Norwegian Ministeries

Action Plan

The Government Action Plan for Implementation of the Health&Care21 Strategy

Research and innovation in health and care (2015-2018)

B

The Government Action Plan for Implementation of the Health&Care21 Strategy

Research and innovation in health and care (2015–2018)

Contents

Foreword

The health and care sector is a broad and important sector of society in which new knowledge, new technologies and demographic development lead to rapid and comprehensive changes. It is the Government's intent to place patients and their needs at the centre of these developments. These developments also give us the opportunity to build new industries and world-leading research communities in Norway. It is necessary to focus on innovation, knowledge and technology in order to meet the challenges in the sector, as well as to facilitate safe, high-quality services, renewal and industrial development.

The Health&Care21 Strategy was developed by universities, hospitals, municipalities, private sector, government agencies and the users themselves. This strategy is their response as to how research and innovation should contribute towards meeting challenges in these services and promote industrial development. Implementation of the Health&Care21 Strategy is essential in order to successfully meet these objectives. This action plan presents the Government's implementation strategy.

Ever since the strategy was presented in June 2014, the Government has been systematically working to implement the ten strategic priority areas. The Government has increased funding of basic research and the industry-oriented instruments for research and innovation. A joint programme will be established for clinical multicentre studies in specialist healthcare services, and information about clinical studies will be improved, which will provide patients with better access to experimental treatment. Four large-scale health research programmes have been established at the Research Council of Norway, targeting public health, treatment, development of services and innovation and global health. By facilitating more research within and for the municipalities, the Government will contribute towards strengthening and modernising the health and care services in communities where people live.

In the first part of the action plan, we will present a cohesive policy for research and innovation in health and care, which will govern the development of the field onwards. In the second part, we will present specific initiatives within the ten priority areas identified in the Health&Care21 process.

In order to achieve the objective of a system of knowledge and innovation for improved services and a new growth industry, we must first build a culture of cooperation. The entire Government is committed to this action plan. Similarly, the health and care services, academic communities and the private sector must all work together to create innovative and evidence-based services and ensure that the knowledge forms a basis for an industry that succeeds among tough global competition. The bar has been set high. The Government expects significant mobilisation for research and innovation in health and care.

Foto: Thomas Haugersveen/Statsministerens kontor

Erna Solberg
Prime Minister

Foto: Bjørn Stuedal

Bent Høie
Minister of Health and Care Services

Foto: Hans Jørgen Brun

Monica Mæland
Minister of Trade and Industry

Foto: Marte Garmann

Torbjørn Røe Isaksen
Minister of Education and Research

1 Government policies for the sector

Introduction

The Government intends to facilitate good physical and mental health throughout the entire lifespan, and will develop health and care services that deliver evidence-based, equal and safe services. These are fundamental prerequisites for sustainable Norwegian health and care services. The sector will face major challenges in the years to come. The composition of the population is changing, and the number of elderly will rise in the future, which will result in a growing need for health and care services. The clinical picture is changing, with a higher rate of chronic and complex diseases. This requires better interaction and cooperation within and between municipal health and care services and specialist health care services. At the same time, the growth of antimicrobial resistance is on the rise.

Patients expect quick access to new and advanced forms of treatment, and the most targeted, effective, safe and individualised treatment possible, irrespective of gender, ethnicity, age and where in the country one resides. New IT solutions and welfare technology offer patients and users the opportunity to participate in decision-making regarding their health and allow them to receive services at home.

The Norwegian economy is entering a restructuring phase in which it is necessary to create new and evidence-based industries and jobs. Research and knowledge are important tools for achieving the goal of a sustainable world in 2030. Norway has a high cost of living, and will need evidence-based industries that are competitive in the international markets also in the future. Research and profits from research outcomes provide the foundation for evidence-based and innovative industries and an industrial development that is sustainable and environmentally friendly, and thereby part of the green shift in the economy.

Challenges must be solved through research, innovation, commercialisation and industrial development in the area of health and care services. We must build competence and infrastructure, and create incentives for research, innovation, profitability and industrial development and cooperation between users, public sector, civil society, private sector and research and academic communities. New knowledge and technology that improves quality and productivity must be implemented. Additional internationally leading research communities must be developed. Health and care services must develop a culture for continuous service innovation. Research and innovation activities must become more strategic and have a clearer basis in governance. The gender perspective, as well as and knowledge regarding the health of various immigrant groups and how they use health care services, should also be included in health and care research.

The Health&Care21 Strategy is the key actors' response to how the challenges in the health and care sector should be addressed, with research and innovation.[1] All of the actors have an independent responsibility to pursue the strategy. The action plan is an indication of the way in which the Government follows up its share of the responsibility. The Norwegian Parliament has already received several white papers that discuss recommendations from the Health&Care21 Strategy,

1 Health&Care 21 National Research and Innovation Strategy for Health and Care Services

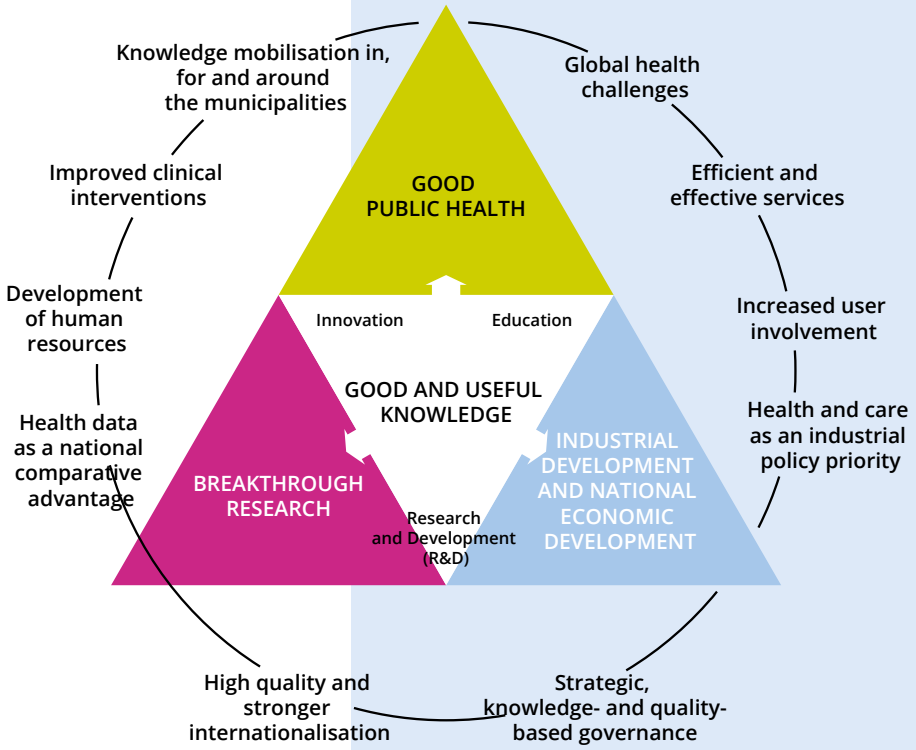
and offer proposals for implementation.[2] The Long-term Plan for Research and Higher Education drives the Government's ambitions and guides research and higher-education policy.[3] Health and care is integrated into several of the priorities in the long-term plan for research and higher education, and a separate priority of public sector renewal highlights the Health&Care21 Strategy and a knowledge system for health and care. The recommendations in the Health&Care21 Strategy have also been important for the implementation of the action-oriented health research programmes at the Research Council of Norway.

The continuation of existing actions and implementation of new actions with budgetary implications will be considered in the annual government budgets.

The Health&Care21 Strategy

Based on the positive experiences from 21-processes such as OG21 and Energi21, the Ministry of Health and Care Services initiated the development of the Health&Care21 Strategy in the spring of 2013. Work on the strategy was conducted as an inclusive process, with input from actors who produce, disseminate or utilise knowledge on topics in health and care across sectors, supplier industries, research and administration. The strategy was submitted to the Government in June 2014 and contains ten strategic initiatives and five main priorities:

1. Knowledge mobilisation for the municipalities
2. Health and care as an industrial policy priority
3. Easier access to, and increased utilisation of health data
4. An evidence-based health and care system
5. A stronger emphasis on internationalisation of research



