

Evaluation of Life Sciences 2022-2024

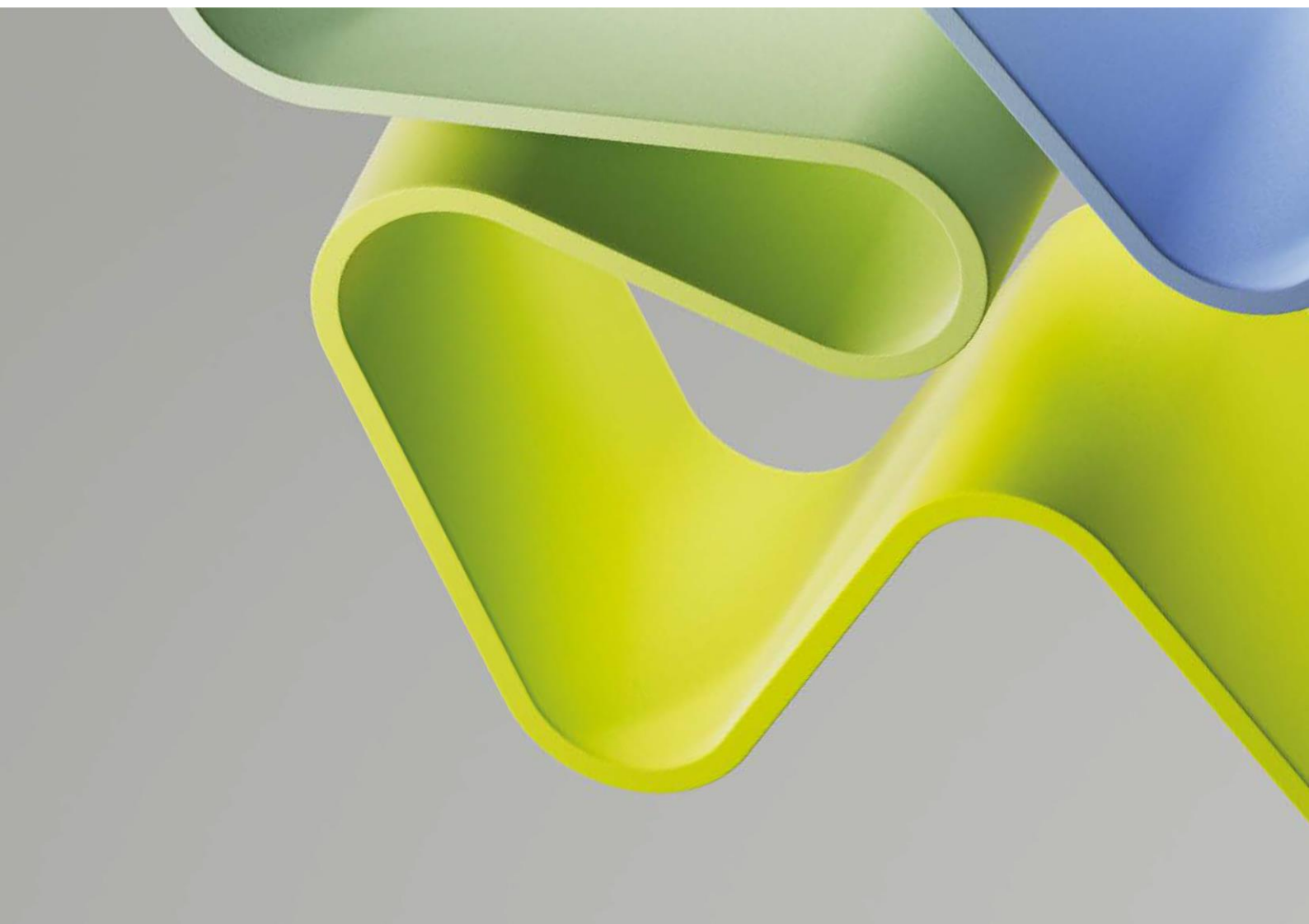
Evaluation of medicine and health 2023-2024

Evaluation report

ADMINISTRATIVE UNIT: Division of Emergency and Critical Care

INSTITUTION: Oslo University Hospital and University of Oslo

December 2024



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Statement from Evaluation Committee Health Trust 2

This report is from Evaluation Committee Health Trust 2 which evaluated the following administrative units representing the hospital trusts in the Evaluation of medicine and health 2023-2024:

- Cancer Registry of Norway, Cancer Registry
- Lovisenberg Diaconal Hospital, Lovisenberg Diaconal Hospital
- Martina Hansens Hospital, Martina Hansens Hospital
- Møre and Romsdal Hospital Trust (HMR), Møre and Romsdal Hospital Trust (HMR)
- Division of Cardiovascular and pulmonary diseases, Oslo University Hospital and University of Oslo
- Division of Clinical Neuroscience, Oslo University Hospital and University of Oslo
- Division of Emergency and Critical Care, Oslo University Hospital and University of Oslo
- Division of Prehospital Services, Oslo University Hospital and University of Oslo
- Division of Cancer Medicine, Oslo University Hospital and University of Oslo

The conclusions and recommendations in this report are based on information from the administrative units (self-assessment), digital meetings with representatives from the administrative units, bibliometric analysis and personnel statistics from the Nordic Institute for Studies of Innovation, Research, and Education (NIFU) and Statistics Norway (SSB), and selected data from Studiebarometeret (NOKUT). The digital interviews took place in Autumn 2024.

This report is the consensus view from committee Health Trust 2. All members of the committee have agreed with the assessments, conclusions and recommendations presented here.

Evaluation committee Health Trust 2 consisted of the following members:

Professor Martin Ingvar (Chair)
Karolinska Institute

Professor Ashley Blom
University of Sheffield

Professor Signe Borgquist
Aarhus University

Professor Vibeke Elisabeth Hjortdal
University of Copenhagen

Professor Thomas Kubiak
Johannes Gutenberg University Mainz

Professor Gavin Perkins
Warwick Medical School

Professor Erica Villa
University Hospital of Modena

Geert van der Veen, Technopolis Group, was the committee secretary.

Oslo, December 2024

Profile of the administrative unit

The Division of Emergency and Critical Care (DECC) at the Oslo University Hospital (OUS) and the University of Oslo (UiO) is organised into nine departments. For this evaluation the Division of Emergency and Critical Care is comprised of one research group, DECC, organized in seven research teams.

In terms of research staff, the DECC consists of 17 professors, 38 senior physicians 12 researchers and postdocs and 31 PhD-students. Women represent approximately 40 percent in all categories except PhD students where they occupy 65 percent of positions.

The strategy of the DECC is based on the overreaching goal to develop a better health care system for their patients, together with the patients. Moreover, UiO has adopted an open access strategy that underscores the importance of making high-quality scientific knowledge visible and accessible for effective use in society, education, and research. The strategy includes a rights retention policy to empower employees and students to publish in their preferred channels while ensuring open access to their work. UiO and OUS encourage all employees to choose journals that support open access, whether through Open Access journals or those that allow articles to be deposited in institutional repositories. A national repository for scientific publications will be available for all sectors in 2024. The University Library provides training on data sharing and archiving. OUS supports the national policies for open access publication and research data and is committed to establishing biobanks and research databases with broad consent for data reuse. Additionally, user involvement in research projects is on the rise, as highlighted in the annual research report from regional health authorities and has become a standard practice for most new clinical projects.

DECC aims to foster a research partnership between the two institutions OUS and UiO. In addition, their researchers collaborate with various units across UiO and OUS, as well as with numerous national and international organisations. The research and development department provides financial support for international collaborations, as well as for local and regional meetings and seminars. Both external and internal funding have been used to sponsor guest professors visiting DECC. Among other things, DECC participates in the national collaboration on Injury Prevention and Outcome following Trauma with, among others, the National Institute of Public Health. They are also involved in a national collaboration on survival rates and long-term outcomes for COVID-19 patients admitted to Norwegian ICUs, working alongside OUS, the Norwegian Intensive Care and Pandemic Registry, and Østfold Hospital. The goal is to obtain results that will improve preparedness for future viral outbreaks and inform the public about the long-term consequences of ICU treatment. Internationally, the DECC are part of the Northern Light Consortium together with the University Medical Centre Groningen (NL) and the Aarhus University Hospital (DK). It is a collaboration for education of PhD students and career building for researchers on the post-doc level.

Based on its self-assessment, in the future, the DECC might take advantage of internal strengths such as that research and innovation are integrated into patient care and that research and innovation are organised through research groups and support functions. They may also take advantage of external opportunities such as the potential for using high resolution health data to perform AI research and innovation and the possibility of increasing the funding from external funding sources. The future situation of the DEEC may also be impacted by challenges such as conflicts in prioritisation between research and other mission requirements, especially clinical activities and the limited space in clinical environments to conduct studies.

Overall evaluation

The overall assessment of the evaluation committee, considering the Terms of Reference provided by the administrative unit, is that the Division of Emergency and Critical Care (DECC) are meeting their strategic ambition of being the leading Norwegian research institution in their field with some areas (e.g. cardiac arrest) being internationally competitive. DECC's response to the COVID-19 pandemic demonstrates its potential to take leadership of research activities at a national level, enhancing opportunities for collaboration in the international space. The breadth of research activities aligns with the delivery of clinical services and emphasises the relevance of the Divisions work to institutional and sectorial purpose. Whilst there are benefits of breadth it also risks dilution of limited resources and makes it more difficult to achieve the critical mass required to be competitive at the highest levels. The low expectations and achievement for national and international grant will likely become limiting factors for DECC if not proactively addressed over the next period. The ambitions to grow industrial and commercial research and exploiting electronic patient records and quality registries offers great potential for the future but will require strong institutional support to enable the Division to succeed.

Recommendations

- Strive for international excellence in one or more areas must be the next ambition.
- Establish DECC as the national reference centres for emergency and critical care research in Norway and promote to the international community.
- Prioritise ongoing and expanded collaboration with international research groups and promote international mobility to maximise scientific and clinical impact.
- Consider opportunities for enhancing collaboration between research groups within DECC and with other related administrative units (e.g. PRE). Core topics such as early career forums, grant development workshops, research design, ethical considerations will likely have common interest.
- Explore opportunities for interinstitutional seminars for the purpose of fostering collaboration with national and international partners.
- Establish schemes to incentivise participation in research exchanges with leading institutions. Monitor participation and outcomes.
- Enhance the value of annual employee interviews to set specific targets and goals for research to foster common purpose and assist with achievement of strategic goals.
- Consider developing a funding strategy which sets out the overall ambition for research grant income and funder mix over the next period. Pooling resources and expertise strategically to target a smaller number of larger and longer awards from national and international schemes will better facilitate sustainable growth than a series of smaller local awards.
- Establish monitoring metrics such as submission numbers, success rates, contract value and funder mix would enable oversight of the income generation strategy.
- Evolve expectations for senior researcher to embrace institutional ambitions for a focus on quality over quantity of research outputs. This includes establishing a system for internal peer review to improve competitiveness of applications.
- Consider establishing a system to mentor and support junior researchers to develop competitive funding applications.
- Identify opportunities to exploit national and international infrastructure.
- For the benefit of patients, actively develop platforms based on healthcare records to enable access for researchers and to facilitate data linkage between different health and social care records.
- Develop collaborations to enable DECC to serve as the lead centre for multi-centre (national and international) research endeavours in core area(s) of excellence
- Explore the opportunity to re-establish the Norwegian network of critical care units established during COVID-19 to serve as a base to deliver national and international collaborative research.
- Include, in the strategy, a plan for recruiting young talents, improving international mobility.
- Consider maintaining oversight through registration of data assets, whether data were archived and whether requests for data sharing were received, accepted or refused.
- Develop systems to enable routine health data to be accessed securely for approved research and quality improvement initiatives.
- Develop a strategy, with supporting educational programmes to address the full range of diversity characteristics.
- Extend the monitoring of characteristics beyond gender to ensure equitable access is provided for research participation, funding, research outputs etc.

