

Determining Return on Investment

Do you want to acquire a magnetic resonance imaging scanner? Or add a nursing position to improve patient flow through the emergency department? Be prepared to answer the question: “What’s the return on investment?” Asking for the ROI is just another way of saying, “Is it really worth the money?” It is a question finance managers like to ask—and can help you answer.

ROI estimates are often used to evaluate various potential projects. Theoretically, the project with the largest estimated ROI gets the thumbs up. In the real world, however, other factors—such as physician preferences, quality of care, and operating costs—may carry more weight than ROI.

ROI Formula

When someone asks about ROI, they want to know the amount of profit from an investment, expressed as a percentage of the total project cost. For example, if a \$100 investment generates \$10 in income, the ROI is 10 percent. However, few real-life ROI calculations are so simple.

The following formula can be used to determine ROI:

$$\text{Revenue from the Initiative} \div \text{Total Cost of the Asset}^* = \text{ROI}$$

* Total cost of the asset refers to all the costs related to the initiative, including equipment costs, space renovation costs, staff costs, interest on any money borrowed to finance the project, etc.

Hospital finance departments may use more technical formulas to determine the ROI of various projects and initiatives.

What Does a Good ROI Look Like?

Average ROI for all hospital assets*

Type of hospital	Median	90th percentile
Urban hospitals	10.00%	18.60%
Rural hospitals	9.50%	15.60%
Teaching hospitals	9.80%	16.90%
Non-teaching hospitals	9.80%	19.40%
System affiliated hospitals	10.90%	23.80%
Non-system affiliated hospitals	9.00%	15.10%

* Calculated based on 2005 data from more than 1,500 hospitals; 90th percentile figures show ROI for top-performing hospitals.

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CFOs track the ROI of all hospital assets—from the land that the hospital owns to the patient beds and everything in between—as one measure of financial strength. As these numbers show, average ROI rates vary, depending on a hospital’s geographic location and other factors. Knowing a hospital’s overall ROI helps a nurse leader understand the expectation the CFO may have when new initiatives are proposed.

ROI Is Used for Making Investment Decisions

If a nursing leader wants to add capacity to an existing service (for example, add another cath lab), then ROI may be a critical factor in making a decision on whether to proceed.

Step 1. Start by asking the hospital CFO what return—10 percent or more—would not be unusual—would be required to win approval from top management and the board of directors.

Step 2. Work with an architect, contractor, and equipment vendors to estimate construction and equipment costs. Look to the finance department for estimated labor, supplies, and other operating costs, based on the experience in the existing cath lab.

Step 3. Knowing all the costs and the minimum ROI, work with finance to calculate how much revenue the new cath lab must generate to be economically feasible. How many procedures—and at what charge to the patient—will it take to hit that number?

Step 4. If the procedures must be priced significantly more than competitors are charging—and the ROI expectations are not negotiable—costs will have to be decreased before the project can fly.

Partner with Finance

Nurse leaders should not go it alone when determining whether a particular project is worth the cost. Ask a finance manager which calculation is most appropriate for the initiative that you are proposing—and go to the cost accountant to get the specific numbers (for example, interest expense) that plug into the formula. Nursing-friendly software programs are available to calculate ROI but, in many hospitals, a member of the finance department will do the calculation for you.

ROI Is Used to Make the Case for Clinical Improvements

Not every piece of equipment generates a fat ROI, and everyone knows it. Say a nurse manager wants to buy bili lights for the neonatal nursery.

Working with a vendor, the nurse leader can learn how much the equipment will cost, plus maintenance and supply expenses. Then, she should check with the hospital's managed care officer to learn how much the hospital will be paid for the service—and calculate an estimated ROI.

The ROI number may be low—or even negative—meaning bili lights are a money-losing proposition. This does not mean that buying the lights is a bad decision. Rather, armed with ROI information, a nurse executive knows that she must use a cost-benefit analysis to advocate for the purchase (see the definition of cost-benefit analysis below). She can point out the intangible benefits, such as parent or physician satisfaction, to make the case for bili lights.

Important Measures of Success—Other than ROI

The term ROI is used as shorthand for many “is it worth it?” calculations. Technically, however, ROI is most appropriate when evaluating the purchase of capital assets, such as buildings, property, or equipment that have a useful life beyond the year they are purchased. If a nurse executive is considering a new hire or an improvement initiative, other calculations are typically used. Here are some other financial measures to know.

Cost-benefit analysis: A popular tool for making financial decisions, cost-benefit analysis compares the costs and benefits of a particular service or initiative. Ideally, all costs and benefits are expressed in terms of dollars. In health care this is not always possible because “human lives saved” might be among the benefits. Thus, think of cost-benefit analysis as a concept of weighing costs versus benefits when some benefits cannot be reduced to dollars.

Consider a situation in which a nurse executive is

trying to unclog a chronically overcrowded emergency department without adding space. One possible solution: add an ED admitting nurse. The nurse in this position would prepare patient assessments and start paperwork, making it easier for floor nurses to accept new patients.

The costs of adding a new position—such as salary, benefits, and recruitment expenses—are easy to calculate. But sizing up the benefits is not. If adding this position would reduce ambulance diversion hours, allowing more patients to be admitted to the hospital, that is a benefit. By working with the finance department, a nurse executive can estimate the financial worth of these and other potential benefits.

Non-financial benefits should also be considered. Although difficult to measure in monetary terms, eliminating long ED waits is likely to improve patient satisfaction and word-of-mouth advertising. That benefit does not fit neatly into the equation, but it could fit nicely into the nurse leader's pre-

sentation when she makes the case for adding a new staff member.

Payback period: The length of time for cash coming in from an investment to equal the amount of cash originally spent. Let's say a hospital buys new imaging technology, and more patients start choosing the hospital for diagnostic tests. Within 10 months, the hospital has brought in enough extra revenue to cover the costs of the imaging equipment. In this example, the payback period is 10 months.

Break-even point: The point at which payments from insurers, the government, and patients match the money spent on labor, supplies, and other expenses. The break-even point is frequently calculated in terms of patient volume. How many scans does an MRI unit need to perform in order to be financially self-sufficient? If the revenue generated by 500 scans covers the cost of operating the unit, it has reached its break-even point.