

WHAT DO WE MEAN BY INNOVATION IN HEALTHCARE?

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ABSTRACT

Just as in other modern industries, the term ‘innovation’ in healthcare has become associated with new developments in the field that allow for improvements in solving problems, in this instance, healthcare problems. This paper seeks to clarify what the term truly means. To address this issue, we first define innovation as a general term, then define what innovation means in the context of the healthcare industry. To better understand what may be considered ‘innovative’ in healthcare, we suggest criteria for innovation and identify potential challenges to newly introduced innovations in the field.

INTRODUCTION

‘Innovation’ denotes new, better, more effective ways of solving problems. Adopted from the business, technology, and marketing industries, the term has been used to describe policies, systems, technologies, ideas, services, and products that provide solutions to existing healthcare problems. With many dynamic methods and approaches available, the word ‘innovative’ has been coined as a buzzword in the field of healthcare. What has been absent from discussions around innovation is a clear, common understanding of what the term means. A clear definition is necessary because lack of consensus acts as a barrier to bringing innovation to clinical practice. Due to a lack of clarity and consistency, the term ‘innovation’ has been frequently used inappropriately to describe different developments within healthcare.

This paper explores what it means to be innovative, how innovation can be understood in the context of healthcare, and how ‘health innovation’ affects our understanding of developments in the field, particularly in improving healthcare. By defining what innovation is and what it is not, this paper will help clarify the notion of innovation in healthcare.

INNOVATION IN HEALTHCARE: A GENERAL DEFINITION

Innovation itself is not a new concept. The term has made its way into healthcare as a concept adopted from other fields, with a similar definition to those used in business, technology, and marketing. The dictionary definition of innovation is: i) “a new idea, device, or method” and ii) “the act or process of introducing new ideas, devices, or methods.”¹ Innovations in healthcare fall under the broader umbrella of social innovations, which aim to solve social issues.² Social innovation encourages new approaches to tackle issues of poverty, education, health, and other human development problems by making system-level changes.³ The World Health Organization (WHO) explains that ‘health innovation’ improves the efficiency, effectiveness, quality, sustainability, safety, and/or affordability of healthcare. This definition includes ‘new or improved’ health policies, practices, systems, products and technologies, services, and delivery methods that result in improved healthcare.^{4,5} Improvements in research, patient satisfaction, education, and access to care are additional factors to keep in mind. Simply put, the ultimate goal of health innovation is to improve our ability

to meet public and personal healthcare needs and demands by optimising the performance of the health system.⁶ In theory, innovations in healthcare should yield scalable solutions and improvements in health policies, systems, products, technologies, services, and delivery methods, in order to improve treatment, diagnosis, education, outreach, prevention, research quality and delivery, and access to healthcare.

‘NEW OR SIGNIFICANTLY DIFFERENT’: WHAT IS INNOVATION? WHAT IS NOT?

To break down the concept of innovation in healthcare, we must ask: in healthcare, what is an innovation, and what is not? To answer these questions, we must consider that: i) problems in healthcare have resulted in solutions to problems of efficiency, effectiveness, quality, sustainability, safety, and/or affordability of healthcare; ii) solutions that have resulted from problems in healthcare may be considered an innovation because they have solved a problem by introducing a new or significantly different approach, concept, idea, service, process, technology, or product; and iii) not all solutions are innovations, and not all innovations are solutions. Some solutions to problems in healthcare are merely developments within the field.

Just as technological advancements (e.g. email, mobile phone, GPS, etc.) find solutions to the world’s communication problems, developments in healthcare seek to address issues in the field. Healthcare is continuously changing and adapting. In order for a solution to a healthcare problem to be an innovation, it must introduce something that is new or significantly different from other solutions in the field. The use of innovation as a general term has led to the dilution of its meaning and how it is understood in healthcare. Without clarity on what innovation truly is, the term is loosely adopted and applied. On one hand, a general definition allows for praise and recognition of positive developments and new ideas, methods, and products in the field of healthcare. On the other hand, without a concrete understanding of what innovation is, we are unable to develop and properly identify new innovations in healthcare.