- Explore opportunities for establishing a multi-professional master's programme to build capacity in the speciality and provide a pipeline of future PhD students.
- Explore if opportunities exist for the commercialisation of research to generate funds which can support and grow future research and innovation activities.
- Continue to prioritise the programmes of work that address the Norwegian Long-term plan for research and higher education.
- Develop a strategy and infrastructure to support researchers to exploit the rich information contained within patient records.

1. Strategy, resources and organisation of research

1.1 Research strategy

The Division of Emergencies and Critical Care (DECC) is one of fifteen clinical divisions (administration units) which form part of the Oslo University Hospital. The hospitals overarching vision is that “Our research shall generate new knowledge – to the benefit of patients.” The hospital works in close partnership with the University of Oslo and aspires to develop links with other institutions, including Oslo Metropolitan University.

The unit’s research covers a broad range of topics including anaesthesia, perioperative care, pain, critical care (including COVID-19), cardiac arrest and trauma.

The unit aims to be the leading Norwegian research institution in their field. Its primary focus is delivering clinical research which aims to change clinical practice for the benefits of patients, the healthcare system and society.

The unit is committed to facilitating the national action plan for clinical studies 2021-2025 which is endorsed and incorporated into the hospitals research strategy. Specifically, DECC aims to raise the profile of research amongst all staff, increase the proportion of patients involved in clinical studies, to integrate user involvement and to improve multi-professional, industry funded and commissioned research within and outside their specialist health community. Dissemination of research results will prioritise open access.

There is a strategic ambition to increase research collaboration through combined positions at UiO, OsloMet and other universities and colleges and to build collaborations with national and international academic health institutions. There is an intention to develop research biobanks, quality registries and to include research use in future equipment tenders.

The research strategy sets a special priority for patient safety research whilst commits to supporting and strengthening existing research groups.

The committee's evaluation

DECC is already achieving its strategic ambition of being the leading Norwegian research institution in their field in some areas and are internationally leading in others. The COVID-19 pandemic demonstrated how DECC was able to play a leading role in co-ordinating national activities and through this making a solid contribution to international collaborative research. Developing and sustaining this model of national collaboration will play an important role in DECC sustaining its national and international position over the next period. DECC has and should continue to contribute to writing clinical guidelines as these provide a route for embedding research into clinical practice.

The current levels of user involvement and commitment to grow this further is commended. The breadth of research being undertaken by the seven research groups aligns well with the DECC and institutional commitment to research, education and innovation being an integral part of day-to-day activities and forming the basis for treatment of their patients. However, where resources are limited such an approach risks dilution of those resources, limiting the opportunity for achieving critical mass in the areas of greatest strength.

The committee’s recommendations

- Establish DECC as the national reference centres for emergency and critical care research in Norway and promote to the international community.
- Strive for international excellence in one or more areas must be the next ambition.

- Prioritise ongoing and expanded collaboration with international research groups and promote international mobility to maximise scientific and clinical impact.

1.2 Organisation of research

DECC, the administrative unit, benefits from the very close collaboration between Oslo University Hospitals and University of Oslo with many scientists having shared positions. It sits organisationally as one of fifteen clinical divisions from the Faculty of Medicine. The researchers are situated within or close to the hospital and have access to infrastructure such as laboratories, equipment, core facilities, biobanks, comparative medicine and other important support for research and innovation, such as biostatistics, clinical trial unit and administrative support from both OUS and UiO. The shared leadership positions between OUS and UiO for the roles of Head of Division and Head of Research ensuring a co-ordinated approach to clinical service delivery and research.

DECC is comprised of nine departments and 7 research groups who meet weekly. The groups have access to shared resources including pre and post grant support, project assistance and monitoring. There are strong channels for communication between the hospitals senior research leadership team (Director of Research, Innovation and Education, Head of Klinmed) and Divisional research leads. Information is cascaded to Divisional leads and between the different research group leaders during weekly meetings. Organisation at group level appears less formalised and less frequent with reference to an annual meeting and research seminar.

Clinical staff are typically allocated between 20-100% time for teaching and research. The research plan aims for research to be included in the annual employee interviews and reports. There are institutional programmes to support postdocs and research leaders and a two-year innovation programme (SPARK Norway). Medical staff have access to sabbaticals (1 year of leave for every 6 years of service). Whilst not formally structured, approximately one researcher a year undertakes an exchange visit with other research institutions.

The committee's evaluation

The institution and DECC have a clear and appropriate organisational structure. There are regular channels for communication between central and divisional activities and between the leaders of the research groups. The pooling of core resources at central and divisional level improves efficiency and enables access to interdisciplinary skills which might not otherwise be available. Compared to the institutional and divisional level, there appears to be less organisational structure at group level. To improve research culture will require a greater degree of interaction beyond the annual conversations between research leaders, PhD students and the annual seminar. Greater emphasis should be placed on interdisciplinary collaboration which brings doctors, nurses, paramedics, methodologists from across related administrative units.

The committee's recommendations

- Consider opportunities for enhancing collaboration between research groups within DECC and with other related administrative units (e.g. PRE). Core topics such as early career forums, grant development workshops, research design, ethical considerations will likely have common interest.

- Explore opportunities for interinstitutional seminars for the purpose of fostering collaboration with national and international partners.
- Establish schemes to incentivise participation in research exchanges with leading institutions. Monitor participation and outcomes.
- Enhance the value of annual employee interviews to set specific targets and goals for research to foster common purpose and assist with achievement of strategic goals.

1.3 Research funding

DECC receives core funding through the hospital (58 MNOK, 2.6% departmental budget) which is supplemented by national (17 MNOK) and international (0,8 MNOK) grants. National grants come primarily from the Regional Health Authority (12,8 MNOK) and public sector (13,9 MNOK) with smaller amounts from Research Council Norway (1,1 MNOK) and industry (0,7 MNOK). Individual research grants were won by a relatively small pool of investigators (15).

The committee's evaluation

The amount of research funding is small to modest when considering the size of DECC. There are no institutional or divisional expectations for individual researchers which likely contributes to the lower levels of achievement. The committee agrees with DECC's assessment that the lack of grant income is a threat. This is particularly the case for early career researchers who seem to have limited access and support to obtain research funds necessary to buy out time to pursue their research ambitions. This will be a limiting factor to DECC's growth and future success.

The committee's recommendations

- Consider developing a funding strategy which sets out the overall ambition for research grant income and funder mix over the next period. Pooling resources and expertise strategically to target a smaller number of larger and longer awards from national and international schemes will better facilitate sustainable growth than a series of smaller local awards.
- Establish monitoring metrics such as submission numbers, success rates, contract value and funder mix would enable oversight of the income generation strategy.
- Evolve expectations for senior researchers to embrace institutional ambitions for a focus on quality over quantity of research outputs. This includes establishing a system for internal peer review to improve competitiveness of applications.
- Consider establishing a system to mentor and support junior researchers to develop competitive funding applications.

1.4 Use of infrastructures

DECC's self-assessment describes that the use of national infrastructure is limited to NorCRIN – the national infrastructure for clinical trials national health registries and population-based data bases. DECC also make use of national health and population databases to conduct research.

No participation in international or European infrastructure is reported.

Institutional policies supporting the FAIR principles are hosted by the University of Oslo Library. These are supported by training courses provided by the University library in

relation to sharing and archiving data. The institutional guidelines for data management lack clear institutional or research group responsibility monitoring for adherence with FAIR principles.

DECC highlights the challenges with sharing sensitive health data, which will be particularly difficult in some of the settings where they work as participants will often lack mental capacity. DECC has several quality registries which provide information to the media, hospital administrators and researchers, although uptake has been limited. The unit highlights that the infrastructure to support internal quality registries and access to health data are inadequate.

The committee's evaluation

The committee noted a limited contribution and use of national and European infrastructure is a missed opportunity. DECC should explore better utilisation of research infrastructure described in the Norwegian Road Map for Research, as well as European and international infrastructure.

DECC are commended for their use of internal quality registries. To move to the next level DECC would benefit from institutional support to access electronic patient records and to facilitate data linkage. Support will be required both with respect to digital infrastructure, data scientists as well as governance processes to ensure the safe access and use of the data.

The committee's recommendations

- Identify opportunities to exploit national and international infrastructure.
- For the benefit of patients, actively develop platforms based on healthcare records to enable access for researchers and to facilitate data linkage between different health and social care records.
- Maintain public trust for the use health data for research by ensuring robust governance systems are in place to ensure the FAIR principles are consistently followed.

1.5 Collaboration

There is strong collaboration between OUS and UiO Faculty of Medicine with many researchers holding shared positions with over 70% of publications from DECC including joint authorship from both institutions. In addition, several professors are affiliated with other institutes and universities including the Psychological Institute (UiO), the Karolinska Institute, the University in Tromsø, the University in southeastern Norway, and Lovisenberg Diaconal Hospital.

These collaborations are supplemented by strong national and international collaborations with academic and hospital partners in which OUS is either PI (4 national) or co-investigator (6 national, ten international). In addition DECC played a major role in the response to COVID-19 through establishing the Norwegian Solidary trial network comprising 23 hospitals across Norway which tested hydroxychloroquine and remdesivir compared to standard of care early after in the COVID-19 pandemic.

The committee's evaluation

Besides shared positions with other institutes and universities, DECC has strong national and international collaborations with academic and hospital partners in which OUS is either PI or co-investigator.

The research collaboration comprises a mix of translational research, epidemiological studies and clinical trials. Funding for these collaborations come from predominantly internal and academic sources, with limited evidence of industrial funding. These collaborations open up opportunities for patients to participate in research which will improve clinical outcomes.

Whilst collaboration with academic and clinical partners is well established, links with the private and third sector are under-developed.

The committee's recommendations

- Develop collaborations to enable DECC to serve as the lead centre for multi-centre (national and international) research endeavours in core area(s) of excellence
- Explore the opportunity to re-establish the Norwegian network of critical care units established during COVID-19 to serve as a base to deliver national and international collaborative research.

1.6 Research staff

DECC has seen a steady growth in research positions at all levels between 2013-2021 more than doubling the number of senior physicians (20 to 44), researchers and postdocs (5 to 22) and PhD students (10 to 24). There has been a small decline in the proportion of researchers with a PhD (79% reducing to 70%) over this period. The gender balance has improved overall from 36% female in 2013 through to 46% in 2021. Improvement has been seen across all grades including senior physicians which increased from 20 to 30%. The average age of physicians and senior physicians has increased with nearly one third of senior physicians now aged >62.

Overall DECC has grown to include 95 persons with the proportion of research time ranging from 20-100% amounting to over 50 work years of research resource. Research activities form part of the annual conversation between researcher and their leader. Development opportunities are available to staff (e.g. postdoctoral programme, research leader programme, innovation) as are opportunities for research exchanges / sabbaticals.

The committee's evaluation

DECC has achieved a steady growth over the assessment period both in overall numbers and the proportion of females. A strength of DECC is the multi-professional group of researchers including nurses, psychologists, physiotherapists, statisticians, epidemiologists, and medical doctors. However, the development opportunities such as research visits / sabbaticals seems less developed for early career researchers and non-physicians than for physicians and senior professors. Given the changing age profile of senior researchers, there is a need to ensure a strong pipeline of early career researchers. The annual conversations between researchers and their leaders provides an opportunity to discuss individual career plans with research capability, and career guidance on ambitions and potential opportunities for a further career in or outside OUS.

