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How Barriers to Using the Electronic Health Record Effects Behavioral Healthcare

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I am dedicating this thesis to my husband since he has been my rock and guiding force throughout my scholastic journey. He has given me the strength and the confidence to complete my graduate work and has expressed how proud he is of me.

Abstract

The healthcare scene is rapidly changing due to the introduction of the electronic health record (EHR) and advances in technology. This means more patient data is readily available for use and gives physicians and patients' faster access to that data. With the passing of recent legislature such as the Health Information Technology for Economic and Clinical Health Act and the American Recovery and Reinvestment Act of 2009, resulting in the rapid adoption of electronic health records due to incentive payment programs. With this comes the push for use of the electronic health record to prepare for Meaningful Use and improved quality of patient care. One field however, seems to be behind the times in regards to the use of the electronic health records, and it is the field of behavioral health. The simple reason being that behavioral health has barriers that other health fields do not. The challenge is how behavioral health can overcome these barriers in order to move forward with using the electronic health record.

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How Barriers to Using the Electronic Health Record Effects Behavioral Healthcare

Chapter 1

Introduction

Since the implementation of the electronic health record (EHR), most settings in the healthcare field are able to quickly capture patient data in order to enhance patient care. However, when it comes to the field of behavioral healthcare there are multiple barriers that limit the use of the EHR. The main concern being that behavioral healthcare follows stricter confidentiality rules in regards to the sharing of patient information. The EHRs that are currently in use in primary care offices do not have the capability to manage consents or to control the re-disclosure of select types of information. This means that special consideration needs to be given to EHRs that would be used in mental health care facilities to make sure that this confidential information complies with not only HIPAA but also that state and federal laws that govern the confidentiality of mental health and substance abuse records (McGregor et al., 2015). There is also the fact that the Medicare and Medicaid program incentives for using an EHR does not apply to mental health and substance abuse treatment providers making the cost of using an EHR very expensive for them (Miller et al., 2014). Finally is the problem that behavioral healthcare has traditionally been isolated and fragmented from the rest of the healthcare system resulting in poor care coordination and decreased quality of care for those with a mental illness (McGregor et al., 2015). The objective of this research paper will be to determine if these barriers can be overcome and how they affect patient care in the field of behavioral health.

Background

The landscape of healthcare is rapidly changing thanks to advances in technology and the introduction of the electronic health record. With the passing of recent legislature such as the Health Information Technology for Economic and Clinical Health Act and the American Recovery and Reinvestment Act of 2009, resulting in the rapid adoption of electronic health records due to incentive payment programs. With this comes the push for use of the electronic health record to prepare for Meaningful Use and improved quality of patient care. The issue is that the field of behavioral health has been left behind. This is due to behavioral health agencies being unable to receive the incentive payments and barriers to their use of the electronic health record.

Purpose of the Study

Research has shown that there is minimal use of the EHR in the behavioral healthcare field due to barriers faced by those providers. The objective of this research study will be to determine if these barriers can be overcome and how they affect patient care in the field of behavioral health. This will be accomplished by analyzing data from a survey of behavioral healthcare professionals (from a certain agency) and comparing it to outside data from another study of behavioral health EHR use in order to determine the main barriers and how they can be overcome.

Significance of Study

The introduction of the electronic health record (EHR) has been a key component in regards to enhancing patient care, improving patient care outcomes and sharing of patient information. However, when used in conjunction with behavioral healthcare, it has faced more barriers to its

use and resulted in poorer patient care. In order to enhance patient care and overcome the barriers to EHR use in behavioral healthcare, this paper will determine that by ensuring that the barriers facing behavioral healthcare are overcome that patient care will improve. By establishing platforms for integration of an EHR that supports behavioral healthcare, maintains strong privacy and confidentiality controls, behavioral health providers can successfully adopt an EHR to promote better patient care, improved access to care and yield promising behavioral health outcomes (McGregor et al., 2015).

This study will provide valuable research that will help behavioral healthcare organizations develop platforms to overcome the barriers they currently face in order to adopt the EHR and improve patient care. This study can potentially provide information that can lead to the development of enhance IT platforms that specifically address the issues faced in behavioral health in order to improve the use of the EHR and to bring the field of behavioral health up to par with the rest of the healthcare fields. It also has the potential to alert those outside of the field of behavioral healthcare to the specific and unique issues facing the use of the EHR and maybe get more support to make changes to the EHR to support behavioral health.

Research Questions

This study aims to show what the barriers are that are associated with EHR use in a behavioral healthcare setting. The survey that was distributed for this study focused on the use of the EHR in behavioral healthcare by asking employees of a non-profit agency (SMA Behavioral Healthcare) to answers questions related to the agency use of the EHR. The research questions for this survey focused on the following barriers and areas:

- Cost of implementing (buying) an EHR system

- Provider resistance
- Eligibility for Medicare/Medicaid Incentive Payment Program
- SMA having qualified IT staff
- EHR improving quality of patient care in behavioral health
- EHR vs. Paper record with ease of use
- EHR use makes job easier
- Overall happiness with EHR at SMA

The analysis of the survey data will focus on the type of facility, type of staff, full electronic or hybrid EHR and other variables. Survey data will be analyzed by computing response rates, frequencies of variables, cross tabulations and statistical testing of designated variables. This data will then be compared to another study done on EHR use in other behavioral healthcare settings to compare both results to see the main barriers encountered.

