Forskningsrådet

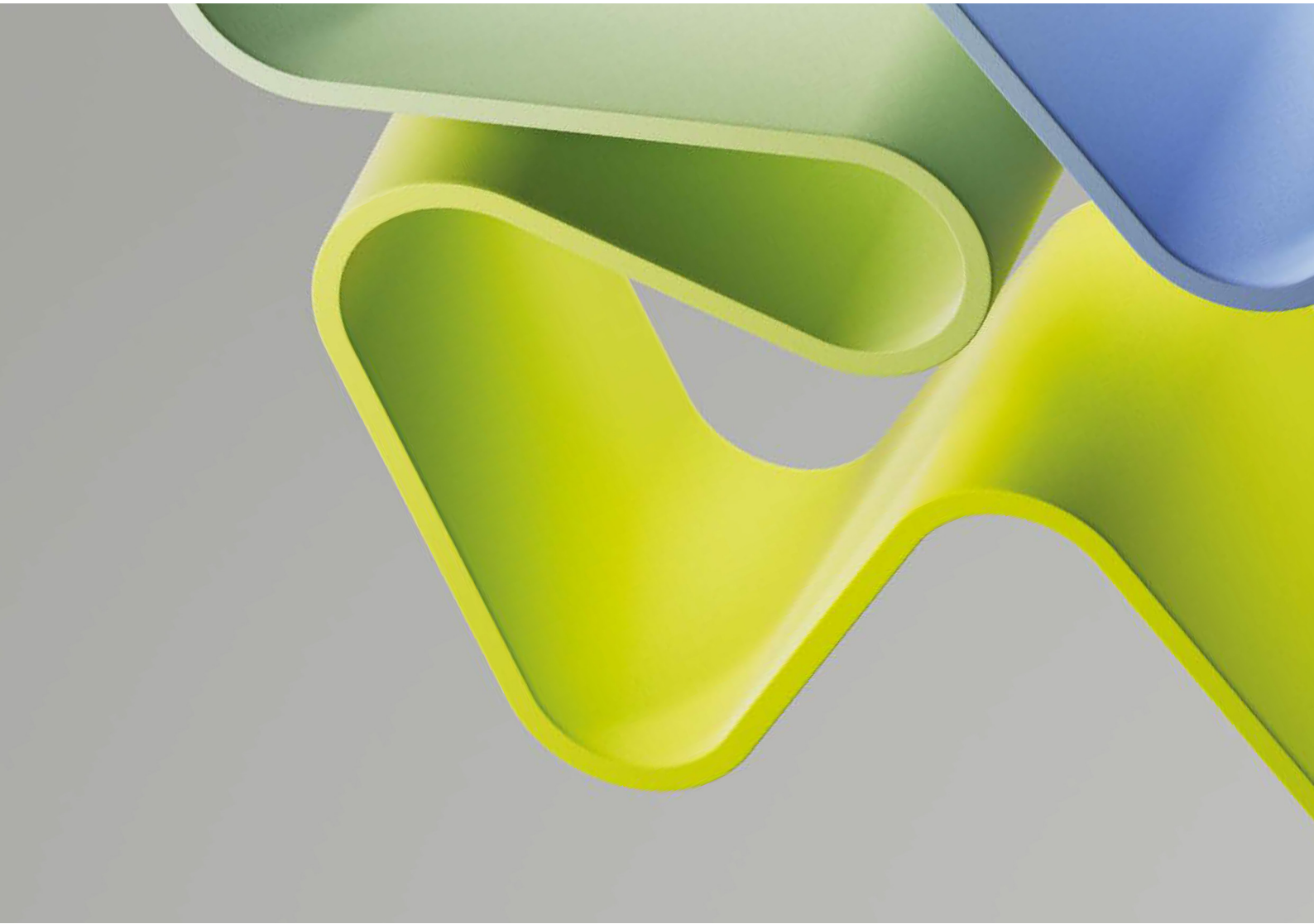
Evaluation of Life Sciences 2022-2024

Evaluation of medicine and health 2023-2024

Evaluation report

ADMIN UNIT: Centre for Psychopharmacology
INSTITUTION: Diakonhjemmet Hospital

December 2024



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Statement from Evaluation Committee Health Trusts 1

This report is from Evaluation Committee Health trust 1 which evaluated the following administrative units representing the hospital trust in the Evaluation of medicine and health 2023-2024:

- Regional Centre for Child and Adolescent, Regional Center for Child Adolescent Mental Health East and South
- Center for Psychopharmacology, Diakonhjemmet Hospital
- Center treatment of Rheumatic and Musculoskeletal Diseases (REMEDY), Diakonhjemmet Hospital
- Division of Paediatric and Adolescent Medicine, Oslo University Hospital and University of Oslo
- Division of head, neck and reconstructive surgery (HHA), Oslo University Hospital and University of Oslo
- Division of Mental Health and Addiction, Oslo University Hospital and University of Oslo
- Division of Gynaecology and Obstetrics, Oslo University Hospital and University of Oslo
- Modum Bad, Research Institute of Modum Bad
- Department of Research, SunnaasRehabilitation Hospital

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 1. All members of the committee have agreed with the assessments, conclusions and recommendations presented here.