The committee's recommendations

- Include, in the strategy, a plan for recruiting young talent and improving international mobility for all research staff groups.

1.7 Open Science

DECC follows the UiO strategy for open access (2022) which emphasises making publications openly accessible. Divisional funds are made available to support researchers to publish in open access journals. Over the assessment period publications in open access journals have increased from 24% to 79%. There are plans to launch a national repository for scientific publications in 2024.

Training is available from the University Library in relation to sharing and archiving data. The institution is committed to the FAIR principles for data.

DECC highlights that the core infrastructure (MTU, ICT, biobanks, and areas) is insufficient, especially for internal quality registries and that health data, generated and stored within the institution, is unavailable for research.

The committee's evaluation

The committee commends DECC for the substantial progress in open access publishing. The adoption of the FAIR principles is welcomed but it is noted that responsibilities for adherence with data archiving and access rest with researchers which creates a risk if there is no institutional oversight.

The committee's recommendations

- Continue your strong commitment to publishing in open access journals.
- Consider maintaining oversight through registration of data assets, whether data were archived and whether requests for data sharing were received, accepted or refused.
- Develop systems in collaboration with the institution to enable routine health data to be accessed securely for approved research and quality improvement initiatives.

2. Research production, quality and integrity

Introduction

DECC researchers publish scientific papers within anaesthesiology, emergency medicine, critical care, nursing, pain/neurology, surgery, general medicine and cardiovascular and respiratory physiology. There has been steady growth in the number of publications over the last 10 years (59 publications in 2013 increasing to 145 in 2022) with a more than doubling of modified author shares. Publications show a consistent pattern of international (44%) and national (55%) co-authors over this period, with the most prevalent international collaborations coming from Scandinavian institutions.

Both Oslo University Hospitals and the University of Oslo have policies and guidelines on research integrity which are complementary to each other and are followed by the administrative unit. Researchers have access to training through courses which is mandatory for PhD students and has been completed by most research leaders.

Research integrity matters are regularly discussed between the heads of research in each administrative unit and Head of Klinmed and at the University of Oslo Research Committee and at administrative unit seminars.

2.1 Research quality and integrity

This part includes one overall evaluation of each research group that the administrative unit has registered for the evaluation. The overall assessment of the research group has been written by one of the 18 expert panels that have evaluated the registered research groups in EVALMEDHELSE. The expert panels are solely behind the evaluation of the research group(s). The evaluation committee is not responsible for the assessment of the research group(s).

Division of Emergency and Critical Care Research Group

DECC's major strength is its out-of-hospital cardiac arrest research, established years ago, where they are still one of the leading international centres. Concerning the other areas, DECC is comparable to other capital-leading university hospitals' research within anaesthesiology, intensive care, and pain management. DECC is credited for regular meetings with a user participation group, but the role of users in the entire research process is not detailed.

DECC has significantly contributed to treatment guidelines at the international level, especially within OHCA, and at the national level on trauma. There is a considerable fraction of women among the PhD students but lacking in leading positions.

The committee's comments to the assessment of the research group

There is a healthy number of highly cited publications including mechanistic, observational studies, randomised trials and clinical guidelines. For most of these highly cited works DECC researchers have played a collaborative rather than leading role in the research. The 7 research groups identified in DECC's self-evaluation were submitted to the expert panel as a single research group. Whilst this provided the opportunity for a high-level summary of achievements, it reduces the granularity of insights into the performance of individual research groups.

3. Diversity and equality

Oslo University Hospital has established an action plan for equality, inclusion and diversity, the principles of which have been adopted by the administrative unit.

The focus of the described activities relates to addressing the gender imbalance. Specific interventions include the institutional level postdoctoral programmes for female researchers. DECC has made progress with enhancing gender diversity across all grades of staff.

The committee's evaluation

There has been positive movement in all domains in the proportion of female researchers (rising from 36% overall to 46%). The greatest gender disparity continues to be at the senior physician grade (increasing from 20% to 30%).

There was less evidence of addressing other aspects of diversity (ethnicity, age, disability, ethnicity, religion, sexual orientation or other personal characteristics being less prominent in the self-assessment). The extent to which opportunities are accessible for multi-professional groups beyond medical doctors is not systematically reported.

The committee's recommendations

- Develop a strategy, with supporting educational programmes to address the full range of diversity characteristics.
- Extend the monitoring of characteristics beyond gender to ensure equitable access is provided for research participation, funding, research outputs etc.

4. Relevance to institutional and sectorial purposes

The research of DECC covers key topics relating to diagnostic methods, treatment options and healthcare technologies. Research outputs are predominantly published in speciality specific journals providing opportunities to inform international clinical practice.

Innovation and commercialisation are key strengths of DECC with the self-assessment and interview describing 6 case studies of the commercialisation of their work.

DECC ensures that their research positively influences the quality of education programmes through integrating their latest research findings in teaching materials. This positively influences clinical education programmes in anaesthesiology, emergency medicine, critical care medicine, and pain medicine. Medical students are given the opportunity to participate in research projects during their studies, although this is not a mandatory component of the curriculum. There are no master's programmes reported in the self-evaluation. There is a solid contribution to Doctoral (PhD) student supervision with numbers more than doubling over the last 10 years (from 10 to 24).

The committee's evaluation

DECC's focus on clinical research, innovation and commercialisation is highly relevant to institutional and sectorial purposes. Innovation and commercialisation are key strengths of DECC. The administrative units participation in clinical guideline development further helps ensure scientific evidence is synthesised and presented in a form to drive forwards improvements in national and international clinical practice.

DECC provides a solid contribution to student education.

The committee's recommendations

- Explore opportunities for establishing a multi-professional master's programme to build capacity in the speciality and provide a pipeline of future PhD students.
- Explore if opportunities exist for the commercialisation of research to generate funds which can support and grow future research and innovation activities.

5. Relevance to society

The administrative unit is taking steps to address the challenge that “research is insufficiently integrated into services” through their strategic plan to grow research participation by 5% each year by ensuring research is included in the annual review of every employee and enhancing user engagement in research.

DECC are making efforts to address the “Better use of health data” challenge through exploiting data held in national registries to study vulnerable patient groups, risk factors and burden of disease. Their strategic ambition to exploit health records at OUS is being stifled as OUS has not prioritised research on health data, and researchers in DECC have not been able to access and analyse important patient outcome data from more than 50,000 annual operations. With respect to the United Nations Sustainable Development Goals – DECC is contributing to goal 3 (good health and well-being), goal 5 (gender equality) and goal 9 (industry, innovation and infrastructure).

The committee's evaluation

The committee considered the work of DECC is highly relevant to the Norwegian Long-term plan for research and higher education particularly in thematic priority area 2 (health). DECC demonstrated their ability to rapidly mobilise research during the COVID-19 pandemic co-ordinating the Norwegian emergency / critical care response, making a substantial contribution to the international solidarity trial.

The committee's recommendations

- Continue to prioritise the programmes of work that address the Norwegian Long-term plan for research and higher education.
- Develop a strategy and infrastructure to support researchers to exploit the rich information contained within patient records.

Comments on impact case 1: Evaluation of the Effects of Remdesivir and Hydroxychloroquine on Viral Clearance in COVID-19

The Nor-Solidarity trial was an independent add-on study to the WHO Solidarity trial that evaluated the effects of hydroxychloroquine (HCQ) and remdesivir compared to standard of care (SoC) in hospitalized COVID-19 patients. This international, multi-centre trial was established early in the COVID-19 pandemic. The main finding was that remdesivir and hydroxychloroquine had no effect on hospitalized patients clinical outcomes or on viral clearance.

Nor-Solidarity played an important role in demonstrating, early in the COVID-19 pandemic, that two potential treatments were ineffective, thus enabling resources to be diverted towards effective treatments. The knowledge gained during the study allowed researchers from OUS to play a key role in developing an adaptive trial platform that has the potential for future benefit.

Comments on impact case 2: Symptom burden and follow-up during and after intensive care treatment to improve mental and physical long term outcome in patients and their family.

DECC has contributed to a better understanding of the long term mental and physical consequences of critical illness for both patients and their families. Using this knowledge they developed interventions (fast-track rehabilitation referral, comfort bundle, patient diaries) which has been implemented in three intensive care units in Oslo.

Observational research demonstrated a high prevalence of post-intensive care syndrome, a condition characterised by long term physical and mental health sequelae following critical illness. Further research showed family members of critically ill patients also experience post-traumatic stress symptoms. A randomised controlled trial across 5 ICU's in Oslo tested an intervention of nurse led interventions to reduce post-traumatic stress but found no difference in outcomes. Researchers have developed a comfort bundle to mitigate the effects of post intensive care syndrome.

Knowledge about post intensive care syndrome amongst patients and their relatives has been enhanced. An intervention has been developed to improve outcomes has been implemented in 3 hospitals and is undergoing further evaluation.

Comments on impact case 3: Causes and consequences of individual differences in pain sensitivity

DECC researchers made a substantial contribution to the sectors understanding that there are substantial differences in pain sensitivity between individuals and characterised the economic impact of acute and chronic pain. This has served as a stimulus to address gender inequalities in pain and to lobby for improved clinical services for chronic pain.

Large observational studies have shown that there is substantial interindividual variation in clinical pain and pain sensitivity. Further research has unpicked genetic and environmental contributions to this variation and quantified economic and societal impact of acute and chronic pain.

The research has stimulated new thinking about individuals responses to pain and the importance of a personalised approach to pain relief. This will be considered in the future design of research in this field.

Appendices

Evaluation of Medicine and health 2023-2024

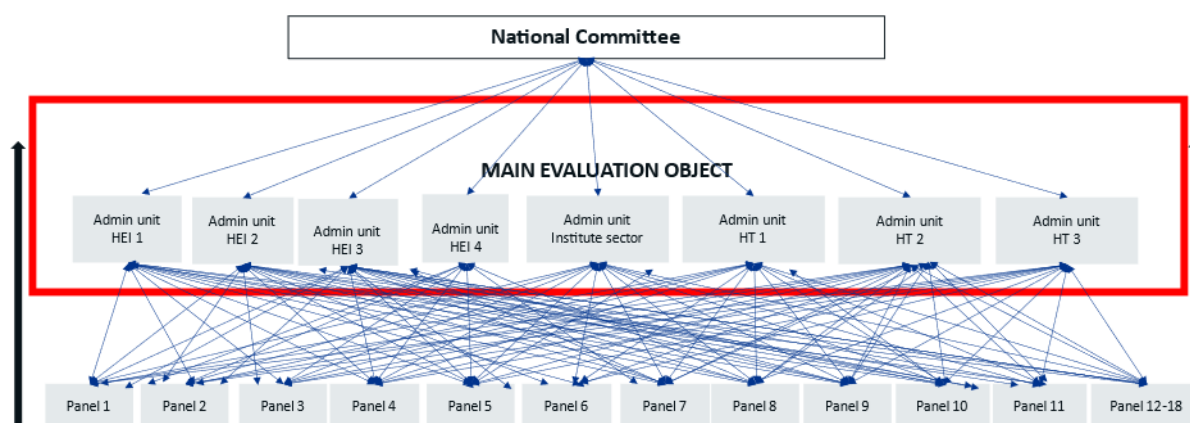
By evaluating Norwegian research and higher education we aim to enhance the quality, relevance, and efficiency. In accordance with the statutes of the Research Council of Norway (RCN), the RCN evaluates Norwegian professional environments to create a solid and up-to-date knowledge base about Norwegian research and higher education in an international perspective.