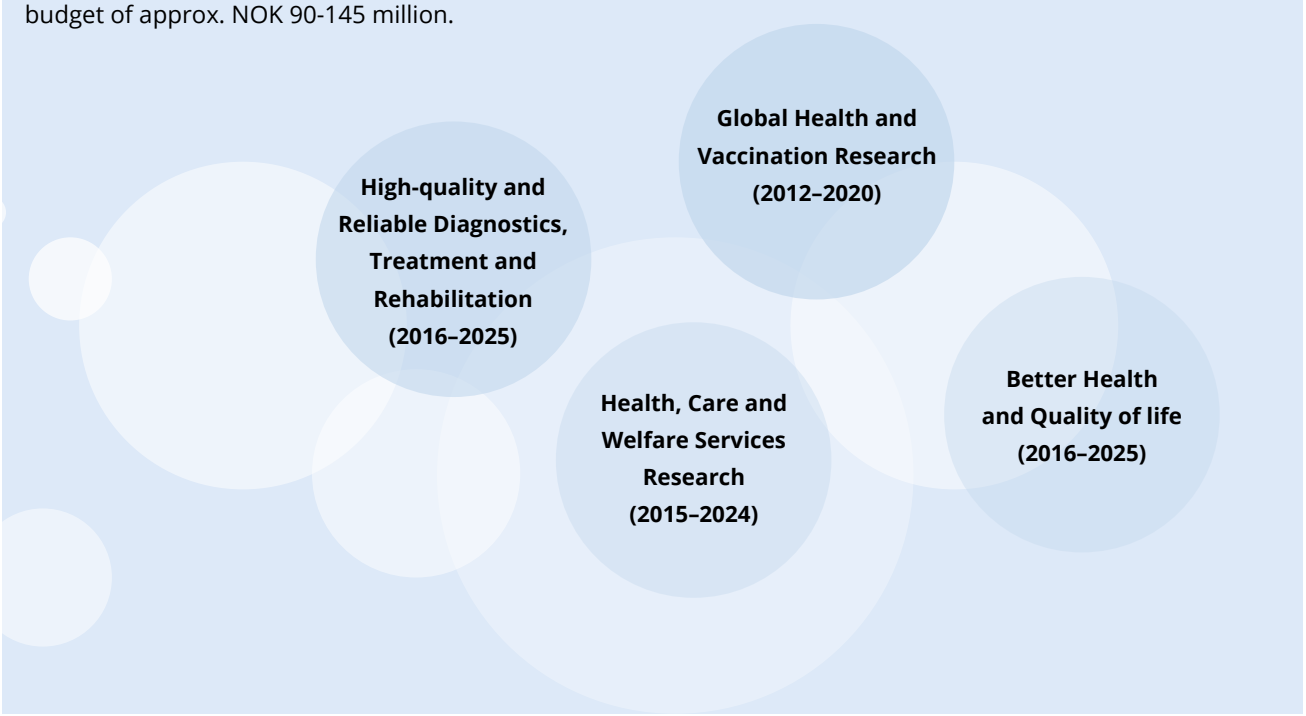
2 For the full list, see Annex 2
3 White Paper No. 7 (2014-2015) Long-term Plan for Research and Higher Education 2015–2024

New programme structure for health research at the Research Council of Norway

From 2016, policy-oriented health research at the Research Council of Norway has been divided into three long-term programmes. These three new programmes, inspired by the Health&Care21 Strategy, have common guidelines to safeguard user involvement throughout the research process, ensuring that all projects will be assessed based on both quality and relevance. All three programmes will also finance research while targeting end users' needs for new knowledge within selected thematic areas through "commissioned research". The programmes will facilitate innovation and industrial development. In all three programmes, the need for more research in and for the municipalities is emphasised. Each programme has an annual budget of approx. NOK 90-145 million.

- The large-scale Programme on Health, Care and Welfare Services Research (HELSEVEL), applies to the period 2015-2024.
- The programme for High-quality and Reliable Diagnostics, Treatment and Rehabilitation (Behandling), applies to the period 2016-2025.
- The programme for Better Health and Quality of Life (BEDREHELSE), applies to the period 2016-2025.

In addition, there is the programme for Global Health and Vaccination Research (2012-2020), which is financed by the Ministry of Foreign Affairs and the Ministry of Health and Care Services.



The patient as an active participant in research and innovation

The Government intends to create the patient's health care service. Experiences of service users and the knowledge they possess must be taken into account in order to achieve this objective. When patients, health care services, municipalities, public administration or the private sector are involved in defining knowledge needs, and also involved in the research and innovation process, new knowledge is more likely to reflect the needs of its users, and there is a greater likelihood that the knowledge will be implemented.[4] Experience from England indicates that user involvement in research may yield higher research quality through better research design and increased recruitment and participation in clinical trials.[5] User involvement is also an increasingly important criterion for participation in the EU's research and innovation programme Horizon 2020.

4 See, inter alia, Chalmers et al., Lancet 2014
5 See National Institute of Health Research: Exploring the impact of public involvement on the quality of research

Users can participate in all phases of the research and innovation process: i) identify and prioritise topics or needs for new knowledge and new methods; ii) participate in the design and follow-up of research and innovation projects; iii) take part in the assessment and awarding of research funds and iv) disseminate the results from research and innovation projects. It is necessary to strengthen user involvement in all phases of the policy-oriented and clinical health and care research funded by the Ministry of Health and Care Services. The same applies to innovation activities.

Sufficient and relevant competence

The Government intends to ensure sufficient capacity and quality of health and care sector personnel. Education and enhancement of competence will, to a greater extent, be shaped in close cooperation with the services and by keeping pace with the needs of the users. Competence plays a crucial role in the success of research and innovation activities. All professions must have updated, relevant and appropriate health care qualifications. Moreover, the services' needs for research and innovation expertise in the areas of technology, governance and management must be covered. Expertise must be developed through basic, post-qualifying and continuing education. The Government will facilitate the opportunity for personnel to work across their professions and services to a greater extent, as is highlighted in the white papers on the primary health and care services and welfare educations.[6] The Government will facilitate a flexible human resources policy that enables relevant competence and the best possible recruitment.

The health and care sector requires personnel with strong critical and ethical reflection skills, as well as good communication and cooperation skills. They must be able to apply new knowledge and technology and promote professional development in their field. To achieve this, the Government will strengthen competence at various levels of education. The Government must also consider how health care services will be able to have a sufficient impact on the development of health and social care educations.

The Government will facilitate greater opportunities for health care students to gain practice training in the municipalities, for the purpose of both recruitment and competence building. The Government aims to present a white paper on quality in higher education in the spring of 2017. Educational capacity is crucial for access to sufficient and appropriate expertise in the health care services. The demographic development suggests a greater need for health and care services and a greater need for more candidates from the health and social care educations.

Good governance and management

Good management is crucial in order to create the patient's health care service. There is a need for improved knowledge and a culture for research in the services and in the municipalities. At the same time, the research communities require a better understanding of the services and their needs. Here, governance and management is crucial. The leaders in the services and the municipalities must take responsibility for meeting knowledge needs through research and innovation initiatives. They should furthermore ensure that research outcomes and new innovations are implemented in the services, and that the effects thereof are evaluated. Leaders in the research and innovation communities must on their part facilitate more interaction between the researchers and the services, in order to implement new technology.

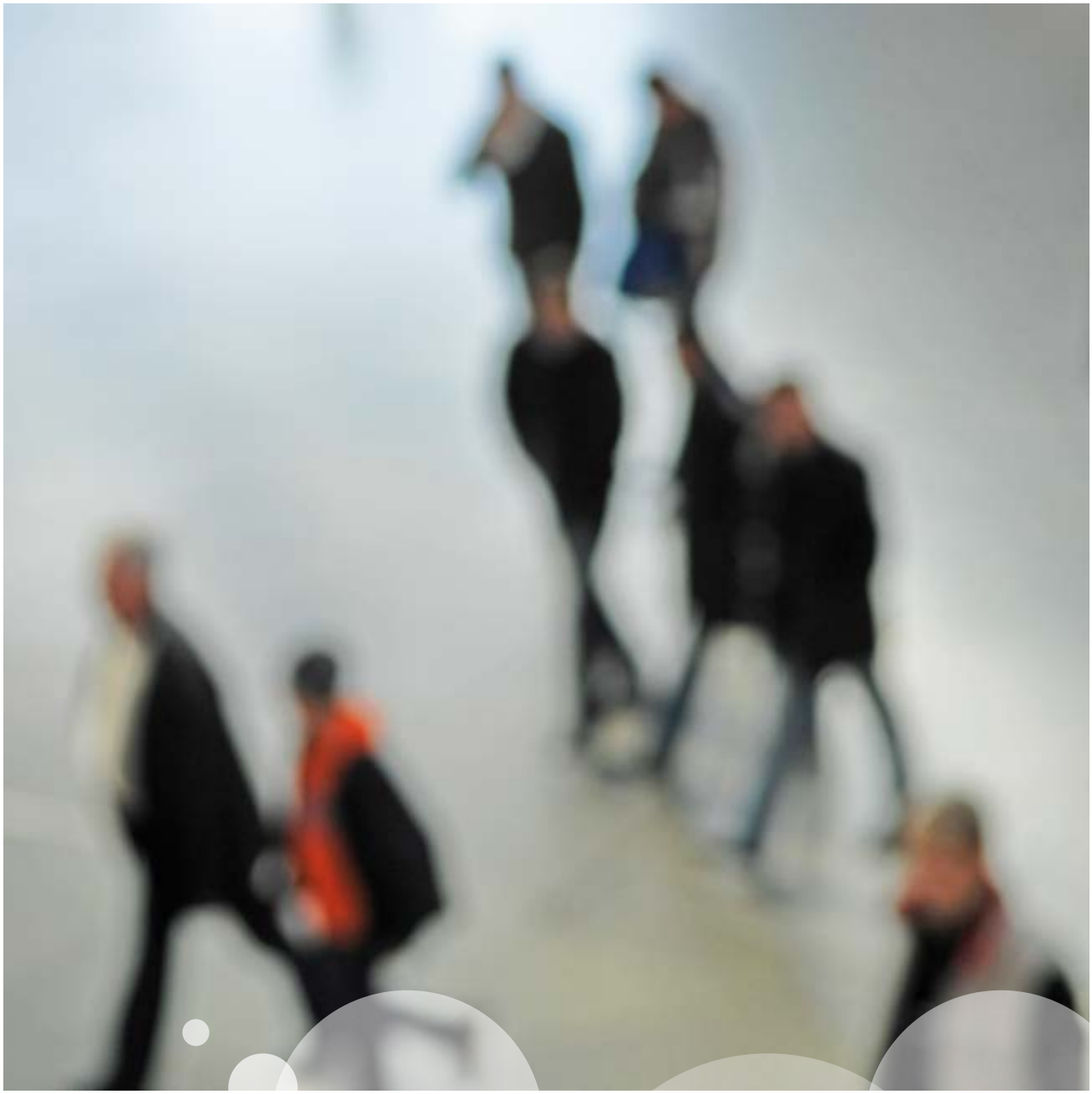
There is a need for a cohesive monitoring system for research and innovation, which provides an overview of resource inputs and effects across sectors. An expedient system must be developed, which ensures that new knowledge is incorporated into professional guidelines, and that these guidelines are implemented into the services.