Definitions of key terms

EMR and EHR definitions

The terms electronic medical record (EMR) and electronic health record (EHR) are often used interchangeably. These terms may be used that way but there is a significant difference between the two. The electronic medical record (EMR) is a digital version of the paper chart kept in the clinician's office and contains the medical and treatment history of the patients in one practice (Garrett, 2011). The advantage that the EMR has over paper records is that it allows clinicians to track data over time, easily identify which patients are due for preventive screenings and checkups and the ability to monitor and improve overall

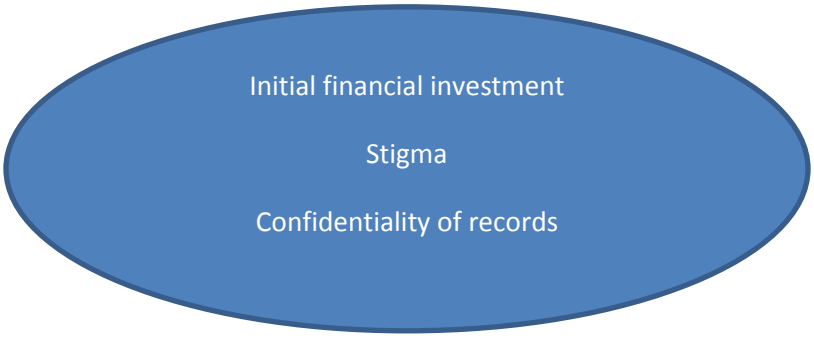
quality of care within the practice (Garrett, 2011). The downside is that the information in the EMR doesn't travel easily out of the practice (Garrett, 2011). The electronic health record (EHR) instead focus on the total health of the patient, meaning that they go beyond the standard clinical data collected in the provider's office and includes a broader view on a patient's care (Garrett, 2011). EHRs are designed to reach out beyond the health organization that originally collected the patient data in order to be able to share that information with other health care providers and contain information from all of the clinical staff involved in the care of the patient (Garrett, 2011). This means that the EHR allows the information to move with the patient giving it the ability to easily share medical information among different healthcare settings and providers. For the purpose of this study and paper the term EHR is used.

Chapter 2

Review of Literature

The literature articles that were researched and dealt with the lack of use of the electronic health record in behavioral health due to barriers and how to overcome these to improve patient care, were identified by searching free full text articles from electronic databases: PubMed and Scopus. The search limited articles from 2013 to present. The search terms that were used to identify articles were: electronic health record, electronic medical record, computerized medical record, computerized patient record, mental health, behavioral health and barriers. The search method and terms resulted in a total of 277 articles. Two hundred and seventy one articles did not meet the needs of this review, leaving a total of 6 articles. Upon further review of those six articles, only four articles contained actual documentation and studies that could be applied to topic of behavioral health and use of the electronic health record. Of the articles that were not used, they were found to focus on other topics and have a slight mention of behavioral health and the two of the six that were thrown out did not have case studies and only pointed out discussions about how behavioral health did not use the electronic health record.

The key concepts that tied into the research topic were the barriers to use in behavioral health and how they could be overcome. The articles used identified the barriers that field of behavioral health is facing in regards to using the electronic health record. The main barriers have been identified as the following:



With that being the case, it is easy to see that these barriers need to be overcome in order to advance the use of the electronic health record in behavioral health. Hence the articles reviewed showed how to overcome these barriers to better the care of patients and get on board with using the electronic health record.

Chapter 3

Methodology

Research Design

A survey questionnaire (Figure 1) was developed to collect information to examine the barriers to using the EHR in a behavioral healthcare setting. The final data collection tool contained the following variables:

1. Type of facility
2. Position in agency
3. Type of medical record
4. Is cost an issue in getting a fully functional EHR?
5. Can behavioral health confidentiality concerns be satisfied by use of EHR?
6. Is provider resistance a barrier to EHR use in behavioral healthcare?
7. Would more behavioral healthcare agencies use an EHR if they were eligible for the Medicare/Medicaid Incentive Payment Program?
8. Does SMA have enough qualified IT staff to make using EHR easy?
9. Can the use of the EHR improve the quality of patient care in behavioral healthcare?
10. Is using the EHR during patient visit easier than using the paper record?
11. Has use of EHR made doing your job easier in regards to patient care and service?
12. Overall, are you happy with the EHR used at SMA?

Survey Method

Each study used different methods of research. The first article used a forced-choice questionnaire survey and hospital level patient outcomes to collect its data. This data was then checked for errors, missing data, out of range values and coding errors before it was analyzed for the study (Kozubal et al., 2013). Then it was sorted by descriptive statistics based on hospital demographic variables, outcome variables and predictor variables calculated for the entire sample set with two-by-two contingency tables to provide the frequency and percent distributions for the use of the electronic medical record use by accessibility of psychiatric records (Kozubal et al., 2013). Group differences were measured by non-parametric procedures using the two-sample Mann-Whitney test for continuous measures and the Fisher's exact test of independence for dichotomous variables (Kozubal et al., 2013). The second article used a survey to include quantitative and qualitative questions by examining prior adoption studies with physicians, and barriers and potential benefits discussed in the literature (Cellucci et al., 2015). Most of the survey findings for the second study were presented as descriptive statistics although planned ANNOVAs were performed to compare concerns across clinic electronic medical record status and the open ended responses were analyzed qualitatively using a semi directed approach to content analysis (Cellucci et al., 2015).

Variables

Type of facility. Survey choices were: Med OP Clinic; Substance Abuse OP; Residential Substance Abuse; Crisis Unit/ES/Detox and Administration.

Rationale: The type of facility may be a factor in opinions on the use and barriers to use of the EHR. This can be because certain programs are more readily adaptable to the EHR.

Position in the agency. Survey choices were: Provider (ARNP, MD), Nurse, Therapist/Counselor, Clinical Administrative Staff, Non-clinical Administrative Staff and BHT.

Rationale: The type of position that a person holds in the agency may be a factor in their opinion on the use and barriers to use of the EHR depending on how much they have to document and use the EHR during their job.

Medical Record Type. Survey choices were: Totally electronic (paperless), Hybrid (part electronic and part paper) and All paper.

Rationale: The type of record being used at the different SMA locations may be a factor in how well a person taking the survey thinks the EHR is working.

In regards to using the electronic health record, do you feel cost is an issue in getting a fully functional EHR? Survey choices were: Yes, No or Maybe.

