

White Paper: Building a Proactive External Peer Review Program & Estimating ROI: How to Get Started

For Hospital Groups, ASCs and Specialty Medical Facilities

Executive Summary

Implementing an external peer review program and determining the potential financial return on investment (ROI) may seem like a daunting task. Until recently, there was no way to determine the ROI for investing in external peer review. In the age of tighter budgets and increased scrutiny on expenses, hospital executives need to be able to justify investments and show how they can enhance a hospital's bottom line.

AllMed's new ROI model for external peer review is a straightforward and easy-to-use mathematical formula that hospitals can use to determine the financial payback associated with ongoing external peer review. In this White Paper, we will review the steps for building a proactive external peer review program, which includes calculating a hospital's potential annual net savings using AllMed's ROI model.

The financial payback on an investment in ongoing external peer review results directly from the reduction in professional liability costs over time. In addition to the long-term financial benefits, a well-executed external peer review program brings qualitative improvements to many areas, including physician performance and the quality of care, as well as improved reputation and improved staff/physician retention.

Risk reduction is a continuous process. The first step of the cycle is the assessment of risk. In the second step, the hospital determines its risk reduction goals. The third and final step requires the development of a corrective action plan and its successful implementation. Once the plan is implemented, the steps of the cycle are repeated as necessary. Continual monitoring of risk exposure is critical, especially once improvement begins, so that attention and resources remain focused and are not diverted to other areas.

The case study that follows builds upon an earlier White Paper developed by AllMed entitled "Calculate the Return on Investment From External Peer Review," which can be found at www.allmedmd.com/landing-pages/hpr-landing-pages/roi-on-external-peer-review

Introduction

The current economy and the escalating frequency of litigation have generated the demand for increased risk assessment to identify, control, and prevent medical risk (adverse events). Although the basic purpose of a risk management program is to minimize the cost of loss, it is also a means of improving and maintaining quality patient care. An effective risk management program begins with a system for identifying the specific events likely to result in loss and the general clinical areas of risk exposure. Identified risks must then be prioritized in order to expend organizational resources in the most cost-effective manner. In addition to reliable recognition of risk exposure, effective risk prevention also depends on determination of its causes, implementation of corrective action, and continual monitoring of risk indicators.

When properly executed, external peer review can reduce medical errors by consistently providing objective feedback to physicians and by identifying performance-enhancing corrective actions for them and for hospital operating and/or training processes.

Risk management plays a major role in limiting vulnerabilities in order to prevent, monitor, and control areas of potential liability exposure. According to a recent industry analysis, claims against hospitals have entered a growth phase in which both the frequency and severity of claims will increase. The American Society for Healthcare Risk Management (ASHRM) and Aon Risk Solutions expect the total cost of medical malpractice claims per hospital bed to grow 5% annually. This, in addition to the uncertainties associated with healthcare reform, presents hospitals with the ongoing challenge to undertake more proactive risk management methods focused on the reduction of medical errors by improving physician performance. When properly executed, external peer review can reduce medical errors by consistently providing objective feedback to physicians and by identifying performance-enhancing corrective actions for them and for hospital operating and/or training processes.

External Peer Review Decreases Risk and Improves Quality of Care

When properly executed, external peer review can reduce medical errors through objective evaluations performed in a non-punitive, educational context that supports a healthy culture of continuous improvement. This results from physicians knowing that their work will be objectively evaluated at regular intervals by board-certified specialists with the same credentials and from similar practice settings, thereby leading to improved quality of care and patient safety and, over time reducing a hospital's professional liability claims and costs. Ongoing evaluation of physicians can also uncover problematic practice patterns, as well as physician- and hospital-level issues that need to be addressed.

Results of a recent RAND study found a highly significant correlation between the frequency of adverse events and malpractice claims. It found that, on average, a hospital that shows a decrease of 100 adverse events in a given year will also see a 37% decrease in malpractice claims. Similarly, a facility that shows an increase of 100 adverse events in a given year will see, on average, a 37% increase in malpractice claims.

External peer review can play a key role in reducing or eliminating risks associated with increased malpractice claims. In addition, it can directly lower the cost of delivering quality care, with the greatest impact on high-risk surgical specialties such as cardiology, neurology, orthopedics, obstetrics, and emergency medicine. Unlike internal peer review, which only looks at sentinel events, external peer review can help hospitals to discover, highlight, and deal with physician performance issues quickly and efficiently before they turn into claims. In addition, external peer review avoids conflicts of interest that can arise from economic, professional, or social ties among physicians within a single institution. It may also be an effective solution for hospitals that lack adequate physician resources to conduct timely performance analysis.

