been screened or are at-risk for infectious diseases. They recommend that audits utilize established criteria to determine the correctness of diagnoses and treatment planning, and ensure all documentation is complete and accurate. As previously discussed, QA programs may be encouraged or enforced by various organizations. However, there is not a lot of agreement about how these programs should be structured. Moreover, as new requirements arise, record keeping and QA processes must be updated to reflect changes and improved methods (Hargrave & Hiatt, 2000). In general, procedures for QA should be clearly specified, including frequency and modus operandi. Additionally, specific guidelines and checklists, utilizing standardized protocols should be used (Pyle, 2000). Pyle (2000) further suggests that QA should be both preventative and corrective in nature. Preventive actions may include changes in problematic forms, ongoing training, and protocol revisions. While corrective actions involve providing feedback and requiring corrections to be made for errors within a record; which should also be documented.

Practitioners and agencies will likely encounter some challenges with beginning or sustaining a QA program. Specifically, some practitioners may feel that QA is irrelevant to mental health practice. Others may feel that QA activities will impede on already busy practitioners, and agencies may lack staff that could assist with QA activities (Eppel, Fuyarchuk, Phelps, & Phelan, 1991). However, as will be examined in

the proposed study, the implementation of a QA program for maintaining client records will be relatively cost-effective. As this review has shown, errors within client records can have various disastrous consequences. An effective solution to these errors is utilization of a QA program. QA can benefit record keeping, through incorporating corrective action for uncovered errors and reducing the risk for ongoing errors.

Purpose of Study

As this review has indicated, studies have yet to examine the effects of QA procedures within a controlled experimental context, and rarely have examined such interventions in uncontrolled contexts. To this end, the purpose of the current study is to empirically develop and initially evaluate a QA program to assist in monitoring records in a clinic, serving mothers found to neglect their children and abuse drugs. The number of errors in clinical records committed before and after implementation of the developed QA program was examined. It was hypothesized that the QA program would be 1) feasible to implement, 2) reliably assessed, and 3) decrease record keeping errors.

Hypothesis 1: The auditing measure (i.e., QA Fidelity of Client Records Form) will demonstrate moderate to high inter-rater reliability across mental health records.

Hypothesis 2: Client records that received QA audits will evidence significantly fewer types of errors (e.g., missing date, missing signature, illegible writing), form errors (e.g., Log of Contacts, Progress Notes, Release of Information), and total errors, compared to records that do not receive QA monitoring.

Hypothesis 3: Frequency of QA audits will be negatively associated with total number of errors. As the frequency of audits increases, total number of errors will decrease.

CHAPTER 3

METHODS

The subsequent sections describe the clinic in which the QA program was developed, implemented, and evaluated, including the services provided, population served, demographics of treatment providers, and QA personnel. The current study evaluates a standardized QA procedure specific to the auditing of client treatment records within an EBT.

Clinic Description

The clinic includes four offices, a locked storage room with locking filing cabinets, and a conference area. The facility is kept locked 24 hours a day and access can only be gained through magnetic key cards. Each office houses two computers which require passwords to gain access. Moreover, electronic files and data are stored on a secure network with restricted access; the restricted accounts are secured by a Novell account within the University and are backed up regularly. Within the locked storage room are six locking storage cabinets which contain client records and assessment data amongst other important documents. This room is locked by key. To gain access to cabinets keys, personnel must enter a three digit code into a lock box to access individual keys. Clinic policy stipulates that cabinets be locked upon accessing storage contents. When all personnel have left for the day, the last person out is required to follow a standardized protocol to ensure all confidential information is stored securely and verify that the clinic is locked and secure.

Service Consumers

The clinic provides mental health services to substance using mothers as part of a controlled treatment trial of Family Behavior Therapy (FBT). With regard to the RCT, clients were eligible for referral if they were reported to the Department of Family Services (DFS) for child neglect, identified to use non-prescribed substances, and evidenced illicit Substance Abuse or Dependence. Clients were required to have at least one adult individual willing to participate in their treatment, and either living with the child related to the referral (i.e. neglect) or it was the intention of the Court to return the child home if safe to do so. Clients received up to 20 home-based therapy sessions of FBT during a 6-month period.

Development of QA Procedure for Examining Client Records

Similar to recommendations from CSAT (1993), QA is conducted utilizing a team approach. Auditing criteria were identified for all aspects of the treatment/research program, including procedures not specific to client records. Criteria for QA of client records consist of detailed procedures conducted by trained auditors. The standards and expectations for the creation and maintenance of client records were disseminated to program treatment providers (i.e., graduate students and advanced level undergraduate students). The QA team developed and followed QA protocols, including auditing methods, tracking procedures, and informing appropriate personal (i.e., therapist and supervisor) of audit findings (e.g., CSAT, 1993). The QA procedures for auditing client records were designed to be continuous and allow feedback for the practitioner on an immediate and short-term basis (Schaub, 1994). Similar to suggestions posed by Pyle

(2000), corrective and preventive action plans were the starting point for continued QA examinations and timeframes were utilized for completion of corrective feedback.

QA audit procedures were developed with the assistance of the principle investigator, treatment providers, and auditors. The initial QA audit procedures consisted of ideas from research meetings and experiences gained through record documentation in a pilot phase of the RCT. Upon examination of pilot records, the following errors were identified: missing forms, poor or difficult to read handwriting, dates not recorded, times not recorded, clinician signatures missing, client signatures missing, relevant information not being completed on forms, forms disorganized, and mismatching dates on entries. After common errors were identified, a standardized method of conducting audits was outlined. The process was designed to be replicable, simple, non-time consuming and consistent across auditors. To this end, auditors utilized a standardized QA error tracking form and detailed systematic instructions were outlined in a QA manual.

The initial QA error tracking form (see Appendix A) included all client record forms to be examined: Table of Contents, Log of Contacts, Treatment Plan, Consent Form, Demographics Form, Contact Sheet, Authorization to Release, Authorization for Release, Referral Form, Status of Referral Form, Directions to Site, Monthly Caseworker Progress Notes, Standard Treatment Session Progress Notes, Outstanding Session Progress Notes, Outside Correspondence Progress Notes. When initially developed, the QA audit consisted of examining client records utilizing the QA error tracking form and the initial QA audit procedures. The QA audit was first implemented with clients who had already received some treatment within a pilot phase of the RCT, but who had not yet completed the treatment program.

After the initial implementation, improvements in procedures were put into practice based upon information gathered during the initial set of QA audits, development of the treatment program, and additional feedback provided from QA meetings. Changes were implemented to improve QA auditing procedures including, assessing for additional errors, and accounting for updates to client record forms within the development of the RCT. The developed and finalized QA audit makes use of the revised QA error tracking form (see Appendix B), QA manual, QA binder (for storing and tracking QA procedures), and auditors trained in QA protocols. Training auditors consisted of modeling, role-plays utilizing the QA manual; implementing the step-by-step QA audit protocol (see Appendix C) to complete the error tracking form. The QA Coordinator would meet individually with prospective auditors to fist discuss the purpose and process of QA audits and the model/instruct on how to utilize the QA manual and forms to conduct audits. The prospective auditor would then role-play how to implement an audit utilizing the manual and forms. The QA Coordinator then provided feedback regarding the role-play. The QA Coordinator monitored initial QA audits. Once auditors were familiar with the protocol and demonstrated 100% adherence to all steps, they completed audits independently. The QA Coordinator would then oversee completion of audits through weekly QA meetings. As the QA program advanced, senior auditors assisted the QA Coordinator with training prospective auditors, through additional modeling.

The first step in a QA audit consists of an initial examination and audit of the client record, after the client has completed their first treatment session. This establishes a timeframe to review records regularly and helps to keep track of assigned treatment providers and the onset of treatment. After the initial audit, treatment providers are given

one week to correct errors. From this point, auditors conduct monthly record audits beginning where they previously left off in the client record. After each monthly check the treatment providers are provided a week to make corrections if needed. Monthly audits are continued until the client terminates treatment. It should be noted that the finalized QA program monitors 100% of client records in the clinic, rather than a sampling of records.

