

SUMMARY

MEDICAL INNOVATION – WHAT IS THE VALUE FOR THE PATIENT?



Photo: Roche



Preface

Menon Economics analyses economic issues and provides advice to businesses, organisations, and public authorities. We are a consulting firm operating at the interface between economics, politics, and markets. Menon combines social and business economics expertise in fields such as social profitability, economic impact, business and competition economics, strategy, finance, and organisational design. We use research-based methods in our analyses and work closely with leading academic environments in most fields.

This is the English summary from the published report. The entire report in is available in Norwegian on our website www.menon.no

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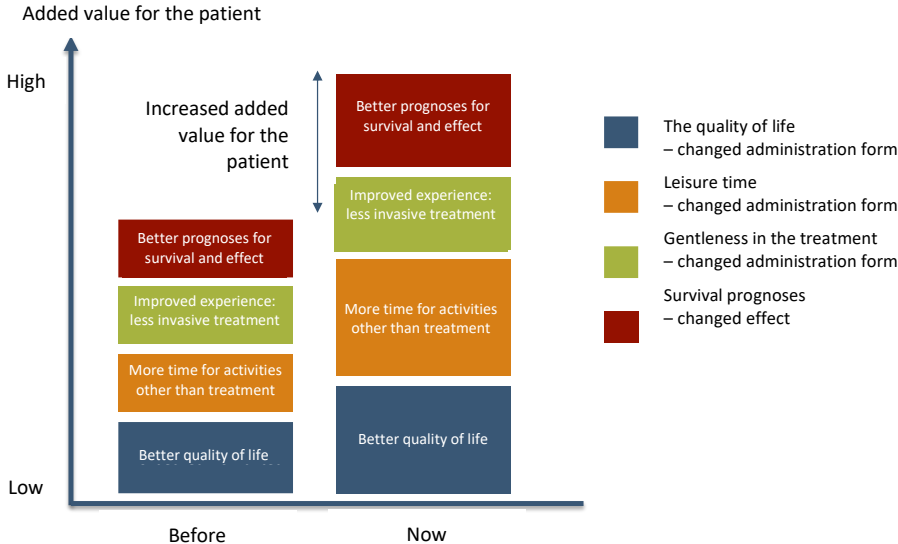
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Summary

Medical innovation can be broadly defined as the development of new solutions for diagnostics and treatment, based on technologies and knowledge that are used in the improvement of healthcare services. The value of medical innovations is linked to whether, and to what extent, they contribute to reducing the negative consequences for society associated with disease and accidents.

The importance of diagnostics has become particularly clear during the coronavirus pandemic. With an infectious disease without access to a vaccine or effective treatment, correct and rapid diagnostics have proven to be important for isolating the infected. The development in diagnostics and treatment for cases of aggressive breast cancer is another example of how medical innovations have led to added value for the patient through better quality of life, more precise treatment, and improved administration.

Figure: Illustration of how medical innovation related to breast cancer can create added value for patients and society



Over the past hundred years, the development of a well-established healthcare service and a series of medical innovations have significantly improved the Norwegian public health. However, the demand for healthcare services is increasing, in line with the rise in life expectancy and the number of elderlies in the years to come. This challenge has been addressed in the Perspective Report 2021, and researchers at Statistics Norway find that the need for full-time equivalents in the healthcare sector may increase from 13 percent of the workforce in 2017 to nearly 30 percent in 2060.¹ Increased resource use alone is not a sustainable approach to meet society's growing need for healthcare services. Medical innovation enables more efficient production of healthcare services, thereby the consequences of illness can be combated with a relatively lower use of resources. Thus, the return on society's investment in healthcare services will increase.

Today's system for evaluating methods must be modernised in line with the medical advancements.

There are many strengths in the Norwegian system for the introduction of medical innovations, New Methods, but there is also a need for the system to evolve in step with the innovations it is meant to evaluate. Medical innovations are becoming more complex and advanced, which is not unfamiliar to consumers: today, hardware

¹Hjemås, G., Holmøy, E., & Haugstveit, F. (2019). *Projections of labor demand in the health and care sector towards 2060* by Statistics Norway.

and software are increasingly merging, contributing to advanced services that we as consumers consider useful and "cost-effective". A few years ago, we thought of TV as a particular type of entertainment received on a TV screen via an antenna or cable TV, and the internet was something we used to send emails. Now, various technological platforms have "converged", and the content has become more independent of the technology platform. Likely, our health technology future will be similar: Pharmaceuticals, diagnostics, technology for remote patient monitoring, and various digital solutions will converge. The content, meaning the medical effect, will be the key element, rather than the distribution technology (whether it comes in the form of a pill or via Wi-Fi).

