Forskningsrådet

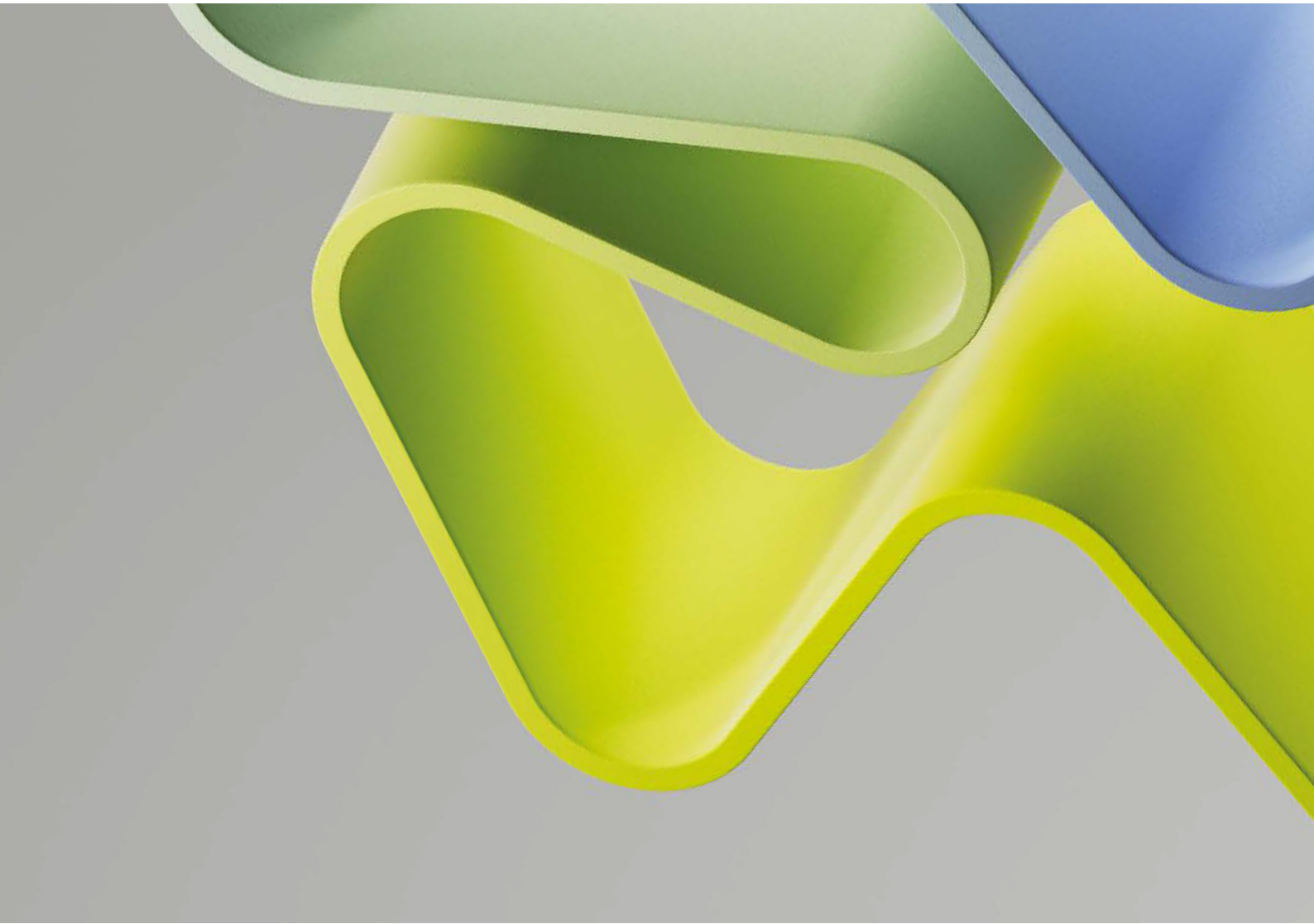
Evaluation of Life Sciences 2022-2024

Evaluation of medicine and health 2023-2024

Evaluation report

ADMIN UNIT: Division of Paediatric and Adolescent Medicine
INSTITUTION: Oslo University Hospital and University of Oslo

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 Division of Paediatric and Adolescent Medicine is one of the 15 clinical divisions in OUS/UiO. The Division is divided in two geographical localisations and is organised in 14 research teams. In terms of research personnel, the division consists of 12 professors/associate professors, 52 senior physicians, 16 physicians, 12 psychologists, 32 researchers and postdocs and 30 PhD students. Women represent a majority in all categories except among professors/associate professors, where they occupy 42 percent of positions.

The Division of Paediatric and Adolescent Medicine is comprised of one research group, the Division of Paediatric and Adolescent Medicine.

The main goal of the administrative unit is to generate new knowledge that leads to better diagnostics, treatment, and prevention of diseases that affect children and adolescents. This goal is achieved in a close collaboration between clinicians, patients and researchers, a prerequisite which is made possible in an environment in which clinical care and research are closely integrated – an academic hospital linked to a university. Evidence-based medicine is considered key, which also includes the de-implementation of futile diagnostics and treatments. Obtaining resources for researchers is prioritised, including research infrastructure independent of external funding. Support for writing applications for external funding is also integrated in the research unit. The goals of the administrative unit align with the institutional strategies and scientific priorities of Oslo University Hospital and the University of Oslo.

The administrative unit's research policy is oriented towards national and international collaboration. The success in achieving external funding is improved by networking, and this is emphasised in their guidance on applications. The administrative unit's Clinical Research Unit collaborates with private partners and is increasingly recruiting for studies initiated by pharmacological companies. Patient involvement is also considered key in clinical research. Several researchers are represented in patient society boards, and patient organisation representatives are regularly included in advisory boards for clinical studies. The administrative unit has also established a patient representative board for research.

According to its self-assessment, in the future, the administrative unit can leverage its strengths, such as a highly active clinical environment and integrated research and innovation. With a broad range of expertise in paediatric medicine and strong partnerships with academia and industry, the administrative unit is well-positioned to lead in health research. New storage facilities for research biobanks and hosting several national facilities provide a solid foundation for future projects. However, challenges remain, including insufficient resources for planning new studies, limited time for clinical personnel to engage in research, and outdated infrastructure. The career paths for researchers post-PhD are uncertain, and there are increasing recruitment issues due to competition with clinical positions. Externally, the administrative unit has opportunities to expand international and national research collaborations, secure EU funding, and strengthen its Clinical Trials Unit through targeted funding. The potential for secondary use of health data and integrating clinical IT systems with national quality registers could enhance research capabilities. Nevertheless, the administrative unit faces threats such as increasing competition for funding, conflicts in resource prioritisation, insufficient IT solutions, and stringent privacy regulations. Limited funding for advanced medical equipment and recruitment issues due to temporary positions also pose significant challenges.