Evaluation committee Health trust 1 consisted of the following members:

Professor Johan Hellgren (Chair)
University of Gothenburg

Professor Oskari Heikinheimo Helsinki University Hospital	Professor Nick Hardiker University of Huddersfield
Professor Fiona Gaughran King's College London	Professor Claudi Bockting Amsterdam University Medical Centre
Professor Li Felländer-Tsai Karolinska Institute	Professor Ertan Mayatepek University Hospital Düsseldorf

Dr Reda Nausedaite, Technopolis Group, was the committee secretary.

Oslo, December 2024

Profile of the administrative unit

The Centre for Psychopharmacology at Diakonhjemmet Hospital consists of 28 regular employees, of whom 14 hold a PhD degree and are working part- or full-time on ongoing projects in the Psychopharmacology research group. The research staff consists of one Head of Research, who is a professor, four associate professors, six PhD students, four post-docs, three senior scientists and two engineers. Women represent a majority in all categories except the Head of Research/Professor, who is male.

The Centre for Psychopharmacology contains one research group. The research focuses on improving the pharmacological treatments of psychiatric illnesses through translational research, mainly using therapeutic drug monitoring and pharmacogenetic analyses, but recently also working in collaboration to identify genes of relevance to schizophrenia and its treatment. It has been extremely successful in this regard, having expanded under its current leadership from relying on local research funding, to a widening PhD and post-doc portfolio and now to national and international collaborations.

The strategy of the Centre for Psychopharmacology includes using big data from pharmacogenetic and psychopharmacological analyses for research to provide knowledge, enhance patient outcomes and develop innovative healthcare approaches. The administrative unit aligns with national strategies and institutional priorities, emphasising the importance of high research activity in improving mental health care and psychopharmacology. Key research areas include developing and validating innovative laboratory methods, evaluating pharmacogenetic impacts, and discovering biomarkers for personalised psychiatry. The ultimate goal is to improve mental health and reduce societal costs by optimising existing drug treatments.

The Centre for Psychopharmacology actively collaborates both nationally and internationally. Nationally, it partners in clinical trials, primarily driven by Oslo University Hospital, where its role is to conduct comprehensive pharmacological and pharmacogenetic analyses. These collaborations include significant projects like the OPERA and COOP trials, focusing on the effects of medical interventions on health outcomes. The Centre's role in these trials involves pharmacogenetic testing, contributing to several observational studies. Collaborations with the University of Oslo are also prominent, with the Centre analysing drugs and metabolites in pharmacokinetics studies. These projects often incorporate biomarkers, enhancing the clinical applicability of the research. A notable national collaboration with the NORMENT Centre of Excellence, starting in 2019, has been particularly successful and beneficial for the administrative unit. This partnership leverages genome-wide association data from schizophrenia patients treated with clozapine, leading to high-impact publications and significant scientific advancements.

According to its self-assessment, in the future, the Centre for Psychopharmacology is poised to leverage its strengths in integrated routine and research activities, extensive biobank resources, and cutting-edge analytical equipment. By focusing on closer collaborations with established partners like NORMENT and Karolinska Institute, the Centre aims to enhance its research impact and innovation potential. The administrative unit's alignment with hospital strategy and its multidisciplinary team will support its growth. Additionally, the Centre's role in personalised medicine is expected to be bolstered by potential national funding and its status as a leading

pharmacological laboratory. However, it will need to address challenges such as limits in access to wider clinical/phenotypic data, lack of resources for clinical trials, and competition from private providers, to maintain its research quality, breadth and novelty.

Overall evaluation

The Centre for Psychopharmacology has demonstrated most impressive growth since starting out as part of a clinical laboratory. It meets its stated strategic objectives which are to develop healthcare for the future and to improve the medical treatment of psychiatric diseases by translational research, facilitating personalised medicine using big data from pharmacogenetic and psychopharmacological analyses.

It is a unique resource, with good international recognition. The Centre for Psychopharmacology sits within Diakonhjemmet Hospital and many of its research policies are hospital wide. Research quality is high, but the centre is reliant on clinical partners for detailed patient-level information and all multi-Centre research is led from elsewhere.

The Centre for Psychopharmacology benefits from high quality routine analysis of data resulting in a large observational dataset; it supports extensive knowledge about metabolism and pharmacological treatment schemes; integrated routine and research activities; internally paired TDM and pharmacogenetic analyses; an integrated, well-functioning internal biobank, along with a large diagnostic biobank with 50,000 DNA samples for discovery studies. The Centre also benefits from cutting-edge analytical equipment with expert methodologists, a multidisciplinary research group, growing international collaborations and participation in relevant consortia.

It has a strong focus on dissemination through education and public outreach, which is its main avenue for direct impact.

Challenges include the limited phenotypic information available or research, as data is not directly collected by researchers in the Centre; it is either observational in nature or collected by researchers elsewhere, so in most cases, there is no direct contact with patients to seek additional consent where needed. Studies have been mainly retrospective and observational rather than interventional. There is a lack of internal resources and infrastructure for clinical trials. There is a limited commercialisation potential of findings from research led elsewhere, although technical developments could benefit the Centre. Additionally, the research team mainly have clinical commitments which take priority over research activity; this must on occasion limit research career advancement.

The Centre works closely with local Universities, although only a minority of staff have a direct affiliation. Nevertheless, the Centre hosts PhD students and agreements have been reached to allow access to electronic libraries and other support structures.