Omachonu and Einspruch⁷ provide a synopsis and explanation of what innovation is, as applied to the field of healthcare. Based on technological innovations, developments in technologies allow for opportunities for product and process

innovation. Omachonu and Einspruch’s description of product innovation involves the new goods and services within the market. Process innovation, on the other hand, involves the enhancement of the production of goods and services.⁷ In healthcare, developments in technologies and practices are evidence-based.^{8,9}

ADOPTING AND IMPLEMENTING INNOVATIONS: STAKEHOLDER CONSIDERATIONS AND BARRIERS TO UPTAKE

The three components of innovation, as suggested by Länsisalmi et al.,¹⁰ are that innovation is i) a novelty, ii) an application component, and iii) an intended benefit. An ‘intended benefit’ should be centred around the receiver of care, the patient, although stakeholder considerations must also be considered. Stakeholder considerations are particularly important in regard to the adaption and adoption of innovations.¹⁰ With these components in mind, the ‘innovation process’ can be understood by analysing the needs, wants, and expectations of stakeholder groups. With patients at the forefront, other stakeholders to consider include physicians and other care givers, organisations, innovator companies, and regulatory agencies. When health innovation takes place successfully, it addresses three key areas: i) how the patient is seen, ii) how the patient is heard, and iii) how the patient’s needs are met.

Even if the criteria are met, barriers remain for the recognition and uptake of innovations in healthcare. The process of diffusion is social and interactive and therefore requires collaboration, communication, and knowledge exchange between those involved within the system.¹¹ As such, adoption and implementation in healthcare involves multiple individuals, constraints, and factors that are specific to the social, political, policy, economic, institutional, and cultural context of a particular system.^{3,8,12,13} The Harvard Business Review explains that innovation in healthcare, while complex, can be understood based on three categories: i) consumer focus, ii) technology, and iii) business models. Within these three categories, the factors that affect uptake and diffusion in healthcare include: stakeholders and their interests, funding and cost, policy and government regulations, competition and other developments that affect uptake in healthcare technologies, consumer views and opinions, and accountability.^{11,14}

Each of these factors affects not only whether or not something is considered to be an innovation, but whether or not it is accepted and adopted in the field of healthcare. In other words, uptake requires that stakeholders see a relative advantage in adopting and implementing the innovation. However, relative advantage on its own does not guarantee adoption and implementation.⁵ Other considerations include capacity, compatibility, complexity, trialability, observability, reinvention, and risk. Stakeholders are more likely to adopt an innovation if they have the individual and organisational capacity to do so, it is compatible with their interests, simple enough to adopt easily, can be tested on a small scale, it is observable, can be refined to suit their needs, and requires minimal risk.^{5,15}

CONCLUSION

The first step in solving a problem is to create a plan for change. In preparation for change within healthcare, there is often an anticipation that change will result in an improvement or solution for an existing problem. In reality, not all changes result in a solution or improvement, much less an innovation. Change may in fact produce little to no improvement or benefit, and in some cases, may unexpectedly yield negative results or outcomes. For this reason, introducing a change, whether big or small, cannot be considered innately 'innovative'.

Observing the effects of change, whether it results in failure or success, is one of the keys to improvements and developments in healthcare. When the change is something new, or involves the process of introducing something new, and results in a benefit of improvement in the field of healthcare, the criteria for innovation in health has been met.

Beyond satisfying these criteria, newly introduced ideas, methods, products, and/or the process of introducing something new in healthcare, face the additional burden of being accepted within the field. An innovation must be something truly new or at least significantly different, applicable to healthcare, and provide a benefit to the field, with patients at the centre. In addition to these hurdles, external demands of stakeholders, funders, regulators, competitors, consumers, and general accountability must be met. Innovation in healthcare is complex, constantly changing, and exclusive of a large interwoven network of factors and considerations. Allowing a flexible or broad application of the term provides an overly inclusive terminology and restricts the exploration of new thinking and adoption of true innovations. By understanding what is innovative and what is not, as well as the barriers to adoption and implementation, we are better able to conceptualise what is needed in the field to bring about long-lasting and large-scale developments for increased efficiency and effectiveness in healthcare.

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