Executive Summary

Has your organization implemented a complete and effective electronic health record (EHR)? Are you getting all the benefits that you expected? Improved productivity? Enhanced billing and collection? Better quality and coordination of care? Streamlined workflows? Increased automation? At-your-fingertips management reporting and data dashboards? Has your EHR partner lived up to all their promises and your expectations?

If you answered no to any of these questions, you are likely experiencing the negative effects of a problem EHR implementation. What do we mean by this? A problem EHR implementation is likely to fall into one of two categories.

- The first is an **incomplete EHR implementation** – where, for one reason or another, you have not been able to implement all of the components of the system to move to a completely paperless health record.
- The second is an **ineffective EHR implementation** – where you’ve implemented everything but it doesn’t work the way you expected.

Perhaps you’ve been implementing a new system for two to more years, and it hasn’t worked as planned. Maybe you’ve had a billing and client data collection system in place for years, and you are trying to implement EHR components and it just isn’t working. Or worse yet, perhaps your organization is one of those – more common than often known – that is experiencing a failed EHR implementation, and you haven’t even been able to get components of the system up and running after a year or more.

With the second generation of EHRs emerging with more capable and flexible technology platforms, organizations should utilize the knowledge and experience they have acquired during their initial EHR implementation and determine if their current EHR solution is costing them money.

How do you calculate the cost of problem EHR implementation? This calculation is critical for making a decision about whether to make a change in EHR systems. In this article, we review the basics of an EHR implementation – the benefits and challenges of implementing an EHR, as well as the typical phases of implementation. In addition, we present a detailed model for calculating the cost of retaining an EHR that doesn’t meet your needs. This model covers both one-time unexpected costs (such as those for programming needed functionality and consulting to get the system up and running) and three ‘big ticket’ items (on-going costs of poor billing and collection, low productivity, and unnecessary staff positions).

An organization’s EHR experience is highly predicated on the organizational culture (e.g. the organization’s customer service approach, investment in the industry, and competence and dedication of their people) of the EHR vendor. As such, the white paper also outlines expectations that an organization should have when seeking and evaluating an EHR partner.

So how much is it costing you to keep your EHR if it is not working as planned? Use this article to do the math so you can decide whether or not to make a change.

“With the right vendor partner and an effective EHR solution, organizations can increase productivity, improve the quality of services, and ultimately, increase revenue,” said Ravi Ganesan, President of Core Solutions.
Benefits & Challenges Of Implementing An Electronic Health Record: How The Right EHR Partner Can Make A Difference

As the health and human services field is increasingly technology enabled, the use of electronic health record (EHR) system functionality is critical to improving the effectiveness and efficiency of health care provider organizations. The importance of EHR systems was reinforced by The American Recovery and Reinvestment Act (ARRA) of 2009 which included financial incentives for Medicare and Medicaid providers to meet specific health information technology (HIT) performance benchmarks related to the meaningful use of an EHR. From a health system perspective, the benefits of moving the entire system towards EHR interoperability include: an improved technological platform for medical research, a comprehensive dataset for public health research, richer community health demographic information and medical trends data, and the ability to better treat highly mobile patients and populations. As technology has continued to advance, making EHR interoperability and its benefits possible, new legislation and standards continue to be established (e.g. Affordable Care Act (ACA), ICD-10, Meaningful Use Stage 2) requiring organizations and systems to incorporate and utilize new technology and standards.

On a smaller scale, EHR systems have the potential to improve the performance of individual provider organizations. A high functioning EHR system improves information sharing and communication between health care providers, allowing access to comprehensive, legible, and remote health care records. A successful EHR system will also allow organizations to streamline workflows - ultimately increasing productivity and revenue. Beyond an increase in the total amount of revenue, a shift to an EHR system has the potential to increase cash flow by shortening delays between service delivery and reimbursement. Finally, a well-designed and executed EHR system will increase both provider and patient satisfaction by better aligning workflow and job functions with patient care.

While the benefits of a fully functional EHR are many, implementing an EHR system represents a considerable investment in dollars, time, and effort. A good EHR vendor partner will help your organization anticipate, manage, and overcome common challenges encountered during EHR implementation.

