

# Development plan for research and Innovation

*The Institute of Public Health is dependent on having a strong research environment in order to deliver well on our societal mission as operationalized in the strategy for 2019-2024 and in other governing documents. The goal for NIPH's research is that it should be characterized by high quality, high relevance, openness and independence. The development plan shall strengthen the work to achieve these objectives. Measures such as stable funding, adaptability, good research infrastructure and extensive collaboration are discussed here. The plan is followed up with more action-oriented plans, for the time being addressing goals concerning (1) research of high quality; (2) practice of open research, and (3) how we will work to secure external funding of the research activity.*

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## Why research at the Norwegian Institute of Public Health?

The Norwegian Institute of Public Health's (NIPH) social mission is to produce, summarize and communicate knowledge to contribute to good public health policy and measures and good health and care services (cf. instructions from the Ministry of Health and Care Services, 2016). In the NIPH's strategy for 2019-2024, the work is divided into three core tasks: We deliver knowledge, preparedness and infrastructure to protect life and improve the health of the entire population.

The control parameters that have been developed in relation to reporting the core activity knowledge production to the Ministry of Health and Care Services illustrates the width of the work: research, health analysis, health service analysis, knowledge summaries, method assessment, risk assessments and advice. Strong research groups are crucial for delivering well on all parameters and supporting other administrative tasks.

The Covid-19 pandemic has been a good illustration of how important it is that NIPH has strong research groups that can contribute knowledge support in emergency situations. There has been a need for quick systematic reviews and ongoing analyses, but also to facilitate more long-term knowledge production, e.g. research into the consequences of the pandemic and the effect of implemented infection control measures. To succeed, knowledge production must be coordinated and prioritized in relationship to both the ongoing advisory work and more long-term knowledge needs. A separate team for corona research was therefore established at NIPH and a national knowledge program for Covid-19, anchored at the Institute. Under the auspices of the Knowledge program (*Kunnskapsprogrammet*), work is being done on future knowledge systems for handling epidemics. Generally, we have to focus on how research by the Institute can support the administrative tasks, while at the same time benefit from the administrative tasks in research, not least with the aim to produce knowledge relevant and useful for society.

The research at the Institute ranges from basic research to applied research and research-based innovation. It is due to our position in the Institute sector and as a subordinate agency under the Ministry of Health and Care Services that our work has an emphasis on applied research and research-based innovation. This separates our social mission from the ones of the universities. One example could be that research applications should particularly be aimed at thematic calls for proposals and calls for proposals such as the Research Council's collaborative projects.

There is no clear distinction between research and other knowledge production. For example, when systematic reviews are published in scientific journals they fall under the category of research. Furthermore, reviews of existing research will be the foundation for new research projects and applications for external funding. Researcher competence is also a prerequisite for making solid systematic reviews which are published in other channels and which we do not necessarily place under the category of research.

The same can be said about health analyses and health service analyses. Solid research is the foundation for the development of the indicators used in the analyses, as well as how data is best collected. Data collected for the purpose of analysis will often also be important sources of research. Our advantage when we publish health analyses and health service analyses in various channels is that the work is rooted in strong research groups. Disease burden analyzes are a good example of this.

Although the main objective for this development plan is to strengthen the research activity at the Institute, it will also contribute to strengthen other areas of knowledge production.

## Prioritized thematic areas

All the Divisions at the NIPH have some research activity and the research ranges widely thematically and methodologically. The Institute's strategy for 2019-2024 provides direction for the knowledge production, both in terms of prioritized topics, data basis and methodological approaches. We also have development plans for research in selected fields. There is currently a [development plan for health services research](#) by NIPH. Division of mental and physical health has development plans for research and analysis on five selected themes: [structural tools in public health work](#), [mental health and prevention of children and adolescents](#), [work and health](#), [quality of life](#) and [comorbidity and shared risk factors](#). In [the development plan for the Division for infection control and Division of climate and environmental health](#) central research topics are highlighted. In addition, a [development plan for the environmental health](#) has been drawn up which elaborates this part of the research activity. The Institute's [development plan for global health](#) also points to knowledge gaps and the need for research. The Institute also manage a [national knowledge program for Covid-19](#), which also sets direction for Covid-19 research at the Institute.

