

**FOLLOW-UP RETURN ON INVESTMENT STUDY
OSWEGO COUNTY OB/GYN, P.C.**

**CONDUCTED BY GATES, MOORE & COMPANY
FOR**

GREENWAY MEDICAL TECHNOLOGIES

Oswego County Ob/Gyn began the installation of their Greenway PrimeSuite system in January 2003. During the initial conversion the focus was on entering patient financial data and utilizing the appointment scheduling system. With subsequent training efforts the practice went live with the EMR portion of PrimeSuite in March 2003; however, at that time the EMR program was only utilized for gynecological visits. Subsequently in October 2003 the practice began utilizing the EMR for obstetrical visits.

Gates, Moore & Company conducted the original return on investment (ROI) study for Oswego County, Ob/Gyn in November 2002. At that time a variety of collection tools were utilized to measure staff activities with regard to all of the functions in the practice related to patient clinical and financial records. Specific observations were made during a two-day visit to the practice. Interviews were conducted with clinical and administrative support staff members, the physicians, and the practice administrator. The observations and measurements were documented and specifically segregated into 12 categories. These categories are as follows:

- Patient registration/check-in
- E/M CPT code distribution analysis
- Clinical encounter, order management – lab
- Clinical encounter, documentation – physician
- Clinical encounter, documentation – nurse
- Clinical encounter, chart management
- Hard costs (of supplies and space)
- Check-out/charge entry
- Payments
- Claims
- Statements
- Staffing

By dividing the various practice functions that are associated with patient financial and clinical encounters into these categorical areas we were able to demonstrate specifically the potential benefit that would come by utilizing a fully integrated medical practice software product. While traditionally practices have utilized software for financial and appointment scheduling applications, the integration of the electronic medical record has been a slow evolution. However, there has always been the supposition that by implementing a completely integrated system that tracks all financial and clinical information related to the patient, specific savings could be realized in the practice. This was the premise that the initial return on investment study was conducted on using Gates, Moore & Company's experience, expertise and familiarity with the day-to-day operations of medical practices.

This report details the findings of our subsequent ROI study of Oswego County, Ob/Gyn, P.C. It should be noted that the numbers and the observations that are reflected here were made after the practice had been fully implemented in the integrated PrimeSuite program for a period of six months.

As will be noted in this report, there are still some areas that need to be finally and fully implemented within the practice. As well, it should be noted that there were some transitional costs related to the implementation of the software that were not unanticipated. It should also be noted that there are still some technical barriers that are beyond the control of Oswego Ob/Gyn in regard to fully utilizing of the benefits of PrimeSuite. The one key technical barrier has been the lack of availability of a T1 line to a satellite location. In this particular situation the practice only operates in the location one day per week and the cost of T1 when it is available will be approximately \$500 per month. The practice is in the process of further weighing its options in this regard, but for the time being has opted to stay with paper charts in this location. We do not view this as a total setback to the concept since this represents a very small percentage of the practice's day-to-day operations. Nor do we feel that it has negatively impacted the return on investment.

One of the other barriers that the practice has experienced has been somewhat self-imposed, that is that it has not fully utilized all of the fields available in the PrimeSuite program. For example, not all of the fee schedules for the various managed care companies have been fully input into the program; accordingly, the practice cannot utilize one of the benefits of PrimeSuite in regard to determining the appropriateness of payment from the various carriers. Some other minor issues remain as will be discussed regarding the specific categorical areas that we studied.

PATIENT REGISTRATION/CHECK-IN

The positive impact of time spent on patient check-in for new and established patients has been realized, yet its benefit is difficult to quantify. Some aspects of the registration process obviously have been slightly expedited, such as scanning insurance cards into the system as opposed to copying them and attaching them to a paper record. However, based on conversations with the staff, the difference now, although positive, can be further improved through the implementation of a patient interface allowing for on-line or kiosk-based patient pre-registration and check-in. Upon delivery of this functionality from Greenway and deployment by the practice, additional benefits and perhaps a more quantifiable result will be recognized. Until the provision of this on-line pre-registration functionality, the staff continues to manually input information once the patient has handwritten the information on a registration sheet

As previously mentioned, while improvements in the practice's patient registration / check-in process has been recognized as a result of the system deployment, these improvements are not quantifiable. Therefore, we have not applied an actual dollars savings amount to this category.

Actual Return on Investment: \$0

E/M CPT CODE DISTRIBUTION ANALYSIS

Categorically it was anticipated that with benefits of an electronic medical record the physicians would code their office encounters with patients more appropriately. The original measurement used to assess this was a comparison of the frequency of new and established patient office visits and new patient consults with national bell curve data from Medicare. (There is recognition that this data may not be entirely reflective of a commercial population in that it only measures information submitted on Medicare patients. None-the-less, it is widely accepted as an industry standard of measurement. As well, there are no other comparative sources for this type of data.)