Overall evaluation

The Division of Paediatric and Adolescent Medicine (BAR) at Oslo University Hospital (OUS) aligns exceptionally well with the strategic goals of OUS and the University of Oslo (UiO), emphasising excellence in research, education, patient care, and innovation. The strong strategic coordination between OUS and UiO significantly enhances research efforts, supported by comprehensive training programs and career development initiatives. Access to state-of-the-art core facilities provided by OUS and UiO, along with national and European biobank initiatives, further enhance BAR's research capabilities.

BAR’s research resources are very good. Allocating 10% of the yearly total budget for research underscores its firm commitment to advancing medical knowledge. While challenges such as limited research time, infrastructure needs, and funding variability exist, BAR has already put strategic interventions in place and is well on its way to addressing these areas. The Division’s clear strategy and benchmarking measures as well as the admin unit ToR are well-conceived. BAR’s reliance on part-time research positions and external funding reflects the dynamic and competitive research environment. However, its strong national and international collaborations provide significant advantages, particularly in joint grant application, such as external collaborative grants outside Norway, to further ensure long-term stability and growth.

The Division’s impressive growth in research staff, particularly PhD students and postdoctoral positions, highlights BAR's commitment to fostering academic careers. This growth necessitates adequate supervision and mentorship, given the diverse backgrounds and responsibilities of research personnel, including clinical and administrative tasks. The leadership has been proactive in providing necessary supervision and mentorship for research personnel, and continues to enhance support mechanisms to balance the clinical and administrative duties of all clinical academics. BAR’s dedication to open access policies, its commitment to integrating research into clinical care, and its strong educational programs are making a significant impact on patient outcomes and influencing clinical guidelines. The Clinical Trial Unit at BAR, which offer access to innovative treatments, further reinforces its critical role in advancing both, clinical practice and public health. National services like the newborn screening program further demonstrate the Division’s substantial contribution to public health at a national level.

In conclusion, BAR stands out for its excellence in research, access to advanced infrastructure, and strategic collaborations, positioning it as a leader in its field. With ongoing efforts to secure more stable funding, enhance international grant acquisition, and continue fostering career progression, BAR is well-positioned for sustained long-term success and impact.

Recommendations

- To optimise the research strategy and organisational efficacy of the Division of Paediatric and Adolescent Medicine (BAR) at Oslo University Hospital, several strategic recommendations have been formulated. Regarding research funding, implementing strategies to secure consistent and reliable funding for research personnel is highly encouraged. Efforts should focus on diversifying funding sources by actively pursuing international grants, particularly EU-funded initiatives. Emphasising international collaborations will expand research and funding opportunities, complemented by enhanced administrative support for funding applications to improve the success rates.
- The committee fully supports BAR's strategies to support the expansion of the Clinical Research Unit (CRU). Their focus on fostering industry partnerships is an excellent approach to further enhancing the capacity to conduct high-quality clinical trials.
- Moreover, integrating with teams employing a life course approach will provide a more comprehensive understanding of health determinants, potentially leading to impactful research outcomes.
- The implementation of mentorship programmes and transparent career pathways for all clinical academics, in conjunction with the optimisation of research time allocation based on career stage and funding sources, will attract and retain talented researchers, thereby fostering sustainable growth and innovation within BAR.
- International recruitment efforts will further enhance diversity among research staff and simultaneously address age-related challenges.
- Finally, to align with institutional and sectorial purposes, BAR should harness its established structures for commercialisation and innovation, such as expanding the CRU to strengthen innovation and align with governmental goals on increasing clinical trials. Regular impact assessments of BAR's research activities will ensure alignment with institutional goals, enabling timely adjustments and enhancements to maximise sectorial relevance and societal impact.
- By integrating these recommendations, BAR can further enhance its already excellent research infrastructure, increase funding success, enhance clinical trial capabilities, provide clearer career pathways, and foster valuable interdisciplinary collaborations. These enhancements will ensure that BAR continues to make significant contributions to paediatric research and clinical care, reinforcing its commitment to addressing evolving healthcare needs and advancing medical knowledge and innovation within Oslo University Hospital.

1. Strategy, resources and organisation of research

1.1 Research strategy

The Division of Paediatric and Adolescent Medicine (BAR) at Oslo University Hospital (OUS) is committed to conducting research that directly enhances clinical care. Based on the ToR the admin unit focuses on generating evidence-based recommendations, including the de-implementation of potentially harmful diagnostics and treatments. BAR prioritises research ideas and initiatives with significant impact on science, policymaking, and society. This is achieved by closely integrating clinical care and research, i.e., colocalisation of the clinical and research units, ensuring that research efforts are directly applicable to improving patient outcomes. The institution's structure and organisation are indicative of a strong paediatric research centre, presenting a broad and comprehensive portfolio of paediatric research in 10 focus areas covering all specialties in paediatrics, supported by 14 research teams.

The group’s resources and infrastructure are robust, including comprehensive core facilities and administrative support for researchers and physician scientists. Regular research meetings within individual research teams enhance research activities and facilitate the dissemination of findings, benefiting the larger group, particularly those focused on clinical care. This integration is ideal for translational work, ensuring that research directly informs clinical practices. The group also manages nationwide prospective registers and hosts the national services for the newborn screening program, providing access to a laboratory with state-of-the-art technologies and a biobanking facility storing samples since 2012. This biobank is a valuable resource for future research, and collaborations with nation-wide cohort studies, such as the Norwegian Mother, Father, and Child study (MoBa), further bolster research capabilities.

BAR's objectives reflect OUS's commitment to addressing the evolving healthcare needs of society. The research focuses on improving understanding, diagnosis, and treatment of prevalent and rare paediatric diseases, including type 1 diabetes, allergy/asthma, childhood cancer, and neurodevelopmental disorders. The unit aims to enhance research infrastructure, visibility, external funding, and career development. Efforts to improve research infrastructure include centralising biobank operations, preparing for the biobank’s move to a new facility, and developing quality registers for research. Increasing the number of clinical trials is supported by strengthening the clinical trials and research unit.

To increase BAR’s research visibility, objectives include updating websites with current research information, disseminating research through media and public platforms, and maintaining research seminars.

