Forskningsrådet

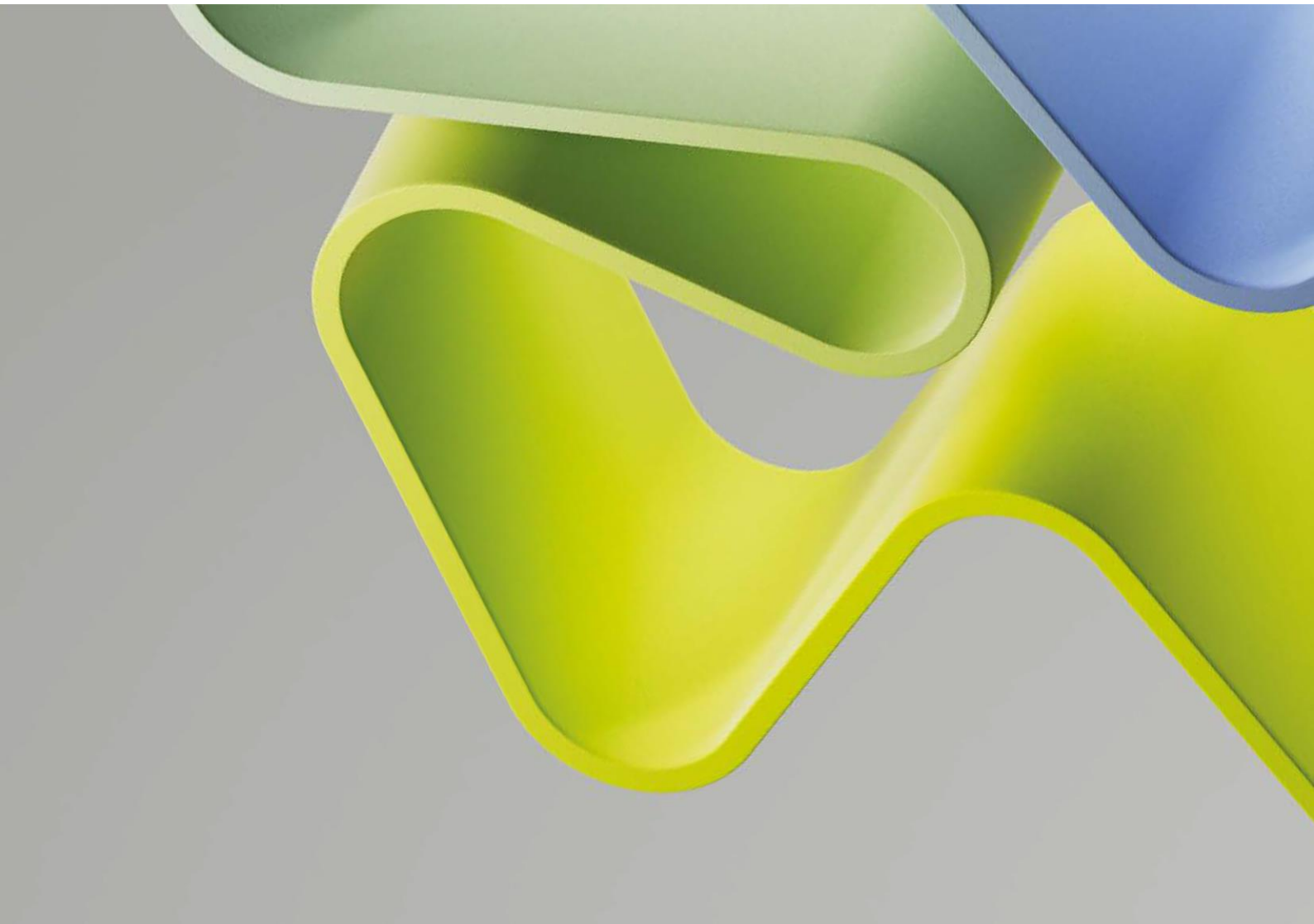
Evaluation of Life Sciences 2022-2024

Evaluation of medicine and health 2023-2024

Evaluation report

ADMINISTRATIVE UNIT: Division of Cardiovascular and pulmonary diseases
INSTITUTION: Oslo University Hospital and University of Oslo

December 2024



Contents

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

In the OUS/UiO Division of Cardiovascular and pulmonary diseases' organisational structure, department heads are responsible for overseeing all research within their respective departments. Research groups are composed of members from within and across departments, as well as external collaborators from other divisions, hospitals, and universities. These groups are tasked with securing funding, either independently or in partnership with external collaborators, following the department's research framework. In terms of research staff, the administrative unit consists of 35 senior physicians, five physicians, 33 researchers and post-docs, 29 PhD students, ten professors and ten associate professors. Women occupy a minority of senior positions, 20 percent of senior physicians, 0 percent of professors and 20 percent of associate professors.