Participants

  QA team. Auditors were trained to utilize QA procedures for a range of tasks. At the FRS clinic, the QA Coordinator is responsible for ensuring auditors meet training criteria, and for ensuring QA tasks are completed in an accurate and timely manner. Auditors meet weekly to assess current progress on QA tasks, identify and eliminate potential problems, and present future directions. QA tasks within the clinic include reviewing client records and other important duties (e.g., data management, form management, client enlistment). QA tasks are facilitated through detailed protocol checklists that specify relevant instructions. Implementation of QA tasks is assisted by the QA binder containing the QA manual, QA protocols, and various tracking forms. The manual and protocols provide guidance, accountability, and allows the QA coordinator to oversee the auditors more effectively. QA on client records can range from 5-15 minutes per record and is performed by a specific group of auditors within the QA Team. Advantages of the standardized QA protocols include establishing clear standards of record-keeping, monitoring progress over time, improving performance (Bond, Evans, Salyers, Williams, & Hea-Won, 2000), and ensuring accountability (Buetow & Roland, 1999).

Treatment providers. Ten treatment providers trained in FBT were included in the study. Treatment providers exhibited a range of experience at the time of the controlled treatment trial (e.g., post-doctoral fellow, bachelors level community treatment providers, master's level graduate students, doctoral level graduate students). Most treatment providers had limited therapy experience in EBTs. Client records were the responsibility of the treatment provider. The number of clients seen per treatment provider ranged from 1-6 with a range of audits performed on their client records. The majority of treatment providers were involved in at least one QA audit, while two providers received QA audits on all of their client records (see Table 1).

Procedure

To conduct the study, five auditors were trained to identify record keeping errors similar to training procedures outlined above. For the purposes of the study, the auditors met with the QA Coordinator as a group to learn the QA study audit protocol and additional research procedures. Auditors were instructed to refrain from individual consultation and would bring QA and research related questions only to the QA Coordinator. Records from thirty-four clients that received FBT were used in the analyses. Four auditors were randomly assigned records to review. Randomization consisted of using a randomizer to assign individual client records using the record's identifying number. The auditors were assigned between 6-10 records each (see Table 2). A fifth independent auditor was randomly assigned to review 25% of the records (i.e., 9) as a reliability check, utilizing the same randomization procedure.

The independent auditor was only utilized to assess inter-rater agreement of client record errors. Inter-rater agreement was examined due to the potential subjectivity of

some types of errors (e.g., illegible writing) and the potential to miss or misinterpret errors. The independent auditor was blind to record assignment of the four primary auditors and was instructed to refrain from discussing treatment and audit related procedures with any other auditor. For the purposes of primary analyses, only the four primary auditors' data was examined.

Eighteen client records did not receive QA audits or monitoring, while sixteen client records were involved in the QA program; having received at least one audit. Auditors utilized the QA Fidelity of Client Records Form (see Appendix D), to assess record errors. Auditors reviewed all forms within assigned records. Questions regarding errors and research procedures were directed to the QA Coordinator. When questions regarding errors arose, the QA Coordinator used a blind procedure to confer individually with the other auditors to determine a consensus on the presence or absence of an error. Decisions were then disseminated to all auditors to assist with defining errors.

Statistical Plan and Approach

The primary variables of this study consisted of seven types of errors (i.e., missing forms, illegible writing, missing dates, missing times, missing information, missing client signature, and missing clinician signature), and nine forms (i.e., Log of Contacts, Informed Consent, Demographics Form, Release Forms, Treatment Plan, Treatment Progress Notes, Outside Session Notes, and Termination Report). Some records were missing forms. When forms were determined to be missing, a means substitution (across records) was utilized to address missing data (errors type) and avoid minimizing absence of errors that could not be determined due to the missing form. The first set of analyses examined descriptive statistics to examine means, standard

deviations, and ranges for all error variables, based on QA group. These analyses assist

with understanding and documenting the types of errors that may typically occur in

mental health treatment records. It was expected that errors would be more frequent (i.e.,

higher range and mean) in records that did not undergo QA (i.e., non-QA records).

The data were also examined for normality to determine if errors were equally

spread across records within their respective group (i.e., QA and non-QA). It was

expected that no significant differences would be found within the respective groups.

However, data were expected to deviate from normality due to skewness. Thus, non-QA

records were anticipated to be negatively skewed towards a higher frequency of errors,

while QA records were anticipated to be positively skewed towards a lower frequency of

errors (e.g., higher frequency of no errors and restricted range). Next, inter-rater

reliability was assessed utilizing intra-class correlation coefficients to determine the

reliability of the QA Fidelity of Client Records Form.   It was hypothesized that auditors

would have a moderate to high level of agreement (.70 - .90) when examining individual

errors. A final preliminary analysis utilized Pearson correlation coefficients to assess

colinearity of error variables and to identify significant covariates. It was hypothesized

that errors would be moderately related, but not multicollinear. In addition, the frequency

of forms within a record was expected to be significantly related to total number of

errors.

An important contribution to the scientific literature would be to determine if use

of a QA program reduces errors in client records. To this end, records were grouped into

either having received QA (i.e., having at least one audit) or non-QA. The second and

third set of analyses consisted of separate MANOVA's to examine differences between

QA and non-QA records on seven individual types of errors (e.g., missing forms, missing signatures, illegible writing) and nine errors based on specific record forms (e.g., Log of Contacts, Treatment Plan, Standard Session Progress Notes). It was hypothesized that significant differences would be observed between QA and non-QA records, such that records receiving QA audits would contain fewer type and form errors, than non-QA records. A t-test was then used to examine differences between QA and non-QA records for the total number of errors. It was expected that non-QA records would have significantly more total errors relative to QA records. An additional chi-square analysis was utilized to examine group differences in record organization, with the prediction that QA records would be more organized than non-QA records.

QA assists with identifying and correcting errors, thereby increasing the number of errors found and corrected within a client record. Moreover, QA assists practitioners with identifying errors they are prone to commit, which may act to prevent the occurrence of errors over time. To this end, another important contribution to the literature would be to demonstrate that a higher frequency of QA audits would reduce errors. Correlational analyses were used to examine the linear relationships between the number of QA audits and errors. Analyses focused on individual forms, types of errors, and total number of errors. It was hypothesized that there would be significant negative linear relationships across all errors; such that as QA audits increased, number of errors would decrease.

Correlational analyses were also used to explore the relationship between the amount of time required to conduct a comprehensive record audit and the total number of errors by group (i.e., QA vs. non-QA). It was expected that records containing more

errors would require significantly more time to complete a full record audit. This will assist in demonstrating that routine QA audits (i.e., monthly) reduce the potential amount of time required to audit and correct client records, without use of a QA program. Finally, descriptive data for auditor specific variables (i.e., total forms, total audit time, total errors, and QA group) and treatment provider variables (i.e., number of records, total errors, frequency of audits, and number of treatment sessions) were examined to identify potential differences in records based on treatment provider in charge of managing the record and auditor reviewing the record. A between-subjects multivariate analysis of variance (MANOVA) and individual t-tests were then computed to further explore differences in auditor specific variables.

CHAPTER 4

RESULTS

Normality of Data

All error variables (i.e., type and form errors) were tested for normality to

determine the distribution of the data between QA groups, using the Shapiro-Wilk

statistic. Regarding non-QA records, errors related to missing forms, illegible writing,

and demographics forms, were normally distributed ($W = .90$, $p = .09$, $W = .91$, $p = .15$,

$W = .89$, $p = .06$; respectively), while all other errors were found to be non-normal (see

Table 3). For, records that received QA, errors related to illegible writing, missing

information, demographics forms, progress notes, and total errors, were normally

distributed. All other errors were found to be non-normal (see Table 3). While data

transformations are sometimes recommended when data indicate outliers or fail to

demonstrate normality, it is not always indicated (Tabachnick & Fidell, 2001). This is

due to difficulties with interpreting data once it has been transformed. Given that the

current data is measured in a ratio format and predicted to be non-normal, data

transformations were not utilized in subsequent analyses.