Rationale: Since SMA is a non-profit agency, they have budget restraints that bigger hospitals and agencies do not when it comes to being able to order equipment. This might be a factor in deciding that cost is a barrier to EHR use in behavioral healthcare.

Do you feel that the electronic health record can satisfy the confidentiality concerns for behavioral health records? Survey choices were: Yes or No.

Rationale: The concerns for keeping behavioral health records confidential is an area that the EHR typically does not address. Since the confidentiality laws for behavioral health are stricter than general medical records, this is an area of concern and could be seen as a barrier to EHR use.

Do you feel that the electronic health record is not used more in behavioral healthcare due to provider resistance? Survey choices were: Yes or No.

Rationale: Typically providers do not like change and the providers at SMA have fought against not having the paper chart in front of them. Depending on the survey taker experience and position in the agency, this may be a barrier to EHR use.

Do you think more behavioral healthcare agencies/providers would use the electronic health record if these agencies were eligible for the Medicare/Medicaid Incentive Payment Program? Survey choices were: Yes or No.

Rationale: As it stands right now, behavioral health organizations are not eligible to receive any kind of payment from the incentive program. If this could be reversed it could change people's minds and no longer be seen as a potential barrier to using the EHR.

Do you think that SMA has enough qualified IT staff to make the use of the electronic health record easy? Survey choices: Yes or No.

Rationale: SMA has grown in size and across counties in Florida. However, the size of the IT department has not grown in comparison. This has caused some concern because as it stands now, regular IT issues take some time to resolve. If the IT department is not expanded, there is the concern that the EHR will not be adequately supported and could lead to issues with its use and leave users upset with the EHR.

Do you think that the use of the electronic health record can improve the quality of patient care in behavioral healthcare? Survey choices: Yes or No.

Rationale: The EHR is designed to help with improving the quality of care giving to patients in the medical setting. At SMA, the survey asked if the use of the EHR would improve the quality of care being given to their patients. The survey taker can be influenced depending on where they work and if they are totally electronic or hybrid and find the system easy to use.

Do you think that using the electronic health record during patient visits is easier than using paper records? Survey choices: Yes or No.

Rationale: Typically the paper record was pulled to refer to during the patient visit at SMA. Now that SMA is starting to use the EHR the question is does not having the paper chart in front of you and just entering information into the EHR easier to do during patient visits. The survey taker can be influenced based on the location they are at and the type of record being used.

Has the use of the electronic health record made doing your job easier in regards to patient care and service? Survey choices: Yes or No.

Rationale: The whole point of using an EHR is to improve patient care and make doing documentation easier. The question was asked of SMA staff using the EHR is this was true. Factors that can contribute to a negative survey response is the staff location and if they are using the EHR or a hybrid system since this will lead to survey takers having different opinions about the question.

Overall, are you happy with the electronic health record at SMA? Survey choices: Yes or No.

Rationale: SMA is a behavioral healthcare organization that has just started to use an EHR system. The reason for this question is to see what the overall feeling of using the EHR is at SMA. If most of the people are happy, then the EHR use will be successful. If the people are not happy, then EHR use will not be successful and the administration at SMA will need to see why the staff are unhappy with the EHR.

Both of the articles that contained case studies reviewed a different array of variables. Both studies focused on behavioral health and the use of the electronic record, however they used different populations to conduct their studies ranging from hospital patients to actual psychology staff.

Approval

A draft of the survey questionnaire was submitted to Dr. Rebecca Reynolds, associate professor and program director for the graduate program at University of Tennessee Science Health Center's Health and Information Management Department and Sajeesh Kumar KR, PhD, associate professor in the Health Informatics and Information Management Department. Approval was obtained from both professors for the survey.

Data collection instrument

After approval of the survey tool, a typed questionnaire was handed out to staff at SMA Behavioral. The data collection method was user friendly and allowed for anonymity since no names were written on the survey and they were all returned via an interoffice envelope with no names on it.

Population and Sample Design

Survey questionnaires were delivered to all locations for SMA. This was in order to get a broad array of staff to respond. The survey was given to clinical and non-clinical staff at the medication outpatient clinics, substance abuse outpatient clinics, substance abuse residential clinics, the CSU/ES/Detox facility and the administrative buildings. This was in hopes to see how the different staff thought about the use of the EHR and barriers to its use.

The two research articles that had actual case studies involving behavioral health and the use of the electronic health record involved varied populations. The populations studied in the first article were hospital patients that were identified as being either inpatient psychiatric or psychiatric emergency department via the University Health System Consortium. This allowed the hospitals to be classified into three groups for comparison: 1) those with a full psychiatric EMR (i.e. electronic psychiatric inpatient admission, discharge and consultations summaries and psychiatric progress notes) vs. those with paper records in at least one category, 2) those with four types of psychiatric records to which non-psychiatric physicians has unrestricted access vs. those with restricted records in at least one category and 3) those with fully accessible, electronic records vs. those with paper records and/or limited accessibility (Kozubal et. al., 2013). The observation period for this study was calendar year 2007 and focused on 13 hospitals from the UHC Clinical database (Kozubal et. al., 2013). The second article that contained a case study focused on psychology clinics and the participants were Clinic Directors within doctoral psychology training programs recruited using the Association of Psychology Training Clinics membership directory (Cellucci et.al. 2015). There were 192 members invited to participate and 78 responded (Cellucci et. al., 2015).

Data Collection Procedures

A cover letter (Figure 2) attached to the survey questionnaire was dispersed to staff at the different locations of SMA. A sample population of 150 staff members received the survey on August 30, 2016 via interoffice mail. The letter asked the staff that wished to complete the survey to please return the completed survey via interoffice mail by the deadline of September 9, 2016.

Data Analysis

After the deadline, the survey data was counted and complied into a Microsoft Excel 2010 spreadsheet and IBM Statistical Package for the Social Sciences (SPSS) software. Creation of frequency tables was done using the SPSS software since it allowed for more flexibility in computing descriptive statistics.