The evaluation of life sciences is conducted in 2022-2024. The evaluation of medicine takes place in 2023-2024. The evaluation of biosciences was carried out in 2022-2023. The primary aim of the evaluation of life sciences is to reveal and confirm the quality and the relevance of research performed at Norwegian Higher Education Institutions (HEIs), the institute sector and the health trusts. The evaluation shall result in recommendations to the institutions, the RCN and the ministries.

Evaluation of medicine and health (EVALMEDHELSE) 2023-2024

The evaluation of medicine and health includes sixty-eight administrative units (e.g., faculty, department, institution, center, division) which are assessed by evaluation committees according to sectorial affiliation and other relevant similarities between the units. The administrative units enrolled their research groups (315) to eighteen expert panels organised by research subjects or themes and assessed across institutions and sectors.

Organisation of evaluation of medicine and health 2023-2024



The institutions have been allowed to adapt the evaluation mandate (Terms of Reference) to their own strategic goals. This is to ensure that the results of the evaluation will be useful for the institution's own strategic development. The administrative unit together with the research group(s) selects an appropriate benchmark for each of the research group(s).

The Research Council of Norway has commissioned an external evaluation secretariat at Technopolis Group for the implementation of the evaluation process.

Each institution/administrative unit is responsible for following up the recommendations that apply to their own institution/administrative unit. The Research Council will use the results from the evaluation in the development of funding instruments and as a basis for advice to the Government.

The web page for the evaluation of medicine and health 2023-2024: [Evaluation of medicine and health sciences \(forskingsradet.no\)](https://forskingsradet.no/evaluering-av-medisin-og-helsevitenskap)

Se vedlagte adresseliste

Vår saksbehandler / tlf.	Vår ref.	Deres ref.	Sted
Hilde G. Nielsen/40922260	23/3056	[Ref.]	Lysaker 28.4.2023

Invitasjon til å delta i fagevaluering av medisin og helsefag (EVALMEDHELSE) 2023-2024

Vi viser til varsel om oppstart av nye evalueringer sendt institusjonenes ledelse 9. november 2021 (vedlegg 2).

Porteføljestyret for livsvitenskap har vedtatt å gjennomføre fagevaluering av livsvitenskap 2022-2024 som to evalueringer:

- Evaluering av biovitenskap (EVALBIOVIT) (2022-2023)
- Evaluering av medisin og helsefag (EVALMEDHELSE) (2023-2024)

Hovedmålet med fagevalueringen av livsvitenskap 2022-2024 er å vurdere kvalitet og rammebetingelser for livsvitenskapelig forskning i Norge, samt forskningens relevans for sentrale samfunnsområder. Evalueringen skal resultere i anbefalinger til institusjonene, til Forskningsrådet og til departementene. Den forrige fagevalueringen av biologi, medisin og helsefag ble gjennomført i 2010/2011 (vedlegg 3).

Fagevaluering av livsvitenskap retter seg mot UH-sektor, helseforetak og instituttsektor (vedlegg 4). Forskningsrådet forventer at aktuelle forskningsmiljøer deltar i evalueringene, selv om beslutning om deltagelse gjøres ved den enkelte institusjon. Videre ber vi om at deltakende institusjoner setter av tilstrekkelig med ressurser til å delta i evalueringsprosessen, og at institusjonen oppnevner minst én representant som kontaktperson for Forskningsrådet.

Invitasjon til å delta i fagevaluering av medisin og helsefag (2023-2024)

Fagevaluering av medisin og helsefag er organisert over to nivåer (vedlegg 4, side 11). Internasjonale ekspertpaneler vil evaluere forskergrupper på tvers av fag, disiplin og forskningssektorer (UH, institutt og helseforetak) etter kriteriene beskrevet i kapittel 2 i evalueringsprotokollen (vedlegg 4).

Panelrapporten(e) for forskergruppene vil inngå i bakgrunnsdokumentasjonen til forskergruppen(e)s administrative enhet (hovedevalueringsobjektet i evaluering), og som vil bli evaluert i internasjonale

sektorspesifikke evalueringskomiteer. Evalueringskriteriene for administrative enheter er beskrevet i kapittel 2 i evalueringsprotokollen (vedlegg 4).

Innmelding av administrative enheter og forskergrupper – frist 6. juni 2023

Administrative enheter (hovedevalueringssubjektet i evalueringen) – skjema 1

Forskningsrådet inviterer institusjonene til å melde inn sine administrative enhet/er ved å fylle ut skjema 1. Definisjonen av en administrativ enhet i denne evalueringen er å finne på side 3 (kap 1.1) i evalueringsprotokollen (vedlegg 4). Ved innmelding av administrativ/e enhet/er anbefaler Forskningsrådet institusjonene til å se innmelding av administrativ enhet/er i sammenheng med tilpasning av mandat for den administrative enheten (Appendix A i evalueringsprotokollen).

Forskergrupper – skjema 2

Forskningsrådet ber de administrative enheter om å melde inn forskergrupper i tråd med forskergruppedefinisjonen (kap 1.1) og minimumskravene beskrevet i kapittel 1.2 i evalueringsprotokollen. Hver administrative enhet melder inn sin/e forskergruppe/r ved å fylle ut Skjema 2. Vi ber også om at forskergruppene innplasseres i den tentative fagpanelinndelingen for EVALMEDHELSE (vedlegg 5).

Forskningsrådet vil ferdigstille panelstruktur og avgjøre den endelige fordelingen av forskergruppene på fagpaneler etter at alle forskergrupper er meldt inn. Mer informasjon vil bli sendt i slutten av juni 2023.

Invitasjon til å foreslå eksperter – skjema 3

Forskningsrådet inviterer administrative enheter og forskergrupper til å spille inn forslag til eksperter som kan inngå i evalueringskomitéene og i ekspertpanelene. Hver evalueringskomité vil bestå av 7-9 komitémedlemmer, mens hvert ekspertpanel vil bestå av 5-7 eksperter.

Obs. Det er to faner i regnearket:

- FANE 1 – forslag til medlemmer til evalueringskomitéene. Medlemmene i evalueringskomitéene skal inneha bred vitenskapelig kompetanse, både faglig kompetanse og andre kvalifikasjoner som erfaring med ledelse, strategi- og evalueringsarbeid og kunnskapsutveksling.
- FANE 2 – forslag til medlemmer til ekspertpanelene. Medlemmene i ekspertpanelene skal være internasjonalt ledende eksperter innen medisin og helsefaglig forskning og innovasjon.

Utfylte skjemaer (3 stk):

- innmelding av administrative enhet/er (skjema 1)
- innmelding av forskergruppe/er (skjema 2)
- forslag til eksperter (skjema 3)

sendes på epost til evalmedhelse@forskningsradet.no **innen 6. juni 2023.**

Tilpasning av mandat – frist 30. september 2023

Forskningsrådet ber med dette administrative enheter om å tilpasse mandatet (vedlegg 4) ved å opplyse om egne strategiske mål og andre lokale forhold som er relevant for evalueringen.

Tilpasningen gjøres ved å fylle inn de åpne punktene i malen (Appendix A). Utfylt skjema sendes på epost til evalmedhelse@forskningsradet.no innen 30. september 2023.

Digitalt informasjonsmøte 15. mai 2023, kl. 14.00-15.00.

Forskningsrådet arrangerer et digitalt informasjonsmøte for alle som ønsker å delta i EVALMEDHELSE.

Påmelding til informasjonsmøtet gjøres her: [Fagevaluering av medisin og helsefag \(EVALMEDHELSE\) - Digitalt informasjonsmøte \(pameldingssystem.no\)](#) .

Nettsider

Forskningsrådet vil opprette en nettside på www.forskningsradet.no for EVALMEDHELSE hvor informasjon vil bli publisert fortløpende. [Her](#) kan dere lese om Fagevaluering av biovitenskap (EVALBIOVIT) 2022-2023. Fagevaluering av medisin og helsefag vil bli gjennomført etter samme modell.

Spørsmål vedrørende fagevaluering av medisin og helsefag kan rettes til Hilde G. Nielsen, hgn@forskningsradet.no eller mobil 40 92 22 60.

Med vennlig hilsen
Norges forskningsråd

Ole Johan Borge
avdelingsdirektør
Helse

Hilde G. Nielsen
spesialrådgiver
Helse

Dokumentet er elektronisk godkjent og signert og har derfor ikke håndskrevne signaturer.

Kopi

Helse- og omsorgsdepartementet
Kunnskapsdepartementet

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Evaluation of life sciences in Norway 2022-2023

LIVSEVAL protocol version 1.0

By decision of the Portfolio board for life sciences April 5., 2022

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Oslo, 5 April 2022

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1 Introduction

Research assessments based on this protocol serve different aims and have different target groups. The primary aim of the evaluation of life sciences is to reveal and confirm the quality and the relevance of research performed at Norwegian Higher Education Institutions (HEIs), and by the institute sector and regional health authorities and health trusts. These institutions will hereafter be collectively referred to as Research Performing Organisations (RPOs). The assessments should serve a formative purpose by contributing to the development of research quality and relevance at these institutions and at the national level.

1.1 Evaluation units

The assessment will comprise a number of *administrative units* submitted for evaluation by the host institution. By assessing these administrative units in light of the goals and strategies set for them by their host institution, it will be possible to learn more about how public funding is used at the institution(s) to facilitate high-quality research and how this research contributes to society. The administrative units will be assessed by evaluation committees according to sectoral affiliation and/or other relevant similarities between the units.

The administrative units will be invited to submit data on their *research groups* to be assessed by expert panels organised by research subject or theme. See Chapter 3 for details on organisation.

<i>Administrative unit</i>	An administrative unit is any part of an RPO that is recognised as a formal (administrative) unit of that RPO, with a designated budget, strategic goals and dedicated management. It may, for instance, be a university faculty or department, a department of an independent research institute or a hospital.
<i>Research group</i>	Designates groups of researchers within the administrative units that fulfil the minimum requirements set out in section 1.2. Research groups are identified and submitted for evaluation by the administrative unit, which may decide to consider itself a single research group.

1.2 Minimum requirements for research groups

- 1) The research group must be sufficiently large in size, i.e. at least five persons in full-time positions with research obligations. This merely indicates the minimum number, and larger units are preferable. In exceptional cases, the minimum number may include PhD students, postdoctoral fellows and/or non-tenured researchers. *In all cases, a research group must include at least three full-time tenured staff.* Adjunct professors, technical staff and other relevant personnel may be listed as group members but may not be included in the minimum number.

- 2) The research group subject to assessment must have been established for at least three years. Groups of more recent date may be accepted if they have come into existence as a consequence of major organisational changes within their host institution.
- 3) The research group should be known as such both within and outside the institution (e.g. have a separate website). It should be able to document common activities and results in the form of co-publications, research databases and infrastructure, software, or shared responsibilities for delivering education, health services or research-based solutions to designated markets.
- 4) In its self-assessment, the administrative unit should propose a suitable benchmark for the research group. The benchmark will be considered by the expert panels as a reference in their assessment of the performance of the group. The benchmark can be grounded in both academic and extra-academic standards and targets, depending on the purpose of the group and its host institution.