Descriptive Data & Correlational Examination of Errors

Means and standard deviations of error variables by QA group are also presented

in Table 3. The total number of errors across records ranged from 12 to 160, with

missing information being the most frequent type of error committed ($M = 19.8$, $SD =$

27.5) and progress notes exhibiting the highest number of errors across forms ($M = 16.6$,

$SD = 26.8$). Pearson correlation coefficients were computed for types of errors and form

errors to examine collinearity. While none of the study variables were found to be

multicollinear, some variables demonstrated moderate linear relationships (see Tables 5 & 6). Interestingly, the frequency of forms within a record was not significantly related to total errors. Therefore, the frequency of forms was not considered as a covariate in subsequent analyses.

Inter-Rater Reliability

Given the potential subjectivity of auditing client records, each set of records examined by each set of auditors were compared, and a reliability estimate was computed to estimate inter-rater reliability. Intra-class correlation coefficients were calculated across the seven types of errors (see Table 4). The overall intra-class correlation coefficient was 80%, suggesting that auditors' estimates of errors were reliable.

Do QA Audits Reduce Client Record Errors?

Errors by type. Differences in types of errors as a function of QA group (QA vs. non-QA) were analyzed using a between-subjects MANOVA. Using Wilk's criterion (Λ) as the omnibus test statistic, the combined dependent variables resulted in a significant main effect for QA group, $F(7, 26) = 3.811$, $p = .006$, partial $\eta^2 = .506$. To probe the statistically significant multivariate effects, univariate ANOVAs were examined on each individual DV. For missing forms, there was a significant main effect for QA group, $F(1, 32) = 7.556$, $p = .008$, partial $\eta2 = .199$. There were significantly more missing forms within non-QA records ($M = 1.44$, $SD = 1.20$) relative to QA records ($M = .50$, $SD = .63$). Examination of missing dates also revealed a significant main effect, $F(1, 32) = 5.385$, $p = .027$, partial $\eta2 = .144$. There were significantly more missing dates within non-QA records ($M = 2.44$, $SD = 2.40$) relative to QA records ($M = .86$, $SD = 1.36$). Another significant main effect was found for illegible writing, $F(1, 32) = 5.225$, $p = .029$, partial

$\eta 2 = .140$. However, this effect indicated that there were significantly more cases of illegible writing in QA records ($M = 8.62$, $SD = 5.35$) as compared to non-QA records ($M = 4.89$, $SD = 4.13$). The main effect for missing information approached statistical significance, $F(1, 32) = 3.563$, $p = .068$, partial $\eta 2 = .100$. Missing client signature, clinician signature, and missing time were not statistically significant (all $ps > .05$).

Errors by form. Next, errors were examined by form to determine if there were significant group differences based on specific forms within the record MANOVA. Using Wilk's criterion (Λ) as the omnibus test statistic, the combined dependent variables were non-significant, $F(9, 15) = 1.784$, $p = .155$, partial $\eta^2 = .517$.

Total number of errors and record organization. Next, an independent-samples t-test was conducted to compare total number of errors in QA and non-QA records. Results revealed a statistically significant difference in total number of errors between QA ($M = 29.55$, $SD = 10.04$) and non-QA records ($M = 53.55$, $SD = 40.81$); $t(32) = 2.288$, $p = .029$. Thus, non-QA records had significantly more errors relative to QA records. Chi-square analysis examining group differences on record organization revealed a significant effect, $\chi^2(1, N = 34) = 6.17$, $p = .013$. Thus, QA records were more organized (50%) than non-QA records (11%).

Do Increased QA Audits Reduce Errors?

Pearson correlation coefficients were computed between the number of QA audits and errors (i.e., individual forms, types of errors, and total number of errors) to determine the relationship between frequency of QA audits and errors. With regard to types of errors, results indicated statistically significant negative linear relationships between QA audits and missing forms and missing dates. As QA audits increased, the number of

missing forms and missing dates decreased. Interestingly, there was a statistically

significant positive linear relationship between QA audits and illegible writing. Thus, as

QA audits increased, the frequency of illegible writing also increased. No other types of

errors were significant ($ps > .05$; see Table 7). Examination of form errors did not reveal

any significant linear relationships to QA audits (all $ps > .05$). However, there was a

statistically significant negative linear relationship between QA audits and total number

of errors ($r = -.40, p = .043$). Thus, as the number of QA audits increased, total number

of errors decreased.

Pearson correlation coefficients were then computed within QA group to examine

whether total number of errors was associated with the amount of time it took auditors to

complete comprehensive QA audits. QA and non-QA records were examined separately.

Results did not indicate a significant relationship between total number of errors and

audit time for either QA group. However, within non-QA records, results indicated a

statistically significant positive linear relationship between audit time and frequency of

forms within records ($r = .67, p = .002$). Thus, non-QA records with more forms required

significantly more time to audit. However, this relationship was not significant for QA

records ($p > .05$).

Differences in Records Based on Treatment Provider and Auditor

A final set of analyses examined treatment provider and auditor effects to explore

individual differences between treatment providers and between auditors. Descriptive

statistics were computed to examine means, standard deviations, and ranges for treatment

provider variables (see Table 1) and auditor specific variables (see Table 2).

Examination of auditor variables revealed that randomization of client records did not

equally distribute QA and non-QA records. For example, auditor 4 reviewed nine non-QA records and one QA record, while auditor 2 reviewed two non-QA records and seven QA records. Mean total audit times ranged from 49 minutes to approximately 2 hours. A MANOVA was utilized to examine differences between auditors for total audit time and total errors. Levene's homogeneity of variance test was statistically significant for total audit time ($p = .014$). Using Wilk's criterion (Λ) as the omnibus test statistic, a significant main effect was observed for total audit time, $F(3, 33) = 11.726$, $p < .001$, $\eta^2 = .540$; indicating significant differences in total audit times between auditors. However, total errors was not significant, $F(3, 33) = 1.873$, $p = .16$, $\eta^2 = .158$. A post-hoc analysis of this main effect, using Tamhane's T2 to adjust for violation of equal error variance, revealed that audit times were significantly lower ($p < .001$) for auditor 1 ($M = 70$) relative to auditor 2 ($M = 116.89$). Additionally, audit times were also significantly lower ($ps < .01$) for auditor 3 ($M = 49.33$) relative to auditors 2 and 4 ($M = 114.40$). Finally, as can been seen in Table 1, there was a range of records and QA audits within treatment providers. Moreover, treatment provider 2 is noted to be an extreme outlier for total number of errors. Further examination of treatment provider effects could not be determined due to restrictions in sample size, high number of treatment providers, and non-normality of treatment provider data.

CHAPTER 5

DISCUSSION

There is a current need for research in QA specific to mental health record keeping. The current study helps to advance this area of research, describing a standardized QA program specific to auditing client records, and providing preliminary results supporting its use. It was hypothesized that implementation of the QA program would result in significantly fewer record errors when compared to records that did not receive any QA monitoring. It was also hypothesized that a higher frequency of QA audits would be significantly related to fewer errors as compared to less frequent audits.

Results indicated that inter-rater reliability for the QA Fidelity of Client Records Form was acceptable. Thus, the measure was found to be reliable for the purposes of evaluating group differences in record keeping errors. However, when examining ICC coefficients across types of errors, illegible writing was found to demonstrate poor reliability. This is likely due to the subjective nature of assessing handwriting. Next, examination of the specific types of errors revealed that there were significantly fewer missing dates and missing forms, within QA records. These results suggest that QA audits assisted with reducing the frequency in which important dates were missing from client records. This is important since documentation of dates is a necessary component on all record forms (e.g., Adler, 2012) and assists with establishing a timeline of events. When forms do not indicate dates, it becomes impossible to verify when treatment sessions occurred or when consent for releases or treatment was obtained. Dates also have important implications when treatment providers are required to breach confidentiality in cases of child/elder maltreatment, suicide risk, or homicidal intent.