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A Case Study Starts on the Next Page

Case Study: Steps for Building An Ongoing External Peer Review Program

The data presented in this section are based on 2009 findings from a full-service 300-bed hospital located on the outskirts of Cleveland, Ohio. The hospital offers a full range of care, and services including comprehensive cardiovascular services, radiation oncology, gynecological cancer, inpatient and outpatient surgery, pain management and digestive health, inpatient pediatrics, as well as a pediatric emergency unit.

1. Perform departmental risk assessments

- ▶ Oncology
- ▶ Cardiothoracic services
- ▶ Stroke Center
- ▶ Emergency
- ▶ Pediatric Emergency
- ▶ Radiology
- ▶ Obstetrics/Gynecology
- ▶ Neonatal ICU
- ▶ Pediatric Inpatient

2. Rank specialties by risk*

1. Cardiothoracic services/interventional cardiology
2. Obstetrics/Gynecology
3. Neurosurgery
4. Oncology

*These rankings are based on the number of malpractice claims, industry data, and data from AllMed's external peer review caseload.

3. Rank surgical procedures for review

For this case study the focused monitoring of cardiothoracic surgeries, which often involve high-risk cases, was chosen as a starting point for implementing a proactive external peer review program.

Cardiothoracic surgery (no. of procedures)

- ▶ Isolated coronary artery bypass graft (CABG) (251)
- ▶ Valve procedures (56)
- ▶ Thoracic (251)
- ▶ Other (pacemakers, Maze & CABG and/or valve procedures) (80)

4. Develop a sample size and interval for case reviews

- ▶ Total no. of cardiothoracic surgeries: 638
- ▶ Minimum number of cases to be reviewed to obtain a 90% - 95% confidence level: 191 - 241

(The confidence level refers to the level of uncertainty you can tolerate. In this case, it refers to the degree of likelihood that external peer review will be able to accomplish its goals.)

5. Develop a schedule and budget

- ▶ 3 to 4 reviews per month per doctor
- ▶ Length of each review: 100 to 150 pages
- ▶ Average cost per review: \$350

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Nov | Dec | Annual Total | Total Cost Per Dr. |
|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------|--------------------|
| Interventional Cardiology MD1 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 42 | \$14,700 |
| Interventional Cardiology MD2 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 42 | \$14,700 |
| Interventional Cardiology MD3 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 42 | \$14,700 |
| Interventional Cardiology MD4 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 42 | \$14,700 |
| Interventional Cardiology MD5 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 42 | \$14,700 |
| Total Reviews Per Month | 17 | 18 | 17 | 18 | 17 | 18 | 17 | 18 | 17 | 18 | 210 | \$73,500 |

6. Calculate the projected ROI of the program

O = total acute care bed equivalents

$$(Acute\ care\ beds \times ECF) + (ED\ visits \times ECF) + (Inpatient\ surgeries \times ECF) + (Outpatient\ surgeries \times ECF) + (Births \times ECF)$$

ECF = exposure conversion factor; weights hospital professional liability.

| Hospital Acute Care Bed Equivalent Calculation | Number | | Estimated Conversion Factor | = | Acute Care Bed Equivalents |
|--|--------|---|-----------------------------|---|----------------------------|
| Acute Care Beds (staffed) | 300 | X | 1.000 | = | 300 |
| ED Visits | 58,000 | X | 0.0023 | = | 133 |
| Inpatient Surgery | 7,224 | X | 0.0240 | = | 173 |
| Outpatient Surgery | 16,250 | X | 0.0013 | = | 21 |
| Births | 722 | X | 0.0610 | = | 44 |
| Total Acute Care Bed Equivalents | | | | | 671 |

PE = Hospital-employed physician equivalents
 (*Acute care specialty A x PR*) + (*acute care specialty B x PR*) + (*acute care specialty C x PR*)

PR = physician relativities; weights relative risk by specialty and should include nonemployed physicians, if any, for whom the hospital pays for professional liability coverage

| Hospital Employed Physician Equivalent Calculation | Number | | PR | | Physician Equivalents (PE) |
|--|----------|---|--------------|---|----------------------------|
| Cardiothoracic Surgery | 5 | X | 4.000 | = | 20 |
| Total (PE) | 5 | | | | 20 |
| Average Conversion Factor | | | 4.000 | | |

L = hospital professional liability + physician liability losses (i.e., HPL + PL)