More breakthrough health and care research and more internationalisation

The Government intends to focus on long-term development of several world-leading research communities. Such communities boost the quality of the research and also highlight Norwegian health and care research internationally. They deliver results which push the boundaries of knowledge and can potentially create innovations that give rise to new business enterprises. The awarding of the Nobel Prize in Physics or Medicine to May-Britt and Edvard Moser in 2014 indicates that Norway has a world-leading research community in the field of basic biomedical research.

The Government will facilitate a good balance and a good interaction between basic research, applied

6 White Paper No. 26 (2014-2015) The Primary Health and Care Services of Tomorrow – localised and integrated, White Paper No. 13 (2011-2012) Education for Welfare



research, translational and clinical research, innovation and industrial development, commercialisation and implementation of new knowledge and new solutions. Modern and suitable buildings and good research infrastructure is essential to all health and care research. This will also make the communities more attractive partners for the private sector and for international researchers.

Knowledge crosses national boundaries. Hence health and care researchers must be involved wherever the newest knowledge is being developed. Internationalisation is therefore a prerequisite for health and care research. The Government's strategy for cooperation with the EU on research and innovation sets ambitious objectives for Norwegian participation in the European research cooperation and Horizon 2020.[7] One of these objectives is that international participation will contribute to improved social welfare and more sustainable social development through research and innovation that enables us to manage major societal challenges. The Government's ambition is for two percent of the competitive funds in Horizon 2020 should be given to Norwegian actors. In order to achieve this goal, the measures laid out in the strategy must be implemented, and there must be increased participation by actors in the health care sector.

The Government will also support other international research and innovation cooperation. North America plays a key role in both global health and medical research. The United States is the country with which Norway cooperates to the greatest extent in these fields. The objective of the Government's strategy for cooperation with Brazil, India, Japan, China, Russia and South Africa in research and higher education is to contribute towards a more cohesive and long-term cooperation based on Norwegian interests in each individual country. This will also help strengthen cooperation with these countries on health and care research.[8]

The Nordic countries experience many of the same challenges and opportunities in the field of health and care. Resources will extend further if the countries are able to cooperate and enjoy a good division of labour. In the Nordic context, a number of research and innovation activities are either ongoing or planned for the future, including improved cooperation on highly specialised treatment, multi-centre clinical trials, rare diseases, registry-based research, public health, inequality in health, patient mobility, welfare technology, e-health, standardisation, mental health, health preparedness, cooperation on pharmaceuticals and exchange of officials and national experts in the EU. National authorities, research communities, municipalities and the private sector would all be involved in this type of cooperation. Nordic markets for demanding procurement entail greater competition and a stronger innovation impulse.

Meeting global health challenges

The Norwegian Government intends to contribute towards research and innovation to solve global health challenges. This can create lasting improvements in global public health and help to reduce unjust health inequalities. The Government will build upon previous efforts and continue to develop research and innovation activities aimed at global health, with a particular emphasis on women's and children's health.

The white paper on Global Health in Foreign and Development Policy presents Norway's main priorities for the areas: i) mobilising for women's and children's rights and their health, ii) reducing the burden of disease, with an emphasis on prevention and iii) promoting human security through health.[9]

The UN Millennium Development Goals expire in 2015 and will be followed by new global goals.[10] The new Sustainable Development Goals will be in effect until 2030. Securing good health and well-being is one of 17 goals. This health goal has nine sub-goals which carry forward those Millennium Development Goals that were not achieved, while new goals for non-communicative diseases were also introduced. Several other goals also have direct relevance to health.

7 Strategy for Research and Innovation Cooperation with the EU. Horizon 2020 and ER

8 Panorama. Strategy for Cooperation on Higher Education and Research with Brazil, India, Japan, China, Russia and South Africa (2016–2020)

9 White Paper No. 11 (2011-2012) Global Health in Foreign and Development Policy

10 The UN's Sustainable Development Goals

Clinical testing of Ebola vaccine in Guinea

Guinea is one of the West African countries hardest hit by the Ebola epidemic. By the end of October 2015, more than 11,000 people had died of the disease in West Africa, 2500 in Guinea alone. An effective vaccine against Ebola would prevent many future deaths. In March 2015, the health authorities in Guinea, the World Health Organisation, Doctors without Borders and the Norwegian Institute of Public Health began a clinical trial with a vaccine developed by the Public Health Agency of Canada. The first clinical results were published as early as August 2015.[11] This offers hope that we will now, for the first time since the discovery of Ebola in 1976, have an effective vaccine against the disease. The Ministry of Foreign Affairs is contributing to the funding of vaccine testing through the Research Council of Norway's programme for Global Health and Vaccination Research (GLOBVAC).

Photo: ©2015 Sean Hawkey

11 Ana Maria Henao-Resrepo et al., Lancet 2015

Evidence-based public health efforts

The Government has an objective of developing effective and good public health initiatives, based on knowledge of the health situation and the health challenges of the population, what affects health, and what instruments and measures are effective. This was the central element in the public health white paper presented by the Government in the spring of 2015.[12]

Systematic and repeated health studies play an important role when gathering data on factors that affect health, including physical activity, nutrition, obesity and tobacco use. The use of national ID numbers gives Norway a good starting point for collecting such knowledge from health registries, patient records and biobanks for both health and industrial development. One objective is to create health registries for all major disease areas. As a general rule, these health registries will be based on consent. The Government will consider measures to make it easier to access to health data for various purposes and user groups, to link data from various data sources and to utilise large-scale data analysis which combines the effects of environment, lifestyle and genetics on public health. This requires a responsible management of personal data. Individuals must be able to dispose of their own information to the greatest extent possible. There must also be protection against unnecessary access to information, or the needless dissemination of information. These considerations have been included in the new Personal Health Data Filing System Act (Health Register Act) and the complementary regulations.

The Government has presented its strategy against antimicrobial resistance which highlights the need for more knowledge in order to reach the specific target of reduced and improved use of antibiotics in the health care service.[13] Major efforts are needed to gain a better and more comprehensive overview of the scope of antimicrobial resistance in humans and animals. There is also a need for research to develop new antibiotics and alternatives to antibiotics.

An unhealthy diet is the most important individual factor in terms of reduced lifespan in Norway, as is the case in many other industrialised countries. Malnutrition can be both the cause and consequence of reduced health. Therefore, it is important to view nutrition in connection with prevention, treatment and restitution. Greater cooperation on knowledge development and innovation with regard to the connection between food, nutrition and health can contribute to a healthier diet, and thereby improved health, and lay the foundation for production of healthy and safe raw materials and products, and also more innovation and value creation.

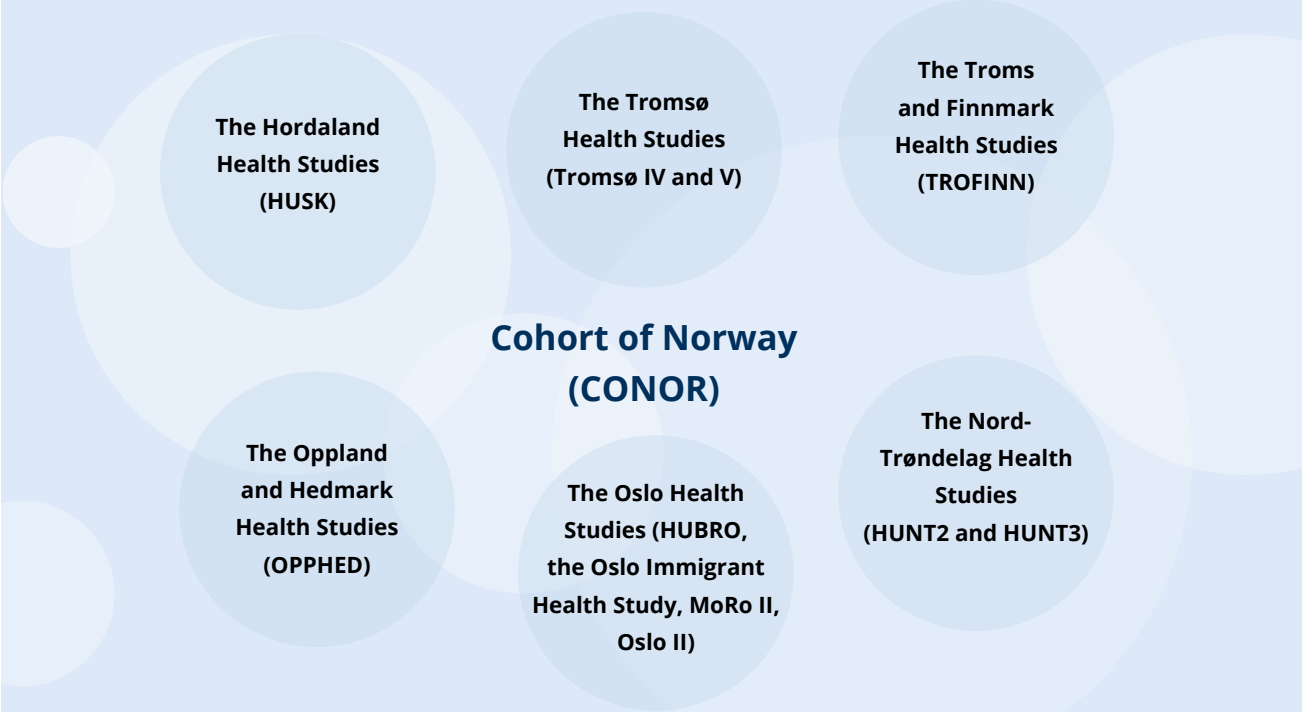
What are HUNT and CONOR?