Chapter 4

Results

Response rates of population

From the 150 surveys that were distributed, 81 responses were received back for the study. This means that 54% of the staff that were asked to complete the survey responded. There were no blank responses or incomplete surveys returned.

Frequency Tables

Summaries of the counts for all of the responses to the 12 survey questions are shown in Tables 1 through 12. The tables provide information in an easy to view format in order to gain information about the questions that were asked about the use of the EHR at SMA and barriers to using the EHR in behavioral healthcare.

Table 1

Type of Facility

Facility Type	No. Of Respondents	Percent of Total Respondents
Med OP Clinic	35	43.21%
Substance Abuse OP	9	11.11%
Residential Substance Abuse	15	18.52%
Crisis Unit/ES/Detox	9	11.11%
Administration	13	16.05%
Total	81	100.00%

Table 2

Position in the agency

Staff Type	No. Of Respondents	Percent of Total Respondents
Provider (ARNP, MD)	5	6.17%
Nurse	7	8.64%
Therapist/Counselor	15	18.52%
Clinical Admin. Staff	18	22.22%
Non-clinical Admin. Staff	29	35.80%
BHT	7	8.64%
Total	81	100.00%

Table 3

Medical Record Type

Medical Record Type	No. Of Respondents	Percent of Total Respondents
Totally electronic (paperless)	12	14.81%
Hybrid (part electronic and part paper)	62	76.54%
All paper	7	8.64%
Total	81	100.00%

Table 4

Is cost an issue in getting fully functional EHR?

Is cost an issue?	No. Of Respondents	Percent of Total Respondents
Yes	34	41.98%
No	17	20.99%
Maybe	30	37.04%
Total	81	100.00%

Table 5

Can EHR satisfy confidentiality concerns for behavioral health records?

Satisfy confidentiality concerns?	No. Of Respondents	Percent of Total Respondents
Yes	64	79.01%
No	17	20.99%
Total	81	100.00%

Table 6

EHR not used in behavioral health due to provider resistance

EHR not used due to provider resistance	No. Of Respondents	Percent of Total Respondents
Yes	38	46.91%
No	43	53.09%
Total	81	100.00%

Table 7

Use EHR if eligible for incentive payments?

Use EHR if eligible for incentive payments?	No. Of Respondents	Percent of Total Respondents
Yes	68	83.95%
No	13	16.05%
Total	81	100.00%

Table 8

SMA has enough IT staff to support EHR?

SMA has enough IT staff to support EHR?	No. Of Respondents	Percent of Total Respondents
Yes	56	69.14%
No	25	30.86%
Total	81	100.00%

Table 9

Using EHR improve quality of patient care?

Using EHR improve quality of patient care?	No. Of Respondents	Percent of Total Respondents
Yes	66	81.48%
No	15	18.52%
Total	81	100.00%

Table 10

EHR easier to use than paper records?

EHR easier to use than paper records?	No. Of Respondents	Percent of Total Respondents
Yes	64	79.01%
No	17	20.99%
Total	81	100.00%

Table 11

Use of EHR made doing job easier?

Use of EHR made doing job easier?	No. Of Respondents	Percent of Total Respondents
Yes	60	74.07%
No	21	25.93%
Total	81	100.00%

