Quality ROI

In Healthcare

PRAGMATE

May 5, 2008

Authored by: Mark P Kajdos

PRAGMATE

Quality ROI (Return on Investment)

In Healthcare

Introduction

What is Return on Investment (ROI) for the quality control program?

Anyone considering implementation of a quality control program should be asking this question. The determination of ROI is important to any decision. Will the additional money spent lead to more money earned?

Why even consider implementing a formal quality control program?

- **Reputation** is important for healthcare organizations. The perception of quality is essential for any business and especially in something as personal as healthcare. Management of quality within healthcare is critical for establishing and keeping the reputation of an organization intact.
- **Liability** is an obvious concern for all healthcare professionals. With a substantial part of total healthcare costs going to pay for costs of litigation, settlements, and damages, this consideration looms large.
- **Regulatory Compliance** requirements represent another influence that, while not necessarily contributing to quality itself, introduces high risk for a healthcare organization. If your facility is closed for regulatory non-compliance, your return on investment may enter uncharted territory.

ROI is a measure that determines how much profit you were able to generate from money invested. For the Quality Control Program, ROI measures incremental income that will be derived from investing the implementation and support costs.

ROI considerations are important because they will dictate the appropriate action:

- If the ROI quality control component is negative, then the best course of action is to minimize the costs of quality control. The liability and perception may be put at risk, but minimal regulatory compliance is likely in order.
- If the ROI quality control component is positive, then the best course of action is to implement a program so that it becomes part of revenue generating activities.

This white paper focuses on how to approach an ROI computation. It shows that the return on investment for a quality control system is a value proposition for a successful healthcare organization.

PRAGMATE

Background

The need for profit is an obvious economical necessity. While there are valid reasons for businesses operating for some time without profit, profit remains a prerequisite for any successful business operation. The allocation of the business resources must be aligned to maximize profit.

The management decision process about any initiative or project must include the profit consideration. The question is: if we spend $1, what will be the effect of that expenditure on our profit? Since the $1 will be added to the costs – or subtracted from profits, the expenditure of $1 must result in either lower overall costs or in higher revenues.

Simply stated, for the $1 expenditure to reflect positively on ROI, then either it must decrease costs by more than $1 or increase revenues by more than $1.

Return on Investment

It is important to use proper terminology for any serious analysis. While concepts of ROI are reasonably simple, some in-depth comments may be useful.

The Standard accounting definition for ROI is as follows:

ROI = (Net Income + Interest * (1 – Tax Rate)) / Book Value of Assets

Where

Net Income = Total revenue minus total costs.

Interest = Interest earned on the capital that is not deployed.

Tax Rate = Incorporated to keep the Interest net of tax paid on the interest income.

Book Value of Assets = Total value of capital deployed in operation of the enterprise.

Important considerations for evaluating an ROI computation (using the above formula) involve many parameters concerning income based on projections. Additionally –duration of project is important: the expenditure needs to be made immediately, while recoupment of the initial investment will be a matter of course for the future. Any ROI computation will be based on projections and management will need to decide on a degree of confidence in those projections.

Prudent management will consider the following in its evaluation of the computed ROI:

- **Length of project** – the longer the project, the higher the potential overstatement of the ROI value proposition. Common rationale dictates that the longer a project expands, the more likely there is to have increased risk and exposure. This is especially true when it comes to projects that have a long lag between expenditure and income from that expenditure.
- **Capitalization policy** – the expenditures are accounted either as costs of operation or increase in assets. If the expenditure is fully capitalized (included in the Book Value of Assets) it will decrease the ROI for the same Net Income. Having the least amount of expenditure capitalized, will increase the probability of overstatement.
- **Depreciation of assets** – this relates to the Capitalization Policy. As depreciation increases, the ROI value proposition will increase by decreasing assets part of the formula.
- **Growth Rate** – the company growth rate affects the ROI. Companies in a fast growth status usually understate the ROI. The result is a common sense consequence representing growth where there is a lag between expenditures and income resulting in lower income for a given asset basis.

The above formula focuses on whole enterprise and is useful in determination of company value. A simpler approach seeks to determine the impact of a particular expenditure. In this case, the simplified approach focuses on the marginal effects of expenditure resulting in an answer that defines how much this incremental revenue produces in terms of the incremental profit. Note that while the traditional formula focuses on total Income and Assets, this formula is expense and profit centric. The concept can be summarized in answering the following question:

Question: If expenditure increases by a given amount, how much will the profit change?