Detailed documentation surrounding these situations is critical. Of increased importance, QA audits reduced the number of missing forms within records. Within community based settings, records with missing forms can have substantial consequences, including disruption in continuity of care, breach of confidentiality, supervisor time, and interference with reimbursement from insurance agencies. It should be noted that with regard to the current study, missing forms occurred when therapists failed to include necessary forms within a client record as opposed to completing forms and losing them from the record.

Contrary to experimental expectations, QA records were found to have significantly more occurrences of illegible writing. Illegible writing within client records should be a concern as it can hinder the usefulness of records and is a potential problem whenever client records consist of hand written documentation. Indeed, illegible writing within medical records has led to malpractice claims and even patient death (Sokol & Hettige, 2006). Within the present study, illegible writing most commonly occurred in the log of contacts, client contact sheet, and progress notes. Within these forms, illegible writing can interfere with being able to contact client and determining when the client was contacted and for what purpose. Illegible writing within progress notes can lead to difficulties reviewing previous sessions, and a host of other challenges when records are transferred or scrutinized by others (e.g., courts, insurance, professionals). As will be discussed, this is likely due to effects specific to treatment providers, as writing is more unique to individuals as opposed to other types of errors. Finally, marginal effects were observed for missing information and missing clinician signatures, suggesting a trend towards improvements in these areas.

When examining records as a whole, QA records exhibited significantly fewer total errors and were more organized than non-QA records. QA audits appeared to significantly reduce errors within client records and help to keep the respective records organized. This is central to client record keeping, as errors and disorganization hinder the use of client records and can result in a range of problems including inefficiency in reviewing prior progress notes, confirmation of required forms (e.g., consent and release of information), incorrect information, and obstruct the transfer of records.

Errors were also examined by form to determine if certain forms were more prone to errors. However, none of the forms differed significantly between QA and non-QA records. This may have been due to potential restrictions in statistical power, given the small sample size and the high frequency of forms analyzed. Alternatively, significant differences may not have been found due to the format of the forms. The forms used in the present study were specifically developed to be less susceptible to errors and easy to complete. Development of standardized forms is suspected to assist with reducing the potential for errors (e.g., Prieto & Scheel, 2002). For example, the progress notes in the current study utilize check boxes, require very little writing, and include specified sections (e.g., date, time, signature, session number) to prevent treatment providers from forgetting what information to document.

Given that specific types of errors were reduced in QA records, the number of audits completed on records was examined to determine if a higher frequency of audits would be associated with fewer errors. As the frequency of audits increased, the number of missing forms and missing dates decreased, as did total number of errors. This is likely due to the corrective nature of QA audits. Within the QA program, once an auditor

finds an error, the treatment provider is provided specific feedback regarding the type of error and location within the record. Corrective feedback assists with reducing future occurrences of errors through awareness and opportunities to practice correcting errors. Illegible writing was also found to be significantly related to frequency of audits, albeit opposite to the predicted direction. Thus, as audits increased, illegible writing also increased. It is not suspected that audits resulted in increased illegible writing; rather, this is a suspected cohort effect that is further complicated by poor reliability in assessing illegible writing. Two treatment providers exhibiting the highest frequency of illegible writing also had the highest mean number of audits (see Table 1). Although QA auditors provided feedback regarding challenges with reading treatment provider writing, this is not likely something that is easily improved, and only corrected in the most extreme circumstances (i.e., when the treatment provider is unable to read their own writing). Indeed, illegible writing is one factor that has influenced movement towards electronic based records (Mandi, 2005), which is the most effective way to prevent illegible writing errors. Illegible writing is much more unique to individual therapists, especially when compared to the other types of errors. Moreover, illegible writing is further complicated by the subjectivity of individual auditors. While examination of auditor data did not reveal statistically significant differences in assessing illegible writing between primary auditors, illegible writing did not demonstrate acceptable inter-rater reliability when comparing independent auditor ratings. Thus, no raters were found to be more or less sensitive to illegible writing errors; however, agreement on the presence of illegible writing was poor. Finally, form errors were not significantly associated with the frequency of audits. Inspection of group means revealed relatively small means across

form errors, with the exception of progress notes. Thus, a higher frequency of audits did not appear to significantly reduce form errors.

QA audits were found to reduce specific types of errors, total number of errors, and improve record organization. However, QA programs are not without cost. The primary cost associated with the present QA program was time. The amount of time dedicated to QA audits is minor when kept to a minimum (e.g., 5-10 minutes per record) and occur regularly (e.g., 4-8 weeks). Through standardized protocols, forms, and training, audit time can be reduced and cost effectiveness increased. This is in contrast to one-time audits or risks associated with errors in the case of unmonitored records.   Given that approximately half of the examined records within the current study had received QA audits, it was suspected that records with fewer errors (i.e., QA records) would require less time to complete a comprehensive audit. Unfortunately, the number of errors was not found to be significantly associated with audit times for QA or non-QA records. However, further examination revealed that the frequency of forms within non-QA records was significantly associated with audit time. While it would be expected that the frequency of forms would influence the amount of time to complete an audit, this was only the case for non-QA records. A potential reason for differences in QA audit times may be related to auditors.

Although inter-rater reliability for the QA Fidelity of Client Records Form was found to be within an acceptable range, this does not indicate a high or absolute level of agreement between auditors. In part, this is due to the subjectivity of some types of errors (e.g., illegible writing), but may also be influenced by differences in auditors detection skills (e.g., presences vs. non-presence of errors). Randomization was expected

to reduce record related influences, such as frequency of forms and number of errors. However, QA and non-QA records were not equally distributed across auditors. For example, the highest audit times were found for auditor 2 ($M = 116.9$, $SD = 19.0$) and auditor 4 ($M = 114.4$, $SD = 43.5$), yet auditor 4 had significantly more non-QA records (i.e., 9), while auditor 2 had significantly more QA records (i.e., 7). Although auditor 2 and 4 took the most time to audit records, distribution of QA and non-QA records does not appear to have influenced their audit times. Moreover, total errors were not found to significantly differ between auditors. The current study is limited in further examination of auditor factors that influence audit times (e.g., speed, detection, efficiency) and further research is needed to examine auditor factors.

Limitations

As previously discussed, the consequences related to record keeping errors can be vast and detrimental to both client and provider. While there does not currently appear to be any statistical analysis of the potential cost of these errors, it is easy to reflect on how costly they can be. QA continues to be important in various fields, especially mental health. While preventative record audits have not been a substantial focus within mental health, the potential for external audits (i.e., insurance and government agencies) is well known. It should be noted that there are limitations within the current study including, use of a single treatment (i.e., FBT), standardized progress notes, small sample size, lack of controlled assignment, and limited examination of auditor specific variables. Use of a specified treatment was beneficial for improved control and improvements in records management and standardization. However, it is not representative of community-based mental health agencies providing multiple types of treatment. Moreover, examination of

forms was impacted due to ongoing form changes within the context of the RCT. When record forms were found to be problematic, they were revised. Use of standardized progress notes is expected to be beneficial for reducing the potential for errors, but may not be representative of progress notes used within other agencies. Further, the QA audits were not designed to examine progress note content. As previously discussed, progress note content is an important aspect to monitor and further research is required to determine progress note standards and use of QA methods to assess adherence. A larger sample size may have been beneficial for increasing power and improving significance of marginal affects. However, significant effects were still observed with a relatively small sample size. Future studies will need to take these factors through the implementation of more controlled methods. This would assist in making conclusions that are more definitive and prevent possible cohort and time effects. Future research should also focus on cost-benefit analysis to calculate the potential costs of record keeping errors and estimated costs for implementing a QA program, especially within a community-based mental health agency.