Increasing external funding involves fostering national and international collaborations and providing administrative assistance and supervision from OUS and the University of Oslo (UiO) in application writing. Lastly, to build academic careers and increase independent researchers, the unit aims to prioritise joint researcher/clinician positions, include postdocs in larger grant applications, and offer supervisory roles to younger researchers post-PhD.

Despite the comprehensive strategy, some areas need more specific details. The PhD student program is crucial, with 30 well-supported PhD students, but few completed PhDs lead to future research careers. Enhancing postdoctoral and research opportunities by allocating resources and supervision time is identified as a key benchmark. Other benchmarks include increasing external funding, the number of publications, the proportion

of publications in high-impact journals, and the number of clinical studies. Additionally, improving research infrastructure, increasing patient involvement in all research stages, and facilitating career opportunities for researchers and clinicians are critical. These benchmarks, while generic, provide a foundation for assessment and continuous improvement.

Overall, based on the admin unit ToR, BAR's strategy aims for better diagnostics, treatment, and prevention of diseases, including de-implementation of harmful diagnostics and treatments. The commitment to communication with the scientific community and the public, coupled with a high priority on researcher resources and infrastructure, positions BAR as a leading paediatric research centre dedicated to advancing paediatric health.

The committee´s evaluation

The strategic goals of the Division of Paediatric and Adolescent Medicine are well aligned with the broader institutional strategies and scientific priorities of Oslo University Hospital (OUS) and the University of Oslo (UiO). These are anchored in the "Research strategy 2021-2025" and the "Action Plan Research and Innovation 2024-2027" of OUS, as well as the "Faculty of Medicine's strategy" and the "Strategy 2030" of UiO, particularly focusing on excellence in research, education, patient care as well as on innovation and societal impact. Overall, BAR's objectives aim to create a robust research environment, foster innovation, and ensure the sustainable development of research capabilities. The unit's aims to enhance research infrastructure are strategically sound. Centralising biobank operations, preparing for the biobank's relocation, and developing quality registers for research are vital steps towards establishing a robust research infrastructure. Increasing the number of clinical trials is another critical aim. Strengthening the clinical trials and research unit is essential for BAR's overarching goal to translate research findings into patient outcomes and advancing knowledge for the broader community. Increasing external funding is vital for sustaining and expanding research activities. BAR's focus on fostering national and international collaborations for larger research projects including EU funding is appropriate. Building academic careers and increasing the number of independent researchers is essential for long-term sustainability. Prioritising joint researcher/clinician positions, including postdocs in larger grant applications, and offering supervisory roles to younger researchers are effective strategies.

The committee´s recommendations

- BAR's aims and objectives are well aligned with institutional priorities and strategically sound. Implementing additional measures may further enhance the unit's research capabilities and impact.
- External Funding: BAR has already identified excellent strategies to enhance funding stability. Their focus on reducing dependence on external sources by establishing more stable funding streams for research personnel is highly commendable. The committee further supports the initiative to strengthen the administrative support for funding applications to increase success rates. BAR's commitment to support international collaborations and joint grant application, i.e. external collaborative grants outside Norway, is an important step in expanding research opportunities and diversifying funding sources.
- Strengthen the Clinical Trial Unit: the committee fully supports BAR's strategies to address infrastructure needs and support the expansion of the Clinical Research Unit

(CRU). Their focus on fostering industry partnerships is an excellent approach to further enhancing the capacity to conduct high-quality clinical trials.

- Research support: BAR's efforts to optimise research time distribution and provide more permanent positions are key to attracting and retaining talented researchers, ensuring sustainable growth and innovation.
- Link with Life Course Approach Teams: strongly recommend linking with teams working on a life course approach and looking at the wider picture of upstream determinants of health. This interdisciplinary collaboration can provide a more comprehensive understanding of health determinants, leading to more impactful research outcomes.
- By integrating these recommendations, BAR can strengthen its research infrastructure, increase funding success, enhance clinical trial capabilities, provide clearer career pathways, and foster valuable interdisciplinary collaborations. These enhancements will ensure that BAR continues to contribute significantly to paediatric research and clinical care, aligning with OUS's commitment to addressing the evolving healthcare needs of society.

1.2 Organisation of research

OUS and UiO closely collaborate to optimise the use of limited resources and investments. Researchers have access to common infrastructures and administrative supports from both institutions. The Faculty of Medicine's operations at OUS are organised through the Institute of Clinical Medicine (Klinmed). The Division of Paediatric and Adolescent Medicine (BAR) is one of 15 clinical divisions at OUS/UiO. Research at BAR is organised within the Department of Paediatric Research/The Paediatric Research Institute (PFI), including the clinical research unit for children (CRU), biobanks and specialised laboratory facilities, and within further 14 research teams of the division. Both, the Head of division (Ellen Ruud), and the Head of Research (Ketil Stordal), hold shared positions at OUS and UiO to ensure coordinated strategic research leadership. To support research careers, researchers are encouraged to take part in trainings offered at UiO and OUS, including various institutional programs such as the *PhD programme* or *Postdoctoral programme* offering courses in career development, research management, and grant writing, along with a peer mentoring scheme for PhD students (including obligatory development meetings), or the two-step *Research Leadership Programme (Starting Level, Consolidating Level)* further focusing on the development as a research leader. Within the unit, initiatives like encouraging new grant applications and allocating internal funds for research supervision aim to further facilitate career development. The distribution of research time among staff at BAR varies depending on their positions and funding sources. PhD students with internal grants at OUS spend 50% on research and 50% on clinical work; externally funded PhD students are fully dedicated to research for three years, often extending to six years with 50% clinical positions. Clinical research fellows at UiO allocate 60% to research and 40% to clinical teaching, while associate professors and full professors balance teaching, research, and other commitments differently (up to 2/3 for research activities for full professors). Research leave policies and clinical sabbaticals provide additional opportunities for further research engagement UiO supports PhD students and postdocs in studying and researching abroad by encouraging international stays through various programs such as UNIFOR, Fulbright Programme - USA, EURAXESS, NordForsk and the Research Council of Norway. Additionally, UiO facilitates participation through exchange agreements with other universities and joint supervision agreements, enabling the collaborative supervision of doctoral theses by partnering institutions.