- ▶ Step 1: PE x (ASHRM risk conversion factor)
- ▶ Step 2: (Results from Step 1) + O = OBE = occupied bed equivalents
- ▶ Step 3: (OBE x 2010 benchmark loss cost per OBE) x (state/county adjustment factor) = 2010 benchmark estimated loss

| Summary of Hospital Professional Liability | Number | | ASHRM Risk Conversion Factor | | Occupied Bed Equivalents |
|--|--------|---|------------------------------|---|--------------------------|
| Acute Care Bed Equivalents | | | | | 671 |
| Physician Equivalents | 20 | X | 2.7500 | = | 55 |
| Total Occupied Bed Equivalents (OBE) | | | | | 726 |
| 2010 Benchmark Loss Cost per OBE | | | | | \$3,280 |
| State/County Adjustment Factor | | | | | 1.1 |
| 2010 Benchmark Est. Loss | | | | | \$2,619,408 |

M = estimated percent reduction in malpractice claims/accrual
A x Rand study coefficient

Assume A, the estimated reduction in adverse events from external peer review = 20%;
 Rand study coefficient, a reduction in 10 adverse events leads to a decrease of 3.7 malpractice claims

| Est. % Reduction in Adverse Events (A) | | RAND Coefficient | = | Est. % Reduction in Malpractice Claims (M) |
|--|---|------------------|---|--|
| 20% | X | 0.37 | = | 7.40% |

Potential Total Savings From Reduced Claims = M x L

(Calculated by using number of occupied bed equivalents and physician equivalent calculations.)

| Est. % Reduction in Malpractice Claims (M) | | Annual HPL+PL Loss (L) | = | Potential Total Savings from Reduced Claims |
|--|---|------------------------|---|---|
| 7.40% | X | \$2,619,408 | = | \$193,836 |

S = Annual net savings in HPL/PL to hospital
(Potential Total Savings From Reduced Claims) – (E)

E = Annual expenses associated with ongoing external peer review)

| | |
|------------------|---|
| \$193,836 | (Potential Total Savings from Reduced Claims) |
| -\$73,500 | (E = Cost of Ongoing External Peer Review) |
| \$120,336 | (Annual Net Savings to Hospital) |

| Potential Total Savings | | Cost of Ongoing External Peer Review | = | Payback Ratio |
|-------------------------|---|--------------------------------------|---|---------------|
| \$193,836 | / | \$73,500 | = | 2.64 |

7. Gain management agreement through budget cycle

Comprehensive Risk Management

The American Society for Healthcare Risk Management defines risk management as the process of making and carrying out decisions that will assist in prevention of adverse consequences and minimize the adverse effects of accidental losses upon an organization. A comprehensive risk management program is both reactive in its response to events that have already occurred and proactive in its prevention of additional events.

Risk Assessment

Hospitals use a variety of means to identify risk cases and risk exposure (adverse events). In reactive case identification, an organization assesses for risk in cases identified external to the organization as being problematic. In proactive case identification, an organization initiates the identification of cases that are more likely than others to carry risk.

Reactive Case Identification

The simplest approach to identifying risk is the assessment of clinical events that come to a hospital's attention in the ordinary conduct of business. The clearest example of this is a lawsuit. Assessment of legal actions against a hospital usually requires careful examination of the specific circumstances of the clinical case, including a peer review of the medical record.

The review of medical records requested by attorneys is another method by which risk can be identified. An attorney requesting records indicates that the case involves some legal activity, and some organizations routinely review all such cases. However, reasons for the request do not necessarily indicate wrongdoing by providers or the institution. A cursory review of requested records may help to identify those cases requiring more detailed review.

Review of patient complaints is a good way to detect cases with risk and poor quality. Many hospitals have a formalized mechanism for handling patient complaints. Focused review of complaints that suggest risk or poor quality can help to uncover problematic areas.

Proactive Case Identification

Utilizing a systematic external peer review program can help hospitals gain an ongoing proactive evaluation of each physician's performance at a summary level. Products such as AllMed's MedScore complement existing performance data collection and internal peer review processes by providing consistent scored analyses of a valid sampling of all practitioners' work at regularly scheduled intervals.

Hospitals can specify event-based cases (e.g., all emergency room deaths) as a result of a known institutional area of concern about clinical quality or risk, as well as depend on reporting from staff, to identify groups of cases for screening. Rather than wait for a legal action, a record request, or a patient complaint to initiate the process of risk identification, most hospitals require staff to notify the risk management or legal department whenever an untoward or unusual incident occurs. This process is often referred to as occurrence reporting.

Unfocused peer review of randomly selected medical records can also lead to a consensus on the identification of problem areas.

Products such as AllMed's MedScore complement existing performance data collection and internal peer review processes by providing consistent scored analyses of a valid sampling of all practitioners' work at regularly scheduled intervals.

Risk Prioritization

Risk prioritization is important not only in assessing the proper response to a recognized risk case, but also in allocating resources for risk prevention.