1.3 The evaluation in a nutshell

The assessment concerns:

- research that the administrative unit and its research groups have conducted in the previous 10 years
- the research strategy that the administrative units under evaluation intend to pursue going forward
- the capacity and quality of research in life sciences at the national level

The Research Council of Norway (RCN) will:

- provide a template for the Terms of Reference¹ for the assessment of RPOs and a national-level assessment in life sciences
- appoint members to evaluation committees and expert panels
- provide secretarial services
- commission reports on research personnel and publications based on data in national registries
- take responsibility for following up assessments and recommendations at the national level.

RPOs conducting research in life sciences are expected to take part in the evaluation. The board of each RPO under evaluation is responsible for tailoring the assessment to its own strategies and specific needs and for following them up within their own institution. Each participating RPO will carry out the following steps:

- 1) Identify the administrative unit(s) to be included as the main unit(s) of assessment
- 2) Specify the Terms of Reference by including information on specific tasks and/or strategic goals of relevance to the administrative unit(s)

¹ The terms of reference (ToR) document defines all aspects of how the evaluation committees and expert panels will conduct the [research area] evaluation. It defines the objectives and the scope of the evaluation, outlines the responsibilities of the involved parties, and provides a description of the resources available to carry out the evaluation.

- 3) The administrative unit will, in turn, be invited to register a set of research groups that fulfil the minimum criteria specified above (see section 1.2). The administrative unit may decide to consider itself a single research group.
- 4) For each research group, the administrative unit should select an appropriate benchmark in consultation with the group in question. This benchmark can be a reference to an academic level of performance or to the group's contributions to other institutional or sectoral purposes (see section 2.4). The benchmark will be used as a reference in the assessment of the unit by the expert panel.
- 5) The administrative units subject to assessment must provide information about each of their research groups, and about the administrative unit as a whole, by preparing self-assessments and by providing additional documentation in support of the self-assessment.

1.4 Target groups

- Administrative units represented by institutional management and boards
- Research groups represented by researchers and research group leaders
- Research funders
- Government

The evaluation will result in recommendations to the institutions, the RCN and the ministries. The results of the evaluation will also be disseminated for the benefit of potential students, users of research and society at large.

This protocol is intended for all participants in the evaluation. It provides the information required to organise and carry out the research assessments. Questions about the interpretation or implementation of the protocol should be addressed to the RCN.

2 Assessment criteria

The administrative units are to be assessed on the basis of five assessment criteria. The five criteria are applied in accordance with international standards. Finally, the evaluation committee passes judgement on the administrative units as a whole in qualitative terms. In this overall assessment, the committee should relate the assessment of the specific tasks to the strategic goals that the administrative unit has set for itself in the Terms of Reference.

When assessing administrative units, the committees will build on a separate assessment by expert panels of the research groups within the administrative units. See Chapter 3 'Evaluation process and organisation' for a description of the division of tasks.

2.1 Strategy, resources and organisation

The evaluation committee assesses the framework conditions for research in terms of funding, personnel, recruitment and research infrastructure in relation to the strategic aims set for the administrative unit. The administrative unit should address at least the following five specific aspects in its self-assessment: 1) funding sources, 2) national and international cooperation, 3) cross-sector and interdisciplinary cooperation, 4) research careers and mobility, and 5) Open Science. These five aspects relate to how the unit organises and actually performs its research, its composition in terms of leadership and personnel, and how the unit is run on a day-to-day basis.

To contribute to understanding what the administrative unit can or should change to improve its ability to perform, the evaluation committee is invited to focus on factors that may affect performance.

Further, the evaluation committee assesses the extent to which the administrative unit's goals for the future remain scientifically and societally relevant. It is also assessed whether its aims and strategy, as well as the foresight of its leadership and its overall management, are optimal in relation to attaining these goals. Finally, it is assessed whether the plans and resources are adequate to implement this strategy.

2.2 Research production, quality and integrity

The evaluation committee assesses the profile and quality of the administrative unit's research and the contribution the research makes to the body of scholarly knowledge and the knowledge base for other relevant sectors of society. The committee also assesses the scale of the unit's research results (scholarly publications, research infrastructure developed by the unit, and other contributions to the field) and its contribution to Open Science (early knowledge and sharing of data and other relevant digital objects, as well as science communication and collaboration with societal partners, where appropriate).

The evaluation committee considers the administrative unit's policy for research integrity and how violations of such integrity are prevented. It is interested in how the unit deals with research data, data management, confidentiality (GDPR) and integrity, and the extent to which independent and critical pursuit of research is made possible within the unit. Research integrity relates to both the scientific integrity of conducted research and the professional integrity of researchers.

2.3 Diversity and equality

The evaluation committee considers the diversity of the administrative unit, including gender equality. The presence of differences can be a powerful incentive for creativity and talent development in a diverse administrative unit. Diversity is not an end in itself in that regard, but a tool for bringing together different perspectives and opinions.

The evaluation committee considers the strategy and practices of the administrative unit to prevent discrimination on the grounds of gender, age, disability, ethnicity, religion, sexual orientation or other personal characteristics.

2.4 Relevance to institutional and sectoral purposes

The evaluation committee compares the relevance of the administrative unit's activities and results to the specific aspects detailed in the Terms of Reference for each institution and to the relevant sectoral goals (see below).

Higher Education Institutions

There are 36 Higher Education Institutions in Norway that receive public funding from the Ministry for Education and Research. Twenty-one of the 36 institutions are owned by the ministry, whereas the last 15 are privately owned. The HEIs are regulated under the Act relating to universities and university colleges of 1 August 2005.

The purposes of Norwegian HEIs are defined as follows in the Act relating to universities and university colleges²

- provide higher education at a high international level;
- conduct research and academic and artistic development work at a high international level;
- disseminate knowledge of the institution's activities and promote an understanding of the principle of academic freedom and application of scientific and artistic methods and results in the teaching of students, in the institution's own general activity as well as in public administration, in cultural life and in business and industry.

In line with these purposes, the Ministry for Research and Education has defined four overall goals for HEIs that receive public funding. These goals have been applied since 2015:

- 1) High quality in research and education
- 2) Research and education for welfare, value creation and innovation
- 3) Access to education (esp. capacity in health and teacher education)
- 4) Efficiency, diversity and solidity of the higher education sector and research system

The committee is invited to assess to what extent the research activities and results of each administrative unit have contributed to sectoral purposes as defined above. In particular, the committee is invited to take the share of resources spent on education at the administrative units into account and to assess the relevance and contributions of research to education, focusing on the master's and PhD levels. This assessment should be distinguished from an

² <https://lovdata.no/dokument/NLE/lov/2005-04-01-15?q=universities>

assessment of the quality of education in itself, and it is limited to the role of research in fostering high-quality education.

Research institutes (the institute sector)

Norway's large institute sector reflects a practical orientation of state R&D funding that has long historical roots. The Government's strategy for the institute sector³ applies to the 33 independent research institutes that receive public basic funding through the RCN, in addition to 12 institutes outside the public basic funding system.

The institute sector plays an important and specific role in attaining the overall goal of the national research system, i.e. to increase competitiveness and innovation power to address major societal challenges. The research institutes' contributions to achieving these objectives should therefore form the basis for the evaluation. The main purpose of the sector is to conduct independent applied research for present and future use in the private and public sector. However, some institutes primarily focus on developing a research platform for public policy decisions, others on fulfilling their public responsibilities.

The institutes should:

- maintain a sound academic level, documented through scientific publications in recognised journals
- obtain competitive national and/or international research funding grants
- conduct contract research for private and/or public clients
- demonstrate robustness by having a reasonable number of researchers allocated to each research field

The committee is invited to assess the extent to which the research activities and results of each administrative unit contribute to sectoral purposes and overall goals as defined above. In particular, the committee is invited to assess the level of collaboration between the administrative unit(s) and partners in their own or other sectors.

The hospital sector

There are four regional health authorities (RHF) in Norway. They are responsible for the specialist health service in their respective regions. The RHF are regulated through the Health Enterprises Act of 15 June 2001 and are bound by requirements that apply to specialist and other health services, the Health Personnel Act and the Patient Rights Act. Under each of the regional health authorities, there are several health trusts (HF), which can consist of one or more hospitals. A health trust (HF) is wholly owned by an RHF.

Research is one of the four main tasks of hospital trusts.⁴ The three other main tasks are to ensure good treatment, education and training of patients and relatives. Research is important if the health service is to keep abreast of stay up-to-date with medical developments and carry out critical assessments of established and new diagnostic methods,

³ [Strategy for a holistic institute policy \(Kunnskapsdepartementet 2020\)](#)

⁴ Cf. the Specialist Health Services Act § 3-8 and the Health Enterprises Act §§ 1 and 2

treatment options and technology, and work on quality development and patient safety while caring for and guiding patients.

The committee is invited to assess the extent to which the research activities and results of each administrative unit have contributed to sectoral purposes as described above. The assessment does not include an evaluation of the health services performed by the services.

2.5 Relevance to society

The committee assesses the quality, scale and relevance of contributions targeting specific economic, social or cultural target groups, of advisory reports on policy, of contributions to public debates, and so on. The documentation provided as the basis for the assessment of societal relevance should make it possible to assess relevance to various sectors of society (i.e. business, the public sector, non-governmental organisations and civil society).

When relevant, the administrative units will be asked to link their contributions to national and international goals set for research, including the Norwegian Long-term Plan for Research and Higher Education and the UN Sustainable Development Goals. Sector-specific objectives, e.g. those described in the Development Agreements for the HEIs and other national guidelines for the different sectors, will be assessed as part of criterion 2.4.

The committee is also invited to assess the societal impact of research based on case studies submitted by the administrative units and/or other relevant data presented to the committee. Academic impact will be assessed as part of criterion 2.2.

3 Evaluation process and organisation

The RCN will organise the assessment process as follows:

- Commission a professional secretariat to support the assessment process in the committees and panels, as well as the production of self-assessments within each RPO
- Commission reports on research personnel and publications within life sciences based on data in national registries
- Appoint one or more evaluation committees for the assessment of administrative units.
- Divide the administrative units between the appointed evaluation committees according to sectoral affiliation and/or other relevant similarities between the units.
- Appoint a number of expert panels for the assessment of research groups submitted by the administrative units.
- Divide research groups between expert panels according to similarity of research subjects or themes.
- Task the chairs of the evaluation committees with producing a national-level report building on the assessments of administrative units and a national-level assessments produced by the expert panels.

Committee members and members of the expert panels will be international, have sufficient competence and be able, as a body, to pass judgement based on all relevant assessment criteria. The RCN will facilitate the connection between the assessment levels of panels and committees by appointing committee members as panel chairs.

3.1 Division of tasks between the committee and panel levels

The expert panels will assess research groups across institutions and sectors, focusing on the first two criteria specified in Chapter 2: 'Strategy, resources and organisation' and 'Research production and quality' The assessments from the expert panels will also be used as part of the evidence base for a report on Norwegian research within life sciences (see section 3.3).

The evaluation committees will assess the administrative units based on all the criteria specified in Chapter 2. The assessment of research groups delivered by the expert panels will be a part of the evidence base for the committees' assessments of administrative units. See figure 1 below.

The evaluation committee has sole responsibility for the assessments and any recommendations in the report. The evaluation committee reaches a judgement on the research based on the administrative units and research groups' self-assessments provided by the RPOs, any additional documents provided by the RCN, and interviews with representatives of the administrative units. The additional documents will include a standardised analysis of research personnel and publications provided by the RCN.