The Institute has established centers for research and analysis in strategically important areas. We currently have one center of excellence (SFF): Center for Fertility and Health. Through funding from the revised national budget in spring 2021, the Centre for Epidemic Interventions Research was established with the ambition to achieve status as a WHO-Collaborating Centre. In addition, we have established five internal Centres for research and innovation; Burden of disease (SyBy), Evaluation of public health measures, Antimicrobial resistance (AMR), Genetic Epidemiology and Mental Health (PsychGen Centre) and Sustainable Diets.

## What shall characterise the research by The Norwegian Institute of Public Health?

NIPH's social mission, strategy, thematic development plans and other governing documents set the direction for prioritizing themes, data and methodological approaches. These documents, however, say little about what should characterize the research at the Institute. This plan highlights the objectives of high relevance, high quality, transparency and independence.

### High relevance

Research conducted at NIPH constitutes and shall constitute an important part of the base knowledge for society's decisions in the field of public health and the healthcare sector. It is therefore crucial that we produce relevant research of high quality and that it is made available in a applicable way.

The societal relevance of NIPH's research can be secured in several ways. Research-based knowledge that the Ministry of Health and Care Services and other ministries need is ordered annually through letters of allocation and supplementary letters of allocation. In connection with the covid-19 pandemic, there have been many assignments, many of which require that we have relevant expertise. Also, in the case of less intrusive social changes, e.g. changes in taxes and fees that can affect the population's living habits, we are asked to deliver research-based knowledge. We also have several assignments from the Norwegian Directorate of Health and other welfare directorates. NIPH has regular dialogue with local authorities about knowledge needs, for instance through the Program for public health work in the municipalities.

Calls for tenders through Horizon Europe, the Research Council and other funding sources are based on analyzes of society's need for knowledge, including broad-based input processes where NIPH also contributes. Research projects financed through thematic calls can therefore be assumed to be of

high societal relevance. Horizon Europe and the Research Council also channel significant financial resources to projects at the intersection between research and innovation. E.g. The Research Council is announcing funding for *a collaborative project to meet challenges in society and business*. These projects shall stimulate and support cooperation between research groups and actors in the health and healthcare sectors, which represents society's need for knowledge and research expertise. NIPH has competed for funding for several projects within this category. We currently have one Center for Outstanding Research (SFF). We must also consider if we should have ambitions to achieve a Center for research-driven innovation (SFI).

Also, for internally financed research and analysis projects beyond the ones given in the annual allocation letter it is important to secure good internal processes to ensure a high degree of relevance for the Institutes mission.

In order to make research available to decision-makers and society at large, NIPH strives for good dissemination and utilization of results from all research projects. In addition to journal articles and research data being made available, it is important that the research is disseminated so that it contributes to knowledge development and becomes utilizable. With an increased scope of research and more complex content, there is a need for professional systematic review that provide an overview of research fields and topics. To summarize knowledge is therefore a core task for NIPH together with research dissemination, for example through disease burden analyses, public health profiles and the Public Health Report.

### High quality

The fact that NIPH has strong research groups and carry out high-quality research is crucial to solving the Institutes social mission in a good way. For example, the advice we give must be based on solid research. Strong professional groups are also a prerequisite for achieving success in the competition for external research funds. A solid professional reputation can further attract the best qualified researchers in the field, as well as being an attractive partner for other strong research groups.

To maintain and promote high quality research at the Institute, the Research and Innovation Committee set up a working group to propose measures to strengthen quality. The work resulted in the note [Action plan for quality in research, 2019](#), which can be considered a toolbox. This work is followed up with an action plan for quality in research where we select some relevant measures, develop these further and implement them at the Institute.