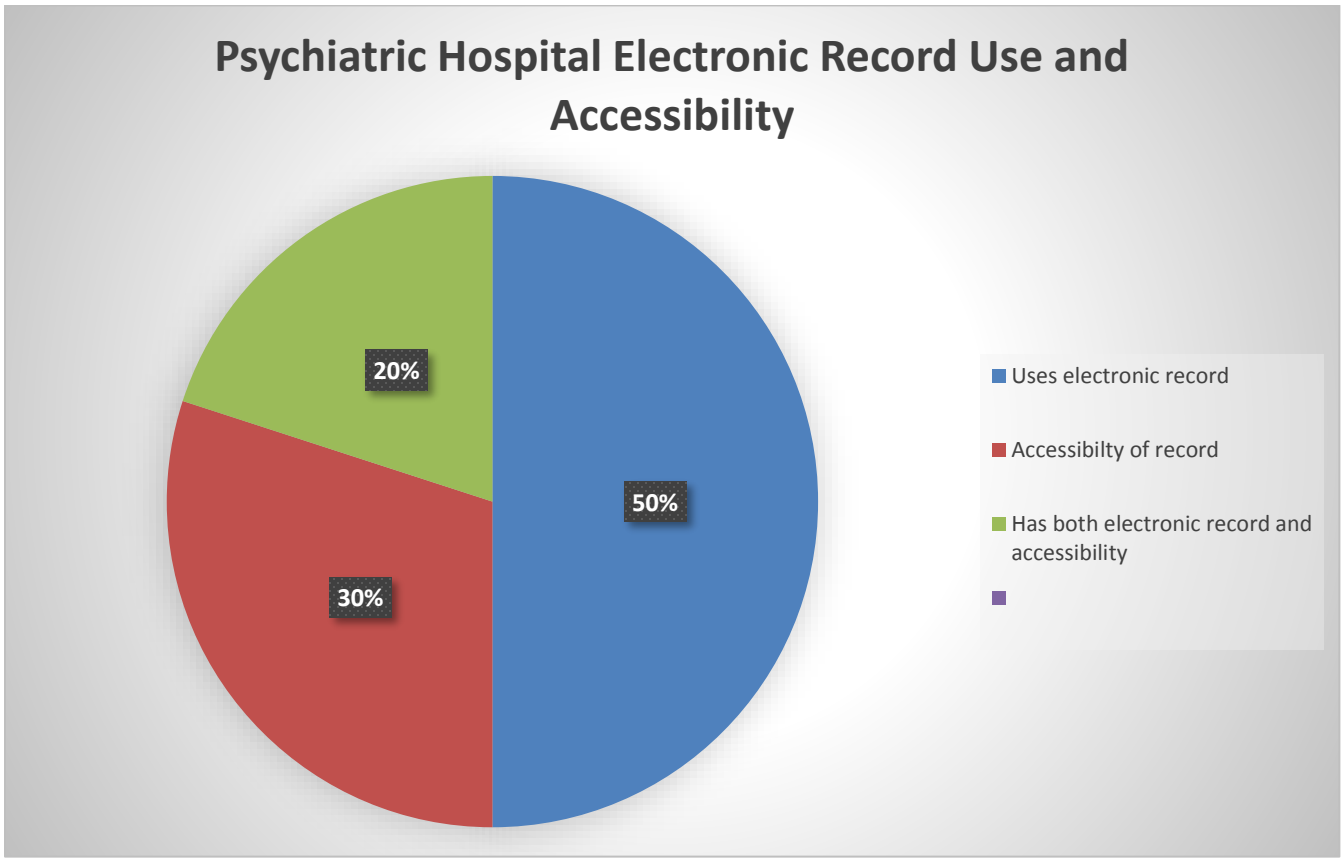
Table 12

Overall, happy with EHR at SMA?

Overall, happy with EHR at SMA?	No. Of Respondents	Percent of Total Respondents
Yes	51	62.96%
No	30	37.04%
Total	81	100.00%

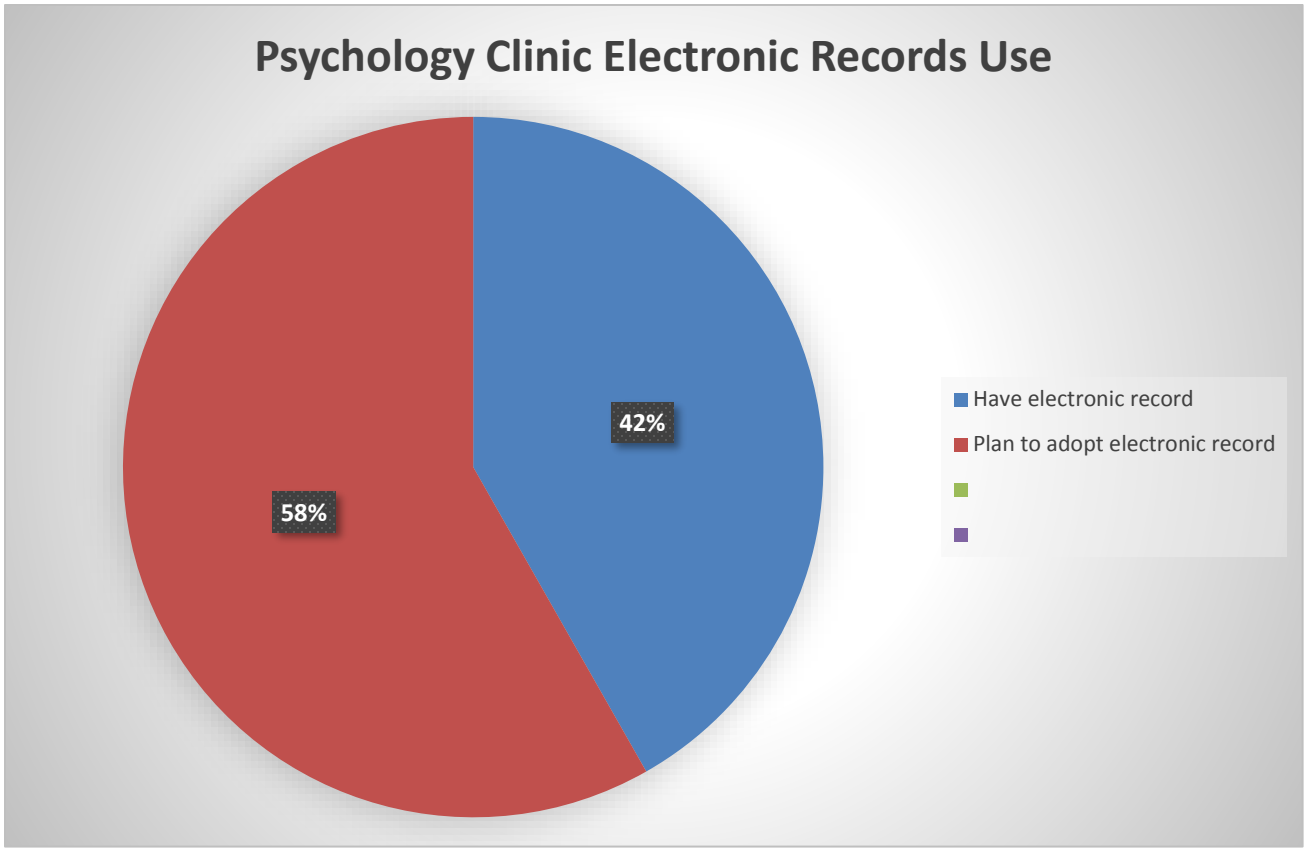
Graph 1

Psychiatric Hospital Electronic Record Use and Accessibility



Graph 2

Psychology Clinics using EHR



Chapter 5

Analysis and Discussion

All 81 of the respondents work for SMA Behavioral Healthcare in one of their facilities. If you look at Table 1, 43% work in the Med OP Clinic, 19% work in the Residential programs for substance abuse, 16% work in the administration buildings, and 11% work either in substance abuse outpatient programs or the crisis unit.

Table 2, shows that from the 81 respondents, 36% were non-clinical administrative staff, 22% were clinical administrative staff, 19% were therapists, 9% were both nurses and behavioral health technicians and only 6% of the respondents were actual providers (ARNP, MD).

Overall, 77% of the staff of SMA are using a hybrid medical record. Only 15% are fully electronic and there is still 9% using only a paper record.