This is part of the background as New Methods are now being evaluated on behalf of the Parliament in Norway. With even smaller patient populations, more personalized medicine, and more complex e-health solutions linked to the entire patient pathway, there are high demands for a flexible joint implementation system for all new methods that may arise.

A system that is based on the entire health service

A method evaluation system that includes costs and savings in both primary and specialist healthcare may facilitate a higher societal value from medical innovations. This is currently done for pharmaceuticals, but not for diagnostics. This means that diagnostic solutions that reduce costs in primary healthcare, but increase costs in specialist healthcare, cannot be introduced in Norway today. An example of this is the introduction of near-patient diagnostics and monitoring of heart failure in primary healthcare using the biomarker NT-proBNP, which could save the society 54 million Norwegian kroner each year.

Additionally, the delineation between primary and specialist healthcare services can make it challenging to implement methods that span across the healthcare service, such as personalised medicine.

A comprehensive decision-making basis with socio-economic assessments

Measures with health consequences are currently assessed differently across various sectors. In the health sector, the assessment is based on a cost-benefit analysis with explicit prioritisation criteria, while evaluations in other sectors are conducted based on socio-economic analyses. We believe that there are good reasons to make the basis for decision-making and analysis methods more similar across all societal sectors, to ensure the most well-informed basis for decisions. For instance, production losses, which are currently not included in the decision-making basis for introduction through New Methods, can represent a significant cost to the society. An example of this is the importance of a good treatment offer for seriously ill children with rare diagnoses. In addition to the value of a treatment in reducing the disease burden for the patient, it will also have significance for the family through reduced production loss when parents spend less time on care.

The current requirements for documentation make it difficult in practice to include certain societal costs in the decision-making basis, even though they represent significant societal savings. Savings related to administration in the treatment of aggressive breast cancer is one such example. If all patients with aggressive breast cancer were offered infusion treatment that can be administered subcutaneously rather than intravenously, savings related to patient time and clinic infusion costs alone would amount to 28 million kroner annually. The total benefit value for the patient and society associated with the change in the form of administration is challenging to include in current method assessments.

More efficient assessment processes

The life cycle of medical innovations is often short, especially for medical technology such as diagnostics and other digital e-health solutions. The more efficient the implementation, the more we can gain from medical innovations in terms of health benefits and savings of resources in the healthcare service. A thorough assessment of all new treatments within healthcare services is important to ensure their safety and effectiveness, and to make sure that the health budget is allocated in a fair manner. The longer the assessment process takes, the longer patients must wait for new innovations that can save lives and reduce the burden of disease.

Collaboration with other countries and reuse of method assessments are measures that can enable more efficient method assessments. In addition, patients can get access to valuable methods more quickly if funding responsibility is shared between the supplier and the purchaser for a limited period while the effect is still being investigated. Pathway-based financing between the public health service and suppliers is intended to distribute the risk surrounding the uncertainty of a new method's effect. If this is used more in the healthcare, it can build trust between the public and private sectors and enable faster access to medications.

It is essential to have a system with a submission channel for all types of innovations. Currently, there is a lack of a clear platform for submitting proposals for new screening technologies. As a result, the potential benefits of new proposals are not being assessed and thus not benefiting patients or the society. An example of this is a new type of triage test for cervical cancer screening, which could potentially save the community 16 million kroner a year.

Temporary implementation as a means to enable the introduction of personalised medicine

There is widespread agreement among politicians, suppliers, and interest organisations that the current system is not suitable for assessing the value of personalised medicine. Personalised medicine is targeted at individuals and small patient populations, whereas the evaluation in New Methods is based on group level. Therefore, it is difficult to provide the necessary documentation.

