



### 3 Ways to Catalyse Healthcare Improvement



Innovations are key to improving quality of care and lowering costs. Some innovations that work in one context, however, may not work in another. A Viewpoint article appearing in *JAMA* discusses how implementation science can be used as a framework for planning innovations in healthcare delivery.

#### 1. A Framework Based on Implementation Science

Implementation science focuses on helping healthcare leaders and decision makers understand how change takes place. These four main groups of variables interact to influence the adoption of innovations: the external environment (eg, new payment models), the structure of the organisation (eg, integrated delivery systems), the characteristics of the innovation (eg, the strength of the evidence supporting it), and the processes used (eg, bottom-up vs. top-down decision making).

The framework can also be used to help understand how organisations eliminate treatments, practices, and policies that do not benefit patients — referred to as “exnovation.”

#### 2. Types of Innovations in Healthcare

The authors say decision makers and stakeholders are likely to be involved in three different types of innovations:

**Biomedical innovations.** These are targeted at specific biological or pathophysiological abnormalities or problems. Examples include new drugs, new technologies, and new surgical treatments (eg, new approaches for joint replacement operations). Physicians are the key implementers, and implementation decisions are highly influenced by the magnitude of benefit to patients and the quality of the evidence.

**Changes in care delivery.** These innovations focus on groups of patients defined not by their pathophysiology but by factors such as the site of care (primary care practice) or the complexity of their clinical situation (complex chronic illness). Examples include adoption of teambased primary care, case management for patients with complex treatment needs, and quality-improvement initiatives. Implementation decisions are made by practice managers (whether clinicians or administrators) and organisational leaders.

**Patient-engagement innovations.** The aim is to engage patients and their caregivers in effective self-care, behaviour change, and chronic disease management; also to better align treatment choices with patients’ well informed preferences and values through shared decision making. These changes in practice involve a

fundamental change in the historical framework of the physician as expert and the patient as passive recipient. As such, the authors note, "a comprehensive framework such as that offered by implementation science is needed to identify the ways in which such patient-engagement strategies can be adopted and spread throughout the healthcare system."

### **3. Data and Data Linkage to Accelerate Learning**

The authors say the implementation science framework depends on the effective quilting together of data elements from multiple sources (ie, linking claims with electronic health record and survey data) over time and across vendor and homegrown systems. Data linkage efforts, however, involve several data challenges including lack of interoperability across electronic health record systems, and the varying and inconsistent approaches to capturing patient- and care-related data. Fortunately, strategies for overcoming some of these challenges have been devised including standardised approaches to handling missing data, text-based vs. coded data entries, and out-of-range entries.

"Insights from successful data development and linkage initiatives can provide guidance on how best to accelerate the development of information systems capable of capturing the information highlighted in the framework to support rapid-cycle learning and improvement," the authors write. "For example, pooling multicentre data provides sufficient power to rapidly establish evidence-based appropriateness criteria to support targeted shared decision making for patients being considered for total knee arthroplasty."

Source: [JAMA](#)

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