The Nord-Trøndelag Health Study (HUNT) is the largest collection of information on a part of the population ever performed in Norway. The data is collected during three population studies, HUNT1 (1984–86), HUNT2 (1995–97) and HUNT3 (2006–08). A total of 120,000 people have consented to the use of their information for research purposes, and nearly 80,000 have provided blood samples. This makes HUNT an important collection of health data and biological material, also in an international context. In 2017, HUNT4 will commence its data collection of the entire portion of the population of Nord-Trøndelag over 13 years of age.

Matrix tubes used at HUNT biobank. The code at the bottom is read electronically in order to identify the correct sample at all processes in the biobank, both for analysis and dispensing of biological material for various research projects. PHOTO: NTNU/HUNT

12 White Paper No. 19 (2014-2015) Public Health Report – Accomplishments and possibilities

13 National Strategy against Antibiotic Resistance 2015–2020



Cohort of Norway (CONOR) is a collection of health data and blood samples from several Norwegian health studies. When the data collection is complete, CONOR will contain health data from approx. 200,000 people and a valuable biobank. The purpose is research on causes of disease.

Safe, effective and more personalised treatment

The Government has presented a White paper on medicinal products, in which one of the main objectives is to facilitate research and innovation. The Government aims to strengthen health research and improve patient access to experimental treatment in Norway.[14] Clinical trials can provide us with updated knowledge on the effects and safety of new diagnostics and new treatment methods. Knowledge gained from clinical multicentre studies supports prioritisation and decision-making in the health care services with regard to the treatment methods offered to patients. Knowledge is also essential in terms of decisions to phase out forms of treatment proven to be less effective or unacceptably costly. Thus, clinical multicentre studies are important instruments for achieving health policy objectives. Cooperation between health care services and universities is the key to ensuring an effective use of public resources, and to avoid duplication.

Clinical research may lead to increased commercial development. Clinical multicentre studies are an integral part of the development of new medications. Robotic technology and IT-based ancillary systems and sensors are examples of new technology that will have importance for an improved quality of life, sustainability and active ageing. Commercialising new technology or new services relies on experimenting and testing. Tests and experiments of new products must therefore be facilitated, in cooperation with the private sector.

We now know that there are many medications that are only effective for certain patients within a patient group that share the same disease. By integrating knowledge about individual biological properties, personalised medicine may, in the future, lead to more accurate diagnostics and treatment. This entails that we can offer the right prevention and treatment to the right person at the right time, in order to improve the individual's quality of life and achieve a more sustainable health care service. Competence and infrastructure for safe storage of data and large-scale data analysis is necessary in order to manage, analyse and create knowledge and innovation out of the large amounts of data that form the basis for personalised medicine. With the help of large-scale analysis and computer simulated (in silico) clinical studies, it will be possible to

14 White Paper No. 28 (2014-2015) Pharmaceuticals Report – Proper use – better health

adapt the treatment as needed to the biology, lifestyle and behaviour of each individual patient. Large-scale data analysis can also provide greater knowledge on differences in clinical practice. The introduction of personalised medicine must be followed by research. There is especially a need for research on digital safety, to ensure safe exchange and storage of data.

Strengthened research and innovation within and for the municipalities

The Government will facilitate a strengthening of research on municipal health and care services and for parts of this research activity to target prioritised needs to a greater extent, so that the decision-basis in the services is improved.[15] The Government calls for municipalities to contribute towards and facilitate research and innovation for the public health activities in the municipalities, to promote quality of the municipal health and care services and interaction with the specialist health care services. This must occur in cooperation with research communities, and the knowledge needs of the municipalities should form the basis for such activities.

The Municipal Reform will facilitate the merger of several municipalities into larger municipalities, which would be better suited to meet the challenges of tomorrow.[16] The Government seeks continued efforts toward welfare technology in the municipalities. InnoMed will play a key role in this effort.[17]

The Government intends to strengthen the knowledge system for the municipal health and care services and related services, such as Child Welfare Services. The regional and national knowledge and resource centres are an important part of the national authorities' efforts to enhance competence in the health and care services, Child Welfare Services and other sectors. In cooperation with the Ministry of Children and Equality, the Ministry of Health and Care Services has established community missions and tasks for 21 of the knowledge and resource centres outside the specialist health care services. The community mission is to contribute with expertise, participate in education, guidance, information and networking activities. In addition, these centres can take part in practice-oriented and practice-relevant research. The Directorate of Health administers grants to the centres and has been assigned the task of promoting measures to ensure that the health and care services obtain more information about the centres' tasks, and are provided equal access to the centres.

New knowledge and innovations are not sufficiently implemented across municipal services. The Government will facilitate additional implementation and effectiveness research, to ensure that good and cost-effective service innovations and technological solutions are scaled up and distributed.

Innovative and effective health and care services

The Government has an objective of increasing the degree of innovation in the health, care and welfare services, and for the public sector to be a driving force for, and active user of innovation. The monitoring of one's own health, home-based solutions and technology that can help people remain at home for as long as possible, and will be important with respect to sustainable development, disease prevention, improved quality of life and active ageing.

Innovation in health and care can, for instance, take place through implementation of technology, amendments to organisation and governance, development of the services, political reforms or amendments to regulations. The introduction of new technological solutions will often lead to changes in work routines, organisation, management and distribution of tasks. In order to gain knowledge of the effects and implementation of such changes, they must be followed through with research and evaluations. Such knowledge must be disseminated and utilised in a systematic way. Moreover, there is a need for impact evaluation of treatment which is currently being offered to patients. The Government will set stricter requirements for making research results available to both service users and the research communities.

The national e-health initiative is a major innovation project and will form the basis for innovation and industrial development. Data from the health services will be prepared and made available for improvement of quality, health monitoring, governance, research and innovation, provided this does not conflict with personal data protection. The Government wishes to establish open sources in the fields of e-health and welfare technology, but only to the extent this is possible. This is

15 White Paper No. 26 (2014-2015) The Primary Health and Care Services of Tomorrow – localised and integrated
16 White Paper No. 14 (2014-2015) Municipal Reform – new tasks for larger municipalities
17 InnoMed is a national competence network for need-driven innovation in the health care sector.

important to ensure open competition and to facilitate a large number of developers and suppliers.

The Government will introduce new and simplified national and EU-based purchase regulations in 2016. One of the purposes of the revised regulations is to better facilitate innovation through simplifications, greater flexibility and new instruments. The Government will facilitate the use of innovative public procurements in hospitals and municipalities, thereby offering improved services for residents and greater industrial development. Knowledge of how to manage procurements should be part of the backbone of the organisation and its users. The health care sector must develop greater competence and a better culture for dialogue with the private sector. The procurements must be firmly anchored in the organisation and among the users. The Government uses the Agency for Public Management and Government (DIFI) and the National Programme for Supplier Development to raise the level of expertise on the implementation of innovation-promoting purchases, and to ensure that the benefits are realised.

Health and care as an industrial policy priority

It is the Government's intent to safeguard and further develop our competitive advantages, as well as the value creation in the Norwegian economy, and will facilitate a private sector that is based on knowledge, and which is sustainable, innovative and adaptable. Stronger industrial development in the health and care sector will result in better and more effective patient treatment and services. It will also ensure improved conditions for the Norwegian private sector in terms of technology development and service innovation in a broad and growing global market. The Government intends to enable the private sector in developing new solutions for dialogue with the health and care services. This will also strengthen the health and care sector's role as a competent customer that demands innovative solutions from the private sector. The Government also intends to facilitate major private investments in industrial research and in research-based industrial development.

Norway has a well-organised health and welfare sector, with good conditions for creating arenas for cooperation between users, public sector, health authorities, private sector and research communities. New knowledge and new solutions for the health and care sector should therefore to a large extent be developed in cooperation with patients, their families, private sector, education and research actors, municipalities and health authorities and non-governmental organisations.

The Research Council of Norway and Innovation Norway manage a significant portion of the Government's industry-oriented funding. The purpose of the industrial funding is to initiate profitable projects of social benefit that would not otherwise be started, and contribute to a better use of community resources than would have been the case had there been no funding. The market is the most important source of capital for new projects. However, the Government believes that the public sector should contribute when the market does not function satisfactorily. Public funding agencies should not be the sole source of financing, nor the most important, but shall enable the release of private capital. The Government's task is first and foremost to facilitate appropriate frameworks.

Additional investors for public funding are necessary when individual enterprises receive government funding of a certain scale. The market must select good enterprises and projects. This also applies to the markets for pharmaceuticals and for health and care services in general. A lack of necessary capital may be critical for the further development and realisation of projects. Pharmaceutical development is characterised by a development cycle of 10-15 years, and involves a high level of risk and high costs. Furthermore, there are few major international pharmaceutical manufacturers operating in Norway that are able to seize projects from Norwegian communities. This means that there are few competent investors who can cooperate with, and utilise public funding. Long development cycles require the public funding agency to properly manage and guide enterprises under such terms and conditions.

All development cycles involve the need for academia, health authorities, municipal sector, public funding agencies, industry and investors in order to develop a common understanding of how potential can be released, also through the establishment of, and active participation in, arenas of cooperation and meeting places where information and the exchange of knowledge takes place.

2 The Government's actions

Increased user involvement

The Government is following through on Health&Care21 by introducing user involvement as a general principle for research projects funded by the hospital trusts, and in the ten-year policy-oriented health research programmes funded by the Ministry of Health and Care Services at the Research Council of Norway. Applications will be assessed in terms of quality and benefit for end-users. "Commissioned research" is a new instrument used to identify, prioritise and develop approaches to problems based on systematic collection of knowledge and involvement of service users and other actors. This instrument will be applied to selected themes in the Research Council's three new health programmes (see page 7). It will also be utilised in the joint programme for clinical multicentre trials in specialist healthcare services.

