

Opportunities and Challenges in the Use of Electronic Health Record (EHR) Systems for Child and Adolescent Psychiatrists

May 2017; Approved by AACAP Council June 2017

This resource was developed by:

Health Information Technology Subcommittee	Todd Peters, MD Jason Chang, MD Rajeev Krishna, MD, PhD, MBA
Members of the Healthcare Access and Economics Committee	Barry Sarvet, MD, co-chair Benjamin Shain, MD, PhD, co-chair
AACAP Staff	Ronald Szabat, JD, LLM Karen Ferguson Fernando Valles, MPH, MSMS David Pearl-Schwartz

PREMISE:

The following document includes 1) recommendations for the optimal utilization of Electronic Health Record (EHR) systems within child and adolescent psychiatry practice and 2) consideration of methods and strategies to leverage this technology in order to realize promised benefits to patients and to child and adolescent psychiatrists (CAPs).

INTRODUCTION:

Although lagging other medical specialties in the adoption and use of EHRs [1-4], increasing numbers of CAPs are utilizing these systems in their clinical practice. It is important to address best principles for EHR utilization as adoption of the technology appears to be an inevitable aspect of practice for the majority of psychiatrists, as with the rest of medicine.

Recent reports list the many potential benefits of EHR technology including improvements in practice efficiency and coordination of care, patient experience and safety, and overall increased quality of care [5,6]. Despite these positive outcomes, EHRs are still cited as one of the leading causes of professional dissatisfaction in a recent general survey of more than 17,000 physicians across the United States [7].

The key to successful implementation of EHRs is rooted in user proficiency and adaptation. Without these skills, EHRs carry the risk of slowing down practice, eroding clinical communication, endangering safety, degrading clinical quality, and negatively affecting the patient experience. Traditionally, child and adolescent psychiatry is a very “analog” field; there are relatively few CAPs who were attracted to their field for the opportunity to work with technology. Because of this, and perhaps more than some other medical specialists, CAPs must intentionally devote time and effort to become proficient in the use of EHRs so they can be seamlessly incorporated into their clinical practice.

Until now, resources provided by the American Academy of Child and Adolescent Psychiatry (AACAP) on subjects relating to health information technology (HIT) have focused on encouraging the adoption of EHR systems by explaining their potential benefits. In this document, we will propose suggestions and discuss strategies aimed at making the best of this technology, once it has been adopted.

PATIENT/PROVIDER EXPERIENCE WITH EHR USE:

The introduction of computers into the exam room has been met with some trepidation and reluctance on the part of physicians. There are obvious concerns about a patient’s experience and the clinical care offered during the encounter. While there is little formal data on the matter, many practitioners have anecdotal concerns about how the presence and use of a computer affects the therapeutic environment of the visit itself. This section will explore some of the inherent tradeoffs raised by EHRs in child psychiatry and offer strategies for mitigating these tradeoffs.

In-Office Patient Experience Considerations:

The most obvious and significant tradeoffs that come with use of EHRs occur in the context of the visit itself. Constant use of the computer during the visit has the potential to disrupt engagement

with the patient. On the other hand, setting aside all documentation until after the visit can lead to provider burnout, especially in the context of a busy caseload. Numerous studies since the early 1980s have indicated that computer use has little impact on patient satisfaction in primary care settings [8,9] and in some cases appeared to improve the interaction [10,11]. Of particular concern to psychiatry, however, is some data suggesting negative changes in depth of psychosocial exploration [12] and broader disruptions in nonverbal communication patterns [13,14]. Despite these concerns, studies suggest that with appropriate planning and preparation, essentially no net impact on patient-psychiatrist interaction exists when implementing EHR technology [15]. To this end, we offer the following recommendations to minimize negative effects on communication patterns, while maximizing provider efficiency and patient engagement.

Office Layout:

Office layout and organization can influence the impact of EHR technology use on the therapeutic environment. A layout that places a computer behind the clinician can yield negative outcomes in two ways. Not only does it force the clinician to turn his or her back to the patient to use the computer, which is highly disruptive to the frame and structure of the visit, but it also makes EHR data potentially visible to the patient. This raises concerns about patient access to non-therapeutic information (provider process notes, comments, etc.) and could lead to privacy violations. Placing a computer between the patient and clinician may address these two issues; however, it creates a physical and visual separation that can be equally disruptive to therapeutic engagement. To address these concerns, our suggestion is to consider an office layout that places the computer in line with the clinician, but off to the side. The goal is to avoid barriers in the direct line of engagement with the patient, while at the same time having the computer still easily visible to the provider. Implementing the use of a rotating screen allows the provider intermittent visibility of EHR data, while still protecting sensitive information.