On subsequent review we examined the practice's coding patterns for these same types of visits after a significant period of utilization of the PrimeSuite EMR.

The results of the follow-up review indicate that there has been nearly no improvement in the coding utilization patterns for these codes. Exhibit 1 indicates that there has been significantly less impact than was originally anticipated. The only category that has had any positive change is that of Established Office Visits, which had a net improvement of \$1,457. However, the total dollar revenue in this category is nearly \$110,000 less than when it was measured in 2002.

In considering this situation there may be several reasons behind it. First, PrimeSuite EMR does allow the physician to override a code. This wasn't mentioned as a common occurrence during our site visit, so we are unsure if this is really a factor. Secondly, this may be an indication that the Medicare bell curve data simply does not serve as a good benchmark for what happens in a practice that has a largely commercial patient base. As well, this data is not geographically specific, which may have some impact on its validity as a benchmark. Finally, we considered whether there was a shift in coding that is not reflected in the bell curve data.

Specifically, there is no benchmarking data to determine the most appropriate ratio of new patient visits to preventative health new patient visits. This is an area of coding in ob/gyn practice that is often fraught with confusion in regard as to how to code specific patients.

A review of the Oswego data indicates that there has indeed been a shift to using more preventative medicine codes than in the past. The second chart on Exhibit 1 indicates a nearly 140% increase in preventative code usage in 2004 versus 2003. The financial impact of this is in excess of \$94,000. Typically in reimbursement scenarios preventative visits are reimbursed at a higher rate than routine office visits. Thus if the practice appropriately codes patient visits in this manner, this shift in coding patterns should have a positive impact on cash flow.

This does appear to be the case in Oswego. If we consider that they have fallen short of the anticipated financial benefits of improved coding on the standard measured codes, but have appropriately shifted their coding to the prevention codes, there is a net financial return of \$24,620.

Accordingly, it is our opinion that the practice's utilization of the EMR through PrimeSuite has enabled them to more appropriately code and receive some level of return. As well, there is still potential for additional return if coding improvements continue.

Actual Return on Investment: \$24,620

CLINICAL ENCOUNTER, ORDER MANAGEMENT-LAB

A significant amount of time was being spent by the practice annually in pulling and filing test results, and by the physicians, nurse practitioners or midwife reviewing them. This was one area in which the practice expressed extreme satisfaction at the outcome.

All lab results are now zeta faxed to nurses in the practice who in turn route abnormal results to the physician's desktop immediately. The physicians take the opportunity to review labs in between patients or at breaks throughout the day. Historically the shortest time that a physician could expect to review a lab would typically be 36 hours after the patient was seen. Now as before, labs are couriered to the hospital immediately and as the hospital runs the labs,

they are sent back via zeta fax. There are now opportunities for the physicians to review the labs in as short a time span as three hours from the time the patient was seen. This has cut down on the time required to handle charts by the administrative and clinical staff and has increased the physician's productive time.

Actual Return on Investment: \$4,240

CLINICAL ENCOUNTER, DOCUMENTATION – PHYSICIAN

The physicians originally estimated that they spent approximately one-half hour per day charting, and another quarter to one-half hour reviewing lab and other reports. As mentioned in the previous section, the time to review lab reports has now been cut extremely and as has the charting time. What this has done is to enable the physicians to actually see patients for an additional 30-60 minutes per day while remaining within the same scheduled closing time of 5:00 p.m.

As a result, the practice has increased its productivity by approximately 24 patients per week. Conservatively considering that the average reimbursement per these patient visits is approximately \$45, this accounts for an additional revenue benefit of \$56,160 annually.

As well, the physicians anecdotally related that since they are spending less time in dictating letters to referring physicians, but presenting those referring physicians with a much neater and more complete package by way of sending a standard cover letter and the H&P notes from PrimeSuite, they feel that they are receiving more direct referrals. They commented that several of the physicians that refer to them are absolutely astonished that they get the results back so quickly and so thoroughly. This has enhanced the practice's visibility within the community. The intent is to measure the referrals and compare them to previous years to determine if this indeed is occurring.

Actual Return on Investment: \$56,160

CLINICAL ENCOUNTER, DOCUMENTATION – NURSE

The time that the nurses spend in documenting patient information, documenting ultrasounds and retrieving information in order to respond to the patient phone calls has been cut significantly. In fact, the practice has lost one nurse (through attrition) that has not been replaced. (This savings is referenced below under Staffing.) What has also impacted this area significantly is that the nurses now do not put in any overtime. This obviously has saved the practice money, and has boded well for staff morale.

Actual Return on Investment: \$15,543

CLINICAL ENCOUNTER, CHART MANAGEMENT

As was anticipated, the amount of time spent handling paper in the practice has been reduced drastically. In fact, the observation is that it was very impressive to see registration and check-out clerks who do not have to constantly get up and leave their desks and look for patient information. As was indicated above with the nursing situation, the planned addition of two new providers will not result in any additional hiring of administrative staff.