Answer: The simplified operations focused ROI formula is as follows:

ROI = (Δ Profit / Expenditure) %

Where:

Δ Profit is the change in profit in $ for the measurement period.

Expenditure is the amount of proposed expenditure plus any carrying costs (interest expense) in $ for the measurement period.

% means that the ratio is expressed in the percent.

For Example:

When the **E** is **$100** and **Δ P** is **$110**, then the **ROI** is **$110 / $100 = 10%**.

Let's investigate various results of the formula and their impact on the enterprise.

The critical value of ROI is obviously **0%**. In this situation there is no change in profits due to the expenditure. This case may still make sense because of other, non-monetary benefits.

- The ROI that is negative is clearly a contraindication for the expenditure. Such expenditure may only be valid if undertaken to achieve compliance with regulatory requirements.
- The ROI that is positive is obviously justified. As discussed earlier, the project proposal needs to be studied in depth for validity of assumptions, but it makes sense to spend money if it results in higher returns.

The ROI concepts are simple to understand and a wise manager will recognize that not all benefits can be expressed in terms of income using a strict casuistic approach. For example, even though the ROI of charitable contributions would be difficult to associate with a stream of revenue, its positive impact and good will is nevertheless real.

ROI Computation

The computation methodology varies depending on the specific project. As the purpose of this paper is Quality Control, the focus will be on how to compute the ROI value of a Quality Control program.

As in any ROI computation, there are benefits and costs associated with each project.

Item	Description	Formula	Value
	Benefits		
Liability	The formal quality control program will affect the liability insurance. While not quantifiable, the presence of the QC will be included into the risk assessment. The estimated savings are based on some discussions with insurance professionals.	10 – 15% of Malpractice Premium.	
Cost Savings	The cost savings in operation are part of most QC programs. By defining the processes and establishing clear	5% of operational expenses.	

Item	Description	Formula	Value
	organizational goals, the QC programs improve the business process. For this purpose the estimate is at 5% of non-payroll expenses. Objective, fact based approach can produce dramatic results.		
Perception and Marketing	The presence of the QC program is important for promotion of any enterprise. It not only improves the value of the business, but it promotes the best kind of advertising – word of mouth. Patients that benefit from quality organization will spread good will towards the enterprise. The WOM (Word of Mouth) represents substantial form of marketing (see WOMMA). The savings estimate represents conservative estimate.	5% of marketing costs.	
Regulatory Costs	Many enterprises have to provide the regulatory agencies with quality data. Having the quality program in place decreases the costs of gathering and providing that information. Since the regulatory requirements need to be incorporated into the QC program, those costs as separate from QC program will be reduced substantially.	90% of current regulatory costs.	
	Costs		
Setting up the program	The setup of the program takes some time. It is, however, valuable for the organization in a number of ways not directly related to the implementation. The QC program requires that the goals of the organization are stated clearly.	Value of software and implementation.	
Survey and Analysis	The QC program is not a onetime exercise. It requires follow-up and consequently dedication of resources.	Costs of gathering the information on a periodic basis.	
Total			

The values of the worksheet presented here will be estimations and will obviously vary depending on size and maturity of the organization. The highest value of the quality control program is that it incorporates quantifiable metrics into the business processes that are not necessarily monitored by the financial systems. The value of those metrics may be difficult to assign to a revenue stream, but it is nonetheless invaluable for achieving efficient, high quality of operation. That is how a good organization becomes a great organization.

PRAGMATE

Summary

ROI is a measurement that has a long tradition in finance. It is an important metric that shows the ability of management to translate investment into profit. In business, the monetary rewards usually follow the delivery of value to the customer. For example, the retailer usually has to purchase the inventory in hopes of selling it at a profit later. While the monetary metrics are important, they usually follow what happens between the company and its customers. If the company delivers value to customers, its business will grow, and consequently its financials will improve.

The critical part of converting the investment into profits is in the processes that delivers value to the customer. And that is the focus of quality control – showing metrics of the process itself – when and where it is happening. Measured quality levels provide the management with insight into the very process that is the source of company revenue. And such insight is truly invaluable.

Using specialized software for managing of the quality control makes business sense.

For more details visit www.pragmate.com or contact Mark Kajdos at mkajdos@pragmate.com