Insight Guide

Implementation Science

An essential partner in the real world

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A tool for launch and post-launch activities

In the first two Insight Guides in this series, we discussed the concept and purpose of Implementation Science as well as how it can be used pre-launch to help understand and prepare for the provision of an evidence-based practices (EBP) and products in the real world. By using tools like contextual analysis, impact planning, and early preparation, teams can set the stage for success and ensure that patients and those who care for them receive the full benefit. But the role of Implementation Science doesn't end at launch. It continues to be valuable post-launch, especially when gaps in everyday provisions and practices emerge and the intended benefits are not reaching patients.

Once an EBP is approved and launched, it might seem like it would automatically reach the patients who could benefit from it. But even with solid pre-launch planning, there are often barriers that limit its full impact. As such, stakeholders should be prepared to wield Implementation Science as a tool alongside other launch and post-launch activities. It is essential to foster an environment where Implementation Science is consistently applied — not only at launch but throughout the lifecycle of an initiative. This involves assessing initial uptake, scaling efforts, and tailoring strategies to address barriers or gaps in context. By doing so, stakeholders can fully leverage its value and enhance both the quality of care and patient-related outcomes.

In this Insight Guide, we will look at situations stakeholders may face post-launch where Implementation Science can make a difference. We'll explore how it can be applied in those cases and revisit some key activities that are ideally done before launch, but continue to be valuable even if conducted after.

Even the best laid plans

No matter how much preparation is done before launching an EBP, barriers to implementation are likely to persist. Post-launch, these barriers will start to impair the provision of optimal care and prevent some patients from fully benefiting from the practice or product. This is when Implementation Science becomes most important; because the longer those barriers remain, the more patients receive care than is not optimized.

There are several types of barriers stakeholders may face when delivering a new practice or product, so it's important to understand what they are in order to mitigate or remove them. While the specifics can vary depending on the situation, it helps to group these barriers into categories. Some examples include:

1. **Identification of patients** — common challenges in routine healthcare to optimal care start at the beginning of the patient's journey through underdiagnosis, misdiagnosis, or delayed diagnosis. It's important that the group of patients that the practice or product is intended for are known or adequately identified. Ensuring patients are diagnosed accurately and provided the optimal care, and pairing EBPs with existing or new evidence-based strategies, is critical to maximizing their value.

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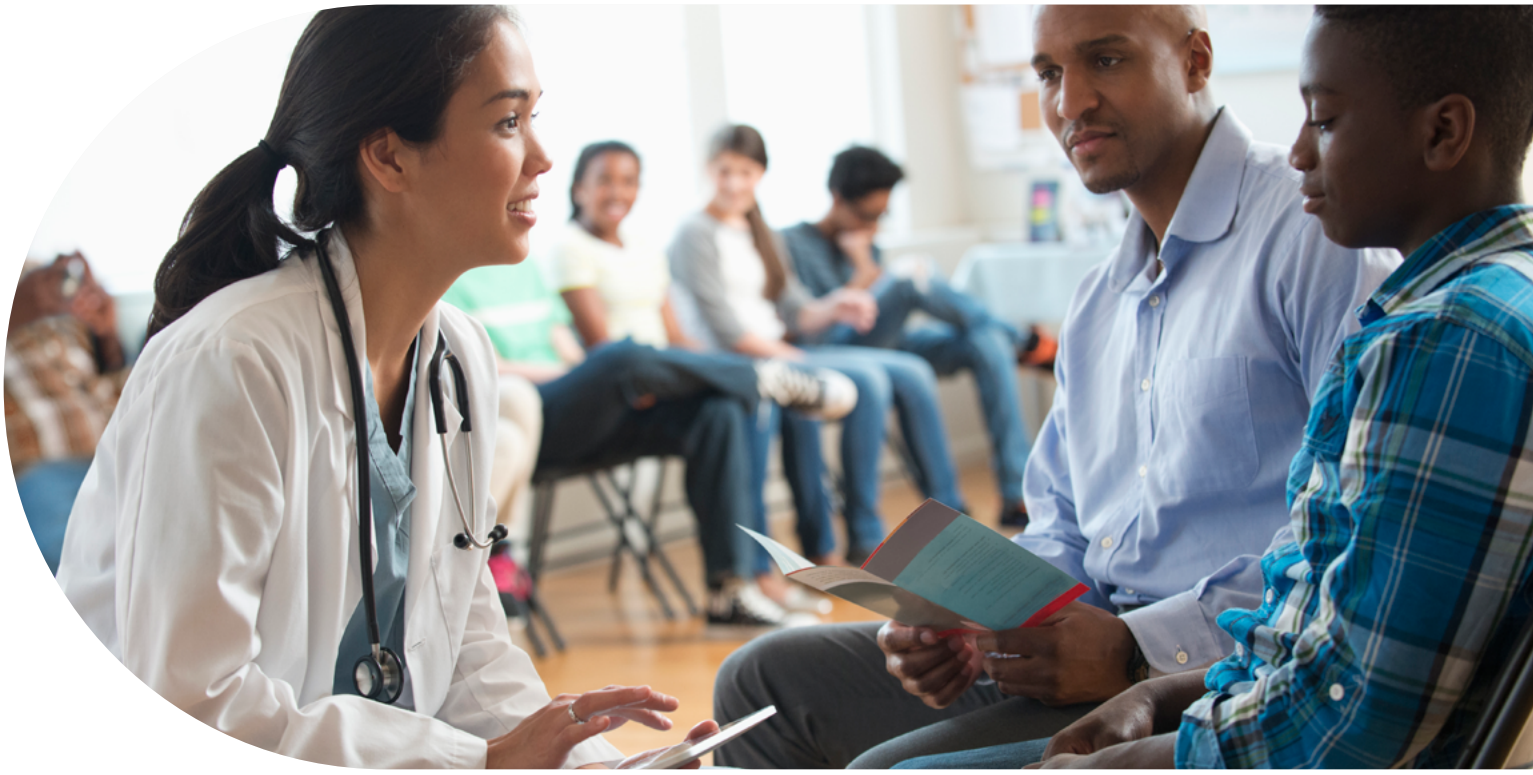
2. **Awareness and intention** — a practice or product can't deliver benefit if those expected to use it — directly or indirectly — don't know it exists, don't understand how it works, or aren't clear on how it compares to what they're already doing. That's why it's essential to identify where awareness is lacking and put strategies in place to raise visibility and support informed decision-making. In addition, understanding perceptions and intentions in relation to uptake of the EBP from stakeholders, including those delivering it and those receiving it, is necessary to provide support as needed to promote the intended change.