Accordingly, the practice feels that it has fully realized the opportunity costs associated with routinely handling charts and the time spent looking for charts that were misplaced.

Actual Return on Investment: \$35,820

HARD COSTS (SUPPLIES/SPACE)

The actual supply cost has gone down with the implementation of PrimeSuite.

The space utilized for chart storage in the main facility has been converted now to an office space for the office manager. However, because of the long history of the practice it has been necessary for the practice to still retain and store old records. We would concur with this practice since it appears that the amount of square footage utilized for storage is nominal. As well, the space in which the records are stored could not be utilized for clinical productivity.

Actual Return on Investment: \$2,405

CHECK-OUT/CHARGE ENTRY

The practice has still not fully implemented the e-ticket concept, but anticipates doing so in fairly short order. Nonetheless, the check-out and charge entry time has been decreased by the elimination of staff having to ask physicians about coding questions and the conditions have improved over the limitations from the previous software program on cash controls.

Actual Return on Investment: \$4,457

PAYMENT

The practice's gross collection rate has improved from 52.2% to 56.4%. This is despite the fact that the practice has not fully installed all of the fee schedules into PrimeSuite. However, there are demonstrably fewer rejected claims and a quicker turnaround time in accounts receivable management.

Actual Return on Investment Realized: \$193,764

CLAIMS

The number of hard copy claims has been reduced significantly as has the amount of time spent in processing these claims. However, there are still some transmittal delays associated with a small number of carriers. Accordingly the realization in this categorical area has not been 100%.

Actual Return on Investment Realized: \$1,243

STATEMENTS

The practice has fully implemented the PrimeSuite statement which was a savings over the previous method that was utilized to send statements.

Actual Return on Investment: \$400

STAFFING

As was mentioned previously, Oswego County Ob/Gyn has cut one nursing position due to attrition. The opportunity to cut additional positions does not appear to be present at this time. However, there is still some overtime savings to be realized on the administrative side. We anticipate that this will provide an additional \$14,730 in savings in this category. We have not included it at this time since that overtime was actually realized during this period of implementation. Nonetheless, improvements are taking place.

Actual Return on Investment: \$35,680

INTANGIBLES

Some of the other intangible benefits that have been realized by Oswego County Ob/Gyn with the implementation of this system include what they perceive to simply be a better level of patient care. This is particularly reflected in the turnaround time regarding labs. There is also a much better feeling regarding internal communication among all staff and physicians.

There were significant comments from the physicians and other providers regarding the ability to automatically zeta fax prescriptions to area pharmacies. This is an element that will also have a definitive impact on patient care given the concerns and focus on patient safety issues as related to prescriptions.

All of the physicians indicated a time savings that they feel is very real. They are not confronted with stacks of charts and paper at the end of the day. They have actually cut down the time they spend on patient phone calls because instead of having the patient have to walk them through their situation, they can instantly review the chart. Some of these times savings are obviously measured in terms of the physicians' increased production as cited above. Others are the intangible measurements such as being able to be home in time for dinner or to enjoy time with the family.

SUMMARY

The tangible measurements indicate that the total return on investment for the installation of PrimeSuite in Oswego County Ob/Gyn annualized for 2004 will be \$374,332. It is likely that this number will actually also increase as the practice becomes more familiar with all of the operational benefits of PrimeSuite and fully implements all operating packages. As can be seen by this comparison chart, there has actually been a greater realization in some areas than originally anticipated. This is particularly true with the clinical encounters documentation-physicians.

Table 1. Comparison of Anticipated vs. actual ROI, Oswego County Ob-Gyn, PC

	Anticipated Return on Investment	Actual Return on Investment
Patient Registration/check-in	\$5,047	\$0
E/M CPT Code Distribution Analysis	57,967	24,620
Clinical Encounter, Order Management - Lab	4,240	4,240
Clinical Encounter, Documentation - Physician	1,038	56,160
Clinical Encounter, Documentation - Nurse	12,184	15,543
Clinical Encounter, Chart Management	35,820	35,820
Hard Costs (Supplies/Space)	4,683	2,405
Check Out/Charge Entry	12,614	4,457
Payments	237,847	193,764
Claims	3,103	1,243
Statements	400	400
Staffing	<u>61,844</u>	<u>35,680</u>
Total	<u>\$436,787</u>	<u>\$374,332</u>

At the time of the reassessment for the return on investment the physicians had not yet seen the hard numbers in terms of how PrimeSuite impacted their practice. However, they and the administrator universally commented that they were aware of the improvements that PrimeSuite has brought to their practice. These improvements have now been documented in some cases by the actual witnessing of specific changes and patterns such as coding and collections. They have been documented in other ways by the absence of certain activities, such as looking by medical charts and employees working overtime.

We therefore consider that Oswego County Ob-Gyn has met nearly 85% of the original financial return on investment anticipated to have achieved its anticipated ROI, with additional financial rewards to come following full and sustained implementation.