When asking if cost is an issue in getting a fully functional EHR, 42% responded yes, 21% responded no and 37% responded maybe to the question.

Table 5 asks is SMA staff feel that an EHR can handle the confidentiality concerns associated with behavioral health records. Seventy-nine (79) percent of the respondents answered yes and 21% answered no.

When asking SMA staff if they felt that provider resistance is a barrier to using the EHR, 47% answered yes and 53% answered no.

Eighty-four (84) percent of the SMA staff surveyed answered yes to the question that more behavioral healthcare providers would use the EHR is they were eligible for an incentive program, while 16% answered no.

In regards to whether staff think that SMA has enough qualified IT professionals to make using the EHR easy, 69% answered yes and 31% answered no.

Eighty-two (82) percent of the respondents answered yes when asked if the use of an EHR can improve the quality of patient care in behavioral health and 19% answered no.

When asked if using the EHR during patient visits is easier compared to using paper, 79% answered yes and 21% answered no.

When responding to whether using the EHR has made their job easier in regards to patient care and service, 74% responded yes and 26% responded no.

Overall, 63% of the staff surveyed are satisfied with the EHR use at SMA Behavioral Healthcare and 37% are unsatisfied with the EHR.

Limitations

Limitations for this study should take into consideration that while 150 surveys were distributed, only 81 staff from SMA responded. Most of those staff that responded were not actual providers. The survey focused on the use of the EHR at SMA Behavioral which is only a small behavioral healthcare agency in Florida.

The Kozubal et al., 2013 study recognized several potential limitations. The limitations were the small sample size (n=18) along with the homogeneity of the type of hospitals limits the generalizability of the results. The study primarily relied on the accuracy of the survey responses of local psychiatrists who were full time employees of the hospitals included in the study and that site visits were not conducted to corroborate the reported methods of psychiatric record characteristics (Kozubal et al., 2013). The study also acknowledged that further analysis is

needed since accessibility is a multi-faceted issue with many variations along with also needing to follow up on the stratifying readmission to related psychiatric and unrelated non-psychiatric units to learn more about the interplay between psychiatric and medical care (Kozubal et al., 2013).

The Cellucci et al., 2015 study also acknowledged limitations in their study as being that data was collected at a single point in time with it being clear that adoption and diffusion of the EMR systems is ongoing in this type of clinic. Other limitations identified were the small subset of clinics that had already implemented an EMR system and the predominant use of that system which limited generalizations (Cellucci et al., 2015). The study also acknowledged that the adoption and use of an EMR in behavioral health is better understood in a broader organizational climate and not just part of a university system. Finally the study showed that further research is needed on education and professional training as it relates to health IT and the effective use of EMRs (Cellucci et al., 2015).

Limitations not related to the studies above but rather to the literature review would be that there were only two articles that had case studies regarding the use of the electronic health record in behavioral health and the barriers as to why that is. Most of the literature was discussions and reviews of why this is an important topic and why it is needed in behavioral health without giving results as to why.

Chapter 6

Conclusion and Recommendations

Summary of findings

As indicated in the level of response, 150 surveys were distributed to SMA staff at all locations and only 81 staff responded. Only 6% of the respondents were actual behavioral health providers (ARNP, MD). The majority of the staff that responded (36%) were non-clinical administrative staff. This is concerning because they responded to more survey's, however their role is vastly different than that of the provider when it comes to using the EHR.

As for barriers discussed (cost, provider resistance and lack of incentive program payments), most of those that answered found that if there was a way to lower the cost and have behavioral health agencies benefit from an incentive program that the EHR would be more widely used in the field.

According to the study by Kozubal et al., 2013, through the use of the electronic health record, they were able to identify an increase in the quality of care as seen by the decrease in the readmission rate of psychiatric patients. They collected data for the calendar year 2007 from eighteen hospitals identified via the UHC Clinical Database. The results were evaluated based on two different outcomes: the prevalence of EMR in psychiatry and aggregated patient outcomes for psychiatric patients by psychiatric EMR use, accessibility of records and electronic access to notes among the 13 hospitals in the UHC Clinical Outcomes Database. The study found that 16.7% of the hospitals had electronic records for either one or two categories, 22.2% in three categories or 44.4% in four categories. Basically this proved that those that had the ability to use the EMR used it 80% of the time to store patient records. The study also showed

an aggregate of patient outcomes for psychiatric patients by psychiatric EMR use, accessibility of records and electronic access to the notes. In hospitals with full EMR access and use, the readmission rates for 7, 14 and 30 days for psychiatric patients were lower compared to hospitals that did not have full EMR access. The use of a full EMR predicted a 10-27% difference in readmission rates, with the accessibility of records predicting a larger decrease ranging from 35-38% (Kozubal et al., 2013). The study also determined that less than 50% of hospitals surveyed had all inpatient psychiatric records in an EMR system, less than 30% of hospitals gave non-psychiatric physicians access to all four types of psychiatric records, and less than 25% had both a full psychiatric EMR and fully accessible records. The study also found that hospitals with electronically accessible psychiatric records had improved healthcare outcomes (Kozubal et al., 2013).

According to the study by Cellucci et al., 2015, the final sample represented 78 different psychology training centers all associated with a university training program with the majority of respondents being Clinical Directors. During the academic year the clinics saw an average of 150 patients seen by 20 clinicians under faculty supervision. The results of the survey showed that 33% of the clinics use an electronic medical record (EMR) system with another 46% planning to adopt this type of system. Of the 33% of clinics that implemented the EMR, they had the system for about 4 years, with the choice of which system to use being made by the Clinical Director. They then ranked the factors that determined which EMR they would use with the main factors being features of the program, ease of use, cost and availability. They also ranked the importance of using the EMR with the most significant factors being to improve efficiency, training of psychologist for healthcare settings and improving documentation quality (Cellucci et al., 2015). The study also identified the barriers to using the EMR as being lack of

flexibility, limited IT support and staff resistance. Overall, the findings of the study suggest ongoing adoption and diffusion of the electronic medical record is similar to previous studied physician practices. Specifically, the rapid growth of EMR use in these clinics by showing that in 2015 while 33% of clinics had an EMR, another 46% were planning to adopt an EMR for increased record efficiency and to help train future psychologists (Cellucci et al., 2015).