Challenge #1: Lack of institutional commitment and stakeholder buy-in

Transitioning to an EHR system affects every aspect of your organization’s operations. In order to be successful, it is vital that stakeholders at every level are involved in the process. Further, managers of provider organizations should create a steering committee comprised of individuals from different departments to both guide the process and serve as champions of the EHR system. Only with this sort of team approach can you ensure that you configure and implement a system that will meet your needs.

Challenge #2: Incongruent departmental goals

There is a limited pool of individuals who understand clinical practice, project management, and software technology. Bringing together individuals with each of these skill sets to create a collective vision of what a successful implementation will entail and achieve is imperative. All stakeholders and departments must be working together towards shared goals. However, the goals and strategies will continue to evolve and the system should be flexible and configurable enough to accommodate changes to meet updated regulations and internal operations. With a clear vision of what you are trying to accomplish, the right team, and the support of an experienced vendor, you are much more likely to be successful.
Challenge #3: Initial decrease in productivity

While a provider organization is making the transition to an electronic health record, a temporary decrease in productivity often occurs due to staff at all levels learning to use the new system. Successful organizations will have a strategy in place to account for this temporary decrease and make the financial and staffing adjustments necessary to both ensure the financial health of the organization and maintain a high quality of care.

Challenge #4: User resistance

Managers of provider organizations often experience strong opposition to new systems from users at all levels, positions, and ages. Long-term staff members may be resistant to changing the way they do their day-to-day jobs. Clinical staff may also be reluctant to give up their paper records and move towards electronic systems, more standardization, and perhaps even concurrent documentation. The key here is to involve the right staff in configuring the system so that it is tailored to meet your organizational needs, to provide adequate training and support to users, and – hopefully – to have chosen an EHR that is intuitive and user friendly. Research indicates that clinical professionals and other staff members are likely to be pleased once they have made the transition to a good EHR and providing them with access to success stories and case studies may help them to see the potential the new system offers for improving day-to-day operations at your organization.

Challenge #5: End user technical proficiency

User resistance and the initial decrease in productivity can also be the result of a limited technical proficiency on the part of the end user. If there are clinical professionals or other staff members who are lacking basic computer or typing skills, creating some pre-training to develop basic skills and comfort will improve the process for those individuals. Developing job-specific training materials, using specially trained “super-users” as coaches, and providing training labs and practice are all beneficial.

Challenge #6: Insufficient support and training

To effectively implement an EHR, you should put formal technical support and training in place for all staff members. This includes not only high quality, job-specific training materials, but also a formal Help Desk function to monitor user needs, questions, and problems. Additionally, you must

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### The Six Key Questions To Answer To Calculate The Cost Of A Problem EHR

1) Have you been unable to reach industry standard billing collection rates of about 95% of net revenues? If not, what is the additional bad debt cost to your organization for having substandard collection?

2) Have you been able to improve clinical productivity for staff after implementing the EHR? If not, what is the annual cost of not realizing this expectation?

3) Have you needed to add unexpected staff positions to implement the EHR or have you been unable to eliminate positions you expected to (such as in data entry or medical records)? If so, what is the annual cost of these staff positions?

4) Have you lost Meaningful Use incentive payment dollars due to having an EHR that is not compliant with Meaningful Use requirements or if it is too difficult to use for required Meaningful Use reporting? If so, what is the total cost thus far?

5) Have you had other unexpected costs related to your EHR? These could include paper and office supplies, payer recoupments due to improper billing or non-compliant records, lost business opportunities, and mobile system use costs. If so, what are these annual costs?

6) Have you spent unexpected money for the EHR on system customization, report development, or consulting? If so, what were these costs?
ensure that your organization has the technical infrastructure it needs in place and the means to support it – including computers, mobile devices, printers, internet connections, and other equipment.