The committee´s evaluation

The unit demonstrates a highly coordinated approach to organising research and innovation activities through its structured collaboration between OUS and UiO. Synergies are effectively created through strategic leadership positions held by key personnel at both institutions, ensuring aligned and focused research efforts. Career development is well-supported by various training programs and initiatives, which foster growth and innovation within the unit. While BAR faces some challenges such as limited time and resources for research, infrastructure needs, and funding variability, its proactive strategies are already addressing these areas. The reliance on part-time positions and external funding reflects the competitive research environment, and the unit is making commendable efforts to secure more stable resources. Although temporary research positions present recruitment challenges, the unit's strong commitment to improving career pathways and expanding the Clinical Trial Unit will further enhance its capacity to plan new studies and support long-term growth.

The committee´s recommendations

- To ensure a more sustainable and attractive research environment, the committee recommends addressing key challenges identified in the SWOT analysis, such as limited resources, funding variability, and recruitment issues among doctors.

1.3 Research funding

In 2022, the administrative unit had a yearly budget of 1.1 billion NOK (approx. 100 million euros), with 10% allocated to research (approx. 10 million euros). Internal funds comprised 40% of research funding, while regional health trusts and other national sources provided similar proportions. Only 2.6% of research funding came from international sources, including EU grants. Additionally, the unit received funding from UiO and “external sources”, covering human resources (8,873,000 NOK, equating to app. 880,000 € in 2022) and management costs (1,969,000 NOK, equating to app. 190,000 € in 2022). Between 2018-2022, the unit secured competitive national and international R&D funds. The unit’s yearly total R&D budget, excluding the basic grant, averaged 69,476,597 NOK (approx. 6.8 million euros). The primary source of competitive R&D funds was the Ministry of Health and Care Services, providing 50,520,659 NOK annually (approx. 5 million euros). Additional funding came from national grants, including the Regional Health Authorities and the Research Council of Norway, totalling 47,695,047 NOK per year (approx. 4.7 million Euros). International grants contributed 2,646,179 NOK annually (approx. 260,000 Euros).

The committee´s evaluation

The unit has 10 million euros per year available for research alone, which is very good. Allocating 10% of the total yearly budget for research underscores the unit’s firm commitment to advancing medical knowledge and innovation. The group has been quite successful in attracting funding from diverse sources. The activities do mirror the investment. However, it seems that the diversity in topics funding, is not always reflected in the depth of funding. i.e. funding for programmes of work in a specific area of research. Furthermore, the unit's self-assessment indicates a substantial reliance on internal and national funds for research, with limited engagement in securing international grants,

representing only about 2.6% of research funding. Thus, there seems to be potential for expansion through stronger international grant acquisition strategies. It is not clear whether the funding sources listed in Table 3 are solely competitive third-party funds or also include basic grants, as the sub-item totals exceed the overall total excluding basic grants.

The committee´s recommendations

- Funding Sources: the unit has already identified excellent strategies to secure international grants, particularly by participating in EU-funded research initiatives. The committee fully supports these efforts to access additional funding streams and expand research networks.
- International Collaboration: the unit is actively working to foster collaborations with international research groups to facilitate access to international funding opportunities. The committee endorses these initiatives to further strengthen international partnerships.
- Support applications: the unit recognises the importance of supporting research applications and has initiated relevant training and support programmes. The committee supports these efforts to improve the success rate of grant applications.

1.4 Use of infrastructures

The team has access to excellent resources and has the expertise to leverage them. OUS and UiO guarantee access to a wide range of research infrastructures. Both, OUS and the Medical Faculty of UiO host several regional core facilities that either offer advanced equipment for use, or provide services to researchers outside the unit, e.g. in imaging techniques, proteomics, metabolomics, animal research, bioinformatics and DNA sequencing at OUS as part of NorSeq. These facilities are near to the researchers. The biobank infrastructure at OUS is associated with national and European Biobank initiatives (Biobank Norway and BBMRI). Additionally, researchers benefit from national clinical research infrastructures like NorCrin, a partnership of all six university hospitals in Norway, and part of the European Clinical Research Infrastructures Network. The administrative unit itself hosts national services for the national newborn screening program.

The unit ensures adherence to the FAIR principles by making quality registers and biobanks accessible to external researchers. Resources have been allocated to enhance data management, allowing for broad use of compiled data. Consents for quality registers and biobanks cover linkage to national registers enabling use by internal and external researchers upon ethical permission.

The committee´s evaluation

The unit benefits from a comprehensive range of state-of-the-art core facilities provided by OUS and UiO including biomedical and bioinformatics services, and from being near to the clinical space, seamlessly integrating research into clinical practice. The biobank infrastructure is integrated with national and European initiatives, enhancing its capacity and accessibility. Moreover, researchers at BAR are granted access to national clinical research infrastructures like NorCrin further enhancing research capabilities and supporting the unit's research endeavours. The unit’s national services for the newborn screening program underscore its pivotal role in public health. Digital research infrastructures are provided through UiO/OUS and by the South-Eastern Norway Regional Health Authority, while ethical permissions facilitate the use of linked national registers, supporting robust

and wide-ranging research activities. Adherence to FAIR principles ensures that quality registers and biobanks are accessible to external researchers, fostering collaborative research.

The committee´s recommendations

- The committee commends the unit for its extensive access to advanced research infrastructures provided by OUS and UiO, which significantly enhance research capabilities. However, as noted in the SWOT analysis, the unit identifies several infrastructure challenges, including limited space for conducting multiple studies, inadequate IT solutions, and insufficient funding for advanced medical-technical equipment. To further strengthen the unit's research impact, we recommend the following:
- Resource Allocation for Infrastructure: the unit has already prioritised the expansion of the Clinical Research Unit (CRU), and the committee fully supports these efforts. The unit may consider allocating resources for advanced medical-technical equipment and provide additional space to increase the number of clinical trials.
- Data Management: continue investing in data management resources and tools to support the broad use of compiled data of existing quality registers while ensuring data quality and integrity.
- Collaboration: the unit is already fostering interdisciplinary and international collaborations. The committee supports these efforts to strengthen collaborations by promoting the accessibility and use of biobanks and quality registers.

1.5 Collaboration

The unit's research policy prioritises national and international collaborations to facilitate sharing of resources and data. Networking is emphasised to improve success in obtaining external funding, with increasing priority on securing international grants like EU Horizon. BAR's extensive research collaborations are evident in its publications, with 50-60% featuring co-authorships with national or international researchers. Collaboration with private partners is managed through BAR's Clinical Research Unit, which oversees a growing number of industry-initiated clinical studies. Patient involvement is integral to BAR's research, with researchers engaging with patient society boards and establishing a patient representative board for research. On a national level, the sectors involved in research-related activities include academia, e.g. the Norwegian Institute of Public Health and the Norwegian School of Sport Sciences, independent research institutes (NORCE), and patient organisations. International collaborations exist with various sectors including academia (Karolinska Institute Stockholm, Sweden; Imperial College London, UK; University of Leuven, Belgium; University of Ulm, Germany; Tampere University, Finland; and the University of Insubria, Italy), industry (GE Healthcare), public healthcare institutions (Steno Diabetes Centre), and research institutes (French National Institute for Research in Digital Science and Technology).