The Centre for Psychopharmacology is well placed to meet its current strategic goals and targets for research and society in the years ahead based on available resources and competence. In future, it would be good to see the Centre aiming to expand further by leading on wider-scale collaborative research and considering consolidating links to a university and national clinic

Recommendations

- The increasing number of collaborations reflects the impressive growth in research activity in the administrative unit but there remains significant potential for future expansion. The Centre may wish to explore whether a stronger partnership with a particular university may strengthen its position as a research leader in this field.
- Systematic collaborations with clinics across the country may allow for wider, more systematic sample/data collection, supporting more research.
- There would also be benefit in incorporating more relevant clinical patient data in the Centre's research approaches, for example shared PhD projects with clinical departments so personnel are shared and can gain access to both sides of the collaboration.
- The Centre has a unique resource of observational data including concentrations of psychiatric drugs and metabolites and genotypes. It would be good to see more externally funded, Unit-driven multi-Centre research with the Unit team driving the scientific questions.
- Support the future aspirations to create approved linkages with national data platforms to extend both Centre-led research and support research collaborations. This will require consolidation of systems to support the governance approvals of linkages. Advances in digital health, e.g. AI in therapeutic prediction, also hold potential.
- The Centre may wish to consider how it could most fruitfully engage with national and EU infrastructure.
- The Centre would benefit from greater support for the administrative burden of grant application and management and research sponsorship.
- A facility for taking consent remotely would allow deeper interrogation of existing data, albeit for lower numbers of people, and may facilitate recontact where needed.
- It is our understanding that diversity policies as they relate to academic career pathways are clearer in the university sector, and there would be value in reviewing the policies in the major academic partners to identify areas of good practice.
- Similarly, it may be useful to decide to regularly refer to the Open Science policy of the major university partner (in this case Oslo University) to ensure that the research polices used remain up to date.
- It would also be useful to explore ways in which the diversity of research participants can be recorded to ensure that the research reflects the population studied. For this particular Centre, this may include reviewing the demographic data requested clinically, which would also strengthen clinical interpretation of findings such as therapeutic drug levels.
- Policy, clinical and societal impact will require strong partnerships with clinicians, academics and policy makers. A partnership strategy to achieve downstream impact would be of value. The Centre may wish to explore taking a national leadership role with policy makers to define and disseminate best practice in the positioning of therapeutic drug monitoring and pharmacogenetics in Norwegian psychiatry, combined with other global high-quality evidence.

- Academic career progression may be limited if most posts require a heavy clinical commitment – creating a parallel pathway with better integration with the university may have advantages.
- Creating a policy on research mobility may also help clarify research career progression opportunities, which otherwise could be complicated by the need to prioritise the clinical service provision.

1. Strategy, resources and organisation of research

1.1 Research strategy

The hospital is a non-profit corporation responsible for general hospital and laboratory services. It hosts the Centre for Psychopharmacology, which is the national Centre of expertise in psychiatric therapeutic drug monitoring and pharmacogenetic analysis, as well as research in psychopharmacology and biological psychiatry. The Centre was established in 1962, analysing blood levels of psychotropic drugs and has grown significantly since then. In 2003, the department established pharmaco-genetic testing for clinical use alongside therapeutic drug monitoring, thus creating the world's largest database for studies on the relationships between genes, variability in drug concentrations and treatment outcomes in psychiatry.

The overall strategic goals of the Centre are to develop healthcare for the future, provide knowledge to improve the pharmacological treatments of psychiatric illnesses and improve the medical treatment of psychiatric diseases by translational research facilitating personalised medicine. The Centre aims to facilitate personalised medicine using big data from pharmacogenetic and psychopharmacological analyses. The Centre's listed research goals relate to the institutional strategies and scientific outcome priorities of Diakonhjemmet Hospital; 1. facilitate studies to improve patient outcomes and 2. develop innovative solutions and sustainable healthcare services highlighting the scientific ambition of sustained high research activity in rheumatology, mental health and psychopharmacology.

The main focus of research in the Centre for Psychopharmacology is to produce evidence on which to base clinical decision-making on psychotropic medications. This includes focus on:

- Validating laboratory methods for clinical research
- Quantifying and evaluating the impact of factors such as pharmacogenetics on variability in concentration of and clinical response to antidepressants and antipsychotics, and
- Discovery of novel genetic and non-genetic biomarkers for personalised medicine in psychiatry.

The potential research and societal impact are high as there have been few new psychiatric drugs in recent decades, making it vital to maximise the effectiveness and minimise the risks of existing medications. The Centre's research informs personalised treatment strategies including genomic approaches. The ultimate goal is better mental health and reduced societal costs.

These strategies are pursued through clinical investment in state-of-the-art equipment and infrastructure for laboratory analysis, with the bulk of research investment going to support staff time allocated to research, studentships and post-doctoral positions.

Priorities for internal investment are set during budget planning and when announcing new positions. Some additional funds come from external grants, but these are as part of collaborative bids, rather than as budget-holders. The leadership group of the Administrative Centre review internal applications for research time for particular projects, with final approval by the Hospital Research

Board. The administrative Unit is represented on the Diakonhjemmet Hospital Research Board and also the Innovation Board with a clear line of corporate communication to the overall hospital Leadership.