The division is comprised of four research groups: the Institute for Experimental Medical Research (IEMR), the Department of Cardiology (KAD), the Department of Cardiothoracic Surgery (TKA) and the Institute for Surgical Research (ISR).

A specific action plan for research and innovation is developed within the administrative unit for 2021-2025, building on the hospital's Research Strategy and Action Plan. The focus is on enhancing the quantity and quality of clinical, experimental, and translational research. The administrative unit is also prioritising innovation and patents, as detailed in the research strategy and group reports. One key goal is to allocate time for researchers to engage in research, either part-time or full-time. However, budget constraints pose a challenge, as clinicians are essential for clinical work and generating revenue for the departments.

The work of the administrative unit in relation to its sector mainly relates to enhancing patient treatment and train the next generation of healthcare professionals. This involves conducting cutting-edge research across mechanistic studies, clinical trials, and robust registries for hypothesis generation and benchmarking. Moreover, the administrative unit is actively involved in a range of clinical trials, aiming to boost both their number and quality in line with governmental guidelines.

The unit also engages in translational research, supported by the two research institutes, which contribute to the education of health professionals through various courses and practical animal training. These courses cover skills from intubation to complex surgical procedures. Additionally, the unit develops and tests new medical equipment and manage several registries, both internal and national, to provide ongoing data. The researchers and academic staff frequently engage with the public through media, including radio, television, and podcasts, and involve users of the health services in research projects, as recommended by health authorities. This approach also helps to disseminate valuable knowledge to the general population.

Based on its self-assessment, in the future, the division might take advantage of internal strengths such as its national leading role as health research institution, being an attractive partner for academia and industry, close links to the University of Oslo and its significant clinical activity, data material, and scientific expertise enabling improvement and research in healthcare services. They might also take advantage of external opportunities such as the increased funding from the EU Horizon Europe programme, the government's goal of doubling clinical trials nationally within the five-year period 2021-2025 and the increasing competition for research funding regionally, nationally, and internationally, as well as pressure on internal budgets. There are also challenges which might impact the future situation of the administrative unit. These include uncertain career paths for researchers,

insufficient innovation in relation to research activity and a lower percentage of funds from the health industry compared to other Nordic countries.

Overall evaluation

The overall assessment of the evaluation committee, considering the Terms of reference provided by the administrative unit, is that the division of Cardiovascular and pulmonary diseases at the OUS/UiO is a well organised administrative unit supporting an overall outstanding research environment. The research is strong at national and international level. The unit members are dedicated, have good track records and strong international and national networks of collaborators ensuring the production of the highest quality research. The networks are also used actively with respect to both research, education and mobility.

Strategies and action plans for achieving this research quality are comprehensive although held at a generic level.

The unit attracts solid competitive private and public funding.

The administrative unit has played a considerable role in terms of societal contribution through guideline influencing clinically oriented research and new therapeutic and technological innovations leading to patenting and spin-out companies.

The administrative unit´s weaknesses relate to the heterogenous nature of the involved research groups, the uncertain career paths for researchers, insufficient innovation in relation to research activity and a lower percentage of funds from the health industry compared to other Nordic countries.

Recommendations

- Consider implementing action plans with ambitious, realistic and measurable goals to evaluate whether the strategies of increased quantity and quality and innovations and patents are successful. This will benefit the unit.
- Increase transparency with respect to priorities.
- Establish and implement tools to monitor the level of successful outcome of strategic plans and actions plans.
- Continue to attract the national funding boards and increase on the international funding (esp. Horizon).
- Clarify the role of the industry in the funding.
- Widen the use of the many infrastructural facilities in a formalised way to optimise the time spend by the doctors/researchers. An expanded use of the combined infrastructure will benefit both the overall research outcome and help career path for the junior doctors who have to joggle time consuming clinical training, frequent changes in clinical position, research career, and potentially also establishing families.
- Consider expanding and strengthening existing international collaborations.
- Engage more with industry. The unit will benefit from this.
- Consider establishing an industrial advisory board.
- Consider ways to interact and engage with other disciplines that may sit outside of the core discipline. This could be effectuated through employment of intermediary level and permanent research staff with more diverse scientific background
- Create more transparency in career path, allocation of research time and mobility.
- Measure and evaluate to what level the Open Science strategies, policies and guidelines are followed.
- Consider employing methodologists such as a statistician/ triallist, systematic reviewer, qualitative researcher and health economist. Alternatively, clinicians can be sponsored to undertake master's level University training in these fields.
- Create a working environment where scientific competences are acknowledged independent of gender and to create an environment with innovation and diversity. A way forward is to actively look for employees that have competences and innovative thoughts that differ from the prevailing line of thoughts. Think new instead of thinking more of the same.
- Continue supporting the infrastructure for development of imaging technologies, creation of more spin-out companies, and expansion of the cardiogenetic research.
- Consider enrichment of research staff with permanent positions for non-medical researchers in order to generate the momentum for further discoveries, more spin-out companies and higher societal impact.
- Consider developing a public and patient outreach strategy at the level of the administrative unit to find ways to involve patients and public in the design of research projects.