The committee´s evaluation

The unit has demonstrated a robust commitment to both national and international collaborations. Networking is a key strategy to improve success in securing external funding, with a growing emphasis on international grants such as EU Horizon. This collaborative approach is reflected in the unit's extensive research output, with 50-60% of

its publications featuring co-authorships with national or international researchers, according to the NIFU report. On the national level, the unit collaborates with various sectors including academia, independent research institutes, and patient organisations. These collaborations facilitate a multidisciplinary approach to research and foster comprehensive community engagement. Internationally, the unit maintains robust collaborations with academic institutions such as the Karolinska Institute in Stockholm, Sweden. Additionally, partnerships with industry players and public healthcare institutions further broaden the unit's research scope and impact. In the private sector, BAR's Clinical Research Unit manages collaborations with industry-initiated clinical studies, ensuring that research is aligned with practical applications and innovations. Patient involvement ensures that the research remains patient centred. Overall, based on the ToR, the unit has a comprehensive approach to collaborate nationally and internationally, and across public, private, and third sectors.

The committee´s recommendations

- Overall, the unit's comprehensive approach to collaboration is a significant strength, contributing to its high research output and impact. The committee recommends maintaining these collaborations, and to expand international and multidisciplinary networks, to improve success rates in securing external funding, particularly through international grants such as the EU Horizon program.

1.6 Research staff

The research personnel profile consists mainly of part-time positions, with the majority being (senior) physicians and professors, while the "researcher and postdocs" category includes dieticians, engineers, and nurses engaged in research. Women are well represented, comprising 71% of all positions, however, the proportion of women decreases from 87% among PhD students to 42% among professors. Since 2013, there has been a significant increase in research staff, rising from 67 to 154, with PhD students increasing from 13 to 30. Notably, the "researcher and postdocs" category has surged from 11 to 32, aligning with the unit's emphasis on promoting academic careers post-PhD. This growth underscores the need for adequate supervision, provided by both experienced researchers and senior academic staff. Notably, only two out of 12 professors devote 100% of their time to research, while the majority only have a 20% research position in addition to which they also must take care of clinical and administrative tasks.

The committee´s evaluation

Since 2013, there has been a substantial increase in research staff, with a notable rise in the number of PhD students and researcher/postdoc positions. This growth underscores the unit's commitment to promoting academic careers post-PhD. However, the increase also highlights the need for sufficient supervision and mentorship, particularly considering the diverse backgrounds and tasks of the research personnel. It is evident that many research personnel, including professors, are not solely dedicated to research activities. The majority hold part-time research positions alongside clinical and administrative responsibilities. This allocation of tasks may impact research productivity and career progression, necessitating a review of workload distribution and support mechanisms.

The committee´s recommendations

- While the unit demonstrates a commitment to gender diversity and supporting academic careers post-PhD, there are areas for improvement, particularly regarding gender balance at higher positions and the allocation of tasks among research personnel. The following recommendations are proposed to enhance the profile of research personnel and address identified issues.
- Mentorship Programs: the unit may consider establishing mentorship programs specifically aimed at supporting women in advancing from PhD to professorial roles. Leadership and career development training targeted at women may better prepare them for senior academic and administrative positions. The unit may further encourage senior female researchers to mentor junior women, fostering a supportive network.
- Dedicated Research Time: the unit has recognised the importance of research time, and the committee supports ongoing efforts to increase the proportion of time senior researchers and professors can dedicate to research.

1.7 Open Science

The University of Oslo (UiO) has a comprehensive open access strategy to ensure high-quality scientific knowledge is visible and accessible. UiO and OUS promote selecting journals for open access and initiatives for biobanks and research databases for data reuse. A national repository for scientific publications will launch in 2024. UiO’s rights retention policy allows employees and students to choose where they publish, with the University Library providing training in data sharing and archiving. The share of open access publications at UiO has increased from 36.5% in 2016 to 80.2% in 2022. OUS researchers can have their publishing costs covered through agreements with major publishers. Additionally, BAR hosts nationwide quality registers and biobanks accessible to other researchers. UiO and OUS's policies on research data ownership, management, and confidentiality are detailed in their “Policies and Guidelines for Research Data Management” and “Data Management Plan for Researchers”. These guidelines adhere to the "open as standard" principle, aiming to make research data openly available while considering privacy, security, and commercial interests. They define research data, management principles, and emphasise international standards like the FAIR and CARE principles.

The committee´s evaluation

OUS and UiO advocate for open access publishing, promoting journals and initiatives for data reuse. The increase in openly available publications shows progress in open access adoption. OUS covers publishing costs for researchers, supporting open access. UiO and OUS follow an "open as standard" principle in data management, balancing transparency with privacy, security, and commercial interests. Their robust open science policies advance accessible scientific knowledge and responsible data management. These efforts highlight their commitment to openness, collaboration, and innovation in research.

The committee´s recommendations

- The committee recommends the following to further enhance the unit’s open science initiatives and data management policies:

- Open Access Publishing: the unit has already taken significant steps to advocate for open access journals, and the committee supports the continued provision of financial assistance for publishing costs to ensure that all researchers can freely share their work.
- Facilitate Data Reuse: the unit is actively promoting the reuse of data through biobanks and research databases. The committee encourages these initiatives to enhance collaborative research opportunities both nationally and internationally.

2. Research production, quality and integrity

Introduction

The NIFU report provides an overview of the scientific publication output of the Division of Paediatric and Adolescent Medicine at Oslo University Hospital/University of Oslo, focusing on publication volume, productivity, open access publishing, scientific impact, and collaborations. Research conducted at the unit covers a wide array of scientific focus areas within paediatrics and related fields, ranging from common public health conditions like chronic-immune-mediated diseases and infections to rare diseases, the latter being supported by centralised clinical functions. The Group has a very good publication and funding record with publications in high impact journals like NEJM, Lancet, Thrombo Res, Diabetes Care etc. Productivity is excellent.