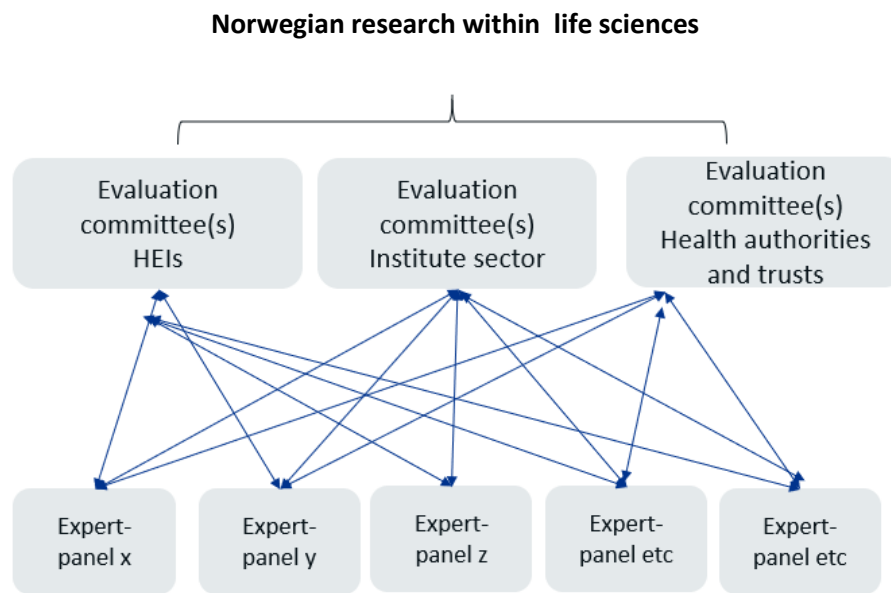


Figure 1. Evaluation committees and expert panels

The evaluation committee takes international trends and developments in science and society into account when forming its judgement. When judging the quality and relevance of the research, the committees shall bear in mind the specific tasks and/or strategic goals that the administrative unit has set for itself including sectoral purposes (see section 2.4 above).

3.2 Accuracy of factual information

The administrative unit under evaluation should be consulted to check the factual information before the final report is delivered to the RCN and the board of the institution hosting the administrative unit.

3.3 National level report

Finally, the RCN will ask the chairs of the evaluation committees to produce a national-level report that builds on the assessments of administrative units and the national-level assessments produced by the expert panels. The committee chairs will present their assessment of Norwegian research in life sciences at the national level in a separate report that pays specific attention to:

- Strengths and weaknesses of the research area in the international context
- The general resource situation regarding funding, personnel and infrastructure
- PhD training, recruitment, mobility and diversity
- Research cooperation nationally and internationally
- Societal impact and the role of research in society, including Open Science

This national-level assessment should be presented to the RCN.

Appendix A: Terms of References (ToR)

[Text in red to be filled in by the Research-performing organisations (RPOs)]

The board of [RPO] mandates the evaluation committee appointed by the Research Council of Norway (RCN) to assess [administrative unit] based on the following Terms of Reference.

Assessment

You are asked to assess the organisation, quality and diversity of research conducted by [administrative unit] as well as its relevance to institutional and sectoral purposes, and to society at large. You should do so by judging the unit's performance based on the following five assessment criteria (a. to e.). Be sure to take current international trends and developments in science and society into account in your analysis.

- a) Strategy, resources and organisation
- b) Research production, quality and integrity
- c) Diversity and equality
- d) Relevance to institutional and sectoral purposes
- e) Relevance to society

For a description of these criteria, see Chapter 2 of the life sciences evaluation protocol. Please provide a written assessment for each of the five criteria. Please also provide recommendations for improvement. We ask you to pay special attention to the following [n] aspects in your assessment:

- 1. ...
- 2. ...
- 3. ...
- 4. ...
- ...

[To be completed by the board: specific aspects that the evaluation committee should focus on – they may be related to a) strategic issues, or b) an administrative unit's specific tasks.]

In addition, we would like your report to provide a qualitative assessment of [administrative unit] as a whole in relation to its strategic targets. The committee assesses the strategy that the administrative unit intends to pursue in the years ahead and the extent to which it will be capable of meeting its targets for research and society during this period based on available resources and competence. The committee is also invited to make recommendations concerning these two subjects.

Documentation

The necessary documentation will be made available by the **life sciences** secretariat at Technopolis Group.

The documents will include the following:

- a report on research personnel and publications within life sciences commissioned by RCN
- a self-assessment based on a template provided by the life sciences secretariat
- **[to be completed by the board]**

Interviews with representatives from the evaluated units

Interviews with the **[administrative unit]** will be organised by the evaluation secretariat. Such interviews can be organised as a site visit, in another specified location in Norway or as a video conference.

Statement on impartiality and confidence

The assessment should be carried out in accordance with the *Regulations on Impartiality and Confidence in the Research Council of Norway*. A statement on the impartiality of the committee members has been recorded by the RCN as a part of the appointment process. The impartiality and confidence of committee and panel members should be confirmed when evaluation data from **[the administrative unit]** are made available to the committee and the panels, and before any assessments are made based on these data. The RCN should be notified if questions concerning impartiality and confidence are raised by committee members during the evaluation process.

Assessment report

We ask you to report your findings in an assessment report drawn up in accordance with a format specified by the life sciences secretariat. The committee may suggest adjustments to this format at its first meeting. A draft report should be sent to the **[administrative unit]** and RCN by [date]. The **[administrative unit]** should be allowed to check the report for factual inaccuracies; if such inaccuracies are found, they should be reported to the life sciences secretariat no later than two weeks after receipt of the draft report. After the committee has made the amendments judged necessary, a corrected version of the assessment report should be sent to the board of **[the RPO]** and the RCN no later than two weeks after all feedback on inaccuracies has been received from **[administrative unit]**.

Appendix B: Data sources

The lists below shows the most relevant data providers and types of data to be included in the evaluation. Data are categorised in two broad categories according to the data source: National registers and self-assessments prepared by the RFOs. The RCN will commission an analysis of data in national registers (R&D-expenditure, personnel, publications etc.) to be used as support for the committees' assessment of administrative units. The analysis will include a set of indicators related to research personnel and publications.

- **National directorates and data providers**
- Norwegian Directorate for Higher Education and Skills (HK-dir)
- Norwegian Agency for Quality Assurance in Education (NOKUT)
- Norwegian Agency for Shared Services in Education and Research (SIKT)
- Research Council of Norway (RCN)
- Statistics Norway (SSB)

National registers

- 1) R&D-expenditure
 - a. SSB: R&D statistics
 - b. SSB: Key figures for research institutes
 - c. HK-dir: Database for Statistics on Higher Education (DBH)
 - d. RCN: Project funding database (DVH)
 - e. EU-funding: eCorda
- 2) Research personnel
 - a. SSB: The Register of Research personnel
 - b. SSB: The Doctoral Degree Register
 - c. RCN: Key figures for research institutes
 - d. HK-dir: Database for Statistics on Higher Education (DBH)
- 3) Research publications
 - a. SIKT: Cristin - Current research information system in Norway
 - b. SIKT: Norwegian Infrastructure for Bibliometrics
(full bibliometric data incl. citations and co-authors)
- 4) Education
 - a. HK-dir/DBH: Students and study points
 - b. NOKUT: Study barometer
 - c. NOKUT: National Teacher Survey
- 5) Sector-oriented research
 - a. RCN: Key figures for research institutes
- 6) Patient treatments and health care services
 - a. Research & Innovation expenditure in the health trusts
 - b. Measurement of research and innovation activity in the health trusts
 - c. Collaboration between health trusts and HEIs
 - d. Funding of research and innovation in the health trusts
 - e. Classification of medical and health research using HRCS (HO21 monitor)

Self-assessments

1) Administrative units

- a. *Self-assessment covering all assessment criteria*
- b. Administrative data on funding sources
- c. Administrative data on personnel
- d. Administrative data on the division of staff resources between research and other activities (teaching, dissemination etc.)
- e. Administrative data on research infrastructure and other support structures
- f. SWOT analysis
- g. Any supplementary data needed to assess performance related to the strategic goals and specific tasks of the unit

2) Research groups

- a. *Self-assessment covering the first two assessment criteria (see Table 1)*
- b. Administrative data on funding sources
- c. Administrative data on personnel
- d. Administrative data on contribution to sectoral purposes: teaching, commissioned work, clinical work [will be assessed at committee level]
- e. Publication profiles
- f. Example publications and other research results (databases, software etc.)
The examples should be accompanied by an explanation of the groups' specific contributions to the result
- g. Any supplementary data needed to assess performance related to the benchmark defined by the administrative unit

The table below shows how different types of evaluation data may be relevant to different evaluation criteria. Please note that the self-assessment produced by the administrative units in the form of a written account of management, activities, results etc. should cover all criteria. A template for the self-assessment of research groups and administrative units will be commissioned by the RCN from the life sciences secretariat for the evaluation.

Table 1. Types of evaluation data per criterion

Criteria \ Evaluation units	Research groups	Administrative units
Strategy, resources and organisation	Self-assessment Administrative data	Self-assessment National registers Administrative data SWOT analysis
Research production and quality	Self-assessment Example publications (and other research results)	Self-assessment National registers
Diversity, equality and integrity		Self-assessment National registers Administrative data
Relevance to institutional and sectoral purposes		Self-assessment Administrative data
Relevance to society		Self-assessment National registers Impact cases
Overall assessment	<i>Data related to: Benchmark defined by administrative unit</i>	<i>Data related to: Strategic goals and specific tasks of the admin. unit</i>



Evaluation of Medicine and Health (EVALMEDHELSE) 2023-2024

Self- assessment for administrative units

Date of dispatch: **15 September 2023**
Deadline for submission: **31 January 2024**

Institution (name and short name): _____

Administrative unit (name and short name): _____

Date: _____

Contact person: _____

Contact details (email): _____

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Introduction

The primary aim of the evaluation is to reveal and confirm the quality and the relevance of research performed at Norwegian Higher Education Institutions (HEIs), the institute sector and the health trusts. These institutions will henceforth be collectively referred to as research performing organisations (RPOs). The evaluation report(s) will provide a set of recommendations to the RPOs, the Research Council of Norway (RCN) and the responsible and concerned ministries. The results of the evaluation will also be disseminated for the benefit of potential students, users of research and society at large.

You have been invited to complete this self-assessment as an administrative unit. The self-assessment contains questions regarding the unit's research- and innovation related activities and developments over years 2012-2022. All submitted data will be evaluated by international evaluation committees. The administrative unit's research groups will be assessed by international expert panels who report their assessment to the relevant evaluation committee.

Deadline for submitting self- assessments to the Research Council of Norway – 31 January 2024

As an administrative unit you are responsible for collecting completed self-assessments for each of the research groups that belong to the administrative unit. The research groups need to submit their completed self-assessment to the administrative unit no later than 26 January 2024. The administrative unit will submit the research groups' completed self-assessments and the administrative unit's own completed self-assessment to the Research Council within 31 January 2024.

Please use the following format when naming your document: name of the institution and short name of the administrative unit, e.g. *NTNU_FacMedHealthSci* and send it to evalmedhelse@forskningsradet.no within 31 January 2024.

For questions concerning the self-assessment or EVALMEDHELSE in general, please contact RCN at evalmedhelse@forskningsradet.no.

Thank you!