The committee´s evaluation

The Centre for Psychopharmacology has grown from a clinical laboratory and the two remain closely aligned. The Centre's research goals are to advance the scientific knowledge relevant to the clinical field, with resultant policy, clinical and societal impact. Most staff have a joint clinical and academic contract, providing scientific continuity. Most research is funded internally, by supporting students and research time for staff. A minority is funded through multi-Centre external studies. Priorities are agreed at the Unit level, then reviewed and ratified at the Diakonhjemmet Hospital Research Board, providing some internal peer review.

The committee´s recommendations

- The Centre for Psychopharmacology may wish to explore stronger partnerships with a particular University and/or a clinic(s) as this may strengthen its position as a research leader in this field, both in terms of widening the clinical service and thus observational data available for research, and in enhancing impact.
- The Centre for Psychopharmacology has a unique resource of observational data on concentrations of psychiatric drugs and metabolites and genotypes. It would be good to see more externally funded, Centre-driven multi-Centre research with the Centre team driving the scientific questions.
- Policy, clinical and societal impact will require strong partnerships with clinicians, academics and policy makers. The Centre may wish to explore taking a national leadership role in creating partnerships to define and disseminate best practice in the positioning of therapeutic drug monitoring and pharmacogenetics in Norwegian psychiatry based in the evidence produced in the Centre itself, combined with other global high-quality evidence.

1.2 Organisation of research

The Centre for Psychopharmacology was established in 1962 and sits in Diakonhjemmet Hospital. It now holds the world's largest database of pharmacogenetics. It was initially solely a clinical service, but the lead established a research group in 2005, with the first PhD candidate dissertating in 2010. During the last 10 years, 10 PhD students and 26 masters have graduated from the research group. There are 28 regular employees, half of whom hold a PhD. The team is multidisciplinary, including psychiatrists, clinical pharmacologists, pharmacists, chemists, molecular biologists, and bioengineers, half participating actively in research. The PhD staff members are represented across the disciplines. All but the head of the research group work in split positions combining research and clinical activities. This is likely to enrich both the research and the clinical activity in terms of quality. Research focus and outputs are strongly related to the clinical field. Three pharmacists, one clinical pharmacologist and one molecular biologist are affiliated to the University of Oslo or to Oslo Metropolitan University.

Researcher career opportunities are firstly through the master's programme. Some students are encouraged to apply for a PhD position following their studies, although

PhD students are also recruited externally. PhD students were also encouraged to take a course in university pedagogy to qualify for academic positions at the Centre for Psychology.

The size of the Administrative Unit has so far limited the ability of organising multiple research groups and therefore certain leadership experience opportunities are limited. All senior researchers are given the opportunity to supervise PhD or master's students, with varying degrees of supported time. The split of clinical and research ranges from 25:75 to 75:25. There is no formal system for sabbaticals but there are resources to finance these on request. A commitment has been made as more international collaborations are funded through EU consortia to create a system to allow experiences in other research environments. The Unit has supported incoming researchers and joint publications.

The committee´s evaluation

The Research Centre has grown from the clinical basis and its organisational structure remains entwined. Only a few researchers have formal affiliations with a university. This provides flexibility and consistency but may make career progression less easy. Overall, this is an excellent Centre, but opportunities for academic progression appear to be limited, therefore succession planning and career progression needs to be considered.

The committee´s recommendations

- The Centre for Psychopharmacology might gain from a better integration with the university. The current situation with the Centre located at the Diakonhjemmet Hospital and with affiliations to Oslo University for only four of the members may not be ideal.
- In particular, academic career progression may be limited if most posts require a heavy clinical commitment – creating a parallel pathway may have advantages.
- Creating a policy on research mobility may also help clarify research career progression opportunities.

1.3 Research funding

The basic funding available to the Centre is low, and no grants have been secured from RCN. However, the Centre has successfully applied for funding for PhD and postdoc programs through the South-Eastern Health Authority, two EU programs and the Swedish Research Council, in total about 3 million NOK a year. The Centre for Psychopharmacology provides significant income for Diakonhjemmet Hospital for the laboratory analysis that they perform. Above 15 percent of the Unit's overall budget is dedicated to research. Latterly, the Unit has joined several international consortia, but as they are co-applicants, these multi-Centre studies have had limited impact on the development of the Administrative Unit's own research agenda.

The committee´s evaluation

In summary the Unit has a limited external research funding but is lucky to be able to fund some of its research work internally. The PhD and postdoc programmes are strong, with a good number of graduating students.

The committee´s recommendations

- The Centre for Psychopharmacology has made itself into a hugely valuable resource for national and international collaborations and should be supported to increase Unit-led collaborations.
- To support this, the Centre for Psychopharmacology would benefit from greater support for the administrative burden of grant application and management and research sponsorship.
- It will be important that research continues to be prioritised in internal funding pathways.

1.4 Use of infrastructures

The Centre benefits from a large observational dataset, deriving from their integrated clinical and research activities, which include internally paired TDM and pharmacogenetic analyses. Internally they have an integrated, well-functioning internal biobank, and a large diagnostic biobank with 50,000 DNA samples for discovery studies, along with cutting edge instrumentation and ICT infrastructure. Separately, the Centre has access to infrastructure through the current EU-funded project. ESFRI and participation in the national infrastructure were noted as currently not applicable, though potential for greater engagement was acknowledged at interview.