The unit hosts the childhood diabetes registry of Norway since 2006, along with associated research activities and clinical trials within the field. Specific research efforts include the development of a profiled randomised study in asthma/allergy, which has transitioned into a large-scale observational cohort study (ORAACLE). Additionally, research in gastrointestinal disorders is emerging within the unit. Despite the diversity of research interests, including biomedicine, psychology, cardiovascular/respiratory, gynaecology/obstetrics, and endocrinology, the unit strives to maintain a cohesive focus across paediatric health enabling innovative ideas for future investigations.

UiO and OUS prioritise research integrity through policies like the "Standard for Research Integrity” at UiO and the "Guideline for Research Ethics and Integrity” at OUS." Both institutions stress the duty of all employees to maintain these standards and promptly report any breaches of research ethics. Institutional arrangements have been established to manage potential violations, including the Commission on Research Integrity and the Research Ombudsman. Guidelines are in place for managing cases of potential violations of research ethics, overseen by the Commission on Research Integrity (“Guidelines for the handling of cases concerning potential violations of recognised norms of research ethics”). Preventive measures include enhanced training in research ethics for PhD candidates and supervisors, and regular dissemination of cases and experiences by the Research Ombudsman and the Chair of the Commission on Research Integrity during coordinating meetings, seminars, and discussions at various levels within the institutions. The "Ethical Guidelines for Supervisors" provide further guidance.

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 overall assessment of the research group(s) presented in this section.

Division of Paediatric and Adolescent Medicine

The Division of Paediatric and Adolescent Medicine (BAR) at Oslo University Hospital and the University of Oslo is a leading research group in the field of paediatrics. The Paediatric Research Group Ahus (PAEDIA) was established in 2014, following the appointment of

group leader Vegard Bruun Bratholm Wyller as Professor of Paediatrics at AHUS. Concomitantly, Prof. Wyller’s already established research portfolio on chronic fatigue syndrome (CFS/ME) and post- infective fatigue syndrome (PIFS) was transferred and further developed as part of his novel position. During its first 5 year-period, PAEDIA gradually expanded in fields of interest as well as in number of affiliated researchers. The Division has multiple groups that is multidisciplinary, with wide national and international links to address prevalent and rare paediatric diseases, including type 1 diabetes, allergy/asthma, and childhood cancer. Their research focuses on improving understanding, diagnosis, and treatment, with a special emphasis on neurodevelopmental disorders. They are a national hub for paediatric research, making significant impact nationally and internationally through their high publication output, engagement in clinical trials, and efforts to improve the long-term outcomes for childhood cancer survivors. Overall assessment The research group's strengths lie in their strong academic expertise, multidisciplinary focus, access to research infrastructure, funding support, clear research strategy and benchmarking, focus on impact and dissemination, good support for early career researchers, national and international collaborations, alignment with institutional strategies, expertise and collaboration across disciplines, management of national infrastructures, clinical trials, high publication output, and access to advanced technologies and methods. Their restricted by the funding constraints, recruitment and retention of researchers, limited clinical research space, research infrastructure development, career progression and supervision, relative limitations in resources, limited focus on certain areas, and time constraints. The excellence in research by the Division is commended, and they have leveraged the access to infrastructures within institution as well as nationally. The Group is likely to succeed and expand if it focuses on obtaining larger and consistent funding from EU Horizon as well as from industry partners. External collaborative grants outside Norway are to be explored, given the strength of access of patients, and research resources. Impact on society - health, wellbeing and economic need to be captured better, to assess the value for money invested in a robust manner.

3. Diversity and equality

BAR’s policy to promote diversity and prevent discrimination aligns with OUS's “Action Plan for Equality, Inclusion, and Diversity,” UiO’s “Policy for Diversity, Equality and Inclusion,” and the Faculty of Medicine’s “Action Plan for Diversity, Equality and Inclusion.” These plans prioritise equality regardless of ethnicity, ability, age, gender identity, religion, socio-economic background, or sexual orientation. The Action Plan at Oslo University Hospital focuses on developing employee skills, promoting inclusive communication, and ensuring diverse representation in recruitment and workplace practices. The NIFU-analysis provides insights into diversity, equality, and gender balance at BAR. The share of women among senior physicians has increased from 38% in 2013 to 70% in 2021. Positive trends are also seen among physicians and psychologists, despite some fluctuations. However, the inclusion of migrants and international recruitment remains low, with no foreign Ph.D. degrees among senior physicians, physicians, and psychologists, and a decline in foreign Ph.D. holders among researchers and postdocs in recent years. The age profile indicates potential future recruitment needs, with a notable share of researchers aged 62 years or older, particularly among senior physicians, psychologists, and postdocs. However, the share of over 62-year-olds has decreased across most occupational groups, from 24% in 2017 to 15% in 2021.

The committee´s evaluation

BAR's policies to protect against discrimination and promote diversity are firmly established through multiple comprehensive action plans and policies from both OUS and UiO. There are positive trends in gender balance and efforts towards international recruitments. Continued focus on addressing age-related challenges and promoting the inclusion of migrants and international researchers will further strengthen these initiatives.

The committee´s recommendations

- International Recruitment Efforts: the committee encourages an increased focus on recruiting researchers with foreign Ph.D. degrees to promote greater diversity and inclusion of migrants within BAR.
- Address Age Diversity: the unit is actively developing strategies to attract and retain younger researchers. The committee supports these initiatives to ensure a balanced age profile and effectively prepare for future workforce needs.

4. Relevance to institutional and sectorial purposes

BAR focuses on applied clinical research, with a primary focus on enhancing regional patient care while also contributing to the global knowledge base. Emphasising translational research, BAR's initiatives aim to develop advanced diagnostic and therapeutic methods, and to de-implement harmful practices. The Clinical Trial Unit at BAR provides access to new treatments and developments. To further improve quality care, BAR promotes open access to health data and quality registers, including the Norwegian Diabetes Registry.