Conclusions

The results of the SMA survey and the national survey have found that behavioral healthcare is behind in the use of the EHR for patient care. Both studies found that the cost, lack of incentive payment programs and the concern for confidentiality to be the main issues in using the EHR in behavioral healthcare. The main EHRs used in the medical field do not meet the needs for the behavioral health record. Also most behavioral health providers do not have the funds that major hospitals have in order to implement a new IT system to be able to support the EHR. As it stands right now, behavioral health care is a field that is not reimbursed by any incentive program to switch to or use an EHR like the medical field. While it is apparent that the field of behavioral health is behind in the use of the electronic health record, more research needs to be done to determine why and what the benefits of using the electronic record will be for patient care in this field. The two studies found showed that there was a reward for using the electronic health record, but more studies need to be done to determine why more providers in behavioral health are not using the electronic health record and more proven results of the benefits of its use.

Cellucci et al., 2015 states that the "impact of EMR in behavioral health settings is not yet known." This is echoed by Kozubal et al., 2013, which states "the data suggests a disparity

in the health outcomes in psychiatric patients; it would be invaluable to further examine why such a disparity exists." The study also found that in order to ensure a higher quality of care for psychiatric patients that parity of coverage needs to be considered along with record modernization and accessibility (Kozubal et al., 2013).

Behavioral healthcare is a field that is growing and the EHR is not growing with it. The field of healthcare overall, needs to realize that behavioral health is just as important as the medical field and make getting and using an EHR more affordable for those providers.

Implications of Study

Behavioral health agencies will benefit from this study by being provided with an in depth look at what other agencies actually see as the barriers to using the EHR in their field. The study results will also provide valuable data that can be used for advocates of behavioral health in regards to formulating strategic plans on how to get access to incentive payment programs to make the cost affordable for these providers. The study results will also bring to light the fact that the provisions in the traditional EHR in regards to patient confidentiality need to be addressed for the stricter restrictions placed on behavioral health records.

Recommendations

The survey conducted at SMA Behavioral along with the surveys from the literature, show that the main concern for EHR use in behavioral healthcare is the cost. The survey has shown that since behavioral health providers do not qualify for incentive payment programs that it is harder for them to implement an EHR. Legislation needs to be adjusted to take into account the field of behavioral health and find a way to make the cost of using the EHR go down. It is important to realize that these surveys need to be expanded to more behavioral health providers

since behavioral health is a growing field that cannot be left behind. This survey showed that behavioral health is in need of ways to make the EHR affordable and that it needs to be tailored to fit the specific needs of the field. It gave a clear picture of the issue and opens up the fact that behavioral health has specific issues in regards to EHR use and that those issues need to be addressed for the problem to be resolved.

References

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Appendix

Figure 1

Survey Questionnaire: This is the questionnaire that was distributed for use in this study.

Survey Questionnaire: Barriers to EHR use in Behavioral Health

1. Type of facility (where you work)

___ Med OP Clinic

___Substance Abuse OP

___Residential Substance Abuse

___Crisis Unit/ES/Detox

___Administration

2. Position in agency

___Provider (ARNP, MD)

___Nurse (RN, LPN)

___Therapist/Counselor

___Clinical Administrative Staff

___Non-Clinical Administrative Staff

___BHT

3. Medical Record type

___Totally electronic (paperless)

___Hybrid (part electronic and part paper)

___All paper

4. In regards to using the electronic health record, do you feel cost is an issue in getting a fully functional EHR?

___Yes

___No

___Maybe

5. Do you feel that the electronic health record can satisfy the confidentiality concerns for behavioral health records?

___Yes

___No

6. Do you feel that the electronic health record is not used more in behavioral healthcare due to provider resistance?

___Yes

___No

7. Do you think more behavioral healthcare agencies/providers would use the electronic health record if these agencies were eligible for the Medicare/Medicaid Incentive Payment Program?

____Yes

____No

8. Do you think that SMA has enough qualified IT staff to make the use of the electronic health record easy?

____Yes

____No

9. Do you think that the use of the electronic health record can improve the quality of patient care in behavioral healthcare?

____Yes

____No

10. Do you think that using the electronic health record during patient visits is easier than using paper records?

____Yes

____No

11. Has the use of the electronic health record made doing your job easier in regards to patient care and service?

____Yes

____No

12. Overall, are you happy with the electronic health record at SMA?

____Yes

____No

Figure 2

Cover Letter: Barriers to EHR use in Behavioral Health

Dear Participant,

You are being asked to participate in a research study in which we will test your knowledge and attitude towards barriers in using an electronic health record in the behavioral healthcare setting. People invited to participate in this study must be between 18-65 years of age, and work in the behavioral healthcare field at SMA. The study is being conducted by Jennifer Woodard, a Masters' degree candidate in Health Information Management (HIM) at the University of Tennessee Health Science Center (UTHSC).

If you decide to take part in this research study, you will complete a short questionnaire. It should only take you a few minutes to complete the survey. The survey will need to be returned to Jennifer Woodard by (date). There is no further procedure required.

There are no physical risks associated with this study. This study will not affect your work in any way at SMA.

Please note that you will likely receive no direct benefit from taking part in this research study. You will not be paid for taking part in this study.

Participation in this research study is strictly voluntary and failure to participate will not adversely affect you in any way.

All paper research records will be stored in locked file cabinets and will be accessible only to research personnel. All electronic research records will be computer password protected and accessible only to research personnel. You will not be identified by name in any publication of the research results.