3. **Delivery** — organizational and operational barriers can hinder full realization of the benefits of practices and products in the healthcare setting. These can manifest in every aspect of operations, from supply chains and facilities, staff training and capacity, and even to patient compliance. They may require organizational or operational changes to support the delivery of the practice or product, failing to do so, may create a significant risk to its delivery.

As stated above, within each of these groups, the number of specific barriers that may be identified for an EBP may be significant. Deploying a well-designed Implementation Science strategy is an effective means for stakeholders to overcome these barriers and reduce their impact on benefits to patients.

Identifying where awareness is needed and deploying strategies that raise awareness and support decision making is fundamental.



From this day forth: Understanding the post-launch benefits of insights

There are a broad range of activities within Implementation Science that can support activities from pre-launch to post-launch. While ideal timing exists, it is never too late to benefit from the insights offered. Knowing what insights are needed and how to go about gathering them is key. Implementation Science activities conducted post-launch can be broadly grouped into three following areas:

1. Contextual analysis

Contextual analysis helps identify and develop understanding of the barriers or facilitators facing an EBP. It examines the differences between the controlled environment where it was tested and the actual conditions post-launch. This may involve investigating specific gaps in care delivery that could affect or be affected by a product or practice.

Even post-launch, contextual analysis provides essential insights to determine the best strategies for minimizing or mitigating environmental factors that could limit the EBP's uptake and improve its impact in real world healthcare.

2. Minimizing barriers/deploying strategies

Understanding the barriers and facilitators is just the start. The real value comes from acting on this knowledge by identifying strategies to minimize barriers or optimize facilitators. Implementation Science offers methods to find and test these strategies in real world settings. Once refined, these strategies can be scaled and adapted across healthcare systems.

Taking a scientific approach and using experts in the field helps make informed decisions, ensures effective investment, and increases the chances of achieving desired outcomes.

3. Continuous evaluation

In the pre-launch environment, it is not possible to anticipate or know everything that a new practice or product might face; post-launch it is equally not possible to know everything on day 1 or even on day 100. As the context and environment around the practice or product change over time, continued evaluation and action are needed.

Here are some things to consider:

- Supporting delivery of the changes intended also sets a roadmap that plans for future potential needs. These may include formal reviews of care provision and planned follow-up studies (such as in local contexts where challenges arise, for scaling up or expanding a program).
- Ensuring programs include a provision for long-term evaluation and consideration of how early decisions are related to those long-term plans (e.g., are the chosen performance indicators feasible for long-term use; has sufficient funding been identified for sustained activity; are there areas of the plan that are seen as fixed versus those that are seen as adaptable; etc.).
- Planning for both the short-term and long-term, and establishing a process for ongoing evaluation and activity, ensures not only immediate success but also the long-term sustainability of EBP.

Knowing what to do is sometimes knowing when to stop

In the first Insight Guide in this series, we stated that Implementation Science was about supporting the systematic and appropriate adoption of EBPs into routine care. In the second insights guide we talked about how Implementation Science can be used for pre-launch planning, and in this guide, how it can be used post launch to support uptake and scaling of EBPs. The removal of practices that evidence shows are no longer beneficial to patients, either independently, or when compared to other practices or products is called de-implementation.

As research and evidence on healthcare practices continues to grow, and new practices or products become available, it is reasonable to expect older practices to become sub-optimal. Delays in de-implementation can be caused by many different factors such as: lack of awareness, cultural resistance, fear and anxiety, inaccurate perceptions, organizational or systemic barriers, and economic factors (e.g., costs associated with de-implementation).

Many factors associated with de-implementation run parallel to the challenges facing implementation because the two may be performed in unison, with one practice being decommissioned as a new one is introduced. Assessing and planning for de-implementation requires a multi-faceted approach. This includes many of the same activities used for implementing new practices or products, such as ongoing cycles of planning, evaluating, adapting, and reassessing throughout the process.

All roads lead to Implementation Science

Since the goal of everyone involved in healthcare is to ensure every patient receives the best care available, it makes a strong case that everyone involved in the development or provision of an EBP should be using Implementation Science.

The comprehensive use of Implementation Science pre- and post-launch is the most effective way for any sponsor or other stakeholder to ensure that the practice or product is used effectively and is available to the greatest number of patients that it can benefit. However, it is never too late, and even the partial or delayed application of Implementation Science can provide insights that support EBP provision in real world practice, increasing the number of patients it reaches, and improving their outcomes.

Working with teams that have experience in all aspects of the discipline will help navigate the short-term and long-term planning of an Implementation Science program as well as assisting with executing the broad range of activities associated with it along the way.

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