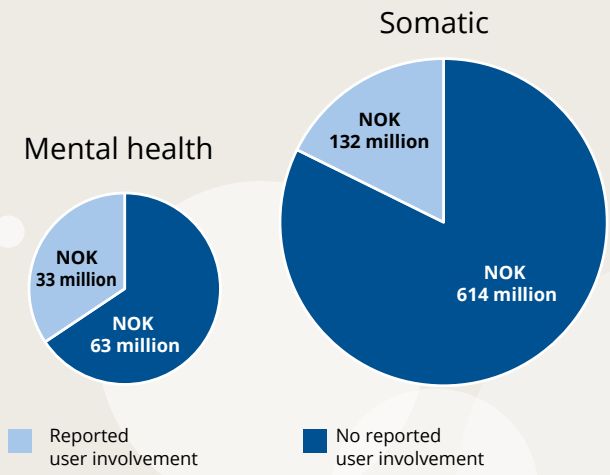
The regional health authorities have been commissioned by the Ministry of Health and Social Care Services to develop guidelines for user involvement in research in four areas: i) service user representatives in various research committees, ii) direct user involvement in research projects, iii) information on user involvement in applications for research funds and iv) training of service users. From 2017, information on user involvement will be mandatory in applications for research funds with regional health authorities and the aforementioned policy-oriented health research programmes at the Research Council of Norway.

There is a need for greater knowledge of the patient as an active participant in research and innovation processes, in decisions regarding their own disease, and in the care provided by both family members and volunteers. The Government will also document the scope and effect of increased user involvement in research through the Health&Care21 Monitor.[18]

The Government will:

- Implement "commissioned research" as a new instrument at the Research Council of Norway and the regional health authorities
- Implement a general principle of user involvement in research funded by the Ministry of Health and Care Services
- Evaluate the scope and effect of user involvement in research

Figure 1: Statistics on user involvement in the hospital trusts in 2014



18 See page 19.

Development of human resources

The Government follow through on Health&Care21 by way of the national development project "Quality in Professional Practice Studies", in order to improve quality and relevance of student practice in health and social care higher education. Proposals will be considered by the Ministry of Education and Research in cooperation with relevant ministries.

The Government will consider the framework conditions for good practice in the municipalities. Legislation varies between municipal health services and specialist healthcare services, and this may be a contributing cause of the current uneven distribution of student practice between municipal health services and specialist healthcare services. The Ministry of Health and Social Care Services and the Ministry of Education and Research will cooperate on the possible introduction of a statutory responsibility for municipalities, making it necessary for them to ensure student practice as a part of the implementation of the proposals of White Paper no. 13 (2011-2012) Education for Welfare. Relevant ministries will consider various models for achieving national standards and professional development in the health and social care educations, to ensure that they correspond with the needs of the services and service users.

The Government will take action on human resource policies to ensure that the university and university college sector is better equipped to develop distinctiveness, professional profiles and ambitions. In keeping with the Long-term Plan for Research and Higher Education, the Government is currently implementing a plan to establish 500 research fellowships in order to educate a greater number of new researchers.

The Government will adopt regulations on tenure track positions in order to provide the universities and university colleges with greater latitude to develop flexible personnel policies. The Government has also revised the regulations on promotions to higher positions in the university and university college sector to make it easier for universities and university colleges to plan professional development and raise the academic standard. A proposal to specify the rules for determining the length of research fellowships, which will make it easier for research fellows to be appointed at their own institution after the fellowship period has ended, has been through the hearing process, and the issue is now being considered in the Ministry.

The Government is implementing changes to the content and structure of specialist training for physicians, primarily in the field of clinical practice. The specialist education will target health challenges, and incorporate new professional developments, changes to the patient and physician roles and reforms to the health care sector. Competence modules will be established for the entire educational pathway, incorporating user involvement, research methods, knowledge management, cooperation, governance and IT. Clinical research may also be included as part of specialist training.

The Government will:

- Enhance the quality and increase the relevance of the health and care service educations by:
  1. following up the project Common Content in Professional Education in Health and Social Care
  2. following up the project Quality in Professional Practice Education
  3. considering the introduction of a more comprehensive, statutory responsibility for the municipalities to accept students for practice studies
- Develop specialist training for physicians that addresses future needs and challenges, and that can incorporate clinical research
- Give universities and university colleges greater latitude to develop flexible personnel policies to obtain sufficient competency and promote good recruitment by:
  1. adopting regulations on tenure track
  2. revising regulations on promotions for positions in the university and university college sector
  3. considering an amendment of the rules for determining the length of fellowships

Strategic and evidence-based governance

The Government is following through on Health&Care21 by establishing and further developing key arenas for cooperation on research and innovation. A successful implementation of the Health&Care21 Strategy is based on cooperation among the actors involved for the purpose of achieving common objectives. The Government has therefore established the Health&Care21 Advisory Board as a central arena and meeting place for monitoring the follow-up of the Health&Care21 Strategy. A reference group has also been established with members from the responsible ministries, led by the Ministry of Health and Care Services, in order to follow up this action plan.

In order to take a closer look at barriers and find solutions for enhanced cooperation between the universities and the hospital trusts, the Ministry of Education and Research and the Ministry of Health and Care Services has established a working group which includes the Deans of the University of Tromsø – The Arctic University of Norway and the University of Bergen, as well as the Chief Executive Officers of the regional health authorities including the Central Norway Regional Health Authority and Southern and Eastern Norway Regional Health Authority. The Research Council will be an observer. It is anticipated that the working group will submit its recommendations by the end of February 2016.

The Government will establish a monitoring system, Health&Care21 Monitor, for health and care research and innovation. This has been assigned to the Research Council. The Monitor will provide an ongoing and expedient knowledge base for resource use, results, and effects of research and innovation in health and care, and has a long-term ambition of encompassing all the research and innovation contributors. It will contain indicators which include all priority areas of the Health&Care21 Strategy, in addition to use of the classification system, the Health Research Classification System (HRCS). The Monitor will provide information on the extent to which the actors' implementation of the Health&Care21 Strategy is a positive development, and will become an important governance instrument for the Ministry, public funding agencies and for the actors themselves. The first phase of the project will be presented as a thematic part of the Research Barometer 2016.

The Government will:

- Establish the Health&Care21 Monitor
- Map the barriers to and latitude for cooperation between the university and university college sector and the hospital trusts

Photo of the Health&Care21 Advisory Board and State Secretary Anne Grethe Erlandsen from the first meeting of the Advisory Board. Photo: Geir Aas, Research Council of Norway.

Top row, from the left: Eirik Næss-Ulseth, Håkon Haugli, John-Arne Røttingen (Chairman), Svein Lie, Camilla Stoltenberg, Jesper W. Simonsen, Erlend Smeland, Arnfinn Sundsfjord. Middle row, from the left: Dagfinn Bjørgen, Kathrine Myhre, Guri Rørtveit, Toril Bariusdotter Ressem, Maren Sogstad, Cathrin Carlyle, Karita Bekkemellem, Stig Slørdahl. Front row, from the left: Fredrik Syversen, Hilde Lurås, Monica Wammen Nordtvedt, Trude Andresen, Fanny Duckert, Bernadette Kumar, State Secretary Anne Grethe Erlandssen

High-quality and stronger internationalisation

The Government follows through on Health&Care21 by strengthening basic research, strengthening the research infrastructure and facilitating greater international cooperation and Norwegian participation in Horizon 2020 and in the European Research Area (ERA). The Long-term Plan for Research and Higher Education, the Government's Strategy for Research and Innovation Cooperation with the EU, and the Government's strategy for cooperation on higher education and research with Brazil, China, India, Japan, Russia and South Africa will contribute to this.

The Government believes that the most expedient way to strengthen basic, high-calibre research is by use of a broadly implemented instrument that cuts across disciplines, and which funds investigator-initiated research projects. The three most important initiatives include an open competitive arena (FRIPRO), the National Financing Initiative for Research Infrastructure (INFRA) and the Norwegian Centres of Excellence (SFF). All three are funded by the Research Council of Norway. Figures from recent years show that projects in the area of health and care are strong competitors with regard to of this general funding (see figure 2). The intention is that FRIPRO will contribute towards qualifying and mobilising Norwegian researchers to apply for funding from the European Research Council (ERC) and other international competition arenas. The Research Council has in recent years developed FRIPRO into a continuous chain of support which covers the entire career span, from young talented researchers, via research projects, to strong research groups.

Research equipment and laboratories are essential for developing world-leading research communities. In the Long-term Plan for Research and Higher Education, the Government states that the allocations for research infrastructure will be increased by NOK 400 million by 2018.

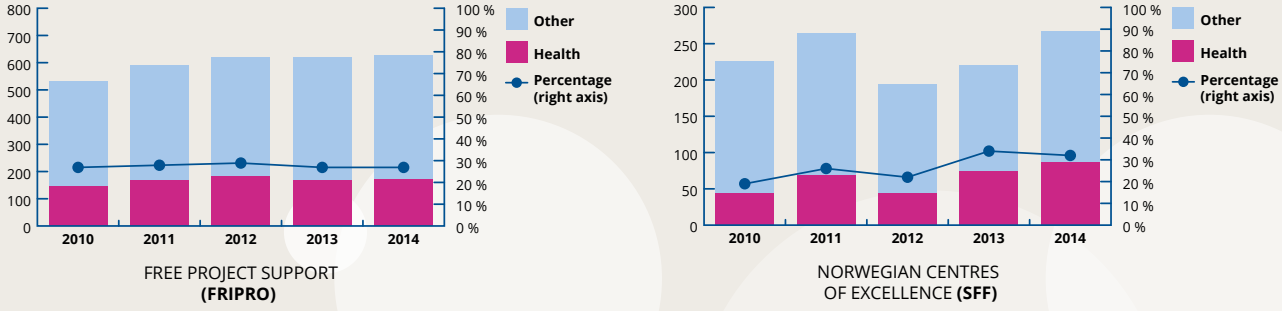
The Research Council has been assigned the task of exploring a possible centre scheme for clinical health research.

