



Evaluating New Technology

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KEYWORDS

- New technology • Risk/benefit technology • Lasers • Radiofrequency • ROI for technology
- Technology efficacy • Technology revenue/expenses

KEY POINTS

- One of the most important issues to consider when evaluating new technology is whether the technology will benefit patients.
- Value analysis is also imperative to the evaluation of new technology.
- The financial issues associated with acquiring new technology must also be considered.

Panel discussion

1. What is your main consideration when evaluating new technology?
2. What criteria would you use for your decision to acquire new technology?
3. How do you evaluate the efficacy of new technology before acquiring it?
4. How do you make patients aware that you have new technology?
5. How could you pay for new technology?
6. What factors affect whether new technology produces sufficient revenue to cover expenses?

Question 1: What is your main consideration when evaluating new technology?

CARNIOL

For me, the main considerations when evaluating any new technology are what it does and how effective it is. It is important that I offer my patients effective treatment options. Therefore, my first

consideration is efficacy. What can the technology be used for and how effective is it? Even if there is a demand for a given technology, I only want to offer it, if there is a demonstrable result. An interesting note is, if I am not sure about a new device, I will often serve as the first patient. This practice gives me the opportunity to evaluate the treatment experience as well as the outcome.

GRUNEBEAM

I only want to endorse truly effective treatments to my patients. Regardless of potential income from a shiny and sexy new technology, if efficacy is unproven or unclear, I would not erode patients' trust in my opinion by selling treatments that may have questionable outcomes.

In my academic practice, the option for new technology investment is extremely limited. In fact, I have had one laser purchase approved in the past 7 years. For the university, the most important aspect is the business plan (return on investment [ROI]). I always downplay the business plan provided by any company, as I consistently find an individual company's income projections grossly inflated. The ROI is not the most important

Disclosure: The authors have nothing to disclose.

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consideration for me as the physician. Patient trust is my most valuable asset; therefore, before I present any business plan to the university, many other aspects of a new technology are evaluated.

HEFFELFINGER

Questions that need to be addressed when evaluating new technology generally can be summarized by the following:

- What is the indication and why should I use this technology?
- How well does the new technology work? What sources of evidence are available?
- How does the evidence apply to my particular patient populations and how does it compare with the current standard?
- How can the performance of this technology be assessed, and what is an adequate time frame for assessment?

In an academic practice, the adoption rate is slow by design; everything I buy must be approved by a value analysis committee. In order to clear this committee, a purchase needs to have data that show it is clearly superior to anything else on the market for the given problem or a price that shows it is more cost-effective than the same. So, it either needs to work unbelievably well (ie, fractional carbon dioxide laser) or must be a Hermes scarf at Marshall's type of bargain (ie, used fractional carbon dioxide laser). I recommend you have your own value analysis committee, even for a process that you follow when buying technology for your office.

It is useful to decide if you are an early or a late adopter. Early adopters are on the cusp of technology and will have as many busts as they do hits. Late adopters will not consider a new technology until it is proven to work and makes complete business sense. Late adopters are okay with missing out on the next big thing and prefer to chug along on a constant, steady rate. I used to think that I wanted to be an early adopter but now put myself solidly in the latter group.

Question 2: What criteria would you use for your decision to acquire new technology?

CARNIOL

As already mentioned, the first criterion is efficacy. This criterion leads to the question of how to evaluate efficacy. I prefer to directly evaluate the technology. If the technology is approved by the Food and Drug Administration (FDA), then this evaluation can be performed by offering a free treatment with the device to some patients and observing the

outcome. Additionally, published articles in the peer-reviewed literature can also be helpful. Speaking with physicians who use the technology can also be valuable. The next criterion relates to patient demand. Is there adequate demand for this device? The next criterion is economic.¹ Is this device financially viable? First of all, can you cover the cost of the device? If you can cover the cost, can you make a profit? It does not make sense to bring a device into your practice on which you cannot at least cover all of the related expenses. Finally, does this device fit into your practice?

GRUNEBEAM

I agree with Paul but would add risk/benefit analysis. I find that patients prefer lower downtime treatments that may require multiple visits with less upside than treatments with a wow outcome that requires a long downtime. I also consider whether others in my community have the exact same technology. I would rather market something completely different than compete on price with my colleagues.

HEFFELFINGER

This question is a broad question with many considerations, but some pros that I like to see include the following:

- I have friends or patients who have seen improvement with the treatment by receiving treatments themselves.
- My friends or people who I really trust, preferably not doctors on the advisory board of a company or traveling trainers, have used the technology and have good things to say.
- There is good evidence in the literature that shows efficacy.

Negatives include

- The technology has been out for less than 3 years and there are not good long-term data.
- No one I know has the device.
- The science seems soft to me.
- I do not see my specific patient population spending the money on what I see as a minimal change.

Question 3: How do you evaluate the efficacy of new technology before acquiring it?

CARNIOL

In my practice, this is an important consideration. I want to perform procedures that have a demonstrable benefit to patients.

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