The Seven Phases Of Electronic Health Record Implementation

Unfortunately, industry research indicates that more than half of EHR Implementations fail. In addition to not addressing the challenges already discussed, these failures are often a result of attempting to implement a new system too quickly or without sufficient planning. While it is possible to do a rapid implementation, it is important to understand that implementing an EHR system is complex. You and your EHR vendor partner must carefully plan the approach and customize the implementation process to meet the specific needs and goals of your organization. The implementation process typically includes the following seven phases:

1. Identification of the objectives of implementing an EHR system
2. Establishing a steering committee to guide and lead the organization through the process and a well-rounded implementation team to execute the implementation
3. Assessment of the organization’s current operations, workflows, and clinical documentation
4. System installation, configuration, and thorough testing
5. Development of training materials and staff training
6. System go-live and implementation
7. System performance evaluation and continued leveraging of the EHR’s capabilities over time

It is vital that key stakeholders from every department in the organization are involved to some degree in each phase of implementation and that the implementation team be comprised of a group of staff members that know all aspects of your organization’s operations. A good EHR should support and advance clinical workflow and best practices rather than just collecting data on existing processes.

Staff will require continued training because they are not able to learn everything about the system at once. They must have mastered the basic operation of the system on the day it “goes live”, but will require additional training to gain true proficiency and maximize the system's potential for improving the quality and efficiency of services. You are likely to implement additional features of the EHR once you have it up and running, and most importantly, you'll want to begin to really leverage the data and management information that is available to your organization through reporting and analysis to improve clinical practice and operations.

The key point in understanding the process of EHR implementation is that your organization should begin to see the benefits of the EHR within weeks or months of the initial go-live date, even if there are initial bumps in the implementation itself. If you are two years or more into an implementation and haven't achieved a complete electronic health record system and all the benefits that come with an effective system, it is time to take a good look at what is missing and the costs associated.
Cost Analysis Of A Problem EHR Implementation

There are both one-time and on-going costs associated with problem EHR implementations. Management teams of provider organizations should consider all of these costs when determining whether to retain their current system.

A problem EHR implementation is likely to fall into one of two categories.

- The first is an **incomplete EHR implementation** – where, for one reason or another, you have not been able to implement all of the components of the system to move to a completely paperless health record.
- The second is an **ineffective EHR implementation** – where you’ve implemented everything but it doesn’t work the way you expected.

Regardless of the type of implementation, there are three types of costs – one-time costs, big ticket on-going costs, and additional on-going operational costs.

**One-time costs of a problem EHR implementation**

Potential one-time costs of a problem EHR implementation include: additional costs for required system changes, costs for additional report development, and consulting costs to complete the implementation. These costs are usually due to functional limitations in first generation/legacy EHR systems that lack the versatility of second generation EHR systems.

**Component One: Costs for required system customizations**

This includes costs associated with additional programming or having the software vendor set-up systems in order to meet organizational needs that have not been met by the initial software purchase. Some examples include modifying the system to meet state or payer reporting and billing requirements or creating custom forms or other required functionality you initially expected to be part of the system. These costs can be eliminated with second generation EHR systems that have been built to leverage configuration versus customization.

**Component Two: Costs for additional report development**

These are unexpected expenses paid to the vendor or outside consultants to develop required compliance and management reports that are not included in the initial software purchase. Typically, this occurs when the system you purchased doesn't come with an array of commonly used management reports or when
the report writing program is difficult and time-consuming for your staff to use effectively. With many second generation EHR systems, organizations are able to become more IT self-sufficient and reliance on your vendor partner for report development decreases, reducing the associated IT vendor costs.

**Component Three: Third party costs**

These are unexpected costs paid to consultants or other third parties you have brought in to help rescue an implementation that was bungled by the vendor’s team or to enhance system operation. This most commonly occurs at the point in the implementation when the project has reeled way off track in terms of timelines and deliverables, threatening either the ability to “go-live” with the system or to complete the implementation successfully.

**Big ticket on-going costs**

There are the three areas of on-going additional and unexpected costs that provider organizations are most likely to incur when their EHR implementation and the software itself are ineffective or incomplete. They include poor billing and collection costs, lost productivity costs, and unnecessary staffing costs. These “big ticket” items can add up considerably over the years.