For hospitals, mandatory reporting is typically required in the event of the following injuries to a patient: death, brain damage, neurological deficit, nerve damage or paralysis, loss of limb, or failure to diagnose a condition that results in continuous course of treatment. In addition, a catchall provision is often included that requires reporting of any claim or medical incident that has a value equivalent to a certain percentage (e.g., 50%) of the self-insured retention limits.

A more detailed list of key specific risks may be compiled based on a hospital's individual experience. A typical list might include the following major headings: medication error, blood-related, surgery-related, anesthesia-related, food-related, patient-induced, policy-related, radiology-related, medical record-related, laboratory-related, intravenous-line related, newborn-related, maternal-related, and physician-related.

Risk Control

Risk control is the process of managing a recognized risk case to minimize the potential for loss. Hospital administrators often devote more time to risk control, rather than risk prevention, due to the fact that lawsuits represent actual losses. However, uncertainties associated with healthcare reform and increased pressure to cut costs are forcing hospitals to adopt more aggressive risk management methods focused on the reduction of medical errors by improving physician performance.

Conclusions

Ongoing external peer review facilitates regular assessment of high-risk specialties, allowing risk avoidance through prevention. Rather than taking a reactive approach and reviewing only sentinel events, external peer review focuses on promoting a proactive culture of investing in loss prevention.

From a qualitative standpoint, ongoing external peer review as a risk reduction strategy reduces medical errors, adverse events, and malpractice costs over time; improves physician performance; provides consistent, objective feedback; identifies process improvement opportunities; ensures transparency and accountability; and promotes a culture of continual improvement.

As shown in this case study, AllMed's ROI model now allows quantitative assessment of investing in ongoing external peer review, strengthening the argument for implementing a proactive program. Working on the premise that ongoing external peer review reduces medical errors, thereby reducing liability, the model provides a critical quantitative component for conducting a comprehensive evaluation of ongoing external peer review.

About AllMed

Founded in 1995, AllMed is a URAC-accredited independent review organization (IRO) providing external peer review services to leading hospital groups, ASCs, and specialty medical facilities nationwide. More than 400 licensed and board-certified physicians in active practice conduct AllMed's evidence-based medical reviews.

Move from compliance to high performance, with PeerPoint^(sm) services from AllMed. PeerPoint offers a complete solution for focused professional practice evaluations (MedEval) and ongoing professional practice evaluations (MedScore). Rather than using external peer review to react to negative events, PeerPoint ensures a proactive, systematic, and evidence-based appraisal of credentials, privileges, sentinel events and sensitive performance issues.

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Appendix A: A Detailed Description of the Model

Variables and Calculations

The ROI model's variables take into account the geographic differences among hospitals in the number of beds, services, and types of physicians, while the conversion factors—derived from the Aon/ASHRM report and the RAND study—weight hospital professional liability and risk by specialty, based on these variables.

O = total acute care bed equivalents

$(Acute\ care\ beds \times ECF) + (ED\ visits \times ECF) + (Inpatient\ surgeries \times ECF) + (Outpatient\ surgeries \times ECF) + (Births \times ECF)$

ECF = exposure conversion factor; weights hospital professional liability.

PE = Hospital-employed physician equivalents

$(Acute\ care\ specialty\ A \times PR) + (acute\ care\ specialty\ B \times PR) + (acute\ care\ specialty\ C \times PR) \dots$

PR = physician relativities; weights relative risk by specialty and should include nonemployed physicians, if any, for whom the hospital pays for professional liability coverage.

L = hospital professional liability + physician liability losses (i.e., HPL + PL)

- ▶ Step 1: PE x (ASHRM conversion factor)
- ▶ Step 2: (Results from Step 1) + O = OBE = occupied bed equivalents
- ▶ Step 3: (OBE x 2010 benchmark loss cost per OBE) x (state/county adjustment factor) = 2010 benchmark estimated loss

M = estimated percent reduction in malpractice claims/accrual

$A \times Rand\ study\ coefficient$

Assume **A**, the estimated reduction in adverse events from external peer review = 10%;

Rand study coefficient, a reduction in 10 adverse events leads to a decrease of 3.7 malpractice claims

Potential Total Savings From Reduced Claims = **M x L**

(Calculated by using the number of occupied bed equivalents and the physician equivalent calculations.)

S = Annual net savings in HPL/PL to hospital

$(Potential\ Total\ Savings\ From\ Reduced\ Claims) - (E)$

E = Annual expenses associated with ongoing external peer review)

Payback ratio (ROI) = $(Potential\ Total\ Savings\ From\ Reduced\ Claims)/E$

The model can also be adjusted for different levels of coverage and reinsurance.