Visit Planning and Visit Structure:

Preparation and visit structure can affect the impact of EHR use on both patients and providers. Notably, activities formerly completed with a paper chart and pen are now commonly performed on the computer. While the computer serves as a new medium for these activities, we recommend the following strategies for organizing a visit to minimize their intrusiveness:

- 1) *Chart Review:* Following the same principle as with paper charts, review of the relevant history should be completed prior to the start of the clinical encounter. This may include reviewing past notes, documentation by other caregivers, labs, or other material that is available before the patient enters the room.
- 2) *Therapeutic Time:* In the past, when a clinician utilized paper documentation, he or she might take notes during the encounter and set them aside based on an assessment of therapeutic engagement. The same may be true of electronic documentation in the EHR. Depending on the clinician's proficiency at touch-typing or online note taking, it may be possible to take notes through a significant portion of the visit, while still focusing on the therapeutic interaction. While the cutoff for setting aside documentation and focusing entirely on the patient encounter may be different than with paper charts, the basic principle remains the same. Clinicians should plan on spending some portion of the visit completely disengaged

from the EHR and focused on the patient. In child psychiatry, this may be particularly true when interviewing a child. This approach, however, may potentially have greater flexibility when interviewing parents and caregivers of the patient.

- 3) *Orders/Charting Time:* Similar to the suggestions for therapeutic time, it is appropriate to identify phases of the encounter when the clinician will be actively engaged with the EHR and less actively engaged with the patient. Prescription writing, patient instructions, and other similar medical process steps are very consistent with times when CAPs would utilize the EHR during other medical visits.
- 4) *Chart Completion:* Plan for chart completion time after the conclusion of the visit. This may entail finishing up documentation, finalizing orders, or other similar tasks, and is again comparable to similar activities in paper charting. It is notable that in many health systems, same day or near same day chart completion is the expectation, and planning for time to complete these tasks is essential.

Recruiting Patients into the Process:

Clinician interaction with an EHR system during the visit has become the norm rather than the exception in the modern medical setting. To this end, integrating patients into the use of this technology can prove beneficial when appropriate. This practice gives clinicians the flexibility to review material and complete charting during the visit without additional burden. Here are some key points to keep in mind:

- 1) *Request Permission:* If you are planning to take notes during the encounter, it is often best to set out this expectation and request permission. A statement such as, "I'm just going to be typing some notes as we go to ensure that I am keeping accurate track of our discussion. Is that okay?" offers the patient/family the opportunity to state agreement or any objections while explaining the reason for the activity.
- 2) *Maintain Communication:* While working with the EHR, maintain communication with the patient and family so that pauses are not unexplained and families understand that you are still engaged in the visit. Examples of informative statements may be, "I'm just skimming my note from your last visit to refresh myself on what our plan was," or, "I am preparing your prescriptions. This may just take a few minutes." Unexplained long pauses in the session should be avoided.
- 3) *Make reference to the EHR directly:* If the office has been arranged to allow simultaneous viewing of the clinician's computer screen, engage the patient and family in reviewing aspects of the record when the appropriate opportunity presents itself. Some examples include: showing parents the computer screen while preparing prescriptions or while typing after-visit instructions, referencing a growth chart when discussing concerns about potential weight-related medication side effects, or sharing results from diagnostic or symptom testing with the patient's caretakers. These practices not only allow the clinician to review the material, but also actively engage families in the discussion and treatment-planning process. Though these practices frame the computer as a tool in the therapeutic framework, as previously

noted, caution is strongly recommended to ensure that inappropriate information is not visible or revealed.

Patient and EHR Interaction Considerations:

Patient portals can provide opportunities for additional interaction between patients and providers. Patient portals often provide access to portions of a patient’s medical record, and may offer direct messaging between patients and clinicians. The implications of such access are significant, though largely unexplored in the field of psychiatry. Potential consequences could range from positive therapeutic effects for patients who may feel more in control of their care, to concerns about legal liability if messaging systems are not monitored appropriately. A clear example of the latter would be if a patient notifies a clinician of dangerous behaviors (e.g.: suicidality) via a messaging system that is not monitored frequently and is not seen in a timely manner. It is important to understand both the benefits and risks of utilizing patient portals in the field of psychiatry, and we would urge caution in their use, as this will undoubtedly be a topic of discussion in research in the field of psychiatry in coming years.