**Component Four: Poor billing and collection costs**

This often overlooked area is the cost of bad debt as a result of billing and collection problems. An effective EHR should prevent bad claims from being filed and support the organization's capacity to maximize first pass collection rates. When implementing a new EHR, provider organizations expect robust billing functionality, and industry standards for collection rates are typically about 92-95% of net revenues for ambulatory services and 95% or higher for bed-day programs. Organizations often underestimate the financial impact of just minor changes in collection rates. For example, an organization that bills $20 million in net revenues annually, can lose $1 million a year if it cannot improve its collection rate from 90% to 95%. This also includes money recouped by payers because there were problems with the billing, which is a problem area that a good EHR is expected to eliminate.

**Component Five: Lost productivity costs**

The second area of “big ticket” costs of an ineffective EHR are losses in revenue as a result of staff not meeting current or new productivity expectations. This can either be an actual reduction in the billable productivity of clinical staff due to using the system, or more commonly in the long-run, the inability to meet the expectation that the EHR would actually improve productivity and thus increase revenues (if you are paid on a fee-for-service basis) or reduce staffing costs (by reducing the number of staff needed to deliver services under a contract or risk-based payment model). These lost productivity costs can be caused by a number of factors including: poor usability, awkward workflows for EHR-related tasks, and not being able to implement a 100% paperless electronic record.

**Component Six: Unnecessary staffing costs**

The final area of “big ticket” costs is staffing. This includes both hiring additional staff to complete tasks related to the EHR system and not being able to eliminate positions you expected to eliminate because of shortcomings in the EHR system. The most common areas for organizations to hire or retain staff to complete tasks that an effective EHR system should manage are: data entry, billing, technology (for
reporting, form development, and system management), quality management and compliance, and service authorization. Typically when implementing an EHR, provider organizations expect to eliminate all data entry staff positions, to reduce the number of staff in medical records functions, and to change the staffing in quality management to focus on clinical quality rather than technical compliance with medical records requirements.

**Additional on-going operational costs**

Aside from the three “big ticket” areas of costs that provider organizations are most likely to incur with a problem EHR implementation, there are three other areas of potential on-going costs: those associated with not being able to meet Meaningful Use requirements, lost revenue and business opportunities, and an array of other operational costs. While these are not likely to be as large as the “big ticket items,” they can result in a considerable expense to your organization over time.

**Component Seven: Cost of not meeting Meaningful Use requirements**

If a provider has an EHR system that is not compliant with Meaningful Use requirements or if it is too difficult to use for required Meaningful Use reporting, they will not receive their Meaningful Use incentive payments. For most behavioral health and social service providers, this is a loss of $63,750 over six years per eligible provider (typically psychiatrists) for the Medicaid Meaningful Use program or between $23,520 and $43,720 per eligible provider if they are applying for Medicare Meaningful Use incentive payments. Additionally, beginning in 2015 for the Medicare, providers who do not successfully demonstrate Meaningful Use will be subject to a payment adjustment. The payment reduction starts at 1% and increases each year that an eligible professional does not demonstrate Meaningful Use, to a maximum of 5%.

**Component Eight: Lost revenue and business opportunities**

This includes any costs associated with not meeting the performance requirements (reporting and compliance requirements, key metrics associated with bonuses or penalties, etc.) from payers. It also includes any missed revenue opportunities (e.g. lacking the data and functionality to bid competitively on a Request for Proposal) that are a result of deficiencies in the EHR system.

**Component Nine: Other operational costs**

Lastly, there are a number of unexpected costs that provider organizations may incur by having an ineffective or incomplete EHR solution. Examples include:

- **Paper and office supply costs** – These are costs associated with not being able to move to a 100% paperless health record, resulting in unanticipated office supply costs including paper, copier costs, and the expense of storing paper records.