In cooperation with research communities and the Research Council, the Government will consider implementing incentives, counselling and support functions for the purpose of improving cooperation between the university and university college sector and health authorities, and also for increasing participation from the research communities in Horizon 2020.

The Government will:

- Assess the way in which funding for incentive measures under the Government's escalation of the Long-term plan can help boost Norwegian participation in health research under Horizon 2020 and ERA
- Target national instruments to enhance mobilisation and qualification for participation under Horizon 2020
- Strengthen high-calibre basic research
- Increase allocations for research infrastructure, in keeping with the planned escalation under the Government's Long-term Plan for Research and Higher Education
- Consider establishing a new centre scheme for clinical research at the Research Council

Figure 2: Funding for health research under FRIPRO, INFRA, SFF and SFI

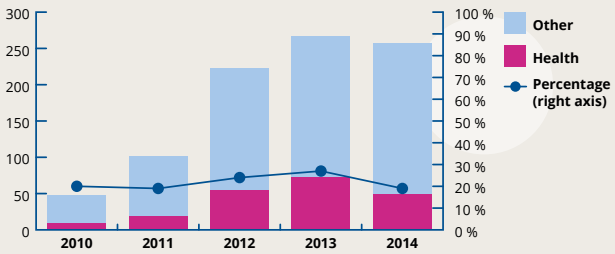


New building for life sciences, pharmaceutics and chemistry

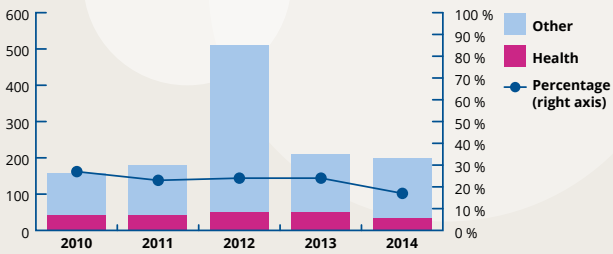
The Government is prioritising a new building for life sciences, pharmaceutics and chemistry at the University of Oslo, which will serve as an important contribution towards achieving the three main objectives of the long-term plan on improved competitiveness and adaptability, meeting the major societal challenges and developing high-calibre research communities.

The new building will facilitate closer cooperation between the various research communities and cooperation with the private and public sectors. Cooperation between the University of Oslo and Oslo University Hospital will be important in ensuring high quality and relevance for education and research.

Photo: Statsbygg. Arkitekt: Ratio arktitekter.



NATIONAL FINANCING INITIATIVE FOR RESEARCH INFRASTRUCTURE **(INFRA)**



CENTRES FOR RESEARCH-BASED INNOVATION **(SFI)**

Research infrastructure

Through a national initiative on research infrastructure, the Government will ensure that Norwegian researchers have access to first-class scientific equipment. The programme will be administered by the Research Council of Norway and has been strengthened in the government budget for 2015. Allocations will be used to purchase new equipment within a cost framework of NOK 2 to 200 million, through open tendering. In 2014, 12 health and care infrastructure projects were allocated funding as part of the scheme. Neuroscience, cancer biology and bioinformatics are among the areas that will receive funding, encompassing biobanks, health registries and equipment for genome sequencing. In 2015, four new projects were funded, for a total sum of NOK 255 million. One of the four projects was devoted to common infrastructure for clinical research through the NorCRIN network.

White Paper No. 18 (2014-2015) Concentration for Quality - structural reform in the higher education sector

The purpose of this reform is to improve the quality of research and education by amending the structure in the university and university college sector and concentrating resources on fewer, but stronger institutions. The mergers will facilitate quality-enhancing interaction between the various health care educations. A university and university college sector with fewer and larger institutions will also contribute to strengthening cooperation with the health care sector and will facilitate a cohesive understanding of national, regional and local needs for education and research. Stronger research communities at the universities and university colleges can enhance interaction between research, education and innovation and thereby the development of the health and care services.

Meeting global health challenges

The Government follows through on Health&Care21 by including global health as a long-term objective for research and innovation activities in the regional health authorities.

The Global Health and Vaccination Research Programme (GLOBVAC) is the primary initiative for investments in global health research and innovation for Norwegian research communities. The programme finances Norway's participation in the second phase of the African-European partnership, European and Developing Countries Clinical Trials Partnership (EDCTP). Several Norwegian research and innovation environments should participate in the EDCTP programme.

The Government will further develop initiatives for global health research and innovation and for incentives for partnerships with researchers in low- and middle-income countries via existing mechanisms such as GLOBVAC at the Research Council of Norway, as well as the Norwegian Programme for Capacity Development in Higher Education and Research (NORHED) at NORAD.

Combating antimicrobial resistance is one of our greatest global health challenges. The Government will continue its efforts towards research initiatives that may develop new or improved antibiotics and new diagnostic tools, including through JPI-AMR, a joint European research programme against antimicrobial resistance.[19]

In the autumn of 2014, the Government launched a national innovation initiative for education and health, Vision 2030. The purpose of the initiative was to mobilise actors for innovation in global education and health that may contribute to the realisation of the Sustainable Development Goals in the areas of health and education, towards 2030. The initiative has been followed up by the announcement of a separate financing mechanism for innovation. The financing mechanism is under development and will promote the reduction of poverty by scaling up innovative solutions in the areas of education and health.

The Government will:

- Continue to develop incentives for partnerships with researchers in low- and middle-income countries, by the use of existing mechanisms such as GLOBVAC and NORHED
- Explore and establish a funding mechanism for innovation projects in global education and health

19 See www.jpiamr.eu for more information.

Health data as a national comparative advantage

The new Personal Health Data Filing System Act (Health Register Act) entered into force on 1 January, 2015. The rules regarding access to data have been simplified, while there are clear requirements for appropriate personal data protection. The regulations that are currently based on the Act will be revised and updated in light of the new Act. In the work on these regulations, the rules for linking health registry data will be evaluated. deadlines for delivery of registry data will also be evaluated. The personal data protection implications of the proposals will be explored and taken into consideration.

The Ministry of Health and Care Services is prioritising efforts to modernise and coordinate central health registries and medical quality registries. This has been implemented through a national health registry strategy and a national e-health strategy. The Government will consider measures to facilitate easier access to, and links between health data and other types of data sources for various purposes and user groups. The personal data protection implications of potential measures will also be explored and taken into consideration in the assessment.

The Norwegian Institute of Public Health will, in cooperation with the Directorate of Health, the National Service Community for Medical Quality Registries and the regional health authorities, develop a plan for the exploration of potential new shared registries. The actors will also prepare an overview of health care service fields in need of evidence-based development, and will explore the prerequisites for establishing quality registries for these areas.

The Government will consider new registries for mental health disorders and substance abuse, and a registry with personally identifiable data with regard to the use of pharmaceuticals. The Directorate of Health has been assigned the task of exploring a registry for municipal health and care services.

The Government will consider introducing a common regulatory framework for the large-scale, population-based health studies. The Government will contribute to the funding of HUNT4 and will consider possible funding schemes for larger-scale data collections through population-based health studies.

Norway will become a full member of the European research infrastructure consortium Biobanking and BioMolecular resources Research Infrastructure (BBMRI-ERIC) from 1 January, 2016. We will thereby be granted voting rights and full rights to participate in the same manner as other Member States in the consortium. The Government will, in cooperation with the other Nordic countries, consider continuing the Nordic cooperation on health registries through the Nordic Council of Ministers.

The Government will:

- Revise regulations under the Personal Health Data Filing System Act
- Consider introducing a common regulatory framework for large-scale, population-based health studies
- Assess potential funding schemes for larger-scale data collection via population-based health studies
- Provide co-funding for data collection under HUNT4
- Consider establishing a non-anonymous registry on the use of pharmaceuticals and a registry on mental health disorders and substance abuse
- Consider measures to facilitate linkage between health data and other types of data sources for various purposes and user groups, while still safeguarding personal data protection

Improved clinical treatment

The Government follows through on Health&Care21 by facilitating addition, larger-scale clinical trials. The Government will establish a joint programme for clinical research in specialist healthcare services from 2016, to ensure that research closely tied to patient treatment and knowledge needs of the services. "Commissioned research" will be used as an instrument in the programme. It will allow for cooperation with the private sector.

The regional health authorities have been assigned the task of strengthening infrastructure, trial facilities and support functions for clinical studies at the university hospitals. The Government will strengthen infrastructure for trials and testing of new diagnostics and medical technology equipment in the hospital trusts.

Clinical research networks will be established which will help to ensure the recruitment of patients for clinical trials in the specialist healthcare services. A national database for clinical studies in the specialist healthcare services will also be established. The Government will consider introducing financial incentives for the hospital trusts, based on the number of patients participating in clinical studies, through a re-distribution of the result-based allocations. In the autumn of 2015, a national website/portal containing information on clinical studies was launched at helsenorge.no, targeting patients and health care personnel.

The research infrastructure for clinical studies in Norway, the Norwegian Clinical Research Infrastructure Network, NorCRIN, will be developed as a "one-stop" shop for information on clinical studies and has in 2015 been allocated funding from the infrastructure programme at the Research Council.[20] A base for early-stage research will also be established. They will be invited into the network, in order to strengthen cooperation with the private sector. The Government will formalise NorCRIN as a Norwegian participant in the European network ECRIN-ERIC.