IMPACT OF EHRS ON DOCUMENTATION:

The Use of EHR Documentation Features:

As with a paper medical record, EHRs aid in the delivery of high-quality care by serving as a chronological account and overview of patient care. Among many of their documentation features, EHRs often allow the use and customization of ready-made templates that can assist in providing logical structure in the documentation of necessary patient care progress notes. Practitioners should take the time to properly learn and customize these templates to make the best use of their time given schedule limitations. Though some may choose not to take advantage of these features, it is important to note that simply using your EHR as a blank sheet of paper on which to type notes is no better than doing so longhand (legibility issues aside). A well-designed template can significantly improve efficiency, accuracy, completeness, and organization of notes and should be used whenever appropriate.

Documentation checkboxes are another common feature in many EHRs. Though their use may prove more efficient than writing prose, they have the potential to depersonalize the medical record. The lack of narrative in the notes can potentially blur the distinction between patients and can lead the clinician to quickly skim through the chart without adequate consideration of the specific patient or visit. Furthermore, templates that offer auto-populate elements of a “normal” exam or visit should be used with caution because they may contribute to a lack of personalized examination information. This, in turn, can contribute to the creation of generic, or even identical, visit notes and potentially inadequate documentation.

Many EHRs also include functions that allow clinicians to insert discrete data, such as recent lab results, rating scale data, and vital signs, directly into the progress note. When used appropriately, this can help enhance the information available in the note. Nonetheless, as discussed previously, overusing this functionality can crowd the note with non-relevant information while making the note too lengthy to be useful.

Apart from the careful use of EHR templates, practitioners must also be vigilant regarding other potential electronic shortcuts while completing documentation. One example is the use of the copy and

paste functionality. While this shortcut allows a psychiatrist to include information that remains relevant without needing to reproduce it completely, its haphazard use can increase the risk of importing or copying outdated, inaccurate, or redundant information. Overuse of this function may also lead to propagation of false information and lead to unnecessarily lengthy progress notes. This, in turn, increases the risk of inflating the amount of work performed during a visit, and the potential up-coding of claims beyond one's actual performance.

Pathway Toward Transparency:

There is a trend, accelerated by recent legislation, to move toward additional transparency of clinical documentation focusing on patient care. It is founded on the understanding that the patient is the ultimate owner of his or her own medical record, but also a consumer of health care services, and needs adequate information to make informed decisions about care. Within this framework, it is therefore essential to make documentation more understandable and accessible to patients. Practitioners should stay away from the use of overly complex medical jargon, work towards condensed diagnostic formulations, and focus on more descriptive and nonjudgmental treatment summaries. Furthermore, documentation should give equal focus to strengths and resiliency factors instead of focusing exclusively on disease state and diagnoses. The aim of patient documentation should be to facilitate communication between the patient and caregiver, while avoiding potential confusion about the care plan.

The current movement toward transparency has led some practitioners and health care systems to grant patients complete access to their entire medical record, including aspects of their mental health treatment. Despite concerns about the appropriateness of this practice, a large prospective study allowed patients from more than 100 primary care providers (PCPs), from three separate clinical settings, to have open access to their full medical record in real-time [16,17]. The study found that most providers noted minimal effect on their documentation styles. Though a minority of clinicians noted a slight increase in the amount of time for documentation, and changes in content of their documentation (including documentation on mental health and substance abuse issues), there was no demonstrable change in the number or frequency of electronic messages sent from patients enrolled in this study to their clinicians. In post-intervention studies of patients, most patients felt that they had more control over their care and reported increased knowledge and accuracy of their current care plan. There are trade-offs, however, as 26-32% of patient responders noted some concerns about their privacy, while 1-8% reported that this open access has the potential to heighten their anxiety regarding their care. One of the biggest markers of success at the end of the study period was that 99% of patients, and 100% of clinicians, elected to continue with open access of their records in the future [18].

It is important to note that there are still those who do not see the advantages of this level of transparency. Those against it often cite concerns that patients may be overwhelmed by the information available to them or may be unable to obtain necessary explanations for what is documented. If done properly, this level of open access in an unpressured setting can have many benefits, including the thorough review of information as well as contribute to open dialogue about care. Whatever the case, it is important that clinicians be given enough control over privacy settings to block certain notes and/or sections of notes from access, if they feel that exposing the content may be detrimental to the care of their patient(s).

SECURITY AND PRIVACY:

Obviously, patient confidentiality and privacy must be protected. Providers must be mindful of the balance between having rapid access to clinical information for coordination of care, and protecting certain categories of high-risk data. This balance of access versus confidentiality is particularly tenuous surrounding documentation of mental health visits, especially when working with children and adolescents. Institutions using EHRs should utilize “role-based” security to limit access to information for different types of clinicians within their specific system.