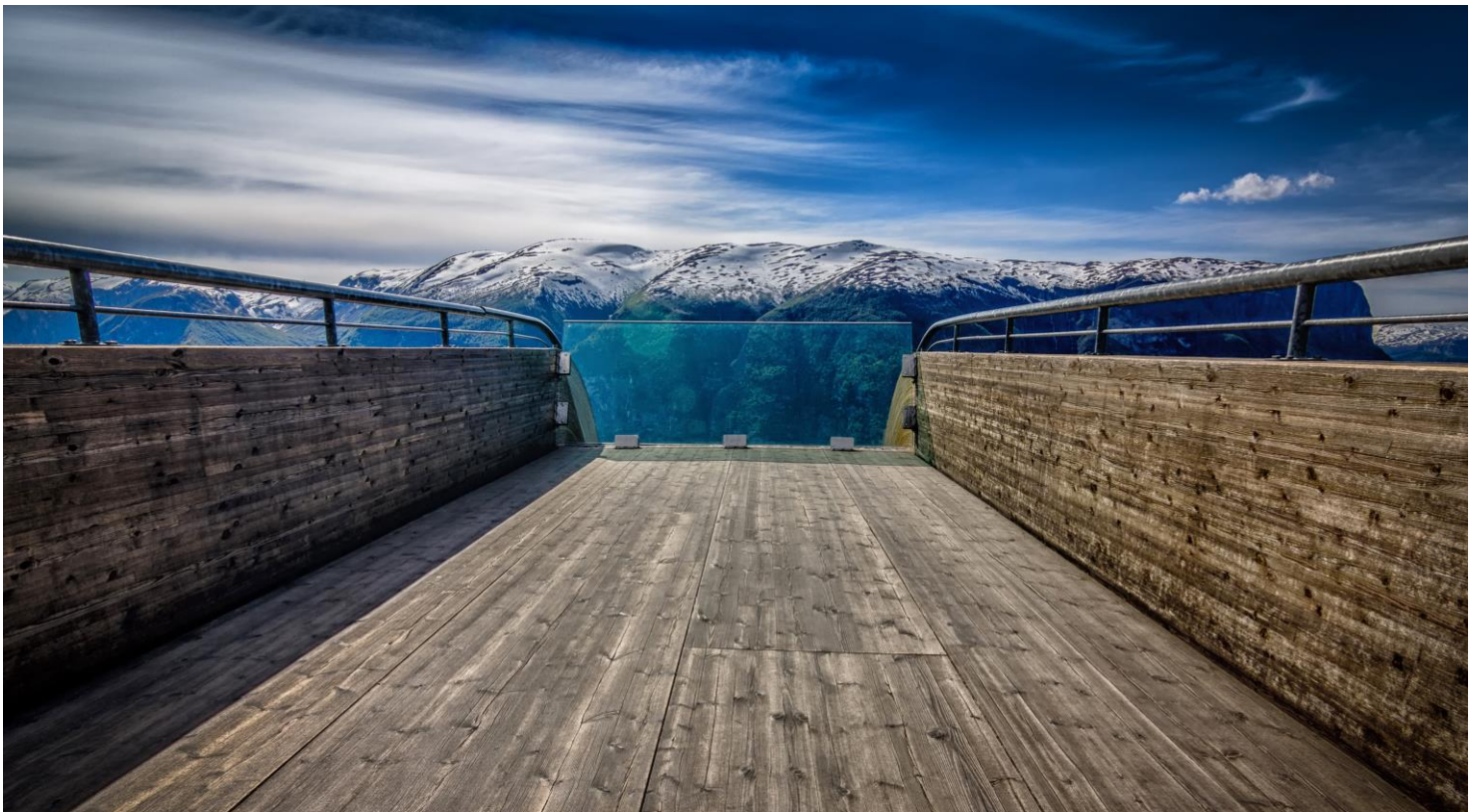
Considering this, a separate evaluation commissioned by the Directorate of Health is currently underway on how personalised medicine, among other things, should be assessed in the future. One of the findings that has emerged during the evaluation is the possibility of a temporary introduction of personalised medicine. *IMPRESS-Norway Improving Public Cancer Care* is a specific example of a research project where clinical trials are conducted in parallel with a gradual implementation.

Given that IMPRESS, alongside clinical trials, has a gradual implementation, patients can gain quicker access to cancer medication. Furthermore, IMPRESS in Norway is part of an extensive international collaboration, which contributes to faster gathering of information even on very rare forms of cancer. This increases the likelihood that more patients can receive improved treatment in the future.

Greater focus on the value for the patient

Achieving a more flexible method assessment system that also ensures patient safety and effectiveness within a limited budget is challenging. One way to achieve this is to move towards a more value-based healthcare service. The aim is to place greater emphasis on the value for the patient throughout the entire treatment process. Despite an increasing use of patient-reported outcome measures in Norwegian clinical studies, only health-related quality of life measured through QALY can be included in the methodology assessment. Including an evaluation from the patient's perspective on whether a new treatment has been effective overall could help improve the quality and influence the priorities in a value-based healthcare service.

Norway has established a substantial quality registry of health data compared to other European countries, and comparisons with our neighbouring countries suggest that we could utilize this more than we currently do. Here, Norway has a significant untapped potential. Here, Norway has significant untapped potential. The innovation partnership at Østfold Hospital is an example of how we may achieve more innovation by adopting a value-based approach. Through innovation partnerships, the public sector should shift its focus from describing the solution they need to defining the problem they wish to solve, and this should be communicated to private actors early in the process. This is followed by a funded development process where private actors attempt to solve the issue in an innovative way. In addition, pathway-based financing, where payments are based on outcome goals rather than just the quantities delivered, can increase the focus on the patient and improve results.



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