The Norwegian Medicines Agency's counselling service entitled Counselling and Advice on Pharmaceuticals Development (VIRIL) will be further developed to expand advisory services for smaller Norwegian businesses and academic communities wishing to conduct clinical studies.

In consultation with the other Nordic countries, the Government will consider the further development of the Nordic cooperation on clinical studies, Nordic Trial Alliance, through the Nordic Council of Ministers.[21]

New major programmes for clinical research will commence at the Research Council of Norway from 2016. The programme entitled "High-quality and Reliable Diagnostics, Treatment and Rehabilitation (2016-2025)" will, through clinical research, contribute to high-quality and reliable diagnostics and rehabilitation to improve clinical practice throughout the disease trajectory. The end results of the research, supported by the programme, shall be relevant to patients and services, and ensure user involvement.

A national research network for the dental health profession will be established for the purpose of strengthening research for the dental health profession.

The Government will ensure that particle radiation therapy is established in Norway. Proton therapy is an alternative to ordinary radiation therapy for cancer, permitting higher doses of radiation, with less radiation damage. A long-term, systematic initiative on competence and knowledge building for such treatment has commenced.

The Government will:

- Establish a joint programme for national clinical multicentre studies in the specialist healthcare services
- Assign the regional health authorities the task of expanding infrastructure for testing new diagnostics and medical equipment
- Establish a new research programme on effective, targeted diagnostics, treatment and rehabilitation at the Research Council
- Develop the helsenorge.no website to inform patients about clinical trials
- Establish a national database for clinical trials
- Establish a dental/odontological research network
- Introduce particle therapy in Norway by establishing a proton centre

20 NorCRIN provides advice and guidance to ensure implementation of high-quality research.

21 The Nordic Trial Alliance is a three-year pilot project, funded by the Nordic Council of Ministers, which is intended to facilitate easier implementation of clinical trials in the Nordic countries.

Knowledge mobilisation for the municipalities

The Government implements Health&Care21 by strengthening knowledge and resource centres outside the specialist healthcare services so that they can better cover the knowledge needs of the municipalities. Municipalities are important; both as service providers and in terms of public health efforts, but their knowledge needs are currently not being adequately met. Knowledge and resource centres outside the specialist healthcare services, not all of which have been assigned research as a task, have been given a new social mission, whereby they have a clear responsibility to participate in practice-oriented and practice-relevant research and in relevant research networks. The Directorate of Health has been given a special assignment to follow this through. The Ministry of Health and Care Services will continue its work to develop and build a knowledge system for research, targeting municipal health and care services. Knowledge and resources centres that have research as their primary task will be considered in this system.

The Government wishes to establish a municipal patient and service user registry. The Ministry of Health and Care Services has held a hearing on a proposal for the establishment of such a registry. This registry would provide easier access to data from the municipal health and care services and form a basis for governance, service development, research and innovation in the health and social care services in the municipalities.

The new policy-oriented programmes for health research at the Research Council shall contribute to strengthening research for and within the municipalities. This applies to public health and prevention, service use and research focused on diagnostics and treatment. There is a need for a more systematic development and use of research-based knowledge on the effect of various initiatives for public health. This involves both national and local initiatives. One of the sub-objectives of the new programme Better Health and Quality of Life throughout all Life Stages is to strengthen scientific development, implementation and evaluation of measures to prevent disease and premature death, and to promote better health and quality of life.

It will be necessary to anchor activities in the services where this is relevant, and the sector will have opportunities to affect the direction of the research through the instrument of “commissioned research”.

The Ministry of Health and Care Services will develop a research strategy for dental health, and will continue to develop research activities in the six regional resource centres for dental health within the framework of the municipal reform.

The Government will;

- Build a knowledge system for research targeting the municipal services
- Consider establishing a municipal patient and service user registry
- Assign the national and regional knowledge and resources centres for health and care services outside the specialist healthcare services a social mission to provide research and knowledge support
- Establish a new research programme on Better Health and Quality of Life throughout all Phases of Life at the Research Council, in order to enhance knowledge on public health in the municipalities

Efficient and effective services

From 2015, Government with follow through on Health&Care21 by establishing a new ten-year programme for service research and innovation at the Research Council. The programme, entitled "Health, Care and Welfare Services Research", has been designated as a Large-Scale Programme for Research and Innovation, and is the most important and largest individual activity in the Research Council's main initiative Healthy and Active for Many Years (FASE). Continuous patient and user progress, logistics and service innovation are key themes of this programme. The programme shall focus on increasing the scope of follow-up research on reforms, organisational changes and the introduction of new technology in the services.

In 2015, the Directorate of Health was assigned the task of exploring a cohesive national system that can facilitate service innovation both regionally and locally, in cooperation with the services and other relevant actors. Such a system can contribute to the dissemination of knowledge and its service applications.

Many actors in the health care services have insufficient knowledge of what promotes or prevents the implementation of new ideas, or how improvement and implementation measures work for the service. The Directorate of Health, InnoMed, DIFI, DogA, Innovation Norway and the Research Council have therefore jointly been assigned the task of developing guidelines for service innovation. Health and care services will be involved in the activity.

The Government will:

- Expand the scope of formative dialogue research and service innovation in the health, care and welfare services
- Conduct a continuous evaluation of the reforms related to Free Choice of Treatment Center and the Treatment Pathway for Cancer in order to determine the impact of the implemented changes

Health and care as an industrial policy priority

The Government follows through on Health&Care21 by strengthening the general industry-oriented instruments administered by the Research Council of Norway and Innovation Norway in the budget for 2015, and proposes further strengthening in 2016. This will contribute to greater access to capital for innovative industry, also in the area of health and care services. The Government believes that broadly implemented instruments across industries, which facilitate good conditions for the private sector, would be the most expedient. Figure 3 shows that health and care projects make up a large portion of the various types of funding, and that this portion has increased in recent years. The Government also suggests strengthening the National Programme for Supplier Development.

In the autumn of 2015, the Government presented a policy for entrepreneurship, Good Ideas – Future Jobs, which provides a cohesive discussion of the Government's policies to promote entrepreneurs and entrepreneurship.[22] Easier access to funding, expertise and networks are among the measures in the Government's entrepreneurship policy.

The Government has facilitated advice and information for foreign companies wishing to establish businesses in Norway through "Invest in Norway", which was established under Innovation Norway in 2013.[23] Invest in Norway has contact with municipalities, industry and other actors throughout the country, and can facilitate contact and connect foreign interests with the right communities. The health and care sector is one area where Norway has strong innovation clusters, and where conditions are optimal for attracting foreign research communities and investments, also for clinical studies.

In order to increase the transfer of technology from the research and innovation communities in the petroleum sector to the health and care sector, the Government proposes to support a network initiative called Norwegian Pumps and Pipes, which brings together communities from both sectors.

Standardisation of technology in the area of health and welfare is important in order to establish more compatible solutions between unit and system.

The Government has therefore strengthened the standardisation activities in the area of e-health and welfare technology. Continua has been introduced as the standardisation framework for welfare technology. This will result in more foreseeable frameworks for both suppliers developing future solutions, and for those requesting these solutions.

The Government will establish an innovation index for the hospital trusts. The purpose is to stimulate greater innovation activity and the dissemination of good innovations. If the innovation index shows positive figures, it could form the basis for results-based financing of innovation in the hospital trusts within the current ear-marked allocations for research. It is expected that the work on innovative procurements will be strengthened by a national purchasing organisation for the hospital trusts from 2016.

The Government will promote more cohesive, coordinated cooperation on research, innovation and industrial development between the research communities and the food industry with regard to regards food, nutrition and health. Continued implementation of the cooperation will be discussed in the Minister of Heath and Care Service's business group on food, and in the action plan on nutrition, which will be developed by the Ministries.

The Government will:

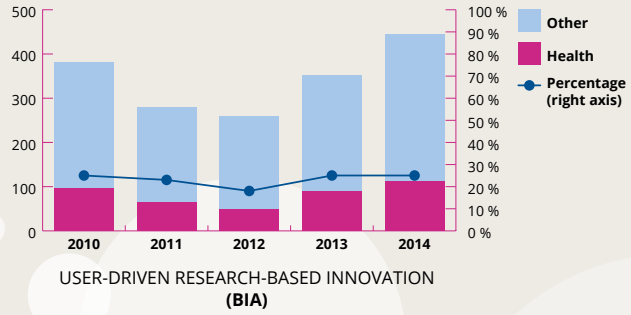
- Strengthen the general instruments in the industry-oriented research and innovation policy in 2016
- Strengthen standardisation activities in the area of e-health and innovation policies in 2016
- Facilitate effective dialogue between the public health and care services and the business sector regarding market needs
- Facilitate increased use of procurement methods that promote innovation
- Strengthen the Norwegian Supplier Development Programme in 2016
- Promote more cohesive, coordinated cooperation on research, innovation and industrial development between the research Communities and the food industry with regard to food, nutrition and health

22 Read the entrepreneurship policy at regjeringen.no.
23 See www.invinor.no for more information.

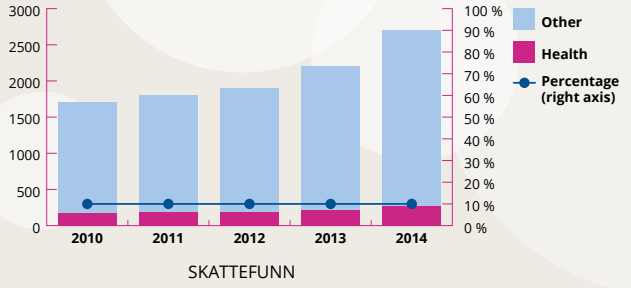
Clusters in the area of health and care services

Research and innovation clusters in the area of health and care are tasked with building bridges between the research institutions and health care institutions and to facilitate innovation and industrial development. Their aim is to improve competitiveness and ensure that a greater number of companies in Norway will produce world-leading health technology and new medicines to a global market. OsloMedtech and Oslo Cancer Cluster are two such clusters that have been designated the status Norwegian Centres of Expertise. On 25 August, 2015, Oslo Cancer Cluster opened the Innovation Park. The Innovation Park brings together businesses, schools, research communities and hospitals under one roof and will provide a unique environment for the development of future cancer treatment.