### Transparency

In NIPH's strategy for 2019-2024, *The Open Institute* is highlighted as one of ten initiatives, and in 2020 the Research Council released its own [policy for open research](#). The Research Council defines open research as "scientific practice where processes and results are openly available under terms which promotes quality and knowledge development, including sharing and use of the research-based knowledge in a socially responsible way".

The Research Council's policy lay down guidelines for work with both quality in research and external funding, and elements from that will be included in these action plans. To see the totality of the work with open research by NIPH, an action plan is made based on the Research Council policy and the national and international processes that are ongoing around open research. In line with the Institute's strategy for 2019-2024 we want to set ambitious goal for openness and play an active role promoting openness in research both nationally and internationally.

## Independence

The role as an independent knowledge producer is perhaps more important than ever. The interaction between profession and politics is put to the test in major, pervasive crises such as the Covid-19 pandemic. We must be aware of our role and our professional integrity. Professional quality is fundamental to the reliability of the knowledge we produce and the advice we give. That our research is not perceived as manipulated by others – neither the ministry nor various sources of funding – is absolutely crucial for our credibility as a knowledge producer. This, as we see it, does not contradict the fact that the research should be seen in close context with and support the administrative tasks. Independent research is primarily about how the research is carried out, how the conclusions are drawn and how the findings are communicated.

## Central means

A number of instruments are used to ensure that NIPH's research is characterized by high relevance, high quality, openness and independence. Here we would highlight stable financing, adaptability, high quality research infrastructure and extensive collaboration with others.

### Stable financing

The research performed at NIPH constitutes a part of and supports the Institute's knowledge production. In line with the instructions from the Ministry of Health and Care Services (HOD), the Institute's research is to a high degree financed through external funding. It is therefore a pronounced goal that the externally funded research must be closely linked to the Institute's mission.

To be successful in the competition for external funding of research, we must build strong research groups and conduct ground-breaking and outstanding research in certain fields. In addition, there is a need for stable research funding to answer assignments in e.g. the allocation letter and to support the Institute's ongoing administrative tasks. There is no contradiction between conducting outstanding research and research that supports administrative tasks. However, what can be challenging if the research is largely based on external funding is – at all times – securing funding for the research needed to support new assignments in allocation letters and ongoing administrative tasks. This makes it necessary to use parts of the basic grant for research. In the action plan for quality in research, it is discussed how we can secure open and transparent processes for quality assurance and prioritization of research projects that are fully or partially funded by the Institute's base grant.

To create further room for action in the years ahead, it is an expressed target to increase external research funding. We will prepare a separate action plan to state what ambitions we must have with respect to externally financed activities, what is needed to achieve the goals we set ourselves and what internal infrastructure we need in case of increased externally financed activity.

### Adaptability

At the same time as we must obtain long-term knowledge production, it is important to have a large degree of flexibility and agility, not just in extreme situations as under the covid-19 pandemic, but also to answer new tasks given in for example the allocation letter. Such flexibility requires that all relevant research expertise is not tied up in externally funded activity. In addition, we must strive for a culture that expects - and is willing to - change. This can partly be ensured through the way we organize our work. Centers for research and innovation (both internally created and externally funded) are used as a tool to lift central strategic themes across the organization. Another is working in teams, currently used by the Division of health services.

Large research projects crossing the organisational structure is a third measure. There are no simple answers to how the research activity is best organized to ensure both the long-term continuity and the necessary degree of flexibility. This is something we still have to explore. In addition, it will be important to discuss how we find a good balance between steering the research in the desired direction when there is a need for it and curiosity-driven research. Introduction of open research as a principle will also include new claims and expectations concerning the researcher's role, new opportunities for career development and new criteria for merits, which will also require the ability to adapt and innovate.

### High quality research infrastructure

There is generally a need for stronger infrastructure for research, which must be developed at the same time as conducting research and research-based innovation. Several measures have been taken to strengthen the research infrastructure at NIPH. In recent years, we have built a Department for Research Administrative support (FAS) with more than twenty employees. The Department collaborates closely with other parts of the Institute, e.g. legal services, data protection officer, security officer and business administration. We work continuously to ensure a good infrastructure to start up, carry out and end research projects in line with the requirements of the legislation, the requirements of the funding sources and internal guidelines. Processes have been drawn up for applications for external financing, incl. plans for budgeting, there is a process on IT-infrastructure for secure storage and sharing of research data, a new protocol solution to keep track of research projects, etc. However, there is a need to look collectively at which systems and support we have for the management of research projects and follow-up in the organization and assess the need for strengthening and harmonization across the Institute's Divisions.