1. Strategy, resources and organisation of research

1.1 Research strategy

The division has an overall strategic goal of increasing the quantity and quality of clinical research, experimental research and translational research. Moreover, the administrative unit focuses on increasing innovation and patents. It is a goal to strengthen the clinical impact on research by allowing clinicians to have part time or full time to do research for a defined amount of time.

These strategies are in line with the institutional strategies. The strategies are outlined in detailed action plans with key measures and allocation of primary responsibility.

The main fields and focuses are cardiology and cardiac surgery. Vascular and pulmonary research are welcomed. There is no strategic decision on which department does research. The interview clarified that academic competences are lacking in vascular surgery and that it is difficult to get qualified doctors. The vascular group does however have a strong group on vascular physiology.

The unit has a strategic plan for outreach and research communication with plans of evaluation and revision every second year. The departments and units are regularly in media and social media disseminating the results of research. The unit encourage the participation. Tools for evaluation of the outreach impact are not available.

Allocation of resources is depending on individual researchers obtaining grants. Internal funding opportunities exist at department, hospital, and university level. External funding from private foundations and industry is available by application. Departmental effort to free clinical time for research is a central part of the strategy. Action plans and tools for follow up and evaluation of strategies and allocation of resources are not in place. The unit attests to inadequate tools for leadership to follow up on research projects amongst internal weaknesses.

Priorities are not self-declared in regard to i.e. specific projects, announcement of new positions, applying for external funding, or following up on evaluations. Each department head priorities at the individual department or sub-departmental level. Prioritisation is not transparent.

The committee's evaluation

Relevant and high aiming generic strategic plans and action plans with measurable outcomes and placement of key responsibility are in place. Follow-up strategies to evaluate whether the goals are reached are potential new pathways for the unit to embark on as is transparency in relation to scientific prioritisation. The committee has not been able to get an impression of outcome products such as publications since links to lists have not been operational.

The committee´s recommendations

- Consider implementing action plans with ambitious, realistic and measurable goals to evaluate whether the strategies of increased quantity and quality and innovations and patents are successful. This will benefit the unit.
- Increase transparency with respect to priorities.

1.2 Organisation of research

In the administrative unit OUS has organised the activity in 15 clinical divisions. Many of the divisions span their activities on more than one of the four major hospital localisations. The Faculty of Medicine has organised its activity at OUS within the Institute of Clinical Medicine (Klinmed), which parallels the organisation of OUS. Due to these coordinated organisation principles, the strategic research leadership is coordinated at the top level of the divisions. The Head of Division normally holds a shared position and thus manages both OUS and UiO activities. There is also a common Head of Research in every division, with a shared position. Most of the publications (approximately 70 percent) have combined addresses of OUS and the Faculty of Medicine, reflecting the close collaboration. The research groups are often co-located within or close to the hospital.

A research council (RC) within the administrative unit consists of members from all departments. The RC is an advisory board for the head of division in research matters. The RC evaluates applications for funding within the division, ranking of research papers, planning of strategy and research meetings. The head of research is the leader of the RC.

The researchers 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. Association with the university gives access to facilities such as scientific journals and office space.

The clinical, research and educational purposes of the administrative unit benefit from key personnel (medical doctors) being employed / affiliated with both UiO and OUS. The many tight connections between university and the clinic are a great asset. A flexible administration of research time taken out of clinical work time seems to create positive synergy. Challenges of reconciling clinical work and research are, however mentioned as internal weakness as are recruitment issues among doctors due to leave, and funding constraints.

The committee's evaluation

This unit has its research organisation in place. The success of time spent on research is less well described.

The committee´s recommendations

- Establish and implement tools to monitor the level of successful outcome of strategic plans and actions plans.

1.3 Research funding

The unit has a strong funding portfolio. In total received 6,6 MNOK in international grants, approximately 60 MNOK in national grants and approximately 60 MNOK from higher education institutions.