BAR encourages its research staff to engage in innovation and commercialisation. Its principles are anchored in the guideline “Commercialisation of Innovations” of OUS, the “Policy for intellectual property rights at the University of Oslo” and the “Agreement between the University of Oslo and employee at the University of Oslo regarding acquisition of rights to work results”. Various internal support structures are established at UiO (Growth House, SPARK Norway) and OUS (Intervention Centre, Helath2B) to support innovation and commercialisation activities. The Growth House, a collaboration between the Faculty of Medicine and the Faculty of Mathematics and Natural Sciences at UiO, provides tailored guidance, seed funding, meeting places, mentors, and training in entrepreneurship in healthcare through the School of Health Innovation. SPARK Norway, a two-year innovation program based on the original Stanford SPARK programme for clinical research, is specifically designed to increase the success rate of projects with high potential impact in the life science domain. Selected participants (any UiO, OUS or Ahus affiliate) receive mentoring and milestone-based funding of up to NOK 500 000 (app. 45.000 €) per year for 2 years. At OUS, the Intervention Centre provides a shared resource for basic- and clinical research groups inside and outside OUS. Furthermore, OUS and the Norway Health Tech and Oslo Science Park have together launched Health2B, an arena and meeting place for actors from the public and private sectors within the healthcare industry, fostering public-private collaboration. UiO and OUS together own Inven2, a limited liability company, established to administer the commercial potential of innovations of UiO and OUS and all health trusts in the South-Eastern Norway Regional Health Authority. Inven2 is Norway’s largest technology transfer office. BAR’s commitment to innovation is demonstrated by initiatives like the development of a heart monitor app by the PRECISE research team in paediatric cardiology.

The committee´s evaluation

BAR's relevance to institutional and sectorial purposes is multifaceted and strongly aligned with both healthcare and innovation sectors. BAR's focus on applied clinical research within the hospital sector highlights its relevance to improving patient care at a regional level. The Clinical Trial Unit at BAR facilitates access to new treatments, underscoring its role in advancing clinical practice and offering innovative solutions to patients. BAR's promotion of open access to health data and quality registers supports institutional purposes of transparency, data-driven decision-making, and continuous improvement in healthcare services. Both, UiO and OUS provide a robust framework/ecosystem that integrates clinical research, industry collaboration, and strategic partnerships supporting entrepreneurship, translating research into practical applications, and boosting the economic impact of healthcare innovations. Various structures are established to enhance the success rate of life science innovations. The self-assessment does not detail BAR’s commitment to teaching and research activities in higher education (4.3.) or research institutes (4.4.)

The committee´s recommendations

- Despite established structures promoting commercialisation and innovation, and the large Clinical Trial Unit, the potential for innovation remains untapped. The Committee supports expanding the CRU to strengthen innovation and commercialisation, aligning with the Norwegian government's goal to increase clinical trials. Researchers at BAR should be more aware of and utilise UiO and OUS training and funding opportunities to grow healthcare startups and commercialise innovations. The unit might implement a system to regularly monitor and evaluate BAR's research activities in relation to innovation and sectorial advancements. Continuous impact assessment ensures alignment with institutional goals, allowing timely adjustments and improvements. UiO/OUS may provide additional resources for early-stage innovations, including seed funding, mentoring, and access to specialised facilities.

4.1 Health trusts

BAR's is committed to enhance the development, assessment, and implementation of new diagnostic methods, treatments, and healthcare technologies, ultimately improving clinical care. A prime example is the newborn screening program, which has been instrumental in developing new diagnostic methods. The early diagnosis of spinal muscular atrophy (SMA) through genetic tests was a groundbreaking achievement implemented through this program. The unit's Clinical Trials Unit plays a pivotal role in identifying new treatments. BAR furthermore integrates advanced technologies into clinical practice. For instance, the use of artificial intelligence (AI) in the early diagnosis of neonatal infections exemplifies the unit's commitment to leveraging technology for better healthcare outcomes. BAR's contribution to enhance the quality of education programs across medical and associated healthcare disciplines is evident through the integration of research into educational curricula, and the fostering of a research-oriented culture. Students specialising in paediatrics and other disciplines are required to design and execute quality improvement projects. These projects often involve implementation research, providing students with practical experience. This hands-on approach ensures that students not only learn theoretical aspects but also develop practical skills essential for their future careers. The curriculum furthermore includes essential components of knowledge management and methods, ensuring that students develop a strong foundation in these areas. The unit currently hosts 30 PhD candidates. These actively contribute to the educational activities. BAR offers multiple opportunities for students in relevant educational programs to engage in research activities, designed to integrate research experience with their academic and clinical education. Medical students at UiO can apply for the Medical Student Research program, which offers a structured pathway for substantial research involvement. The structure of the program (one year of full-time research, two years of half-time research while continuing regular medical studies) allows students to deeply immerse themselves in research without significantly disrupting their medical education. Furthermore, all medical students must complete a 20-study-point assignment in their fifth year. This 12-week program often involves literature search projects but can also include the publication of original papers or systematic reviews. Supervision is provided by academic staff and full-time clinicians as external supervisors.

The committee´s evaluation

The unit demonstrates a strong commitment to enhancing clinical care through the development and implementation of new diagnostic methods, treatments, and healthcare

technologies. Additionally, the unit significantly contributes to the quality of educational programs by integrating research into curricula and providing extensive opportunities for student involvement in research activities. BAR's research initiatives translate into practical applications that improve patient outcomes and influence clinical guidelines on a national and international scale. The administrative unit effectively facilitates student involvement in research through well-structured programs and comprehensive support mechanisms. The structured yet flexible requirement ensures that all students gain some level of research experience. The active involvement of PhD candidates and researchers further enriches the educational experience, bridging the gap between research and clinical practice and preparing students for successful careers in healthcare. The presence of 30 PhD candidates indicates that these programs are actively used and valued by students.

The committee´s recommendations

- The administrative unit has already recognised the importance of mentorship to provide to talented young researchers additional guidance and support throughout their research projects. The committee supports efforts to provide increased financial support for student and postgraduate research projects.

5. Relevance to society

The unit contributes to the Norwegian Long-term plan for research and higher education by prioritising medical research and education. BAR addresses sustainable health and care services in an aging society, improves child health to reduce future healthcare demands, and enhances healthcare efficiency through evidence-based practices. As part of the largest medical faculty, the unit is crucial in expanding health education capacity, ensuring the sustainability of the healthcare system by training the growing number of students in the health care sector. BAR tackles societal challenges through vaccine development and antibiotic stewardship, aligning with national and global health priorities. Its research supports UN Sustainable Development Goal 3 by achieving substantial reductions in neonatal and under-5 mortality and managing non-communicable diseases.

The group has presented three user-oriented publications: a children's book, a podcast, and a national report, which highlight the practical applications of their research. The 70% reduction in child mortality in Norway from 1990-2020 is attributed to research and knowledge dissemination, although the specific contribution of this group to this success was not evident from the report. The reduction of premature mortality due to non-communicable diseases (NCDs) through prevention and treatment is postulated to have global gains, and yet there is a lack of specific details.

A strength of the group is their clinical research, which provides better evidence for what is necessary while also identifying areas of medical overactivity, a growing concern in paediatrics. Their research priorities are anchored in collaborations with user groups. They teach a growing number of students in an excellent teaching and research environment.