The hospital aligns with the objectives and guidelines of the Research Council, the EU, and the Ministry of Education and Research for the management of research data - 'As open as possible, as closed as necessary'. The Centre for Psychopharmacology commits to working towards an open and sharing culture, following the FAIR principles, while also taking into consideration the interests of researchers and legal, ethical, or security aspects.

The hospital provides data management support for approved data sharing and accessibility, noting the privacy and information governance restrictions that apply to clinical datasets.

The committee's evaluation

The Centre is well served with internal infrastructure resources. However, greater strategic leverage of national and EU facilities would support future research growth.

Recommendations

- Support aspirations to create approved linkages with national data platforms to extend both Centre led research and support research collaborations.

1.5 Collaboration

The Centre’s policy has gradually expanded over the last 15 years to include collaborative research both nationally and internationally. In national collaborations, the Unit is mainly performing pharmacological and pharmacogenetic analyses, such as in the OPERA and COOP RCTs or pharmacokinetics studies with the University of Oslo. Although these projects create the possibility of identifying predictors of

clinical response, thus far they have had a limited impact on the development of the Centre's research. The most productive national collaboration has been with the NORMENT Centre of Excellence in Oslo University resulting in several high-impact papers e.g. reporting novel identification of a gene regulating drug metabolism and schizophrenia risk variants.

International collaborations have also been developed with Karolinska, Aachen, Cardiff and Tartu.

The committee´s evaluation

The Centre's collaborations are growing, with the major national partner being Oslo University alongside international collaborations with Karolinska, Aachen, Cardiff and Tartu.

The committee´s recommendations

- The increasing number of collaborations reflects the growth in research activity in the administrative unit. Investing in supporting research funding applications led from the Centre for Psychopharmacology would complement this growth well.

1.6 Research staff

Among the 28 regular employees at Centre for Psychopharmacology, 50% hold a PhD degree and are working part or full-time on ongoing projects, including psychiatrists, clinical pharmacologists, pharmacists, chemists, molecular biologists and bioengineers. Three pharmacists, one clinical pharmacologist and one molecular biologist are affiliated either to the University of Oslo or Oslo Metropolitan University in part-time academic positions as Professor II or Associate Professor II.

All senior researchers are given the opportunity to supervise PhD or master's students, with varying degrees of supported time. The split of clinical and research ranges from 25:75 to 75:25. While the share of women in the academic staff from the level of associate professor down is robust, both the Head and the Professor are male. No data is available on other protected characteristics, such as ethnicity.

The committee´s evaluation

All research staff also hold clinical roles which has great advantages in the clinical relevance of the work and in continuity of practice but may pose practical problems in academic career advancement.

The committee´s recommendations

- It would be useful to explore formal sustainable departmental affiliations with a University department to allow for parallel academic career pathways.

1.7 Open Science

The Centre for Psychopharmacology was established in 1962, growing out of a clinical laboratory resource and has expanded consistently since. It now holds the world's largest database for studies on the relationships between pharmacogenetics, individual variability in drug concentrations and treatment

outcomes in psychiatry. The Centre sits in Diakonhjemmet Hospital and is bound by hospital policy, which includes an open science policy including management of research data and recommendations for publishing in open access journals, with support for researchers in relation to publishing costs. Researchers in the administrative unit, even those without university affiliations, have access to educational library services and educational resources through the university and the regional health authority.

Patient councils have been established by Diakonhjemmet Hospital and the Centre. The Centre has recently established a user-representative panel of persons with different experiences to obtain broader perspectives towards their research activities. There is a service user research lead, and a young person with lived experience is being appointed. The Centre has had the same user representative for over 10 years. Researchers have an outreach strategy for disseminating research to stakeholders and user groups.

The hospital relies on the objectives and guidelines of the Research Council and the EU and the Ministry of Education and Research and the Management of Research Data (As open as possible, as closed as necessary) including the fair management of research data, using fair principles (FAIR). Data sharing is limited as much of the observational data derives from clinical sources and thus is not openly accessible.

The committee´s evaluation

The Centre works in line with Diakonhjemmet Hospital Open Science Policy.

The committee´s recommendations

- It may be useful to regularly refer to the Open Science policy of the major university partner to ensure that the research polices, including the Open Science policy, remain up to date.

2. Research production, quality and integrity

Introduction

The overall strategic goals are to provide knowledge to improve the pharmacological treatments of psychiatric illnesses through transitional research, mainly using therapeutic drug monitoring and pharmacogenetic analyses, but recently also working in collaboration to identify genes of relevance to schizophrenia and its treatment.

The Centre for Psychopharmacology follows Norway's Research Ethics Act, including the Declaration of Helsinki. The Health Research Act emphasises the formal responsibility of the institutions for all aspects of the research project, including arrangements that address ethical, privacy, and information security considerations, as well as internal control. The Hospital has implemented these laws and principles as part of internal control including mandatory training courses and procedures related to the conduct of research projects at the institution, to which the administrative unit adheres. This includes procedures regarding issues of research misconduct such as falsification, fabrication, plagiarism, and other serious violations of recognised research ethical norms which applies to work conducted at the hospital and work performed at other institutions where employees, in their capacity at Diakonhjemmet Hospital, have participated in the implementation of research projects.

