

# New indicators of innovation in the health sector

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**Relevant themes and topics:** Digitalisation of science and innovation; Networks, collaboration, diffusion and commercialisation of ideas, valuation of knowledge-based assets; Skills for innovation, researchers' mobility, incentives and institutions; Innovation in different geo-contexts and sectors; Alternative approaches to the 2005 Oslo Manual; New data infrastructures for the analysis of science and innovation.

## Abstract

This paper reports on a new model for the measurement and stimulation of service innovation and commercialization in the health sector which has been developed for the Norwegian Ministry of Health and will be piloted in 2016. Data for the indicators are recorded from a new shared national innovation management and information system in which the primary function (independent of measurement) is to aid the phase-to-phase efficiency and valuation work in daily innovation processes, and to create diffusion of innovation and learning among the actors. The new model seeks to represent and stimulate innovation activities in two dimensions: phase of the innovation and (socio) economic value or potential of innovation.

## Keywords

Service sector innovation; commercialization; health sector; hospitals; diffusion; learning; innovation management; innovation valuation; innovation process; software; indicators; incentives.

## Policy relevance

This paper is the first international presentation of a new model for the measurement and stimulation of service innovation and commercialization in the health sector which was developed in 2014-2015 for the Norwegian Ministry of Health (Sivertsen, 2015). It will be piloted in 2016 in collaboration with the government-funded specialised hospitals (including all university hospitals). The novelty in the model is that it does not aggregate different types of outputs (e.g. patents, licenses, income, evidence of implementation and diffusion) which are known to represent the innovation activities unbalanced and incompletely. The data are instead recorded from a shared national innovation management and information system in which the primary function (independent of measurement) is to aid the phase-to-phase efficiency and valuation work in innovation processes, and to create diffusion of innovation

and learning among the actors. If successful, the indicators derived from this new data source will be used to stimulate innovation in the funding formula for the hospitals.

## **Background**

Increasing costs, an aging population, rising public expectations and lack of health care workers are challenging the sustainability of the current healthcare system and increasing the demand for health care innovations. New creative solutions are an important way to meet such needs, but there is a clear lack of adoption, diffusion and knowledge transfer of given solutions at local, regional, national and European levels of healthcare development (Bason & Hollanders, 2013; Forskningsrådet, 2013; Hughes, Moore, & Katarhia, 2011). Important breakthroughs in knowledge often fail to be translated into medical practice. New creative solutions to patient-centric challenges and new technologies are not sufficient to make change happen. There is a clear need for a more systematic stimulation and professional coordination of innovation activities in healthcare.

Norwegian hospital innovation is commonly promoted through specialized innovation management offices within the hospitals while commercialization and patent applications are outsourced to Technology Transfer Offices. The innovations that are processed within the hospitals, are mostly services, ICT-related innovations or combined service and product innovations. For the last decade, output statistics from both types of management processes have been collected by the Ministry of Health for the purpose of stimulating innovation in healthcare. The authorities and hospitals now agree that although the annual procedure provides useful information at the national level, it is insufficient for creating reliable and independent indicators of innovation that might be used for the stimulation of the activities.

Independently of the need for innovation statistics on the national level, the hospitals have been looking for specialized software that can be used for more efficient innovation management and communication. Such software is already used by the TTO's. Norway is now in a situation where all relevant organizations in the health sector may be implementing the same software as a shared national system for innovation management and communication. The system may then also be used for recording data on innovation activities in a transparent way. The new indicator model is based on this opportunity.

## **The model**

The model seeks to represent and stimulate innovation activities in two dimensions. The two dimensions are combined in innovation points that are recorded annually:

1. Phase of the innovation. Innovations will be given increased weight the further they have come towards implementation and diffusion/commercialization.
2. Value or potential of the innovation, expressed in economic terms (socioeconomic for service innovation), either as estimates or evidence, depending on the phase of innovation.

The model has so far been designed with specific thresholds and definitions for the phases (five in all, from recorded idea or need to implementation and diffusion). A specific methodology for the valuation work will be designed in the pilot. The work is not only expected to improve comparability of innovation activities across types and organizations, but also to aid and improve the decision-making process in the management of innovation itself, as well as to stimulate the diffusion of and learning from service innovation among the participating hospitals.

## References

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