Guidelines for completing the self-assessment

- Please read the entire self-assessment document before answering.
- The evaluation language is English.
- Please be sure that all documents which are linked to in the self- assessment are in English and are accessible.
- The page format must be A4 with 2 cm margins, single spacing and Calibri and 11-point font.
- The self-assessment follows the same structure as the [evaluation protocol](#). In order to be evaluated on all criteria, the administrative unit must answer all questions.
- Information should be provided by link to webpages i.e. strategy and other planning documents.
 - Provide information – provide documents and other relevant data or figures about the administrative unit, for example strategy and other planning documents.
 - Describe – explain and present using contextual information about the administrative unit and inform the reader about the administrative unit.
 - Reflect – comment in a reflective and evaluative manner how the administrative unit operates.
- Data on personnel should refer to reporting to DBH on 1 October 2022 for HEIs and to the yearly reporting for 2022 for the institute sector and the health trusts. Other data should refer to 31 December 2022, if not specified otherwise.
- Questions in 4.3c should **ONLY** be answered by administrative units responsible for the Cand.med. degree programme, cf. [Evaluation of the Professional programme in Medicine \(NOKUT\)](#).
- It is possible to extend the textboxes when filling in the form. **NB!** A completed self- assessment cannot exceed 50 pages (pdf file) excluding question 4.3.c. The evaluation committees are not requested to read more than the maximum of 50 pages. Pages exceeding maximum limit of 50 pages **might not** be evaluated.
- Submit the self- assessment as a pdf (max 50 pages). Before submission, please be sure that all text are readable after the conversion of the document to pdf. The administrative unit is responsible for submitting the self-assessment of the administrative unit together with the self-assessments of the belonging research group(s) to evalmedhelse@forskningsradet.no within **31 January 2024**.

Please note that information you write in the self- assessment and the links to documents/webpages in the self- assessment are the only available information (data material) for the evaluation committee.

In exceptional cases, documents/publications that are not openly available must be submitted as attachment(s) to the self- assessment (pdf file(s)).

1.Strategy, resources and organisation

1.1 Research strategy

Describe the main strategic goals for research and innovation of the administrative unit. You may include the following:

- How are these goals related to institutional strategies and scientific priorities?
- Describe how the administrative unit's strategies and scientific priorities are related to the "specific aspects that the evaluation committee should focus on" indicated in your Terms of Reference (ToR)
- Describe the main fields and focus of research and innovation in the administrative unit
- Describe the planned research-field impact; planned policy impact and planned societal impact
- Describe how the strategy is followed-up in the allocation of resources and other measures
- Describe the most important occasions where priorities are made (i.e., announcement of new positions, applying for external funding, following up on evaluations)
- If there is no research strategy – please explain why

Table 1. Administrative unit's strategies

For each category present up to 5 documents which are most relevant for the administrative unit. Please delete lines which are not in use.

Research strategy		
No.	Title	Link
1		
2		
3		
4		
5		
Outreach strategies		
No.	Title	Link
1		
2		
3		
4		
5		
Open science policy		
No.	Title	Link
1		
2		
3		
4		
5		

1.2 Organisation of research

a) Describe the organisation of research and innovation activities/projects at the administrative unit, including how responsibilities for research and other purposes (education, knowledge exchange, patient treatment, researcher training, outreach activities etc.) are distributed and delegated.

b) Describe how you work to maximise synergies between the different purposes of the administrative unit (education, knowledge exchange, patient treatment, researcher training, outreach activities etc.).

1.3 Research staff

Describe the profile of research personnel at the administrative unit in terms of position and gender. Institutions in the higher education sector should use the categories used in DBH, <https://dbh.hkdir.no/datainnhold/kodeverk/stillingskoder>.

RCN has commissioned reports from Statistics Norway (SSB) on personnel for the administrative units included in the evaluation. These reports will be made available to the units early November 2023.

Only a subset of the administrative units submitted to the evaluation is directly identifiable in the national statistics. Therefore, we ask all administrative units to provide data on their R&D personnel. Institutions that are directly identifiable in the national statistics (mainly higher education) are invited to use the figures provided in the report delivered by Statistics Norway. Please delete lines which are not in use.

Table 2. Research staff

	Position by category	No. of researcher per category	Share of women per category (%)	No. of researchers who are part of multiple (other) research groups at the admin unit	No. of temporary positions
No. of Personell by position	Position A (Fill in)				
	Position B (Fill in)				
	Position C (Fill in)				
	Position D (Fill in)				

1.4 Researcher careers opportunities

- a) Describe the structures and practices to support researcher careers and help early-career researchers to make their way into the profession.
- b) Describe how research time is distributed among staff including criteria for research leave/sabbaticals (forskningstermin/undervisningsfri).
- c) Describe research mobility options.

1.5 Research funding

- a) Describe the funding sources of the administrative unit. Indicate the administrative unit's total yearly budget and the share of the unit's budget dedicated to research.
- b) Give an overview of the administrative unit's competitive national and/or international grants last five years (2018-2022).

Table 3. R&D funding sources

Please indicate R&D funding sources for the administrative unit for the period 2018-2022 (average NOK per year, last five years).

For Higher Education Institutions: Share of basic grant (grunnbevilgning) used for R&D ¹ For Research Institutes and Health Trusts: Direct R&D funding from Ministries (per ministry)	
Name of ministry	NOK

National grants (bidragsinntekter) (NOK)	
From the ministries and underlying directorates	
From industry	
From public sector	
Other national grants	
Total National grants	
National contract research (oppdragsinntekter) ² (NOK)	
From the ministries and underlying directorates	
From industry	

¹ Shares may be calculated based on full time equivalents (FTE) allocated to research compared to total FTE in administrative unit

² For research institutes only research activities should be included from section 1.3 in the yearly reporting

From public sector	
Other national contract research	
Total contract research	
International grants (NOK)	
From the European Union	
From industry	
Other international grants	
Total international grants	
Funding related to public management (forvaltningsoppgaver) or (if applicable) funding related to special hospital tasks, if any	
Total funding related to public management/special hospital tasks	
Total all R&D budget items (except basic grant)	

1.6 Collaboration

Describe the administrative unit's policy towards national and international collaboration partners, the type of the collaborations the administrative unit have with the partners, how the collaboration is put to practice as well as cross-sectorial and interdisciplinary collaborations.

- Reflect of how successful the administrative unit has been in meeting its aspirations for collaborations
- Reflect on the importance of different types of collaboration for the administrative unit: National and international collaborations. Collaborations with different sectors, including public, private and third sector
- Reflect on the added value of these collaborations to the administrative unit and Norwegian research system

Table 4a. The main national collaborative constellations with the administrative unit

Please categorise the collaboration according to the most important national partner(s): 5-10 institutions in the period 2012-2022. Please delete lines which are not in use.

National collaborations

Collaboration with national institutions – 1 -10	
Name of main collaboration or collaborative project with the admin unit	
Name of partner institution(s)	
Sector of partner/institution(s)/sectors involved	
Impacts and relevance of the collaboration	

Table 4b. The main international collaborative constellations with the administrative unit

Please categorise the collaboration according to the most important international partner(s): 5-10 international institutions in the period 2012-2022. Please delete lines which are not in use.

International collaborations

Collaboration with international institutions – 1-10	
Name of main collaboration or collaborative project with the admin unit	
Name of partner institution(s)	
Sector of partner/institution(s)/sectors involved	

Impacts and relevance of the collaboration	
--	--

1.7 Open science policies

a) Describe the institutional policies, approaches, and activities to the Open Science areas which may include the following:

- Open access to publications
- Open access to research data and implementation of FAIR data principles
- Open-source software/tools
- Open access to educational resources
- Open peer review
- Citizen science and/or involvement of stakeholders / user groups
- Skills and training for Open Science

b) Describe the most important contributions and impact of the administrative unit's researchers towards the different Open Science areas cf. 1.7a above.

c) Describe the institutional policy regarding ownership of research data, data management, and confidentiality. Is the use of data management plans implemented at the administrative unit?

1.8 SWOT analysis for administrative units

Instructions: Please complete a SWOT analysis for your administrative unit. Reflect on what are the major internal Strengths and Weaknesses as well as external Threats and Opportunities for your research and innovation activities/projects and research environment. Assess what the present Strengths enable in the future and what kinds of Threats are related to the Weaknesses. Consider your scientific expertise and achievements, funding, facilities, organisation and management.

Internal	Strengths	Weaknesses
External	Opportunities	Threats

2. Research production, quality and integrity

2.1 Research quality and integrity

Please see the bibliometric analysis for the administrative unit developed by NIFU (available by the end of October, 2023).

a) Describe the scientific focus areas of the research conducted at the administrative unit, including the unit's contribution to these areas.

b) Describe the administrative unit's policy for research integrity, including preventative measures when integrity is at risk, or violated.

2.2 Research infrastructures

a) Participation in national infrastructure

Describe the most important participation in the national infrastructures listed in the Norwegian roadmap for research infrastructures (Norsk veikart for forskningsinfrastruktur) including as host institution(s).

Table 5. Participation in national infrastructure

Please present up to 5 participations in the national infrastructures listed in the Norwegian roadmap for research infrastructures (Norsk veikart for forskningsinfrastruktur) for each area that were the most important to your administrative unit.

Areas in roadmap	Name of research infrastructure	Period (from year to year)	Description	Link to website

b) Participation in international infrastructures

Describe the most important participation in the international infrastructures funded by the ministries (Norsk deltakelse i internasjonale forskningsorganisasjoner finansiert av departementene).

Table 6. Participation in international infrastructure

Please describe up to 5 participations in international infrastructures for each area that have been most important to your administrative unit.

Project	Name	Period (from year to year)	Description	Link to infrastructure

c) Participation in European (ESFRI) infrastructures

Describe the most important participation in European (ESFRI) infrastructures (Norske medlemskap i infrastruktur i ESFRI roadmap) including as host institution(s).

Table 7. Participation in infrastructures on the ESFRI Roadmap

Please give a description of up to 5 participations that have been most important to your administrative unit.

Social sciences and the humanities				
Name	ESFRI-project	Summary of participation	Period (from year to year)	Link

d) Access to research infrastructures

Describe access to relevant national and/or international research infrastructures for your researchers. Considering both physical and digital infrastructure.

e) FAIR- principles

Describe what is done at the unit to fulfil the FAIR-principles.

3. Diversity and equality

Describe the policy and practices to protect against any form of discrimination and to promote diversity in the administrative unit.

Table 8. Administrative unit policy against discrimination

Give a description of up to 5 documents that are the most relevant. If the administrative unit uses the strategies, policies, etc. of a larger institution, then these documents should be referred to. Please delete lines which are not in use.

No.	Name	Valid period	Link
1			

4.Relevance to institutional and sectorial purposes

4.1 Sector specific impact

Describe whether the administrative unit has activities aimed at achieving sector-specific objectives or focusing on contributing to the knowledge base in general. Describe activities connected to sector-specific objectives, the rationale for participation and achieved and/or expected impacts. Please refer to chapter 2.4 in the [evaluation protocol](#).

- Alternatively, describe whether the activities of the administrative unit are aimed at contribution to the knowledge base in general. Describe the rationale for this approach and the impacts of the unit's work to the knowledge base.

4.2 Research innovation and commercialisation

- a) Describe the administrative unit's practices for innovation and commercialisation.
- b) Describe the motivation among the research staff in doing innovation and commercialisation activities.
- c) Describe how innovation and commercialisation is supported at the administrative unit.

Table 9. Policies for innovation including IP policies, new patents, licenses, start-up/spin-off guidelines

Describe up to 5 documents of the administrative unit's policies for innovation, including IP policies, new patents, licenses, start-up/spin-off guidelines, etc., that are the most relevant. If the administrative unit uses the strategies, policies, etc. of a larger institution, then present these documents. Please delete lines which are not in use.

No.	Name	Valid period	Link
1			

Table 10. Administrative description of successful innovation and commercialisation results

Please describe up to 10 successful innovation and commercialisation results at your administrative unit in the period 2012-2022. Please delete lines which are not in use.