The Department of Cardiology has their second SFI (Centre for Cardiological Innovation) ongoing, financed by RCN (110 MNOK), HSØ-funding for the ACASA-TAVI trial (RCT of antithrombotic treatment after TAVI, 10 MNOK) and an ERC consolidator grant (29 MNOK).

The IEMF have been granted a Jebsen Centre (39 MNOK), an RCN early career grant (8 MNOK), and several PhD and post-docs.

The committee's evaluation

It is the committee's evaluation that the unit has a solid and broad research funding especially at national level with a good mix of sustained public and private funding. The international aspect of funding is adequate,- but the unit may benefit from more international grants. The industry is involved at a low level and the unit is not clarified with regards to the role of industry financed research. The balance between independence and financial support is debated.

The committee´s recommendations

- Continue to attract the national funding boards and increase on the international funding (esp. Horizon).
- Clarify the role of the industry in the funding.

1.4 Infrastructures

The unit participates in national infrastructures such as the NORMOLIM (Norwegian Molecular Imaging Infrastructure) that has been a national research infrastructure on the RCN National Research Infrastructure Roadmap since 2017/2018 and “The Norwegian Advanced Light Microscopy Imaging Network” (NALMIN-II).

The unit’s participation in NORMOLIM is also a transnational node in the ESFRI infrastructure Euro-BioImaging ERIC.

The research groups have access to laboratories, equipment, core facilities, biobanks, comparative medicine units and other important support, such as biostatistics and epidemiology, clinical trial unit and administrative support from both OUS and UiO.

There is good administrative support from UiO: pre- and post-grant support, project support, compliance-related matters, data management and privacy, contracts and collaboration agreements, as well as advice and support in various aspects of the scientific publication process. The Institute of Clinical Medicine provides HR services related to employment contracts, recruitment, and other practical issues. The institute also provides procurement and financial support such as budgeting. The communication team contributes to outreach activities in the research group. The research groups further benefit from the university library, as well as support services offered by UiO as IT computing services, innovation and commercialisation support.

The Research Support Services provides advising and training courses on key topics. The administrative unit works with the fair principles.

The committee's evaluation

The unit possesses very solid and advanced national infrastructure covering almost all needed and wanted areas. However, the description of the infrastructures is generic and there is little information about how the research groups get knowledge and access to the vast infrastructure and how the collaborative mechanisms and agreements are stipulated. It seems as if all groups in the unit are not making the full use of all the infrastructure and that more synergies can be established.

The committee´s recommendations

- Widen the use of the many infrastructural facilities in a formalised way to optimise the time spend by the doctors/researchers. An expanded use of the combined infrastructure will benefit both the overall research outcome and help career path for the junior doctors who have to joggle time consuming clinical training, frequent changes in clinical position, research career, and potentially also establishing families.

1.5 Collaboration

The unit has a positive attitude for collaboration within a hospital setting, nationally and internationally as well as with UiO and other universities and non-governmental institutions. The unit has national collaborations with several of the Norwegian hospitals and universities such as Norwegian University of Science and Technology, Trondheim, KG Jepsen Centre for Cardiac Research, Akershus University Hospital, Sørlandet Hspital, Arendal and Stavanger University Hospital.

International collaborations are very strong involving the Mayo Clinic, Rochester, MN, USA, Johns Hopkins Hospital, MA, USA, KU Leuven, Belgium Universität Bern, Switzerland, University of Münster, Germany, Karolinska Institutet, Sweden and Sahlgrenska Hospital, Gothenborg, Sweden. The outcome of the international collaborations entails high impact papers, exchange of personnel, methodological developments and applications, and industry/innovation projects.

The committee's evaluation

The administrative unit has impressive international collaborations in cardiogenetics in Europe and with very strong academic institutions in the USA. Furthermore, there are national collaborations taking into account Norway’s long standing leading position in development of imaging. The administrative unit also has a strong national collaboration that covers the country from South to North and thereby maximises the potential pool of patients to be enrolled in clinical trials.

Especially the area of cardiogenetic diseases and risk of sudden cardiac death is very highly profiled and renowned and the results are published in the highest ranked journals.

The collaboration with public and private sector is well established whereas there is little collaboration with third sector.

The committee´s recommendations

- Consider expanding and strengthening existing international collaborations.
- Engage more with industry. The unit will benefit from this.
- Consider establishing an industrial advisory board.