If you have any questions about this research study you may contact either Jennifer Woodard at 386-236-1750 or her advisor Dr. Sajeesh Kumar at 901-448-6486. You may also contact any of the following: Holly Herron, CIM, UTHSC IRB Administrator at 901-448-5920; Donna Stallings, CIM, UTHSC IRB Administrator at 901-448-3805; or Melanie Saucier, UTHSC IRB research Administrative Assistant at 901-

448-4824. You also have the ability to visit the website at: http://www.uthsc.edu/research/research_compliance/IRB/participant_complaint.php if you have any questions about your rights as a participant in this study or your rights as a research subject.

Thank you.

Jennifer Woodard

386-236-1750

Figure 3

Flow chart of the results from the Literature Review

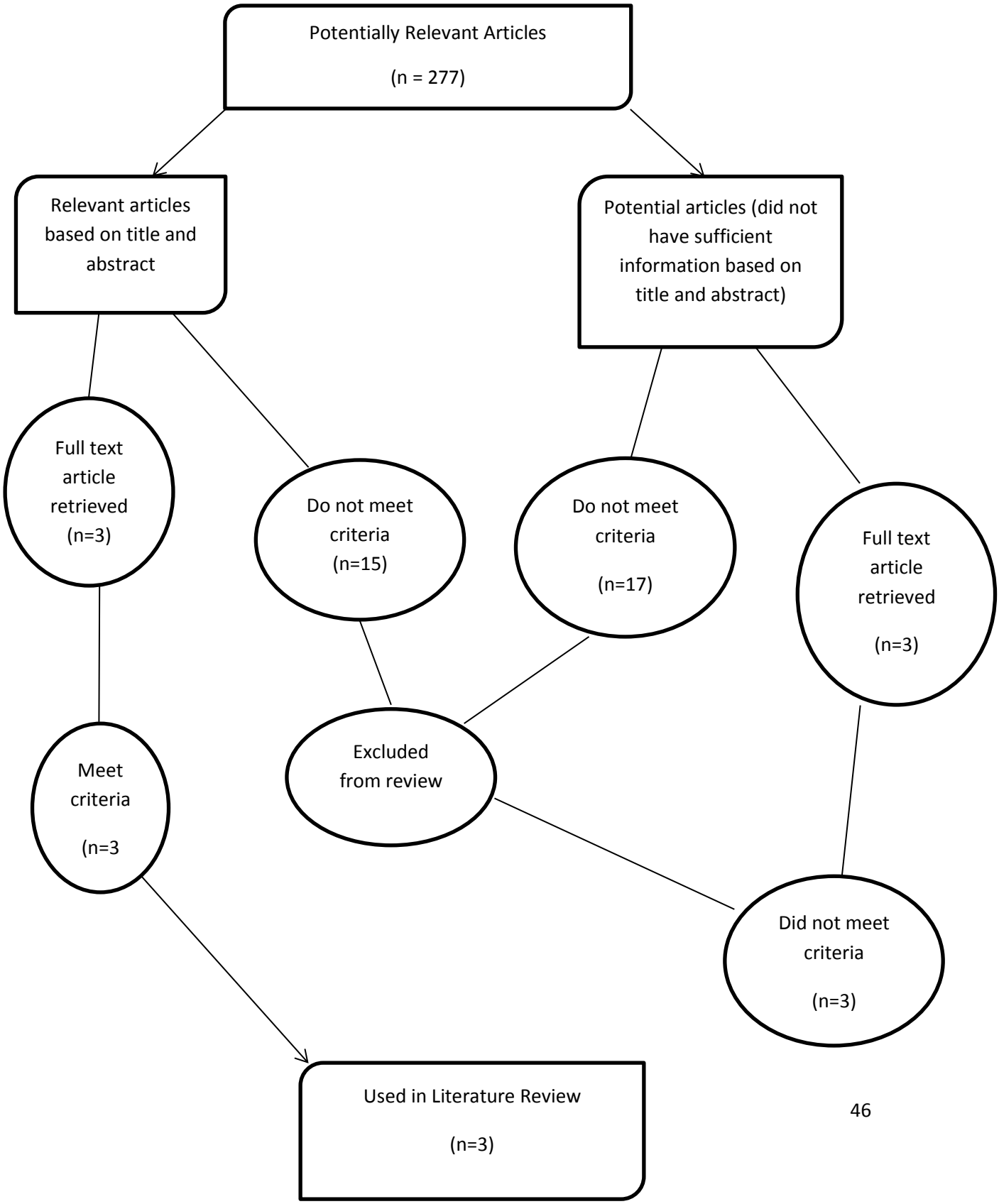

Figure 4

Author(s), year	Participants, Survey Methods	Variables	Results
Kozubal, Samus, Bakare, Trecker, Wong, Guo,Cheng, Allen, Mayer, Jamison, Kaplin (2013)	• Hospitals in the UHC Clinical Database • Calendar year 2007 based on patient outcome analysis • Hospitals classed into three separate groups based on use of EMR • 16.7 % of the 18 hospitals had electronic records in one category • 16.7% in two categories • 22.2% in three categories • 44.4% in four categories	• Combined EMR score • Access score • Patient length of stay • Avg. length of stay for patients with primary psych diagnosis	• Facilities that had accessible electronic records maintained their records in the EMR format 80% of the time • Hospitals with full EMR systems had a lower readmission rate for psychiatric patients
Cellucci, Stanton, Kerrigan, Madrake (2015)	• Clinic Directors who are members of the Association of Psychology Training Clinics • 192 APTC members received survey • Received 78 usable surveys	• Exploratory nature of study • Included quantitative and qualitative questions • Findings presented as descriptive statistics • Varying size and scope of clinics surveyed	• Median age of psychology clinic used was 32 yrs. • Clinical directors in position for at least 6.5 years • Number of patients seen per year ranged from 25 to 3000 • During the academic year the median number of patients was 150 per year with a median of 20 trained clinicians • 33% of clinics used an EMR system • 46% were planning to adopt EMR System