All Diakonhjemmet Hospital employees are obligated to report any potential breaches of recognised research ethical norms. The responsibility for follow-up lies within the organisational structure. The hospital's internal procedures provide protection for those who report misconduct. In cases of serious violations, it may be considered to refer the matter to The Commission on Research Integrity established in collaboration with the Institute of Clinical Medicine at the Faculty of Medicine, University of Oslo, Oslo University Hospital HF, and Akershus University Hospital HF. Diakonhjemmet Hospital has entered into an agreement for the use of the Commission.

2.1 Research quality and integrity

This part includes one overall evaluation for 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 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) presented in this section.

Centre for Psychopharmacology

The volume of research from the Centre for Psychopharmacology has increased steadily over the time period in question; the annual number of Pubmed-listed publications from the Centre for Psychopharmacology increased from one paper in 2013 to 35 in 2022.

The organisation of the Centre for Psychopharmacology is well structured, the analytical skills very high and the output of data impressive. The research quality is high. However, the output is not fully controlled by the Centre due to the lack of

detailed information available on the patients, and the research initiatives being external. The Centre would benefit from stronger development of its own strategic vision. The rich source of data that the Centre controls could be exploited in a more successful way and in that sense secure the future development and progression of the Centre. Even if the main activity is to provide routine laboratory work and clinical service, the Centre could take the lead in larger consortia at national and international level. In addition, closer interactions with the clinical departments should be considered.

Research Integrity appears to have clear structure and pathways which apply to the entirety of Diakonhjemmet Hospital.

3. Diversity and equality

While the share of women in the academic staff from the level of associate professor down is robust, both the Head and the Professor are male. No data are available on other protected characteristics, such as ethnicity. The Culture, Equality, Diversity and Inclusion policies that apply are those of Diakonhjemmet Hospital, which preclude gathering data on protected characteristics other than gender. Data on ethnicity of research participants is thus not available.

The committee´s evaluation

Although the leadership is male, over half of the academic staff from the level of associate professor down are women. Other than gender, diversity metrics are not available. It is not clear how diversity, including gender, is protected in the allocation of students or protected time for research.

The committee´s recommendations

- It is our understanding that diversity policies as they relate to academic career pathways are clearer in the university sector, and there would be value in reviewing the policies in the major academic partners to identify areas of good practice, also for leadership roles.
- Similarly, it would be important to keep under review the proportion of protected time allocated to research (and to administrative tasks) by gender and, when possible, other protected characteristics.
- Ongoing awareness of the need for the diversity of research participants to reflect the population studied and exploration of ways in which this could be monitored would be of value.
- Awareness of the need for diversity in lived experience advisory groups.
- Further development of the existing pathways for international recruitment and sabbaticals will be advantageous.

4. Relevance to institutional and sectorial purposes

The Center for Psychopharmacology sits within the framework of the Diakonhjemmet hospital, which provides general hospital services for a population of 150 000 people in western Oslo, along with laboratory services. These include the Center for Psychopharmacology, the national center for psychiatric therapeutic drug monitoring (TDM) and pharmacogenetic analysis.

The research expertise seen in the administrative unit grew from this clinical base and remains highly clinically orientated. This is in keeping with the national commitment to research, wherein the importance of a research active environment in supporting quality improvement and patient safety is recognised. Research is listed as one of the four main tasks of Hospital Trusts in Norway, highlighting the importance of research active clinical settings in raising standards. The Center for Psychopharmacology supports the institution and the sector in keeping up to date with advances in medical sciences, including diagnostic methods, treatment options and technology.

The strong alignment between clinical service provision and research is exemplified by the knowledge generated from routinely collected, de-identified data which increases understanding of patterns in metabolism and response to psychiatric medications and informs practice. The Center for Psychopharmacology combines TDM and pharmacogenetic data within the same firewall with robust information governance, supporting more detailed examination and greatly strengthening the opportunities for research and knowledge generation.

Their contribution to the sector is large, both in the potential clinical value of their research, and in innovations such as the "Kjernejournal", a digital solution for life-long re-use of pharmacogenetic data linked to patient-specific medical records, which the administrative unit innovated with the Directorate of e-health.

Potential opportunities for innovation and commercialisation exist in the clinical application of the research conducted. This applies to the TDM / pharmacogenetic research itself but also potentially to the progress in establishing/innovating cutting-edge analytical methods for TDM and pharmacogenetic analyses. At present, the administrative unit states it is not dedicated to innovations driven by the goal of patenting new diagnostic methods etc. for commercialization. As the field of pharmacogenetics develops, the opportunity for its wider use as decision-support on personalized dosing will expand. The applied research in this field is not yet at that point, but the Center will be well placed when it is.

The committee's evaluation

The Center for Psychopharmacology has build a robust research unit from a clinical laboratory, and retains its strong degree of relevance to the institution and the sector. Commercialisation pathways are not prioritised at present.

The committee´s recommendations

- Creating partnerships in applied research and implementation science to evaluate the systematic incorporation of TDM/Pharmacogenetics in routine

clinical practice will enhance the impact of the research from the administrative unit.
- Further exploration of where to get support and guidance on commercialisation and intellectual property opportunities would be helpful.

