The 4-1-1 on Creating an ROI

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Students perform on a manikin as part of simulation technology classes.

Amar Patel, Wake Med Director of the Center for Innovative Learning describes how to develop a business plan and show ROI for your center.

Most all of us have taken medical simulation classes to improve our caregiving skil g real-life scenario much like students who wish to learn a foreign language frequen e ‘immersion’ courses where only the foreign language is spoken in the classroom. In doing so,

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exhilarating and fulfilling experience, especially when we succeed. The benefits of simulation have been proven over and over again. As educators and program directors, we are not only tasked with helping others understand the value of simulation, but providing a business case on the ongoing value of simulation itself. We have all been asked "what were you doing before simulators?"

Research studies continue to show how students have more fun learning through simulation, rather than through passive teaching methods like lecturing, and the student retention rate of information is often much higher (Crofts et al., 2007; Wayne et al., 2006). Furthermore, there is clear evidence that simulation allows trainees to actively experiment and use their clinical skills and decision making without actual risk to real patients. Finally, it helps meet the overwhelming demand to engage students, and improve both teamwork and communication behaviors. For any health care discipline, the demand for simulation use is there and while we hope that people will understand the value of the technology as a valuable learning tool, it is up to each of us to show the data that supports the education modality.

So let's get down to brass tacks: how much money does simulation actually cost, and how do the return on investment and the return on expectation compare?

Dollars and Sense

You may be thinking, "I know that simulation training works, but how much money are we going to have to invest?" In these tough economic times, budgets are being cut, and organizations have to use their training dollars wisely. And what type of return on ment can we expect? How will we know our spending is worth it? The answer is a multi- d one that involves logistics, the size and scale of training, and statistical results, as well as the

Finally, there are simple equations that can help you understand how much upfront investment is required to start a simulation program. You have to know what to ask! By using some rough figures, you can easily formulate a business plan that will help you and a simulation board of directors layout the 1, 3, 5, and 10 year plan for the use and integration of simulation technology.

Business Plan

We don't often consider the need for a business plan in developing and maintaining a simulation program; however, the business plan clearly outlines the short and long-term goals of any business. Understanding, researching, and having to clearly articulate your program objectives, short and long-term goals, the target audience, potential competitors, and a funding model will help everyone see where there is value and costs (SBA.gov, 2011). Furthermore, a well-developed business plan will continue to guide any simulation program through the toughest of decisions. If you have no familiarity with developing a business plan, it is important that you take the time to understand all of the different components needed to make a solid business plan. Although writing a business plan can be time consuming, with a little bit of research, any of us can do it.

There are truly only four major driving forces that have pushed simulation significantly forward. First, is the desire to lower the cost of both education and health care. In this tough economic environment, health care administrators are always looking for ways to provide education at a reduced rate and continue to improve the care delivery model. What if we could provide education that is not only effective but also efficient and improve patient outcomes? Those of us in simulation realize this is possible. You have to invest in education to show an impact through education or you have to spend money to make money. Second, simulation technology allows individuals better access to information where they h n opportunity to repeatedly practice varied symptomologies and complex cases.

Finally, we need to reduce the number of medical errors. The rate of medical errors is staggering and while we continue to improve on how care is provided, the reported number of errors continues to rise (Allen, 2013; SoRelle, 2000; Starmer et al., 2013). Both simulation technology and the process of simulation can help identify where there are vulnerabilities in the health care system and use those identified vulnerabilities as a starting point for program development. Instead of being reactive, we can be proactive. To integrate simulation, these four powerful motivators will play a valuable role in outlining the educational need and impact a process analysis has in anyone's business plan. They highlight the true value of the technology and show the impact the entire simulation process can have on an institution.

Logistics: What Do We Want, and How Do We Get It?

First, before you can determine your organization's ROI, you must answer several key questions about the type of training you want to provide your participants. If you're considering mobile training, the up-front costs of using simulation technology actually depend on a number of logistical factors, including:

- The training location: Is it possible for attendees to participate in training remotely, via computer, or must they go to another physical location? Can the training come to them? If so, what is the associated travel cost?
- The length of the training: how many hours/days/weeks will participants invest?
- The depth of the training: will participants simply take part in computer simulation, or will the training involve interactive, real-life scenarios involving mannequins or human patient simulators? Will there be actual environmental components to the training, such as fire or water? Will emergency service vehicles play a role in the training? Will you involve disaster medicine teams? How much will you simulate simulation?