Implications

The current study suggests that QA audits were beneficial and that higher frequency of audits was associated with fewer errors. These results have implications for clinical and research settings. The study also assists with outlining and supporting the use of a standardized QA program that could be feasibly implemented within community-based mental health agencies. While undergraduate research assistants were utilized to implement QA audits in the current study, it is believed that treatment providers in community clinics could easily implement the same protocols and procedures. Similar to

the QA program outlined by Beattie and colleagues (2004), treatment providers could assist their fellow colleagues with "blind" record monitoring. As an example, treatment providers would be randomly assigned to review records while utilizing a standard protocol and tracking form, comparable to ones used in the current study. Similar to the evaluated QA system, we would recommend audits occur every 4 weeks, or up to 8 weeks depending on need and record keeping proficiency. We would also recommend that audits last between 5-10 minutes, if implemented on a monthly basis. Lead supervisors and/or agency coordinators could monitor the QA program and ensure audit results are disseminated to all providers.

APENDIX A: QUALITY ASSURANCE CLIENT CHART REVIEW

Quality Assurance Client Chart Review

Reviewed by: _____

Date: 2-25-08   Client ID: 27

* Shaded area = not applicable to form listed at top of column

1. Are all the forms in the correct order?   Yes ___   No ✓

2. Do the log of contacts and outstanding session progress notes match?   Yes ___   No ✓

3. Do the log of contacts and outside correspondence progress notes match?   Yes ✓   No ___

Notes: _____

Signature of Primary Therapist to Indicate Forms Reviewed and All Necessary Corrections Were Made

Date: 2/27/08

Please Place This Form in the Completed Quality Assurance Forms File in Cabinet # 6, Drawer 1 After making All Necessary Corrections

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FRS Family Research & Services
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Quality Assurance Client Chart Review

Please Place This Form in the Completed Quality Assurance Forms File in Cabinet # 8, Drawer 1 After making All Necessary Corrections

Reviewed by: _____ **Client ID #:** _____
Review Date: _____ **Due Date:** _____

	Form is Missing	Writing is Sloppy	Date Not Recorded	Time Not Recorded	Supervisor Signature Missing	Clinician Signature Missing	Client Signature Missing	All Relevant Information Not Completed	Client ID missing
Table of Contents		NA	NA	NA	NA	NA	NA	NA	
Log of Contacts					NA		NA		
Informed Consent		NA		NA	NA	NA			
Phone/Meal Contract		NA	NA	NA	NA			NA	NA
Client Contact Sheet				NA	NA	NA			NA
Treatment Referral Form				NA	NA	NA	NA		
Phone Prescreen Form			NA	NA	NA	NA			
Demographics Form			NA	NA	NA	NA	NA		
Authorization to Release				NA					
Authorization for Release				NA					
Monthly Client Progress Report/MCWC Progress Notes					NA		NA		
Treatment Plan				NA	NA	NA	NA		
Status of Referral Form			NA		NA	NA	NA		
Consent/Assent Forms				NA		NA			NA
Standard Tx Session Progress Notes					NA		NA		
Progress Notes Continuation Page					NA		NA		
Enlistment Standard Progress Notes					NA		NA		
Assesment Progress Notes				NA	NA	NA	NA		
Treatment Assessment Summary		NA	NA	NA	NA	NA	NA		
Outside Session Progress Notes					NA		NA		
Receipts For Incentives		NA		NA	NA				
Termination Report*				NA			NA		
LSS		NA	NA	NA	NA	NA			
PSCS		NA	NA	NA	NA	NA			

NA = not applicable to form listed at left of column

1. Are all the forms in the correct order?   Yes _____   No _____

2. Do the log of contacts and standard tx. session progress notes match?   Yes _____   No _____

3. Do the log of contacts and Outside Session Progress notes match?   Yes _____   No _____

4. Does the Monthly Client Progress Report include a cover sheet and fax confirmation sheet?   Yes _____   No _____

5. Does MCPR have note in Outside Session Progress notes?   Yes _____   No _____

6. Do meal receipts match the number of meals administered?   Yes _____   No _____

Signature of Therapist: _____   Date: _____

*Termination Report to be completed at the end of treatment or otherwise noted by therapist

APENDIX C: QA AUDIT PROTOCOL

Procedures for checking a "<u>new</u>" client treatment chart:

**Note. The Quality Assurance and Treatment Integrity Coordinator will check each week during supervision to see if any new clients have been scheduled for their first treatment session and/or if any clients have finished their last treatment session and a termination report has been filed. The purpose of this procedure is to check client treatment charts for potential errors (i.e. sloppy writing, missing information…) as well as to ensure all forms are included in the treatment chart. It also establishes when the client's chart will need additional checks.

- The quality assurance team must perform the first quality assurance check **within one week** of the first session.
- Thereafter, the quality assurance team will check the treatment chart once a month from the date of the first treatment session until the client has been terminated or otherwise stated by supervisor.
  - **It is important the team performs monthly checks within one week of the chart check date (i.e., if the check date is 7.30.08, the team has 5 days prior to complete this check)**

☐ Check QA coordinator email and obtain client ID #'s needed for review

☐ Obtain cage room key, cabinet # 2 and cabinet # 6 keys from lock box in the FRS hallway

☐ This box requires a code to unlock, if an FRS member does not have the lock code obtain assistance from an FRS administrator

☐ Proceed to Cage Room located as the first room to the left of the main FRS entrance

☐ Open Cage Room and find cabinet # 6

☐ Open cabinet # 6, drawer #1

☐ Under the "Client Chart Review (TX)" folder, obtain one "Quality Assurance Client Chart Review" form for each client ID ready to be reviewed.
  - This form is utilized to check treatment charts for information such as sloppy writing, missing signatures, dates missing, etc. and is inserted into the treatment chart for therapists to review. The therapists will have one week to fix any applicable modifications and return this "Completed Quality Assurance Form" to cabinet # 6, drawer # 1 into the "Completed Quality Assurance Forms" folder.

☐ Lock cabinet # 6 and proceed to open cabinet # 2.

☐ Open Drawer # 1 and/or # 2 and locate the client ID # needed for review (the charts are filed in numerical order starting with the lowest number).

66

☐ Begin with one client treatment chart.

☐ Obtain the client chart, lock cabinet # 2 and return all keys to the lock box in the FRS hallway.

☐ Find an empty desk and conduct quality assurance.

☐ Obtain one "Quality Assurance Client Chart Review" form gathered from the steps aforementioned.

☐ Complete the top four sections of the form:
- Reviewed by: (first/last)
- Review Date: (month/day/year)
- Client ID #: (insert #)
- Due Date: (month/day/year) one week proceeding the review date

☐ Open the client treatment file and refer to the "Quality Assurance Client Chart Review" form
- Start with the first form listed (i.e., Table of Contents) denoted by the first row on the "Quality Assurance Client Chart Review" form
- Proceed to scroll to the right of the page and assess this form under each column presented (i.e., form missing, writing sloppy, date not recorded).

**Note. Depending on the treatment form being reviewed some columns will not apply and will be denoted by an "N/A" The quality assurance team should skip this column and any other column that contains an "N/A" and proceed to assess the form on the columns that are applicable.

☐ Place an "√" beneath each column that is applicable to the form
- Continue to review all listed treatment forms utilizing the procedures aforementioned.

Note. It is important to note that the **"Termination Report" & "Treatment Plan" will not be present in the client chart and will not need to be checked until after the client has been terminated from the program for the "Treatment Report" and until the first monthly review for the "Treatment Plan".