Role-based security protocols assign levels of access to patients’ EHRs based on predefined job categories. The level of information granted to clinicians or healthcare workers is based on the access needs required by his or her position. For example, staff who are involved in scheduling patient appointments or billing activities will not require the same level of access to a patient’s EHR as a clinician. When information is released, transmission of the information should take place in such a way that minimizes the risk of inappropriate sharing of protected health information. Most EHRs are agile enough to quickly share appropriate medical content with outside clinicians, while still protecting other information from being released or re-released. Though this may be the case for sharing on electronic platforms, at times the printing and downloading of sensitive information is necessary. It is important that the EHR keep track of who accesses sensitive information and when. It should be noted that the Health Insurance Portability and Accountability Act (HIPAA) permits the sharing of medical information during emergency situations and authorized users are usually able to override access restrictions during these situations. While working in a multidisciplinary environment and collaborating with other medical specialties, it is important to avoid discussion of topics and disorders that are not being directly treated, and to avoid releasing information that is not clinically necessary in the moment. Providers should work with their EHR vendors to make sure they are properly oriented to such functionality.

Privacy and Children:

Safety concerns regarding access to patient protected information have led to a change in documentation styles in the electronic age. Recent publications have reviewed strategies for navigating ethical issues in electronic documentation and often include strategies and preventive measures to best safeguard personal health information in the pediatric patient population [19]. This is especially important given the reality that documentation should be done with the expectation that the child or family members will eventually view the medical record [20-22]. Given this situation, practitioners need to be mindful of how their EHR handles specifics in the access of a minor’s treatment information. In most medical settings, parents have access to their child’s medical record until the child turns 18 years-old, or becomes emancipated. In mental health care, access to a child’s protected health information is significantly more complicated. For some children and adolescents, allowing the guardian(s) to have access to a child’s personal health information could expose the minor to potential trauma. The question then arises: in what situation(s) do guardians not have access to a child’s personal health information?

To help answer this question, it is essential to know the federal and state laws specific to one’s practice location, particularly because privacy laws can vary significantly from state-to-state. If a state permits a minor to seek mental health treatment without parental consent (even if parental consent is given), the minor also has the right to refuse access to his or her protected health information for that

specific treatment. Clinicians must be able to block or limit access in their specific EHR, especially as some may default to relatively open settings. In addition, if the clinician feels that sharing the information would not be in the minor's best interest, access to protected health information by parents/legal guardians must be limited. Access to the medical record can also be refused, if there is a reasonable belief that releasing personal health information places a child at risk, and/or the parent(s), or legal guardian, is suspected of abusing or neglecting the child. Additionally, based on a United States Supreme Court ruling (*Jaffee v. Redmond*), psychotherapy process notes that are not utilized for care planning, medication management, or billing, may be kept separately from the main medical record and remain exempt from disclosure in the medical record. If a clinician elects to keep these notes within the EHR, he or she needs to find out how to lock them separately. If keeping them outside of the EHR, the notes must be properly protected. This can become relevant if they are being kept electronically outside of the EHR, as the security measures that are normally in place for the EHR would not protect these highly sensitive documents, yet they are subject to the same level of protection.

SUMMARY/CONCLUSIONS:

The presence of EHRs affects how mental health care providers collect and share information about patients and influences the therapeutic relationship, communication modalities, and scope of confidentiality. Though the true impact of these changes on psychiatric practice are not entirely known, this document offers a consensus statement on implementation suggestions for the use of EHRs for child and adolescent psychiatrists in their clinical practice.

- **Patient Experience:** The introduction of computers to the clinical interview can have a significant effect on interaction patterns and alliance-building. Clinicians are encouraged to consider factors ranging from office layout to visit structure to ensure that important clinical interactions are not missed due to provider attention to the EHR.
- **Documentation:** EHRs provide operational efficiencies with respect to documentation, pulling information from other areas of the chart, and reducing typing needs. Clinicians are cautioned that this can have the unintended effect of depersonalizing the record, reducing or eliminating vital contextual information, or propagating inaccurate information. At worst, this may expose clinicians to liability issues.
- **Security and Privacy:** Requirements that documentation in the EHR be accessible to other clinicians, and to patients, are increasingly common. It is also an increasingly common practice that clinicians offer online channels for patient communications, such as email and secure messaging. This raises significant concerns when discussing the sensitive or stigmatizing topics that may arise in psychiatric care. Clinicians are encouraged to understand the scope of disclosure in their respective health systems to ensure that their patients are aware of this scope and work to appropriately minimize the potential disclosure of highly sensitive information. Clinicians are also encouraged to evaluate the secure communication mechanisms offered by their EHR and their organization and develop a communication strategy appropriate for their practice.