1.6 Research staff

The profile of research personnel is characterised by employees with combined positions (100% clinical (OUS) and 20% university (UiO or vice versa) positions, either as adjunct professors (N=10), associate professors (N=10), or researchers). In addition, several OUS employees have either part-time or full-time research positions paid by OUS. Moreover, the administrative unit has postdoctoral and PhD positions, mainly paid for by external funding. All heads of departments, except for Vascular Surgery and the Outpatient Clinic, have a 20% adjunct professorship at the UiO and are combined leaders of both the clinical and the university (academic) aspects within their respective departments.

Gender wise, the unit has a male/female distribution of approximately 40/60 at the non-specialist/non staff level. Among specialists and senior physicians, the gender distribution is 80/20. When it comes to professors/ass professors the distribution is 90/10 with no female amongst professors.

The research staff seems to be almost entirely medical doctors. There is no mentioning of other health care professional, statisticians, project managers, physicians, engineers or others that could participate as scientific research members or provide local infrastructure. There is however mentioning of many infrastructural elements.

The unit's research career opportunity structure involves the postdoctoral programme at the Faculty of medicine, research leadership programmes, and innovation programmes. The initiative to comply with the strategy for early-career development lies within the different departments.

Allocation of research time for employs with combined positions at OUS and UiO follows an agreement between the two parties and practically arranged according to local arrangements at the individual departments and at the decision of the department head. Staff members with dual employment (OUS and UiO) have 2 days per week to safeguard research and teaching of medical students. Specialist doctors have 4 months sabbatical every 5 years and younger doctors have hours and days set aside for courses and self-education. Junior doctors are expected to use leisure time for research to prove their interest before more formal affiliation and funding are considered. There is no tool to monitor the use of research time and the decision making for allocation of research time. All employees might be granted paid leave to perform research in foreign laboratories, either nationally or internationally. For senior consultants, this is most common in association with sabbaticals. For PhD students and post-docs, this might be part of their education/working plan and, especially for post-docs, it is common to serve part of their period in a laboratory abroad. There is also specific funding for research mobility where both governmental and international funds (EU) are available. The application of funding is at the initiative and finalising of the research mobility seeking MD. There is no tool to monitor the quantity and quality of mobility.

The committee´s evaluation

There is a well-functioning mix of researchers on staff with shared positions at UiO and OUS. There is a solid staff and a good number of junior researchers. The number of intermediary level of researchers and researchers with other backgrounds than medicine seems more restricted.

There are programmes available for career opportunities and possibilities for dedicated research time. The process of allocation of career opportunities, research time, and mobility is unclear.

The committee´s recommendations

- Consider ways to interact and engage with other disciplines that may sit outside of the core discipline. This could be effectuated through employment of intermediary level and permanent research staff with more diverse scientific background
- Create more transparency in career path, allocation of research time and mobility.
- Create tools to monitor research time spend in dedicated time and preferentially also during leisure time
- The board would benefit from more diversity as it is strongly dominated by clinicians.

1.7 Open Science

UiO has adopted a strategy for open access (2022). The strategy emphasises that high-quality scientific knowledge must be both visible and accessible to be effective in social and working life, in education and research. OUS supports the national open access publication and open access research data policies. This is emphasised in the strategic documents.

Of all publications of the administrative unit 86.5% is now published open access. A national repository for scientific publications will be available for all sectors in 2024. OUS is also actively supporting initiatives to establish biobanks and research databases based on broad consent that enables the re-use of data. There are a number of registries and biobanks run by the different departments (research groups) that are more or less open for all researchers to use. It is unclear if researchers outside of UiO/UOS have access to these registries and biobanks.

Both OUS and UiO have implemented guidelines for data management. UiO and OUS aim to manage research data according to international standards, such as the FAIR principles. The HLK Self- assessment for administrative units 2023-2024 20 OUS OA policy follows the "as open as possible, as closed as necessary" principle in terms of access to research data. Scientists and students are responsible for managing research data according to these principles. Supervisors of PhD candidates and students have a special responsibility for ensuring that candidates and students attend courses and manage research data according to the guidelines.

One research group has a long lasting collaboration with «Foreningen for hjertesyke barn» which has been consulted in user involvement. Moreover, IEMF has a formalised cooperation with LHL, NORHEART and Nasjonalforeningen regarding user involvement.

The committee's evaluation

The administrative unit has taken relevant steps to ensure open sciences policies, approaches, and activities. They publish 86.5% of publications in open access.

The administrative unit aim to manage research data according to the FAIR principles although there is not measurement of whether the unit achieve the aim.

The committee´s recommendations

- Measure and evaluate to what level the Open Science strategies, policies and guidelines are followed.

2. Research production, quality and integrity

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).