☐ After all the treatment forms have been assessed complete the bottom portion of the "Quality Assurance Client Chart Review" form
- This will include providing a check mark beside a "yes" or "no" for three questions and providing any notes if applicable for the treatment therapist

☐ Tally and notate the total # of "√'s" recorded on the "Quality Assurance Client Chart Review" form.

- This number will be recorded on the "Quality Assurance of Treatment Files Tracking Form"
- This "Quality Assurance of Treatment Files Tracking Form" is utilized as a tool for the quality assurance team to ensure client charts are reviewed and tracked in a timely manner. The form is divided by columns which are denoted by client ID #'s and rows that are represented by such items as: primary/secondary therapist, date of first review, # of corrections required, date corrections were made, etc)
- The quality assurance team is to refer and/or complete this form whenever applicable throughout the process of quality assurance. This will assure, for instance, if a first quality assurance check was conducted on client ID # 2 on 7.21.08, the quality assurance team will recheck the chart on 7.28.08 to verify the requested chart modifications (denoted by the "√'s) were made.

Note. Notes that correspond with "√'s should be placed on the back of the "Quality Assurance Client Chart Review"

- **At this point quality assurance for the chart is complete and administration is required**

☐ Place the "Quality Assurance Client Chart Review" form, loosely on top of all the treatment forms inside the client chart

☐ Close the treatment chart and proceed to obtain the cage room key, cabinet # 2 and cabinet # 6 keys from lock box in the FRS hallway.

☐ Proceed to Cage Room located (first room to the left of the main FRS entrance)

☐ Open Cage Room and find cabinet # 2, drawer #1/#2.

☐ Open cabinet # 2, drawer #1/#2, and deposit client chart

☐ Lock cabinet # 2 and find cabinet # 6, drawer #1.

☐ Open cabinet # 6 and obtain "Quality Assurance Binder" from drawer # 1

☐ Find and open the tab labeled " QA Tracking"

☐ Find the Client ID # that corresponds with the quality assurance check.

☐ Scroll down and find the first row that is labeled: "Date of QA Review."

☐ Record the date (month/day/year)

☐ Scroll one row down (labeled "# of Corrections Required") and insert the tally # of "√'s" that was notated from the "Quality Assurance Client Chart Review"

- The information relevant to this first quality assurance check is now complete, however, for the subsequent treatment chart checks the quality assurance team member must record the future dates for chart reviews in the corresponding rows labeled "Date of QA Review." This is to give the QA members an idea of the general time (within the week) that subsequent reviews should be completed. This can be done by starting with the date recorded in the first row labeled "Date of QA Review" and recording dates in one-month intervals from this date down the descending date rows (i.e., if the first date was 7.30.08, the subsequent dates would be 8.30.08, 9.30.08, etc).

☐ Enter subsequent treatment chart review dates in "Date of Next Review" boxes

☐ Make a copy of this form for QA coordinator to review

- Continue to proceed with any additional client treatment charts in need of review utilizing the steps aforementioned.

☐ Close binder and deposit it back into drawer # 1 of cabinet # 6.

☐ Lock the cabinet and return keys to key box in FRS hallway.

☐ Once all treatment charts have been reviewed fill in QA Task Sheet with initials and date completed

**Note. This form is located in office 100 B on the corkboard next to the window

Procedures for conducting monthly QA on active client treatment charts:

Note** It will be the responsibility of the quality assurance team members to check **once a week** the "Quality Assurance of Treatment Files Tracking" Form located in the "Quality Assurance Binder" to ensure treatment chart checks are performed in a timely manner. Monthly date intervals have been provided for each client ID # on the Tracking form that are to be used as cut off dates for charts to be reviewed. The quality assurance team members will have **a one week grace period** prior to this date to complete the chart check. If a client chart is ready for

review, proceed to follow the steps provided in the section labeled "**Procedures for checking a "new" client treatment chart."**

Check for Dates on "Quality Assurance of Treatment Files Tracking Form"

**Note. The purpose of this procedure is to check and see if therapists have reviewed QA forms and made necessary changes and/or corrections to their client's chart. This task will be completed on a weekly basis, possibly Mondays to ensure that corrections have been made. If corrections haven't been made in the allotted time (see below) then the therapists will need to be sent a reminder.

- ☐ Return to the tab labeled: "QA Tracking"
- ☐ Review the rows labeled "Date of QA Review" for all client ID #'s
- ☐ Ensure if seven days have lapsed from those dates, the rows labeled "Date changes were made" have recorded dates
  - If a date is not provided, this means the therapist has not fixed the modifications requested from the "Quality Assurance Client Chart Review" Form
- ☐ If therapist hasn't fixed the modifications requested **notate** on a piece of paper the therapist's names responsible for the client chart(s) in the first two rows of the "Quality Assurance of Treatment Files Tracking" form.
  - ○ **OR**
- ☐ If therapist has fixed the modification requested skip down to **Check for "Completed Quality Assurance Forms"**
- ☐ Close binder and deposit back into drawer # 1, cabinet # 6.
- ☐ Lock cabinet # 6
- ☐ Pick up notation(s) aforementioned above to be entered into an email and return keys to lock box in FRS hallway
- ☐ Find an open computer and log on (username: AC Team/ Password: achievement)
- ☐ Email therapist(s) from notation above to update requested modifications on "Quality Assurance Form"
- ☐ Follow up within 24 hours to make sure the "Completed Quality Assurance Form" was deposited. Proceed to follow the aforementioned steps (to record and file the form properly).
- ☐ Once you have checked for all modifications as well as potential chart review dates, fill in QA Task Sheet with initials and date completed

Note. This form is located in office 100 B on the corkboard next to the window

Check for "Completed Quality Assurance Forms"

**Note. The purpose of this procedure is to review completed QA forms and to log this information into the QA Binder. The QA Binder keeps track of all QA forms specific to each clients chart and acts as a log of # of corrections needed, therapists assigned to the client, and dates of corrections. This task will be completed on a weekly basis, preferably near the end of the week to ensure that if therapist has been reminded earlier that week; that they have had adequate time to make corrections.

☐ Obtain cage room key and cabinet # 6 key from lock box in the FRS hallway.

☐ This box requires a code to unlock, if an FRS member does not have the lock code obtain assistance from an FRS administrator

☐ Proceed to Cage Room (first room to the left of the main FRS entrance)

☐ Open Cage Room and find cabinet # 6

☐ Open cabinet # 6, drawer #1 and check for "Completed Quality Assurance Forms" located in the first drawer labeled: Completed Quality Assurance Forms.
- This form is utilized to check treatment charts for information such as, sloppy writing, missing signatures, dates missing, etc. and is inserted into the treatment chart for therapists to review. The therapists will have one week to fix any applicable modifications and return the "Completed Quality Assurance Form" in the cabinet and drawer aforementioned.
- This record of "Completed Quality Assurance Forms" is utilized to ensure the same mistakes are not consistently occurring between one or multiple therapist. This information can guide the quality assurance team to make modifications, presentations, workshops, etc. on maintaining treatment charts efficiently.

☐ Obtain forms and place on the desk provided in the cage room

☐ Proceed to locate "Quality Assurance Binder" in drawer # 1 of cabinet # 6

☐ Place the binder on the provided desk and obtain **one** "Completed Quality Assurance Form" from the stack obtained from cabinet # 6, drawer # 1

☐ Locate the client ID # in the upper right corner of the "Completed Quality Assurance Form"

☐ Return to the binder and locate the Client ID # tab that corresponds to the client ID # provided in the upper right corner of the "Completed Quality Assurance Form."