It's only common sense that the more intense the training, the more expensive it w
Fortunately, there is simulation training available to fit every budget, and a quick search on

do, and where you need help.

Level of Commitment: Are You Ready?

With ROI, decision makers compare the timing and magnitude of the gain they expect to make versus their investment cost. To calculate any type ROI, a basic math equation is used to show the overall financial outcome of the investment.

ROI = gains – investment costs / investment costs

Let's suppose your organization has invested in simulation training in the past with positive results, and your administration is ready and able to commit to a stationary, in-house training program. They've considered the creation of a simulation lab, but questions remain, specifically about funding. The following are factors to consider:

- How will the organization secure funding? Are there people/organizations/corporations that are willing to partner with you and invest in the simulation lab? If so, for what period of time, and how will you report on the use of those funds?
- Can your simulation program be self-sustaining?
- Do you want to build a new facility, or will you use an existing structure?
- How much staff will you need?
- What type of equipment will you invest in? What are the monthly maintenance costs? Utilities costs?
- What will you need to charge participants? Will you earn revenue by selling simulator time to other training organizations?
- And the number one question: **Can simulation ever be financially profitable?**

The following is an example of an ROI equation to help answer that question:

If, in fact, the organization chooses to move forward with utilizing simulation technology, it is imperative that stakeholders in the project be at the decision-making table from the beginning. That would include a board of directors or a steering committee, as well as others who may have a vested interest in the training. Frequent communication about progress is imperative, not only to fuel the fires of continued support, but because it's the right thing to do. Continue to discuss program objectives with them, as well as short and long-term planning, and keep them abreast of progress. It is also important to remember that creating an ROI is not an overnight adventure. It takes years of planning, development, and implementation to see the results. In the end, an open line of communication can only help show the positive return of investment the simulation program is making.

The Cost vs. Benefit to Patients

While the financial costs of simulation training are relatively easy to measure in dollars and cents, there is also long-term statistical data that will need to be evaluated for ROI reporting. As educators, we should always measure clinical ROI in terms of the impact on patient care. At its core, ROI is "the amount of improvement in care brought about by a certain investment. ROI can also refer to the theory that if you invest in health care quality now, then the quality of care for patients will improve in the future" (Robert Wood Johnson Foundation, 2013).

As we calculate the ROI from using simulation technology, we will need to examine its impact on system processes. Have unnecessary policies and/or procedures been eliminated? Have we become more efficient with one of our most valuable resources – time – during patient care? Did we reduce the number of complications and readmissions following medical procedures? Did we reduce the number of caregiver errors? Ultimately, did our quality and patient outcomes improve? The answers to these questions provide valuable data to administrators as well as outside investors as to the worthiness of the investment in simulation.

Return on Expectation

helping us prove out worth? Would you be interested?

Return on expectation – or ROE – is a measurement factor that has more intangible qualities than hard, statistical data (Kirkpatrick & Kirkpatrick, 2010). However, it is equally important. ROE is a collaborative agreement that unites an organization in working towards a common goal (Kirkpatrick & Kirkpatrick, 2010). On the other hand, ROI is a summative measurement that evaluates individual pieces of a project and determines the success of the efforts of each. Even though ROE may include measurements that are not as scientific and formula-driven as ROI, do not be misled to think that ROE is "soft". In fact, it's just the opposite. ROE is usually determined at the beginning of a project, as in, 'What are our goals for this project? What do we hope to gain, not only financially, but corporately with regards to how our work contributes to the community?' ROE establishes common ground when determining the long-term value of simulation training.

The real results of simulation training will be evident when "the rubber meets the road" – when employees are actually using their new, advanced skills on the job. That's when you'll see both the ROI as well as ROE. Through their successes on the job, they will build a chain of evidence – including improved patient outcomes – that demonstrates the bottom line value of simulation training.

In a nut shell:

1. Identify key stakeholders.
2. Create a steering committee or a board of directors.
3. Develop a business plan.
4. Develop a marketing plan.
5. Sell yourself! Don't be afraid to do tours and demonstrations. It only helps show lue of the program.
6. Collect data on what you do.

10. Tell your story! Don't be afraid to present your program locally, regionally, and nationally.

And the final equation is a simple one:

A Return = Outcomes + Simulation

About the Author

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