NIPH is responsible for developing and managing various health data, including health registers, population-based health surveys, laboratories, and biobanks. We put a lot of resources into building flexible, secure, and interoperable solutions for collecting, storing, using, and sharing data. In addition to being heavily involved in the development of national solutions, such as the health analysis platform, we are represented in international projects for compiling and sharing data. The action plan for external funding also discusses ambitions and opportunities for obtaining external funds to a greater extent to build national and international research infrastructure.

It will be important to also secure capacity to and good infrastructure for the utilization of health data in the groups for research and analysis at NIPH. As part of this, we need to discuss the need for a separate group consisting of scientific computer scientists and whether we are making sufficient use of the opportunities from recent technological developments, among other the possibilities such as big data, machine learning and model learning and the possibility of monitoring in real time.

### Nationally and internationally cooperation

To deliver research of high quality and relevance we are dependent on cooperation with others – both within and outside the research sector.

Collaboration with other strong research environments is crucial to ensure that research is at the forefront both nationally and internationally and to catch up in the competition for external research funding. NIPH has entered into general cooperation agreements with the largest universities in Norway. Cooperation with leading professional environments internationally is also crucial. Since the Institute's research spans very broadly thematically and methodologically, this is, as we see it, most efficiently taken care of by the individual research groups, primarily in connection with the implementation of research projects and applications for research funding.

To ensure high relevance and utilization of our research, it is also important to have good collaboration arenas outside the research sector. NIPH is involved in and works with a number of such arenas to strength these and are continuously creating new ones. Examples of arenas where we are involved in or has responsibility for as of today is HealthCare21, the Municipalities' strategic research body (KSF), Program for public health work in the municipalities, the yearly Public Health Conference, the annual Infection Prevention Days and Vaccine Days.

Public-private cooperation in research is high on the political the agenda, e.g. the efforts in *The health industry — Together for value creation and better services* (Meld. St. 18 (2018–2019) Report to the Storting (white paper)) and in the letter of allocation. There is a requirement/desire for cooperation between the public and private sector in several of the calls under the auspices of the Research Council and the EU. As a public Institute, we have some considerations related to independence and conflicts of interest that must be taken into consideration in such research collaboration. The Institute have prepared its own guideline for Cooperation and interaction with private actors. Ours impression is that there is uncertainty concerning research collaboration with private sector actors in several of our research groups, and that it is important to set a direction and a level of ambition for such collaboration going forward.

## Development plan and action plans

Here is a short summary of the first development plan with more action-oriented plans for quality in research, open research and external funding.

**Figure 1. Development plan and action plans**

	Development plan for research and Innovation		
Action plans	Quality in research	External financing	Open research

Whether more action plans are to be made is assessed on an ongoing basis. So far, proposals for action plans have come up for research-based innovation/utilization of research and infrastructure for research.

### Process

In the development plan and action plans for quality in research, external funding and open research, measures are proposed within the current strategy period 2019-2024. Both the development plan and the action plans are living documents in the sense that they are updated at least annually according to the Institute's planning process, containing activities for the coming year.

In the follow-up of the action plans, it becomes important staff the proposed working groups with administrative support. These are tasks that should naturally be added to the Department for Research Administrative support (FAS).

Several of the measures discussed and investigated in the extension of the action plans will need resources in the form of infrastructure and staff if they are to be implemented. This affects several of the Divisions and Institute resources. Relevant measures are presented to the Top Management Group for decision as soon as they have been fully investigated.

It is suggested that progress concerning the measures that are adopted in relation to the action plans are followed up under reporting on coordination responsibility in the Management Review (LGG).