With adequate consideration of these factors, we believe that EHRs and new health information technology have the potential to dramatically improve the quality and consistency of care provided to child psychiatry patients.

REFERENCES

1. Lefkowitz PM. Behavioral health/human services information systems survey: executive summary/media release. 2009. Available at: <http://www.satva.org/documents/InformationSystemsSurveyReportFinal.pdf>. Accessed June 26, 2016.
 2. Mojtabai R. Datapoints: use of information technology by psychiatrists and other medical providers. *Psychiatr Serv* 2007;58(10):1261.
 3. Hsiao C, Beatty PC, Hing ES, et al. Electronic medical record/electronic health record use by office-based physicians: United States, 2008 and preliminary 2009. Available at: http://www.cdc.gov/nchs/data/hestat/emr_ehr/emr_ehr.pdf. Accessed June 26, 2016.
 4. Burt CW, Sisk JE. Which physicians and practices are using electronic medical records? *Health Aff (Millwood)* 2005;24(5):1334–43.
 5. Peters T. Transformational Impact of Health Information Technology on the Clinical Practice of Child and Adolescent Psychiatry. *Child Adolesc Psychiatric Clin N Am*. January 2017; 26(1): 55–66
 6. Dunne J, Peters T. Why Invest in an EMR? http://www.aacap.org/App_Themes/AACAP/docs/clinical_practice_center/business_of_practice/emr/Why_Invest_in_an_EMR.pdf Accessed 3-19-2017.
 7. The Physicians Foundation. 2016 Survey of America’s Physicians: Practice Patterns and Perspectives. Sept 2016. http://www.physiciansfoundation.org/uploads/default/Biennial_Physician_Survey_2016.pdf. Accessed 3-19-2017.
 8. Koide D, Asonuma M, Naito K, Igawa S, Shimizu S: Evaluation of electronic health records from viewpoint of patients. *Stud Health Technol Inform* 2006, 122:304-8
 9. Garrison GM, Bernard ME, Rasmussen NH: 21st-century health care: the effect of computer use by physicians on patient satisfaction at a family medicine clinic. *Fam Med* 2002, 34(5):362-8.
 10. Delpierre C, Cuzin L, Fillaux J, Alvarez M, Massip P, Lang T: A systematic review of computer-based patient record systems and quality of care: more randomized clinical trials or a broader approach? *Int J Qual Health Care* 2004, 16(5):407-16.
 11. Johnson KB, Serwint JR, Fagan LA, Thompson RE: Computer-based documentation: effects on parent-provider communication during pediatric health maintenance encounters. *Pediatrics* 2008, 122(3):590-8.
 12. Makoul G, Curry RH, Tang PC: The use of electronic medical records: communication patterns in outpatient encounters. *J Am Med Inform Assoc* 2001, 8:610-5
 13. McGrath JM, Arar NH, Pugh JA: The influence of electronic medical record usage on nonverbal communication in the medical interview. *Health Informatics J* 2007, 13:105-18.
 14. Duggan AP, Parrott RL: Physicians’ nonverbal rapport building and patients’ talk about the subjective component of illness. *Hum Commun Res* 2001, 27:299-311.
 15. Stewart RF, Kroth PJ, Schuyler M, Bailey R. Do electronic health records affect the patient-psychiatrist relationship? A before & after study of psychiatric outpatients. *BMC Psychiatry*. 2010;10:3. doi:10.1186/1471-244X-10-3.
 16. Walker J, Darer JD, Elmore JG, et al. The road toward fully transparent medical records. *N Engl J Med* 2014;370(1):6–8.
 17. Leveille SG, Walker J, Ralston JD, et al. Evaluating the impact of patients’ online access to doctors’ visit notes: designing and executing the OpenNotes project. *BMC Med Inform Decis Mak* 2012;12:32.
 18. Kahn MW, Bell SK, Walker J, et al. A piece of my mind. Let’s show patients their mental health records. *JAMA* 2014;311(13):1291–2.
 19. Chiu SH, Fitzgerald KM. Electronic medical/health record and pediatric behavioral health providers: progress and problems. *Arch Psychiatr Nurs* 2013;27(2):108–9.
 20. Koocher G, Keith-Spiegel P. *Ethics in psychology*. 2nd edition. New York: Oxford University Press; 1998.
 21. Rae WA, Brunnquell D, Sullivan JR. Ethical and legal issues in pediatric psychology. In: Roberts MC, editor. *Handbook of pediatric psychology*. 3rd edition. New York: The Guildford Press; 2003. p. 32–49.
 22. Knowles P. Collaborative communication between psychologists and primary care providers. *J Clin Psychol Med Settings* 2009;16(1):72–6.
-