Department of Cardiology (KAD)

Strengths of the Department of Cardiology are their very strong funding portfolio, the two centres for Research-based Innovation, the excellent quality research outputs – internationally competitive/leading and excellent education, including 44 PhDs completed. The Department is also a national centre/lead for RCTs, conducts international and national, inter-and transdisciplinary collaboration, has a very good societal contribution, actively collaborates with patients and establish a panel of user representatives. Finally, it has a good public outreach. Weaknesses concern their small size (2 Professors, 1 Associate Professors plus 2 cardiologists) and the limited research space and personnel.

Department of Cardiothoracic Surgery (TKA)

Firstly, the self-assessment form for this research group is poorly written and this has contributed to the low grading – there is a lack of key and detailed information. The research environment and organisation of research activities are only adequate to enable the production of good research that would not reach the highest standards of excellence. There are weaknesses in the overall leadership and how both units work currently – there is a lack of cohesion. Funding is declining and no real plan on how this group will be sustainable in the longer term. The group has contributed to societal impact in Norway with a modest impact internationally.

Institute for Experimental Medical Research (IEMR)

Strengths of the Institute for Experimental Medical Research are their clearly defined strategy, excellent aspiration (“excellence in science and in working place culture”), very strong funding portfolio (good mix of sustained public and private funding), and national leadership in the discipline (in both research and education). The research group has translational research with unique animal models, good national and international links and provides a good contribution to education. They also provide high-quality research outputs that are internationally competitive, contribute to European guidelines and have a good record of patenting discoveries. Finally, they have supportive infrastructure. Weaknesses constitute planning for co-localisation with three other groups which creates a logistic and organisational challenge and seems to generate a high level of anxiety, it is difficult to attract talented staff, there is little explicit evidence of public and patient outreach activities, and the lack of evidence for patient involvement in research design (and conduct).

Institute for Surgical Research (ISR)

Strengths of the Institute for Surgical Research (ISR) concern the clearly defined strategy, very strong funding portfolio (a good mix of sustained public and private funding), the translational research, good national and international links, and good contribution to PhD student supervision. Furthermore, the research group has high-quality research outputs that are internationally competitive, contributes to European guidelines, has a good record of patenting discoveries plus spin-out company and supportive infrastructure. Main weaknesses concern little explicit evidence of public and patient outreach activities and a lack of evidence for patient involvement in research design (and conduct).

3. Diversity and equality

Strategies and action plans are in place to protect against discrimination and to promote diversity. The gender distribution of staff is, however, not equal. There is no information about inclusion of migrants or international recruitment.

The committee's evaluation

Strategies and action plans are in place, but they are either not functional or not followed, since there is a delay in obtaining gender equity and equality at levels of staff positions and professor level. The recruitment problem may find part of an explanation as well as potential for solution in the lack of diversity. The intellectual and competence pool from which to recruit leaders necessitates an environment where all genders feel appreciated and acknowledged.

The committee´s recommendations

- Create a working environment where scientific competences are acknowledged independent of gender. Create an environment with innovation and diversity. A way forward is to actively look for employees that have competences and innovative thoughts that differ from the prevailing line of thoughts. Think new instead of thinking more of the same. The unit will benefit from diversity.
- Routinely collect data on research participation, grant funding and research outputs by gender, age, ethnicity, disability and less than full-time working.

4. Relevance to institutional and sectorial purposes

The administrative unit performs clinical and experimental research and innovation of high standard. The research output contributes to clinical guidelines. The cardiogenetic research has placed the institution in the top international level.

At the administrative unit there are good opportunities for medical students to become involved in research activities. There is a large number of medical students using these opportunities although the number of PhD students for the whole administrative unit is small compared to the number of professors. The number of ascending career positions and non-medical career tracks are less well developed.

The committee's evaluation

The research performed at the administrative unit is relevant to institutional and sectorial purposes.

The committee´s recommendations

- The committee has no recommendations.

5. Relevance to society

The seventeen UN Sustainable Developmental Goals include “To ensure healthy lives and promote well-being for all ages” (SDG 3), “To ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (SDG 4), “To achieve gender equality and empower all women and girls (SDG 5)

The committee's evaluation

The administrative unit has a good record of patenting discoveries from the research related to development of imaging techniques. It contributes importantly towards implementation of new diagnostic methods, treatment, healthcare technologies and spin-out companies.

Overall, the administrative unit has good experience with societal contribution although there is a discrepancy between the research groups within the administrative unit. For most parts, the administrative unit has little patient involvement in research design and conduct.

Of the UN Sustainable Developmental Goals, the unit have provided evidence to support SDG 3; have a commitment and are making strides towards SDG 4; and have a strategic plan to achieving SDG 5 but have not provided the data to support this goal.