☐ Refer to the "Completed Quality Assurance Form" and locate the Review Date in the upper left corner beneath the Reviewer name

☐ Find this date on the "Quality Assurance of Treatment Files Tracking Form" under the corresponding client ID # column and the row labeled "Date of QA Review"
   - ♣ This form is located under the "QA Tracking" tab in the Quality Assurance Binder

☐ Refer to the "Completed Quality Assurance Form" and locate the therapist date at the bottom of the form beside the therapist signature

☐ Return to the binder and insert this date two rows below the "Date of QA Review" obtained from above labeled: Date Changes were Made

☐ For each correction listed on the "Completed Quality Assurance Forms" go back to the client's treatment chart and double check to see if correction was made
   - Proceed to follow the aforementioned steps for additional "Completed Quality Assurance Forms"

☐ File recorded "Completed Quality Assurance Forms" according to client ID #'s in the "Quality Assurance Binder" denoted by binder tabs

☐ Once you have reviewed all "Completed Quality Assurance Forms", fill in QA Task Sheet with initials and date completed

Note. This form is located in office 100 B on the corkboard next to the window

APENDIX D: QA FIDELITY OF CLIENT TREATMENT CHARTS

<u>Review Information</u>
- ☐ Date of review: _____

- ☐ Start time of review: _____

- ☐ Client Chart #: _____

☐ **Table of Contents**   ☐ **NA**

Is Form Missing?	Is Client ID missing
yes no	yes no

☐ **Log of contacts**   ☐ **NA**

# of Forms Missing (tally)	# of *times* Writing is Sloppy	# of *times* Date Not Recorded	# of *times* Time Not Recorded	# of *times* Clinician Signature Missing	# of *times* All Relevant Info Not Complete

☐ **Informed consent**   ☐ **NA**

Is Form Missing?	Is Date Recorded?	Is Client Signature Missing?	# of *times* All Relevant Info Not Complete (tally)
yes no	yes no	yes no	

☐ **Incentives Contract**   ☐ **NA**

Is Form Missing?	Is Clinician Signature Missing	Is Client Signature Missing?	# of *times* All Relevant Info Not Complete (tally)
yes no	yes no	yes no	

☐ **Client contact sheet**   ☐ **NA**

# of Forms Missing	# of *times* Writing is Sloppy (tally)	# of *times* Date Not Recorded (tally)	# of *times* Client Signature Missing (tally)	# of *times* All Relevant Info Not Complete (tally)	Is form sloppy?
yes no					yes no

☐ **Treatment Referral Form**   ☐ **NA**

Is Form Missing?
yes   no

☐ **Phone Prescreen Form**   ☐ **NA**

# of Forms Missing?	# of *times* Writing is Sloppy (tally)	# of *times* All Relevant Info Not Complete (tally)

☐ **Demographics Form**   ☐ **NA**

# of Forms Missing?	# of *times* Writing is Sloppy	# of *times* All Relevant Info Not Complete (tally)

☐ **Authorization to Release**   ☐ **NA**

# of Forms Missing (tally)	# of *times* Writing is Sloppy (tally)	# of *times* Date Not Recorded (tally)	# of *times* Supervisor Signature Missing (tally)	# of *times* Clinician Signature Missing (tally)	# of *times* Client Signature Missing (tally)	# of *times* All Relevant Info Not Complete (tally)

☐ **Authorization for Release**   ☐ **NA**

# of Forms Missing (tally)	# of *times* Writing is Sloppy (tally)	# of *times* Date Not Recorded (tally)	# of *times* Supervisor Signature Missing (tally)	# of *times* Clinician Signature Missing (tally)	# of *times* Client Signature Missing (tally)	# of *times* All Relevant Info Not Complete (tally)

☐ **Monthly Client Progress Report**   ☐ **NA**

# of Forms Missing	# of *times* Writing is Sloppy	# of *times* Date Not Recorded	# of *times* Clinician Signature Missing	# of *times* All Relevant Info Not Complete

☐ **Monthly Case Worker Call Progress Notes**   ☐ **NA**

# of Forms Missing	# of *times* Writing is Sloppy	# of *times* Date Not Recorded	# of *times* Clinician Signature Missing	# of *times* All Relevant Info Not Complete

☐ **Treatment Plan**   ☐ **NA**

Is Form Missing?	# of *times* Writing is Sloppy	# of *times* Date Not Recorded	# of *times* All Relevant Info Not Complete
yes no			

☐ **Status of Referral Form**   ☐ **NA**

Is Form Missing?	Is Writing Sloppy?	# of *times* All Relevant Info Not Complete
yes no	yes no	

☐ **Informed Assent Forms**   ☐ **NA**

Is Form Missing? (Is clt. under 18?)	# of *times* Date Not Recorded (tally)	Is Supervisor Signature Missing?	Is Client Signature Missing?	# of *times* All Relevant Info Not Complete
yes no		yes no	yes no	

☐ **Standard Tx Session Progress Notes**   ☐ **NA**

# of Forms Missing	# of *times* Writing is Sloppy	# of *times* Date Not Recorded	# of *times* Time Not Recorded	# of *times* Clinician Signature Missing	# of *times* All Relevant Info Not Complete

☐ **Progress Notes Continuation Page**   ☐ **NA**

Is Form Missing?	# of *times* Writing is Sloppy	# of *times* Date Not Recorded	# of *times* Time Not Recorded	# of *times* Clinician Signature Missing	# of *times* All Relevant Info Not Complete
yes no					

☐ **Enlistment Standard Progress Notes**   ☐ **NA**

# of Forms Missing	# of *times* Writing is Sloppy	# of *times* Date Not Recorded	# of *times* Time Not Recorded	# of *times* Clinician Signature Missing	# of *times* All Relevant Info Not Complete

☐ **Assessment Progress Notes**   ☐ **NA**

Is Form Missing?	# of *times* Writing is Sloppy	# of *times* Date Not Recorded	# of *times* All Relevant Info Not Complete
yes no			

☐ **Treatment Assessment Summary**   ☐ **NA**

# of Forms Missing (tally)	# of *times* All Relevant Info Not Complete (tally)	# of *times* Client ID missing (tally)	Is Clinician Signature Missing?	Is Date Recorded?
			yes no	yes no

☐ **Outside Session Progress Notes**   ☐ **NA**

# of Forms Missing (tally)	# of *times* Writing is Sloppy	# of *times* Date Not Recorded	# of *times* Time Not Recorded	# of *times* Clinician Signature Missing	# of *times* All Relevant Info Not Complete	Are forms in chronological order?
						yes no

☐ **Receipts For Incentives**   ☐ **NA**

# of Forms Missing	# of *times* Date Not Recorded	# of *times* Clinician Signature Missing	# of *times* Client Signature Missing	# of *times* All Relevant Info Not Complete

☐ **Termination Report* (only one per chart if client has finished treatment)**
    ☐ **NA**

* Criteria: If clt. has completed all sessions (20) or has been in treatment for 6 months, there should be a termination report within 2 weeks of the last session.

Is Form Missing?	# of *times* Writing is Sloppy	# of *times* Date Not Recorded	# of *times* Supervisor Signature Missing	# of *times* Clinician Signature Missing	# of *times* All Relevant Info Not Complete
yes no					

☐ Are all the forms in the correct order?	Yes No
☐ # of *times's* the log of contacts and standard tx. Session progress notes **DO NOT** match	

☐ # of *times's* the log of contacts and Outside Session Progress notes **DO NOT** match	
☐ # of *times's* the Monthly Client Progress Report **DOES NOT** include a cover sheet and fax confirmation sheet	
☐ Total number of errors found in the QA Client Chart Review Form	
☐ # of *time's* Monthly Caseworker Progress Note **DOES NOT** match the log of contacts	
☐ # of *time's* Incentive Receipts **DO NOT** match the Standard Treatment Progress Note	

End of review: _____Total time for review: _____Reviewer:_____

Non-Review Information

☐ 1st and last FBT treatment session occurred prior to: 09/18/2007	yes	no
☐ 1st FBT treatment session occurred prior to: 09/18/2007 but last FBT session occurred after 09/18/2007	yes	no
☐ 1st and last FBT treatment session occurred after: 09/18/2007	yes	no
☐ *Total number of QA checks performed (to be completed later)*		
☐ # of weeks in the QA system (since 09/18/2007)		
☐ Number of FBT treatment sessions completed		
☐ # of informed consent forms		
☐ # of releases of information forms		
☐ # of Demographics forms		
☐ # of Treatment Plan forms		
☐ # of pages for Monthly Client Progress Report/		