- **Wireless cards and mobile system access costs** – These are the costs associated with not having mobile and/or disconnected access to the EHR system for staff who work in the field. These include the time spent creating electronic health records after service is complete and a potential decrease in the accuracy of records due to the delay in entering information, as well as the actual cost of wired equipment and service.
Case Study: An Analysis Of The Cost Of A Problem EHR Implementation

Situation: A $25 million behavioral health organization went live with a new cloud-based EHR system 2.5 years ago. The organization provides primarily outpatient mental health, case management, and residential services. The 150 clinicians in the outpatient mental health and case management programs were expected to improve their billable productivity by two hours a week once the system was implemented. They encountered major problems with Medicaid billing with the new system and continue to struggle with getting accurate service authorization information, hitting productivity targets, and improving their rather poor rate of collections from 85% to 90% due to system problems.

<table>
<thead>
<tr>
<th>Costs</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
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<tbody>
<tr>
<td>Additional programming to meet state reporting requirements and to convert to the DSM-IV coding system since this wasn't included in the original contract or maintenance agreement</td>
<td>$15,000</td>
<td>$0</td>
<td>$0</td>
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<td>Hire a consultant familiar with the system to help clean up problems with the billing set-up and to do additional clinical staff training on using the treatment planning modules</td>
<td>$12,000</td>
<td>$0</td>
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<td>$0</td>
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<tr>
<td>Bad debt expenses for being unable to improve collection of net revenues from 85% to 90% due to problems with Medicaid billing, service authorization functionality, and collection-related reports</td>
<td>$1,250,000</td>
<td>$1,250,000</td>
<td>$1,250,000</td>
<td>$1,250,000</td>
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<tr>
<td>Lost revenues due to not being able to increase billable productivity for the 150 outpatient clinicians and case managers by two hours per week as expected (at an hourly average rate of $65)</td>
<td>$897,000</td>
<td>$897,000</td>
<td>$897,000</td>
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<tr>
<td>Needing to maintain a medical records clerk position to pull compile record release documents from both the paper and electronic versions of the EHR</td>
<td>$45,000</td>
<td>$45,000</td>
<td>$45,000</td>
<td>$45,000</td>
<td>$45,000</td>
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<tr>
<td>Not being able to meet reporting requirements for Meaning Use for the one eligible provider, the full-time Medical Director/Psychiatrist</td>
<td>$0</td>
<td>$8,500</td>
<td>$8,500</td>
<td>$8,500</td>
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<td>Estimated paper costs for needing to maintain part of the record in paper format</td>
<td>$5,000</td>
<td>$5,000</td>
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<tr>
<td>Maintaining wireless laptop cards for 50 field-based case managers since the EHR does not offer a “disconnected” solution</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
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<tr>
<td><strong>Total Cost Per Year</strong></td>
<td><strong>$2,244,000</strong></td>
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<td><strong>$2,225,500</strong></td>
<td><strong>$2,225,500</strong></td>
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<tr>
<td><strong>Total 5 Year Cost</strong></td>
<td><strong>$11,146,000</strong></td>
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Total Five Year Costs of the Ineffective EHR: $11,146,000!

What To Expect From A Vendor Partner And EHR Software Solution

Selecting an EHR partner and completing a successful implementation can be an overwhelming task for most provider organizations. You need the right vendor partner with the right product to help you implement a complete EHR and to gain all the benefits an effective system can offer. A good EHR software product alone is not enough to ensure success. The best partnerships with vendors will offer three key things:

- A comprehensive, highly configurable EHR software application.
- The capacity to help your organization achieve Meaningful Use, ICD-10 compliance, and compliance with other standards and regulations.
- A highly collaborative approach to assessing the needs of your organization, designing and implementing the new system, evaluating the use of the system, and continued partnering to improve the quality and application of the EHR to support your operations and clinical service delivery.

Do you have this kind of partnership with your EHR software vendor and has your organization reaped all the expected benefits of having a complete and effective electronic health record? If not, it is time evaluate your current EHR system and partnership with your EHR vendor and determine whether it is time to make a change. As the field of health technology matures, there is a new class of EHRs emerging. This second generation of EHRs offer innovation and alternatives that may better suite your clinical practice and resolve problems that are currently costing your organization and negatively impacting your service delivery.
References


For additional information, please review the following articles below:


