A.   Cost Justification

Can a physician afford to spend an additional $15,000 on technology over the next six years? The answer is becoming very clear! YES. According to Dr. James Holly, five years ago, Southeast Texas Medical Associates, LLP, determined that the complexities of medical decision making and the continuity of care over a enlarging range of services was impossible with a paper record. Therefore, they adopted electronic patient records (EMR) and quickly moved toward achieve electronic patient management (EPM).

Almost five years later, they had achieved a great deal, all of which has value to their patients, to their practice, to payers and to other health care providers. Integrating delivery over a wide ranging network is unusual for a private medical practice but is the hope of the future. Whether the patients are in the office, in the physical therapy department, in the home health, in the hospital, in the ER, in the lab, or whether the health care provider is at home, in the office, in the hospital or on vacation in Europe, the patient's data base should be accessible in a HIPAA compliant environment.

This means that quality of care has improved and that the cost of that care has decreased. The value to the practice has been documented in a recent Microsoft Case Study on Return on Investment certified and verified by Mark R. Anderson with AC Group, Inc. Overall, SETMA was able to document a 24% decrease in cost of in-patient care. Due to EPM, they have one of the few successful IPAs in the country and they participate in one of only two PSOs approved by CMS. They believe that their PSO is being very successful because of the systems infrastructure which they have at SETMA. The results of their ROI study showed:

- After 90 days, the average number of Patient visits per physician remained the same after the installation on the EMR Product.
- The EMR application help cut Medical Transcription costs from $5.93 per visit in 2000 to an average of $0.25 per visit in 2001.
- Based on the number of visits in 2001, SETMA saved more than $340,000.
- The EMR application helped improved E&M coding and thus, increased average billable charges for office visits by 4.23%.
- After installation of the EMR application, coding and charge capture improved. The clinic's overall average charge per patient visit increased from $171 to $206 (a 20% increase) and the average collection increased from $80 to $104 (a 30% increase). These coding improvements added more than $150,000 in billable charges per year.
- Based on the number of patients seen in 2001, total billable charges increased by $2.1M and overall collections increased by $1.4M.

- Through the creation of an Electronic Patient Record, the number of administrative staff required to handle the patient's chart decrease by 76.7% ($2.65 per visit down to $0.62).
- The new procedure saved the clinic more than $120,000 per year in administrative costs.
- The average man-hour cost to establish a chart decreased 85% from 8.0 minutes per new chart to 1.2 minutes, an annual savings of more than $22,000.
- The amount of time required to handle phone call inquiries that required the chart has been reduced by 73%. The number of tasks decreased from 18 down to 2. Total annual savings exceed $103,000.
- The average cost for administrative supplies decreased from an average of $8.00 per patient to $0.97, a decrease of more than 87%.
- Based on the number of actual patients (55,000), the practice saved more than $380,000 in paper and supply costs.
- Because of better charting, the number of claim denials has decreased 26%. This has help reduce days in accounts receivables by 7 days, thus increasing actual revenues by $102,000.
- With improved charting and documentation, the number of successful audits has improved and in the last year the clinic has passed 100% of their required audits.
- Electronically calling patients each day to remind them of their appointments has decreased "no shows" by 65%. This has resulted in an 8% increase in number of daily visits without increasing practice size.
- At an average reimbursement of $100 per visit, this represents a $60,000 per month increase in revenue.
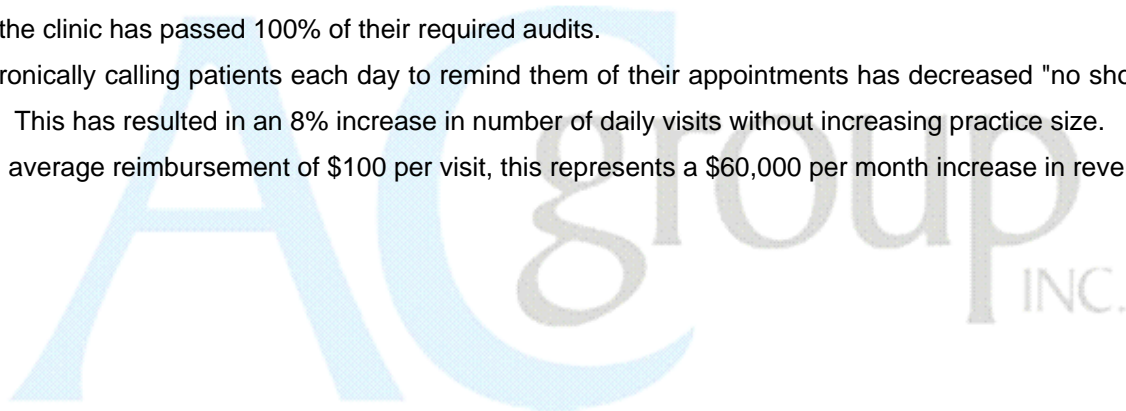
B.   The Business Case for the EMR

Making the transition to an electronic medical record (EMR) is a major undertaking for any physician office. It not only involves an expenditure of both human and financial capital, but it also requires a fundamental change in the way that a physician office conducts itself. This raises a very simple but profoundly important question: does it make sense from a business perspective?

Most experts in the field look at four specific categories within a medical office where an EMR can make a significant difference, and within each category we will provide concrete examples of benefits realized by physician office s across the country. Each example, in its own direct or indirect way, has either top line (increased revenue) or bottom line (increased profitability) implications for the physician office. It should be stated that the electronic medical record is a tool with a broad set of features and capabilities that are utilized in many different ways by different physician office s. Also, the benefits of an EMR are optimized when the physician office is able to fully transition to the electronic chart (as opposed to running dual paper and electronic systems).

- ***Cost Reduction***

The definition of cost reduction is simple: you spend less on these items after the deployment of an electronic medical record than you did before. The extent of savings is variable, according to the size, geography, and practice patterns of the individual physician office s. The extent of these savings is also dependent on how an individual site deploys their EMR; research has shown that sites that pursue a paperless implementation will in general be more cost efficient. The following outlines ways in which physician office s lower their costs after implementing an EMR.

Reduced Transcription Costs: Physician offices that eliminate transcription by having physicians enter all data directly into the electronic medical record can save a significant amount of money. Transcription costs range from $300 to $1000 per month per physician. However, it is not necessary to force all physicians to give up transcription in the post-EMR era in order to lower transcription costs. Particularly for physician offices that use in-house transcription services, an EMR can have a significant impact on transcription efficiency. The reason: an EMR provides instantaneous access to all charts. Therefore, transcriptionists spend more time transcribing and less time searching for, assembling, reassembling, and filing charts.

Reduced internal and external copying expenses: Many physician office s use copying services to copy records requested by attorneys, insurance companies, and other physicians. An EMR allows you to print the records directly from a networked PC, eliminating the use of an outside service or the time-consuming in-house process of locating, disassembling, copying, reassembling and re-filing the chart. The ease of printing the electronic chart translates directly into labor savings and reduced copying costs.

Labor Savings: Paper-based charting systems require a high allocation of administrative labor dedicated to the retrieval and management of charts. Additionally, paper systems impose labor inefficiencies on the daily operations of physician office s because the chart is not universally and instantly accessible to both administrative and physician office staff at the many points during the day that the chart is required. Because the EMR can be accessed from any networked workstation, a fully implemented EMR site will realize labor savings and improved administrative efficiency (as detailed in the Improved Administrative Efficiency section below). These efficiencies translate into re-deployment or reduction of staff, which translates into fewer FTEs required to support each provider. Many post-EMR physician office s have been able to expand the number of physicians without hiring new administrative staff.

Successful EMR physician sites are more efficient than traditional offices. As a result, the number of FTEs required to support physicians is lower than at paper based offices. Practices with EMR's report 2.0 to 2.5 FTEs per doctor, compared to the MGMA average of 4.0. These improvements can be attributed to the following:

a) Fewer chart pulls and less filing
b) Universal access to the chart (by more than one person at a time) and less searching for lost charts
c) Reduction in phone tag
d) Improved internal office communication
e) Fewer call-backs from pharmacies

However, for small practices (1 to 3 physicians) the economics may not be the same. With minimal staffing, it would be impossible for a practice to reduce staffing just because of the installation of an EMR application. In reality, the staff maybe able to perform other activities, but overall staffing cannot and should not decrease below the minimal level.

Malpractice Insurance Savings: Insurance carriers are beginning to recognize that practices with an electronic medical record offer an improved risk profile based on both quality of care and quality of documentation. Some malpractice insurers are beginning to reduce their premiums for practices utilizing an EMR. These premium reductions typically run around 5%, offering significant annual savings per physician. As an important side note, some carriers will refuse to defend practices in which the chart is not legible.

Lower Paper Chart and Storage Expenses: Making the transition to an electronic medical record means reducing the expenditures that are required to support a paper-based system. These costs range from paper supplies and filing systems to the dedicated office space required to store paper charts. Particularly for new practices that have not yet invested in the hardware and space for filing charts, the potential savings are considerable. For existing practices, the primary payback is a reduction in supply costs (the cost of chart folders, dividers, and filing cabinets

are estimated to average $3 per chart). In addition, the EMR offers the potential of reclaiming—over time—office space that was once dedicated to filing charts.

Decreased Pharmacy Costs: The EMR is a powerful medication management tool. For instance, the **Patient Records** prescription writer automatically notifies physician offices of the recommended medication based on the formulary for patients' insurance carriers—each time a prescription is written. Since many practices are tracked according to their pharmacy costs, this provides a convenient means of adhering to formulary recommendations.

- ***Revenue Enhancement***

An EMR also offers a variety of different ways in which a practice can increase revenue. The potential for revenue enhancement involves many factors, including current billing practices, patient population, and the mix of managed care and fee-for-service in the region. Some of the ways in which the EMR affects a practice's top line are as follows:

Health Maintenance *- A Tool to Increase the Number of Services You Offer.* Health Maintenance refers to age- and gender-specific care reminders. An EMR provides built-in tools to help a practice provide these services in a more efficient manner than traditional paper systems. For instance, every time a chart is accessed, **Patient Records** provides a reminder of overdue health maintenance items in the chart summary section. Additionally, some EMR systems allow the practice to specifically search for all patients who are overdue for recommended services, allowing the practice to send reminder letters. In a fee-for-service environment, this offers the potential of insuring better care for your patients while also increasing the volume of services offered. In a capitated environment, an EMR can help demonstrate quality practices and therefore help an office qualify for a capitation premium when compared to other practices in the area.

Improved Accuracy of Coding: Coding levels are correlated not only to the level of services provided during a particular patient encounter, but also to the completeness of documentation for those services. Services rendered that are not documented may be subject to dispute. In the current environment, many physician offices are conservative regarding coding, because of the additional documentation burden required. Industry estimates for the amount of money lost by inaccurate coding range from 3 to 15 percent of total practice revenue. An EMR assists by making it easier to provide complete documentation for a visit. This is accomplished through the use of templates, physician office macros (detailed blocks of text that can be inserted into a note with a button push), and the ability to automatically pull information from other portions of the chart into the current note. Additionally, billing clerks are able to quickly match coding against the note since they have access to the chart. Many **physician** offices report greater confidence in coding after the implementation of an EMR.

- ***Improved Administrative Efficiency***

Effective management of paper charts requires a great deal of clerical effort and administrative management. As a practice makes the transition to electronic records, it is freed from many of the labor-intensive tasks inherent in managing paper charts. Most of the benefits are directly correlated to the degree to which practices are able to make the paper record obsolete (which therefore should become key criteria in the EMR selection process).

Fewer Chart Pulls and Less Filing: A primary attraction of the EMR is the decrease in the chart pulls and filing required to keep charts current. For practices that successfully transition to the EMR, each networked workstation is the chart rack, accessible to anyone with network privileges. In addition, one of the unique features of the EMR is its ability to automatically incorporate outside data into the patient chart without the staff manually having to enter the data. With electronic interfaces from such external sources as laboratories and hospitals, incoming data can be downloaded directly into a patient's chart, eliminating the time-consuming and staff-intensive filing chores that are required with a paper-based system.

Universal Access to Charts (by more than one person at a time) and Less Searching for Lost Charts. The paper chart is inherently limited by its physicality; it can only be in one place at one time. Due to the sheer volume of charts that practices deal with, there is the frequent problem of the lost chart—common sources of frustration for even the most efficient paper-based practice. An electronic medical record offers the distinct advantage of being available at any workstation, whether it's at the office, hospital, or home. And since multiple people can view an individual's chart at the same time, the daily work of the practice—whether administrative or physician office—is never inhibited by the fact that someone else has the chart.

Reduction in Phone Tag: The EMR offers a tremendous improvement in efficiency for the numerous daily phone tasks that require information from the patient chart. Because the EMR offers instant access to charts, both administrative and physician office staff can handle incoming calls on the fly, improving efficiency and customer service.

Improved Intra-Office Communication: An important benefit to some EMR systems is the integration of email messaging as part of the system. This greatly enhances the speed, efficiency, and quality of intra-office communications between staff and providers. Email messaging allows messages to be delivered and received instantly from any workstation. It also allows staff to automatically document any sent or received message directly into the patient's chart.

Fewer Call-Backs from Pharmacies: Patient Records incorporates a prescription writer that prints all prescriptions, insuring their legibility. The system checks for drug-to-drug interactions prior to printing of the

prescription. And with fax server technology, prescriptions can be sent directly to pharmacies. These features serve to minimize the common inefficiencies experienced between office and pharmacy.

Easier Compliance with Chart Requests and Chart Audits: To accommodate the requests for copies of patient charts with paper systems, physician office s must pull, disassemble, copy, and reassemble the chart. This time-consuming process can be eliminated with an EMR, since the entire chart can be printed from any networked PC. Complying with chart auditors is simply a matter of sitting them down in front of an available PC, since each workstation is the chart rack. And since an EMR results in better documentation and better organization of the chart, EMR practices typically pass chart audits with flying colors.

- **Improved Physician office Efficiency, Patient Care, and Service**

Higher Quality Documentation (legible, organized, and complete): An EMR helps standardize chart quality across a practice, minimizing problems that result from poor handwriting or inconsistencies in documentation.

Built-in Protocols and Reminders (including Health Maintenance): EMRs can provide physician offices with important information at the time of documentation. Diagnosis-specific templates can help guide and remind providers of special protocols and tests for certain conditions. Additionally, an EMR incorporates age, sex, and disease-specific health maintenance reminders that are flagged each time a patient chart is accessed. Practices can proactively evaluate and improve their performance on routine health maintenance, by querying the patient database for all patients with overdue items and sending reminder letters.

More Efficient Signing of Charts: Paper-based systems require the physical presence of charts for signing. With an EMR, all unsigned components, whether progress notes or lab results, can be signed electronically from any workstation—at the office or at home. This allows fast and efficient review at times and locations that are convenient to the provider. Additionally, some EMR systems provide the administrator with reports on all unsigned notes—an excellent tool to help insure chart quality across providers.

Patient Education and Involvement: Many physicians utilize the EMR as a tool to engage patients more actively in their care. For instance, patients on weight loss, blood pressure, or cholesterol reduction programs respond to graphical representations to their progress that can be readily created using the EMR. EMR systems also offer access to specialized patient education handouts that can be printed for patients directly from the point of care. Electronic patient education also allows for more conditions to be covered with less cost, than with traditional paper handouts.

Summary - The electronic medical record is one of the few technologies that has an impact on both the physician office and administrative aspects of the practice. The Business Case for EMR is based not only on its ability to lower costs, increase revenue, and improve the efficiency and operation of a practice, but also on its role as a tool to enhance the quality of services provided. Additional benefits can accrue when the system is fully integrated with the scheduling and billing functions of the practice. While the decision to transition to an electronic medical record requires a commitment of significant capital, human resources, and leadership at the physician level, there are very few other investments that offer a greater return.