The committee´s recommendations

- Continue supporting the infrastructure for development of imaging technologies, creation of more spin-out companies, and expansion of the cardiogenetic research.
- Consider enrichment of research staff with permanent positions for non-medical researchers in order to generate the momentum for further discoveries, more spin-out companies and higher societal impact.
- Consider developing a public and patient outreach strategy at the level of the administrative unit to find ways to involve patients and public in the design of research projects.

Comments on impact case 1: Invasive strategy in patients aged 80 years or older with non-ST elevation myocardial infarct or unstable angina pectoris

This large randomised controlled study of patients aged 80 years or more with non-ST elevation acute coronary syndrome (NSTE-ACS) demonstrated that an invasive strategy was superior to a conservative strategy in the reduction of composite events. The research was published in two papers in international journals. The impact has been substantial, contributing to changes in clinical practice and guidelines globally. The evidence from the study continues to influence decisions made by healthcare professionals regarding the treatment of older patients with acute coronary syndromes. The impact began to manifest in 2019, increased after the implementation in of the results in the European and American guidelines in 2020, and continues to influence clinical practice.

Comments on impact case 2: CCN proteins as preproproteins that require bioactivation by endopeptidase cleavage following secretion can be exploited to develop novel biologic therapeutics

This case concerns therapy against fibrotic diseases. The study disclosed that CCN proteins are secreted preproproteins that must undergo endopeptidase cleavage in order to

release the bioactive signalling entity. This discovery led to the generation of a biologic therapeutic based on the bioactive entity of CCN5 fused to a half-life extending biologic molecule as a novel pharmacologic principle to target fibrotic diseases. The results were published in 2 international papers. Together with key investors Novo Nordic and HealthCap AB, the start-up company Tribune Therapeutics was established to commercialize and develop the potential product towards clinical testing in humans. An antifibrotic drugs would have major implications on a large group of patients with lung fibrosis and patients with liver fibrosis. Patients with fibrosis in the heart or other organs would potentially also benefit from antifibrotic treatment.

Comments on impact case 3: Cardiogenetics and sudden cardiac death

The case is more than a case. The case is a major life-changing series of research findings leading to a renewed risk stratification in cardiogenetic diseases, contributing to the 2022 ESC guidelines for sudden cardiac death and the 2023 ESC guidelines for cardiomyopathies. Findings on exercise restrictions based on genotypes were instrumental in guiding clinical advice. In specific cardiomyopathies, the work informed the guidelines on pregnancy recommendations. Additionally, pioneering research on mitral valve prolapse has identified the risk factor "mitral annulus disjunction." The case also initiated international efforts for risk stratification, diagnosis, and ongoing clinical trials. This outstanding research has resulted in over 180 papers in peer reviewed journals during the last 5 years and numerous presentations at international conferences
The research findings have changed guidelines, increased disease understanding and treatment and has been an inspiration for research worldwide leading to initiation of a multitude of clinical trials worldwide. The primary beneficiaries of this research include clinicians, cardiologists, and patients globally. The impact is evident in improved risk stratification, more informed exercise recommendations, and inclusive family planning for women with cardiogenetic diseases. The Oslo group's work has contributed to safer and more personalized clinical practices, ensuring that patients receive tailored care based on the nuances of their genotypes and conditions.

Appendices

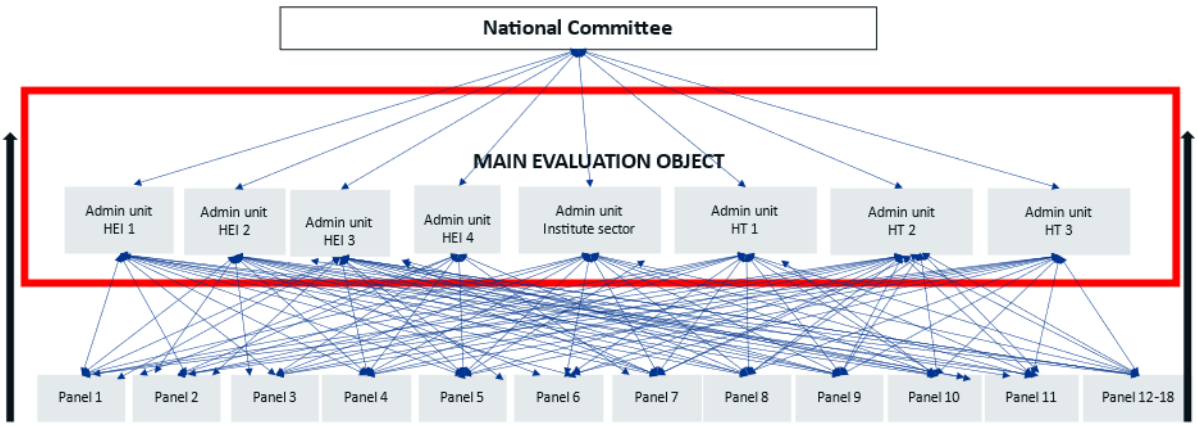
Evaluation of Medicine and health 2023-2024

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 (forskningsradet.no)]

Forskningsrådet

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 (hovedevalueringsobjektet 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.