☐ # of pages for Monthly CaseWorker Call Progress Notes	
☐ # of pages for log of contacts	
☐ # of pages for Treatment Referral	
☐ # of pages for Phone Prescreen	
☐ # of pages for Standard Tx Session Progress Notes	
☐ # of pages for Progress Notes Continuation Page	
☐ # of pages for Enlistment Standard Progress Notes	
☐ # of pages for Assessment Progress Notes	
☐ # of pages for Treatment Assessment Summary	
☐ # of pages for Outside Session Progress Notes	
☐ # of pages for Termination Report*	
☐ # of Receipts For Incentives	

APENDIX E: TABLES

Table 1

Treatment Provider Data

Treatment Provider	Records	QA Audits		Total Errors	
		Range	Mean (SD)	Range	Mean (SD)
1	6	0 – 5	1.3 (2.2)	34 – 105	63.2 (27.7)
2	1	0 – 0	0 (0)	123.6 – 123.6	123.6
3	1	0 – 0	0 (0)	37.6 – 37.6	37.6
4	5	0 – 4	0.8 (1.8)	23 – 160.1	60.7 (56.5)
5	2	0 – 0	0 (0)	14 – 33.2	23.6 (13.6)
6	6	0 - 7	2.8 (3.2)	12- 62	30.4 (17.8)
7	2	5 – 5	5.0 (0)	29 – 42	35.5 (9.2)
8	4	0 – 6	3.3 (2.5)	12 – 29	19.5 (7.3)
9	4	0 – 5	2.0 (2.5)	21 – 43.1	29.6 (9.5)
10	3	4 – 6	5.3 (1.2)	26.1 - 42	32.1 (8.7)

Table 2

Auditor Data

Auditor	Records QA / Non-QA	Forms		Audit Time		Total Errors	
		Range	Mean (SD)	Range	Mean (SD)	Range	Mean (SD)
1	4 / 2	24 – 56	41.3 (12.5)	48 – 82	70 (12.6)	12 – 33.2	21.9 (9.6)
2	7 / 2	20 – 54	36.1 (11.3)	85 – 145	116.9 (19.0)	21 – 62	34.7 (12.1)
3	4 / 5	12 – 61	32.8 (13.4)	20 – 96	49.3 (24.1)	20 – 160.1	46.6 (43.9)
4	1 / 9	11 – 73	34.9 (17.4)	43 – 183	114.4 (43.5)	14 – 123.6	57.4 (36.8)

Table 3

Descriptive Statistics

Variables	Non-QA (n = 18)			QA (n = 16)		
	Range	Mean (SD)	W	Range	Mean (SD)	W
Frequency of Forms	11 – 73	31.8 (14.5)	.19	20 – 61	40.3 (11.8)	.20
Total Errors	12 – 160	53.6 (40.8)	.24*	12 – 50	29.5 (10.0)	.20
Error Type						
Missing Form	0 – 4	1.4 (1.2)	.17	0 – 2	0.5 (0.6)	.38*
Illegible Writing	0 – 12	4.9 (4.1)	.20	0 – 19	8.6 (5.3)	.12
Missing Date	0 – 8	2.4 (2.4)	.20	0 – 5	0.9 (1.4)	.33*
Missing Information	2 – 134	27.8 (36.0)	.29*	4 – 20	10.7 (4.6)	.19
Missing Client Sig.	0 – 0	0 (0)		0 – 2	0.1 (0.5)	.54*
Missing Clinician Sig.	0 – 5	1.4 (1.7)	.20	0 – 3	0.8 (0.9)	.32*
Missing Time	0 – 3	0.2 (0.7)	.54*	0 – 0	0 (0)	
Form Errors						
Log of Contacts	0 – 8	2.1 (2.3)	.21	0 – 12	2.7 (3.5)	.30*
Consent	0 – 1	0.1 (0.3)	.51*	0 – 1	0.1 (0.3)	.52*
Demographics	0 – 6	2.0 (1.8)	.20	0 – 7	3.1 (2.3)	.17
Consent to Release	0 – 6	2.3 (2.2)	.20	0 – 8	0.9 (2.1)	.46*
Consent for Release	0 – 10	2.0 (2.7)	.30*	0 – 8	0.7 (2.0)	.48*
Treatment Plan**	0 – 1	0.5 (0.6)	.35*	0 – 12	1.5 (3.1)	.35*
Progress Notes	0 – 134	24.1 (35.4)	.27*	0 – 20	8.1 (4.7)	.20
Outside Session Notes	1 – 8	3.1 (2.0)	.30*	1 – 17	3.6 (4.0)	.31*
Termination Report	0 – 16	1.2 (3.7)	.47*	0 – 2	0.7 (0.7)	.27*

Note: W = Shapiro Wilks test of normality. Missing client signature and missing time were omitted from test of normality due being constant. ** = Within non-QA records, three participants did not have a treatment plan within their record due to early drop out (n = 15). * = p < .05.

Table 4

Inter-Rater Reliability

Error Type	Intra-class correlation coefficient
Illegible Writing	.25
Missing Date	.54
Missing Information	.99
Missing Client Signature	1.0
Missing Clinic Signature	.89
Missing Time	1.0
Missing Form	.94

Table 5

Relationships between Error Type, Total Errors, and Frequency of Forms

Variables	Missing Form	Illegible Writing	Missing Date	Missing Info.	Missing Clt. Sig.	Missing Clin. Sig.	Missing Time	Total Errors
Frequency of Forms	-.38*	.20	.10	-.09	.16	.17	-.16	.01
Missing Form		-.32	.21	.09	-.17	.00	.17	.10
Illegible Writing			-.21	.02	-.06	-.10	-.15	.10
Missing Date				.02	.28*	.35*	.05	.15
Missing Info.					-.06	.15	.74**	.96**
Missing Client Sig.						.12	-.03	-.07
Missing Clin. Sig.							.13	.21
Missing Time								.64**

Note: N = 34. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Table 6

Relationships between Form Errors, Total Errors, and Frequency of Forms

Variables	Log of Contacts	Informed Consent	Demo. Form	Auth. to Release	Auth. for Release	Treatment Plan	Progress Notes	Outside Notes	Termination Report	Total Errors
Frequency of Forms	.02	.10	-.01	.08	-.14	-.17	-.08	.12	.13	.01
Log of Contacts		-.05	-.20	.11	-.01	-.21	.00	-.09	.12	.10
Informed Consent			.35*	.10	.06	.56**	-.09	.05	.59**	-.01
Demo. Form				-.03	.11	.37*	.03	.00	-.04	-.02
Auth. to Release					.65**	-.07	.19	-.26	-.02	.34*
Auth. for Release						-.09	-.10	-.09	-.04	-.02
Treatment Plan (N=31)							-.05	-.03	-.05	-.06
Progress Notes								.00	-.07	.93**
Outside Notes									.06	.11
Termination Report (N=28)										.07

Note: ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed). N = 34 for all other variables not indicated.

Table 7

Relationship between Number of QA Audits and Errors

Variables	Audits
Total Errors	-.35*
Error Type	
Missing Forms	-.45**
Illegible Writing	.46**
Missing Date	-.34*
Missing Info.	-.31
Missing Client Sig	.26
Missing Clin. Sig.	-.18
Missing Time	-.16
Form Errors	
Log of Contacts	.12
Consent	.00
Demographics	.27
Consent to Release	-.28
Consent for Release	-.22
Treatment Plan (N=31)	.12
Progress Notes	-.29
Outside Session Notes	.11
Termination Report (N=28)	-.05

Note: ** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
N = 34 for all other variables not indicated.

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