4.1 Health trusts

The administrative unit focuses on translational research, and especially on the implementation of personalised medicine in psychiatry, in particular TDM and genetic analysis. They have a large database that is pretty unique. In alignment with the research strategy, the Centre's current specific objectives are to develop and deliver projects to understand the effect of patient factors on drug levels of antidepressants and antipsychotics; to conduct research on unexplained variations in metabolism and response to psychiatric drugs and, more recently, to participate in large external multi-Centre projects of gene variants relevant to schizophrenia and its management. Considering the huge amount of data available for research on individual variability in drug metabolism and dose requirements, as well as longitudinal changes in psychiatric drug treatment, the administrative unit has become more and more attractive as an international collaborator, which opens new avenues for research as well as career development.

Regarding innovation and commercialisation, the unit has been involved in projects relevant for commercialisation or intellectual property. They do not have dedicated commercial support or IP support, but have access to the regional tech transfer office, which is a free service as part of the National Healthcare Service.

The research output of the Centre gives the potential for cost savings in terms of better health, disease prevention and society. They have contributed to the discovery of new genetic variants and biomarkers which have the potential to be added to analytical routine panels and help improve predictions of treatment. The administrative unit has also collaborated with the Directorate of e-health to innovate a digital solution for life-long re-use of pharmacogenetic data linked to patient-specific medical records ("Kjernejournal").

In terms of education, several staff members are involved in teaching and supervision of Masters and Bachelor students. Ten PhD students and 26 master's students have graduated since 2012. The Centre also runs regular courses in psychopharmacology for clinicians.

The Centre provides free digital lectures via YouTube providing education for clinicians in using Therapeutic Drug Monitoring and pharmacogenetic analyses as decision-making tools on drug dosing in clinical practice. The Centre also runs annual courses in psychopharmacology, open to psychiatrists and general practitioners for a low registration fee.

The committee´s evaluation

The Centre is extraordinarily well placed to impact on clinical practice in psychiatry across Norway and beyond. It has been at the forefront of development in their field in Norway with an impressive growth in size and impact. It supports many research degrees and disseminates knowledge from research widely to clinicians.

The committee´s recommendations

- Formalising educational links with clinical Centres may increase referrals for testing, thus increasing the potential for emergent knowledge in the field deriving from observational datasets, as well as improving clinical practice.
- Working with the hospital to develop a strategy for commercialisation of innovation.

5. Relevance to society

The Centre for Psychopharmacology has taken an exemplary approach to integrating research and education within clinical practice. The wider relevance of the Centre for Psychopharmacology to society is in the context of personalised medicines having untapped and under researched potential to improve outcomes for people living with mental disorders, mental disorders being associated with extremely high societal costs. Better treatment of mental illness reduces the inequalities experienced by this population and is in line with the UN Sustainable Development Goals. The Administrative Unit has particular expertise in the antipsychotic drug clozapine, which is the gold standard treatment for treatment resistant schizophrenia but is often inadequately used. Similarly, the most common psychiatric disorder treated is depression. Serotonin reuptake inhibitors are the most commonly prescribed antidepressants, but these have high discontinuation and modest efficacy rates. The work of this group has the potential to generate knowledge to understand why this might be and to inform clinical approaches which may improve outcomes.

The committee´s comments to impact case 1 - Pharmacogenetics of clozapine metabolism and treatment failure

The research informs treatment options for the one third of patients with schizophrenia who do not respond to standard anti-psychotic medication, and for whom, although clozapine is the gold standard treatment, it is not always effective. This important study, conducted in collaboration with the NORMENT group in University of Oslo took a novel approach to identifying genes using GWAS that may be relevant when clozapine fails. This lack of response may be because the clozapine is broken down too quickly. Although it is known that hydrocarbons in cigarette smoke accelerate the breakdown of clozapine by the liver through inducing the Cytochrome P450 1A2 pathway, previous studies had not accounted for tobacco smoking status. This study did, and in doing so was able to identify a novel gene, nuclear factor 1 B-type (NFIB) that regulates clozapine metabolism; in this case having a significant impact on serum concentration.

Researchers from the Centre of Psychopharmacology found that in cigarette-smoking patients carrying the NFIB C variant the risk of clozapine failure is substantially increased, unless substantially higher clozapine doses are prescribed. This risk failure is even higher for people carrying both the NFIB-C and CYP1A-T variants.

Overall, these studies show that pharmacogenetic variability, along with smoking, is important to consider for personalised dosing of clozapine and prevention of treatment failure in patients suffering of treatment-resistant schizophrenia. Three papers in International Journals from the Research group on this topic are listed.

This impact case aligns with the unit’s strategic goal of identifying and quantifying factors of importance for personalised medicine of patients with serious psychiatric disorders. And opens the door to applied research investigating whether pre-emptive, genotype-guided dosing of clozapine can improve treatment response in patients with resistant schizophrenia.