Forskningsrådet

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	Hilde G. Nielsen
avdelingsdirektør	spesialrådgiver
Helse	Helse

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

Kopi
Helse- og omsorgsdepartementet
Kunnskapsdepartementet

Vedlegg
1. Adresseliste
2. Nye fagevalueringer – varsel om oppstart november 2021
3. Erfaringer med oppfølging av fagevaluering av biologi, medisin og helsefag 2010/2011
4. Fagevaluering av livsvitenskap 2022-2024 – Evalueringsprotokoll
5. Tentativ panelinndeling EVALMEDHELSE mai 2023
6. Skjema 1 – Innmeldingsskjema Administrative enheter
7. Skjema 2 – Innmeldingsskjema Forskergrupper
8. Skjema 3 – Forslag til internasjonale eksperter til evalueringskomiteene og ekspertpanelene
9. Appendix A – word format

The Research Council of Norway

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

The Research Council of Norway
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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.

Administrative unit	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.
Research group	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 Reference[1] 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 colleges[2]

- 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 sector[3] 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 (RHFs) in Norway. They are responsible for the specialist health service in their respective regions. The RHFs 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 (HFs), 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 mains 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.

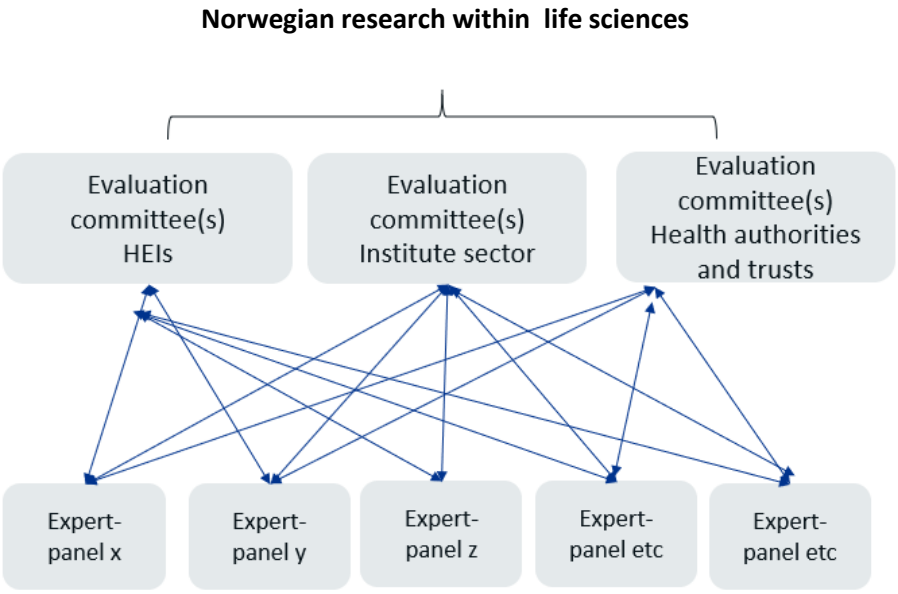

Figure 1. Evaluation committees and expert panels

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

Evaluation units / Criteria	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	*Data related to:* *Benchmark defined by administrative unit*	*Data related to:* *Strategic goals and specific tasks of the admin. unit*

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):_____

Content

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 from. **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 infrastrukturer 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 Cardiovascular and pulmonary diseases	Department of Cardiology (KAD)	Panel 3b-2
Oslo University Hospital and University of Oslo	Division of Cardiovascular and pulmonary diseases	Department of Cardiothoracic Surgery (TKA)	Panel 3b-2
Oslo University Hospital and University of Oslo	Division of Cardiovascular and pulmonary diseases	Institute for Experimental medical Research (IEMR)	Panel 3b-2
Oslo University Hospital and University of Oslo	Division of Cardiovascular and pulmonary diseases	Institute for Surgical Research (ISR)	Panel 3b-2

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 leadin**g 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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