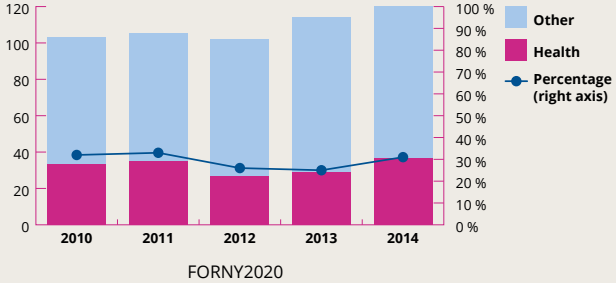
Figure 3: Figures for health in the general funding agencies in the industry-oriented research and innovation policy



USER-DRIVEN RESEARCH-BASED INNOVATION **(BIA)**



SKATTEFUNN



FORNY2020

Annex 1: Action list

1 = Increased user involvement
2 = Development of human resources
3 = Strategic and evidence-informed governance and management
4 = Increased high-quality internationalisation
5 = Meeting global health challenges
6 = Health data as a national competitive advantage
7 = Improved clinical treatment
8 = Knowledge mobilisation for the municipalities
9 = Efficient and effective services
10 = Health and care as an industrial policy priority

Initiative	Action	Ministry with coordinating responsibility	Participating Ministries
1	Implement "commissioned" research as a new funding instrument at the Research Council of Norway and the regional health authorities	Ministry of Health and Care Services	
1	Introduce a general requirement for user involvement in research funded by the Ministry of Health and Care Services	Ministry of Health and Care Services	
1	Evaluate the scope and impact of user involvement in research	Ministry of Health and Care Services	
2	Enhance the quality and relevance of education in health and social care by: 1. following up the project Common Content in Professional Education in Health and Social Care 2. following up the project Quality in Professional Practice Education 3. possibly introducing a more comprehensive, statutory responsibility for the municipalities to accept students for practice training	Ministry of Education and Research	Ministry of Health and Care Services, Ministry of Children, Equality and Social Inclusion, Ministry of Labour and Social Affairs
2	Develop specialist training for physicians that addresses future needs and challenges, and which can incorporate clinical research	Ministry of Health and Care Services	Ministry of Education and Research
2	Provide universities and university colleges with greater latitude to develop flexible human resources policies to obtain desired competence and promote recruitment by: 1. adopting regulations on tenure track 2. revising regulations on promotions for positions in the university and university college sector 3. considering amending the rules that determine the length of fellowships.	Ministry of Education and Research	
3	Establish a Health&Care21 Monitor	Ministry of Health and Care Services	Ministry of Education and Research
3	Map the barriers to and latitude for cooperation between universities and university colleges and the hospital trusts	Ministry of Health and Care Services and Ministry of Education and Research	
4	Assess how the planned increase in funding for incentive measures under the long-term plan can help boost Norwegian participation in health research under Horizon 2020 and the ERA	Ministry of Education and Research	Ministry of Health and Care Services
4	Target national instruments to enhance mobilisation and qualifications for participation under Horizon 2020	Ministry of Health and Care Services and Ministry of Education and Research	
4	Strengthen high-calibre research	Ministry of Education and Research	
4	Increase allocations for research infrastructure, in keeping with the planned escalation under the Government's Long-term Plan for Research and Higher Education	Ministry of Education and Research	
4	Consider establishing a new centre scheme for clinical research at the Research Council	Ministry of Health and Care Services	Ministry of Education and Research
5	Continue developing incentives for partnerships with researchers in low- and middle-income countries, e.g. through existing mechanisms such as GLOBVAC and NORHED	Ministry of Foreign Affairs	
5	Explore and establish a funding mechanism for innovation projects in global education and health	Ministry of Foreign Affairs	Ministry of Health and Care Services and Ministry of Education and Research
6	Revise the regulations under the Personal Health Data Filing System Act (Health Register Act)	Ministry of Health and Care Services	

6	Consider introducing a common regulatory framework for large-scale, population-based health studies	Ministry of Health and Care Services	
6	Assess potential funding schemes for larger-scale data collection via population-based health studies	Ministry of Health and Care Services	
6	Provide co-funding for data collection under HUNT4	Ministry of Health and Care Services	
6	Consider establishing a registry with personally identifiable data with regard to the use of pharmaceuticals, as well as a registry on mental health disorders and substance abuse	Ministry of Health and Care Services	
6	Consider measures to facilitate links between health data and other types of data sources for various purposes and user groups, while still safeguarding personal data	Ministry of Health and Care Services	Ministry of Education and Research, Ministry of Labour and Social Affairs, Ministry of Local Government and Modernisation, Ministry of Children, Equality and Social Inclusion, Ministry of Finance
7	Establish a joint programme for clinical multicentre studies in specialist healthcare services	Ministry of Health and Care Services	
7	Assign the regional health authorities the task of expanding infrastructure for testing new diagnostics and medical equipment	Ministry of Health and Care Services	
7	Establish a new research programme on Effective, Targeted Diagnostics, Treatment and Rehabilitation at the Research Council	Ministry of Health and Care Services	
7	Further develop the helsenorge.no website to inform patients about clinical studies	Ministry of Health and Care Services	
7	Establish a national database for clinical studies	Ministry of Health and Care Services	
7	Establish a research network for the dental health profession	Ministry of Health and Care Services	
7	Introduce particle therapy in Norway by establishing a proton centre	Ministry of Health and Care Services	
8	Build up a knowledge system for research targeting the municipal services	Ministry of Health and Care Services	
8	Consider establishing a municipal patient and service user registry	Ministry of Health and Care Services	
8	Assign the national and regional resource centres for health and care services outside the specialist healthcare services a social mission for research and knowledge support	Ministry of Health and Care Services	
8	Establish a new research programme on Better Health and Quality of Life throughout all Life Stages at the Research Council, in order to enhance knowledge on public health in the municipalities	Ministry of Health and Care Services	
9	Expand the scope of formative dialogue research and service innovation in the health, care and welfare services	Ministry of Health and Care Services	Ministry of Children, Equality and Social Inclusion, Ministry of Labour and Social Affairs
9	Conduct an ongoing evaluation of the reforms related to Free Treatment Choice and the Treatment Pathway for cancer in order to determine the impact of the implemented changes	Ministry of Health and Care Services	
10	Strengthen the general instruments in the industry-oriented research and innovation policy for 2016	Ministry of Trade, Industry and Fisheries	
10	Strengthen standardisation activities in the area of e-health and welfare technology	Ministry of Health and Care Services	
10	Facilitate effective dialogue between the public health and care services and the business sector regarding market needs	Ministry of Health and Care Services	Ministry of Trade, Industry and Fisheries
10	Facilitate increased use of procurement methods that promote innovation	Ministry of Trade, Industry and Fisheries	Ministry of Health and Care Services
10	Strengthen the Norwegian Supplier Development Programme in 2016	Ministry of Trade, Industry and Fisheries	
10	Promote more cohesive, coordinated cooperation on research, innovation and industrial development between the research communities and the food industry with regard to food, nutrition and health	Ministry of Health and Care Services	Ministry of Agriculture and Food, Ministry of Trade, Industry and Fisheries

Annex 2: Relevant white papers and other documents

White papers from the Solberg Government

- White Paper No. 7 (2014-2015) Long-term Plan for Research and Higher Education 2015–2024
- White Paper No. 14 (2014-2015) Municipal Reform – New tasks for larger municipalities
- White Paper No. 18 (2014-2015) Concentration for Quality - Structural reform in the higher education sector
- White Paper No. 19 (2014-2015) Public Health Report – Accomplishments and possibilities
- White Paper No. 26 (2014-2015) The Primary Health and Care Services of Tomorrow – Localised and Integrated
- White Paper No. 28 (2014-2015) Pharmaceuticals Report – Proper use – better health
- White Paper No. 7 (2015-2016) Equality in Practice – Equal opportunities for women and men

White papers from the Stoltenberg II-Government

- White Paper No. 11 (2011-2012) Global Health in Foreign and Development Policy
- White Paper No. 13 (2011-2012) Education for Welfare
- White Paper No. 30 (2011-2012) See me! Alcohol – Narcotics – Doping
- White Paper No. 9 (2012-2013) One Citizen – One Record
- White Paper No. 10 (2012-2013) Good Quality – Safe services – Quality and patient safety in the health and care services
- White Paper No. 29 (2012-2013) Future Care
- White Paper No. 25 (2013-2014) Education for Development

Other documents

- Strategy for Research and Innovation Cooperation with the EU. Horizon 2020 and ERA
- National Strategy against Antibiotic Resistance 2015–2020
- Good ideas – Future Jobs. The Government's Entrepreneurship Policy
- Panorama. Strategy for Cooperation on Higher Education and Research with Brazil, India, Japan, China, Russia and South Africa (2016–2020)

Published by:
Norwegian Ministry of Health and Care Services

Public institutions may order additional copies from:
Norwegian Government Security and Service Organisation
E-mail: publikasjonsbestilling@dss.dep.no
Internet: www.publikasjoner.dep.no
Telephone: + 47 222 40 000

Publication number: I-1168 E
Foto: fotolia.com
Design: Melkeveien Designkontor
Print: Norwegian Government Security and Service Organisation
1/2017 – Impression 100