No.	Name of innovation and commercial results	Link	Description of successful innovation and commercialisation result.
1			

4.3 Higher education institutions

a) Reflect how research at the administrative unit contributes towards master and PhD-level education provision, at your institutions and beyond.

b) Describe the opportunities for master students to become involved in research activities at the administrative unit.

c) **ONLY** for administrative units responsible for the Cand.med. degree programme, cf. [Evaluation of the Professional programme in Medicine \(NOKUT\)](#).

- Reflect on how research at the administrative unit contributes towards the quality of the Cand.med. degree programme at your institutions and beyond.
- Describe the different opportunities for students on the Cand.med. degree programme to become involved in research activities at the administrative unit, and the extent to which students use those opportunities.

4.4 Research institutes

a) Describe how the research and innovation activities/projects at the administrative unit contribute to the knowledge base for policy development, sustainable development, and societal and industrial transformations more generally.

b) Describe the most important research activities with partners outside of research organisations.

4.5 Health trusts

a) Reflect on how the administrative unit's clinical research, innovation and commercialisation contribute towards development, assessment and implementation of new diagnostic methods, treatment, and healthcare technologies.

b) Reflect on how research at the unit contributes towards the quality of relevant education programme at your institutions or beyond.

c) Describe the different opportunities for students on relevant educational programmes to become involved in research activities at the administrative unit, and the extent to which students use those opportunities.

5.Relevance to society

Reflect on the administrative unit's contribution towards the Norwegian Long-term plan for research and higher education, societal challenges more widely, and the UN Sustainable Development Goals.

5.1 Impact cases

Please use the attached template for impact cases. Each impact case should be submitted as an attachment (pdf) to the self-assessment.

Impact case guidelines

Each case study should include sufficiently clear and detailed information to enable the evaluation committee to make judgements based on the information it contains, without making inferences, gathering additional material, following up references or relying on members' prior knowledge. References to other sources of information will be used for verification purposes only, not as a means for the evaluation committee to gather further information to inform judgements.

In this evaluation, impact is defined as an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia.

Timeframes

- The impact must have occurred between 2012 and 2022
- Some of the underpinning research should have been published in 2012 or later
- The administrative units are encouraged to prioritise recent cases

Page limit

Each completed case study template will be limited to **five pages** in length. Within the annotated template below, indicative guidance is provided about the expected maximum length limit of each section, but institutions will have flexibility to exceed these so long as the case study as a whole remains no longer than **five pages** (font Calibri, font size 11). Please write the text into the framed template under the sections 1–5 below. The guiding text that stands there now, can be deleted.

Maximum number of cases permitted per administrative unit

For up to 10 researchers: one case; for 10 to 30 researchers: two cases; for 30-50 researchers: three cases; for 50-100 researchers: four cases, and up to five cases for units exceeding 100 researchers.

Naming and numbering of cases

Please use the standardised short name for the administrative unit, and the case number for the unit (1,2,3, etc) in the headline of the case. Each case should be stored as a separate PDF-document with the file name: [Name of the institution and name of the administrative unit] [case number]

Publication of cases

RCN plans to publish all impact cases in a separate evaluation report. By submitting the case the head of the administrative units consents to the publication of the case. Please indicate below if a case may not be made public for reasons of confidentiality.

If relevant, describe any reason to keep this case confidential:

Please write the text here

[Name of the institution and name of the administrative unit] [case number]

Institution:
Administrative unit:
Title of case study:
Period when the underpinning research was undertaken:
Period when staff involved in the underpinning research were employed by the submitting institution:
Period when the impact occurred:

1. Summary of the impact (indicative maximum 100 words)

This section should briefly state what specific impact is being described in the case study.

2. Underpinning research (indicative maximum 500 words)

This section should outline the key research insights or findings that underpinned the impact, and provide details of what research was undertaken, when, and by whom. This research may be a body of work produced over a number of years or may be the output(s) of a particular project. References to specific research outputs that embody the research described in this section, and evidence of its quality, should be provided in the next section. Details of the following should be provided in this section:

- The nature of the research insights or findings which relate to the impact claimed in the case study.
- An outline of what the underpinning research produced by the submitted unit was (this may relate to one or more research outputs, projects or programmes).
- Dates of when it was carried out.
- Names of the key researchers and what positions they held at the administrative unit at the time of the research (where researchers joined or left the administrative unit during this time, these dates must also be stated).
- Any relevant key contextual information about this area of research.

3. References to the research (indicative maximum of six references)

This section should provide references to key outputs from the research described in the previous section, and evidence about the quality of the research. All forms of output cited as underpinning research will be considered equitably, with no distinction being made between the types of output referenced. Include the following details for each cited output:

- Author(s)
 - Title
 - Year of publication
 - Type of output and other relevant details required to identify the output (for example, DOI, journal title and issue)
 - Details to enable the panel to gain access to the output, if required (for example, a DOI or URL).
- All outputs cited in this section must be capable of being made available to panels. If they are not available in the public domain, the administrative unit must be able to provide them if requested by RCN or the evaluation secretariate.

4. Details of the impact (indicative maximum 750 words)

This section should provide a narrative, with supporting evidence, to explain:

- How the research underpinned (made a distinct and material contribution to) the impact;
- The nature and extent of the impact.

The following should be provided:

- A clear explanation of the process or means through which the research led to, underpinned or made a contribution to the impact (for example, how it was disseminated, how it came to influence users or beneficiaries, or how it came to be exploited, taken up or applied).

- Where the submitted administrative unit's research was part of a wider body of research that contributed to the impact (for example, where there has been research collaboration with other institutions), the case study should specify the particular contribution of the submitted administrative unit's research and acknowledge other key research contributions.
- Details of the beneficiaries – who or what community, constituency or organisation has benefitted, been affected or impacted on.
- Details of the nature of the impact – how they have benefitted, been affected or impacted on.
- Evidence or indicators of the extent of the impact described, as appropriate to the case being made.
- Dates of when these impacts occurred.

5. Sources to corroborate the impact (indicative maximum of ten references)

Institution	Administrative unit	Name of research group	Expert panel
Oslo University Hospital and University of Oslo	Division of Emergency and Critical Care	Division of Emergency and Critical Care Research Group (DECC)	Panel 3b-1

Scales for research group assessment

Use whole integers only – no fractions!

Organisational dimension

Score	Organisational environment
5	An organisational environment that is outstanding for supporting the production of excellent research.
4	An organisational environment that is very strong for supporting the production of excellent research.
3	An organisational environment that is adequate for supporting the production of excellent research.
2	An organisational environment that is modest for supporting the production of excellent research.
1	An organisational environment that is not supportive for the production of excellent research.

Quality dimension

The quality dimension consists of two judgements: 1) Research and publication quality, and 2) Research group's contribution. The first judgement is defined as follows:

Score	Research and publication quality	Supporting explanation
5	Quality that is outstanding in terms of originality, significance, and rigour.	The quality of the research is world leading in terms of quality, and is comparable to the best work internationally in the same area of research. The publications submitted provide evidence that the work of the group meets the highest international standards in terms of originality, significance, and rigour. Work at this level should be a key international reference in its area.
4	Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence.	The quality of the research is internationally excellent. The research is clearly of an international standard, with a very good level of quality in terms of originality, significance, and rigour. Work at this level can arouse significant interest in the international academic community, and international journals with the most rigorous standards of publication (irrespective of the place or language of publication) could publish work of this level.
3	Quality that is recognised internationally in terms of originality, significance and rigour.	The quality of the research is sufficient to achieve some international recognition. It would be perceived nationally as strong and may occasionally reach an internationally recognised level in terms of originality, significance and rigour. Internationally recognised journals could publish some work of this level.
2	Quality that meets the published definition of research for the purposes of this assessment.	The international academic community would deem the research to be nationally acceptable, but below world standards. Legitimate nationally recognised peer-reviewed journals could publish work of this level.
1	Quality that falls below the published definition of research for the purposes of this assessment ¹ .	The quality of the research is well below international level, and is unpublishable in legitimate peer-reviewed research journals.

¹ A publication has to meet all of the criteria below:

Societal impact dimension

The societal impact dimension is also composed of two judgements, defined as presented in the table below.

Score	Research group's societal contribution, taking into consideration the resources available to the group	Score	User involvement
5	The group has contributed extensively to economic, societal and/or cultural development in Norway and/or internationally.	5	Societal partner involvement is outstanding – partners have had an important role in all parts of the research process, from problem formulation to the publication and/or process or product innovation.
4	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is very considerable given what is expected from groups in the same research field.	4	Societal partners have very considerable involvement in all parts of the research process, from problem formulation to the publication and/or process or product innovation.
3	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is on par with what is expected from groups in the same research field.	3	Societal partners have considerable involvement in the research process, from problem formulation to the publication and/or process or product innovation.
2	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is modest given what is expected from groups in the same research field.	2	Societal partners have a modest part in the research process, from problem formulation to the publication and/or process or product innovation.
1	There is little documentation of contributions from the group to economic, societal and/or cultural development in Norway and/or internationally.	1	There is little documentation of societal partners' participation in the research process, from problem formulation to the publication and/or process or product innovation.

Methods and limitations

Methods

The evaluation is based on documentary evidence and online interviews with the representatives of Administrative Unit.

The documentary inputs to the evaluation were:

- Evaluation Protocol Evaluation of life sciences in Norway 2022-2023
- Administrative Unit's Terms of Reference
- Administrative Unit's self-assessment report
- Administrative Unit's impact cases
- Administrative Unit's research groups evaluation reports
- Panel reports from the Expert panels
- Bibliometric data (*NIFU Nordic Institute for Studies of innovation, research and education*)
- Personnel data (*Statistics Norway (SSB)*)
- Funding data – The Research Council's contribution to biosciences research (*RCN*)
- Extract from the Survey for academic staff and the Student Survey (*Norwegian Agency for Quality Assurance in Education (NOKUT)*)

After the documentary review, the Committee held a meeting and discussed an initial assessment against the assessment criteria and defined questions for the interview with the Administrative Unit. The Committee shared the interview questions with the Administrative Unit two weeks before the interview.

Following the documentary review, the Committee interviewed the Administrative Unit in an hour-long virtual meeting to fact-check the Committee's understanding and refine perceptions. The Administrative Unit presented answers to the Committee's questions and addressed other follow-up questions.

After the online interview, the Committee attended the final meeting to review the initial assessment in light of the interview and make any final adjustments.

A one-page summary of the Administrative Unit was developed based on the information from the self-assessment, the research group assessment, and the interview. The Administrative Unit had the opportunity to fact-check this summary. The Administrative Unit approved the summary without adjustments. ***(Adjust the text if the AU asked for corrections. Include the AU request and explain what adjustments were made).***

Limitations

(Choose one of the three options below and delete the others. Feel free to elaborate slightly if necessary. For example, if you choose option 3, explain the missing information. Note that the Committee can provide detailed feedback and suggestions on improving the evaluation in the Memorandum to the RCN. This section has to remain concise and only summarise whether the information was or was not sufficient.)

- (1) The Committee judged the information received through documentary inputs and the interview with the Administrative Unit sufficient to complete the evaluation.

- (2) The Committee judged that the Administrative Unit self-assessment report was insufficient to assess all evaluation criteria fully. However, the interview with the Administrative Unit filled gaps in the Committee's understanding, and the information was sufficient to complete the evaluation.
- (3) The Committee judged that the Administrative Unit's self-assessment report was insufficient to assess all evaluation criteria fully, and some information gaps remained after the interview with the Administrative Unit.

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