The committee´s comments to impact case 2 - Impact of CYP2C19 genotype on escitalopram metabolism, dosing, and antidepressant drug switch

This research addressed the important and clinically challenging question of choice of and response to anti-depressants and was conducted in collaboration with the Karolinska Institute in Sweden. Major depression is the most common mental disorder, with a lifetime prevalence of 10-15%. Antidepressant drugs are the main pharmacological treatment of major depression with escitalopram the most commonly prescribed world-wide. There is considerable individual variability in clinical response to SSRIs. The causality is multifactorial, probably a mixture of the biological heterogeneity of depression; pharmacokinetics (e.g. metabolism) of the drug, pharmacodynamics (e.g. target protein expression or binding), placebo effect, and adherence. However, during drug development the treatment response is dose dependent. Thus, as dose determines concentration, factors associated with variability in concentration, such as cytochrome P450 (CYP) metabolism, should be relevant for inter-individual differences in effect and tolerability. Studies investigating associations between CYP genotypes and clinical response have shown conflicting findings, which has prohibited the implementation of CYP genotype-guided dosing of escitalopram and other SSRIs clinical practice. In this large, naturalistic cohort of escitalopram-treated patients, CYP2C19 genotype was demonstrated to be a significant determinant of escitalopram concentration and dose requirements, and was significantly associated with drug switch, a proxy measure of unsuccessful treatment. Three papers from the Research group published in International Journals are listed.

The findings of this impact case align with the research strategy at Centre for Psychopharmacology, where the importance of CYP pharmacogenetics on metabolism and effect of antidepressants has been investigated in many studies. The work provides evidence for further exploration of genotype-guided treatment of escitalopram with reduced dosing in CYP2C19 PMs to avoid drug switching and highlights the value of the unique skillset and resources in the Centre for Psychopharmacology. This impact case aligns with the strategic goal of identifying factors relevant to personalised dosing of psychiatric medication and has significant potential future impact to the many people living with depression.

Appendices

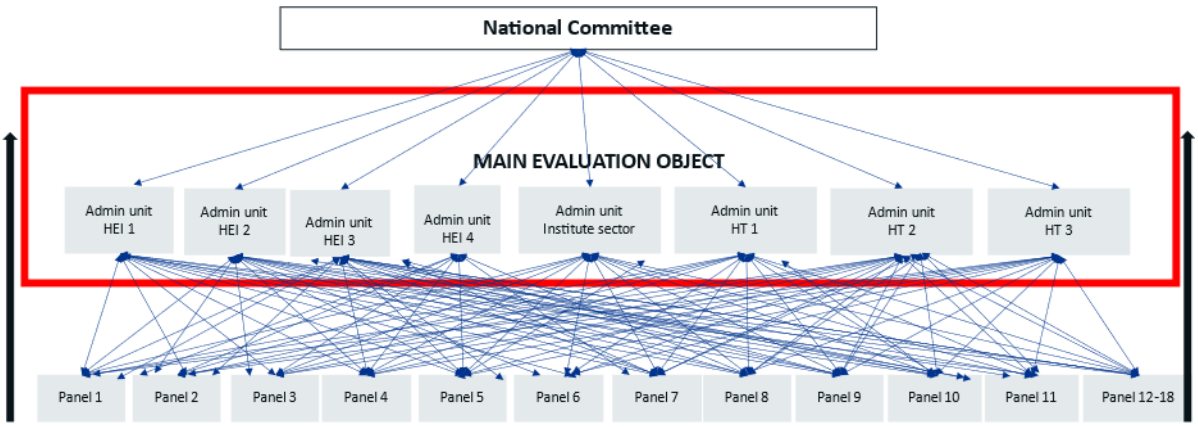
Evaluation of Medicine and health 2023-2024

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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The report can be downloaded at
www.forskningsradet.no/publikasjoner

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.

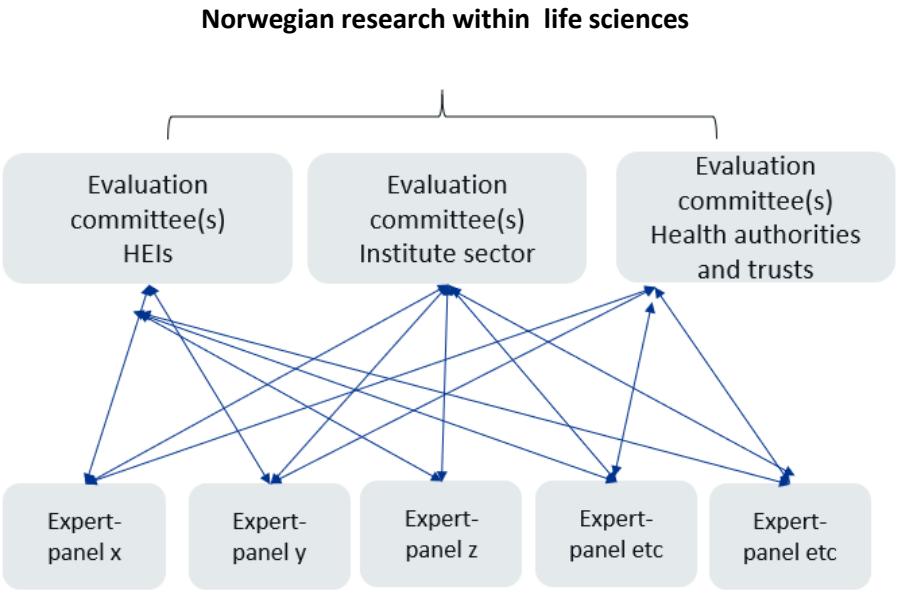

Figure 1. Evaluation committees and expert panels

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
Diakonhjemmet Hospital	Center for Pshychopharmacology	Center for Psychopharmacology	Panel 1b

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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