To further enhance their impact, it is recommended that the group captures the actual effect of their work on health, economic, and societal improvements seamlessly and iteratively. This will help assess the true impact of their research. Further details are needed on how the group contributes to child health education beyond the three above-mentioned publications. It is suggested that they focus their efforts on obtaining relevant data on how practice changes were informed by their research and the magnitude of benefit resulting from these changes. This data can be collected through audits, quality improvement projects, surveys, or research.

The committee´s comments to impact case 1 – Bronchiolitis All-SE Study

The Bronchiolitis All-SE study, conducted in South-Eastern Norway, significantly influenced the treatment of acute bronchiolitis in infants by challenging the routine use of inhaled adrenaline. This study, which involved 404 infants across eight hospitals from 2010 to 2011, found no significant difference in hospital stay length, oxygen therapy, or other outcomes between inhaled adrenaline and saline. It also showed that on-demand inhalation of either treatment led to shorter hospital stays compared to fixed schedules. The study concluded that inhaled adrenaline offered no additional benefit over saline and should no longer be routinely used. This groundbreaking study, designed and led by researchers of the unit in collaboration with local PIs at the participating hospitals in South-Eastern Norway was published in *The New England Journal of Medicine* in 2013 and *Lancet Respiratory Medicine* in 2015. These publications ensured widespread dissemination within the medical community, leading to a shift in treatment guidelines, including those from the American Academy of Paediatrics in 2014. As a result, the use of inhaled adrenaline was dramatically reduced, with estimates suggesting over 10,000 fewer inhalations annually in Norway. This

change not only improved patient care but also resulted in substantial cost savings for the healthcare system. The study's findings were further validated by a recent retrospective study published in *BJM Paediatr Open*, which confirmed that the new national guidelines were successfully implemented. Despite minimal external funding, the rigorous execution of the study across multiple hospitals has had lasting benefits, improving clinical practice and healthcare efficiency. This case clearly demonstrates how evidence-based research can lead to meaningful changes in medical practice, enhancing patient outcomes and reducing unnecessary healthcare costs.

The committee´s comments to impact case 2 – PreventADALL (Preventing Atopic Dermatitis and ALLergies in children)

The PreventADALL study, a large-scale randomised controlled trial involving 2400 mother-child pairs from Norway and Sweden, demonstrated that introducing peanut, cow's milk, wheat, and egg between 3 and 4 months of age reduces the risk of food allergies by 60% at age 3. However, it found no reduction in the risk of atopic dermatitis at 1 and 3 years. These findings provide strong evidence supporting the early introduction of allergenic foods, potentially reshaping infant feeding guidelines. The study, which spanned from mid-pregnancy to age 3, involved extensive data collection on clinical, biological, and lifestyle factors, and continues to follow participants into adulthood. The PreventADALL study was initiated and coordinated by researchers from Oslo University Hospital (OUS) and the University of Oslo (UiO), with significant international collaboration. It relied on a multidisciplinary approach across various research groups and institutions, ensuring a robust design and comprehensive data analysis. The study's results, published in high-impact peer-reviewed journals such as *The Lancet* and *Allergy*, have highlighted several key findings underscoring the importance of early-life interventions in preventing allergies and improving long-term health. Given the compelling evidence, the findings are expected to influence the upcoming 2024 nutrition guidelines, potentially leading to a revision of recommendations for introducing allergenic foods to infants. This case exemplifies how evidence-based research can have a significant impact on public health guidelines, with potential long-term benefits for preventing allergic diseases and improving child health.

The committee´s comments to impact case 3 – The role of the oxytocin system in health and wellbeing

Quintana and colleagues (2019) gene expression study on oxytocin receptors in the human brain has significantly advanced our understanding of oxytocin's role in health and behaviour. By creating a high-resolution map of oxytocin receptors across hundreds of brain regions and correlating this with brain activation maps from over 15,000 studies, the research confirmed known oxytocin functions and identified new potential roles, particularly in behavioural flexibility. These findings have led to the design of three upcoming randomised controlled trials, exploring oxytocin's effects on daily functioning, learning, and behavioural flexibility. The research, part of a larger program led by the K.G. Jebsen Centre for Neurodevelopmental Disorders at the Department of Rare Disorders and Disabilities at BAR, has been continuously published in peer-reviewed journals, including the high-impact journal Nature Communications. These findings, building on previous clinical trials, support the potential of oxytocin as a personalised treatment for conditions involving social behaviour difficulties and behavioural rigidity. The forthcoming trials, funded by the Research Council of Norway, the South-Eastern Norway Regional Health Authority, and the Kavli Trust, aim to explore the efficacy of oxytocin-based interventions, taking into account

sex differences and optimal dosages. If successful, these trials could offer new treatment avenues for disorders like autism spectrum disorder and social anxiety, improving outcomes for affected individuals. The research has also fostered international collaborations (Germany, Belgium, Canada, Netherlands) and earned national and international recognition, highlighting oxytocin's significant role in health and wellbeing.

The committee´s comments to impact case 4 – Enterovirus in type 1 diabetes and celiac disease

The Diabetes Virus Detection (DiViD) study and the DiViD intervention randomised controlled trial (RCT) have made significant strides in understanding the role of enterovirus in type 1 diabetes and celiac disease. The studies found enterovirus to be the only virus present in pancreatic tissue from newly diagnosed type 1 diabetes patients, suggesting a viral role in disease development. The RCT demonstrated that antiviral treatment (pleconaril and ribavirin) could preserve insulin secretion after diagnosis, offering a potential new therapeutic approach for this autoimmune condition. Additionally, an observational study revealed that enterovirus infection is significantly more frequent in individuals who later develop celiac disease, compared to matched controls. The DiViD studies, led by researchers from the unit, have resulted in around 40 peer-reviewed articles since 2015, published in high-impact journals like *Nature Medicine*, *Diabetes*, and *Diabetologia*. The observational studies on enterovirus and parechovirus in relation to celiac disease were conducted in collaboration with the Norwegian Institute of Public Health and OUS, providing new insights into the viral infections that may precede celiac disease. The findings from these studies offer promising avenues for prevention and treatment of both type 1 diabetes and celiac disease. By identifying enterovirus as a potential modifiable factor in their development, the research suggests that antiviral therapies or even enterovirus vaccines could play a crucial role in preventing or managing these common childhood autoimmune diseases. This has the potential to transform therapeutic approaches, reduce disease incidence and improve public health outcomes for both conditions.

Appendices

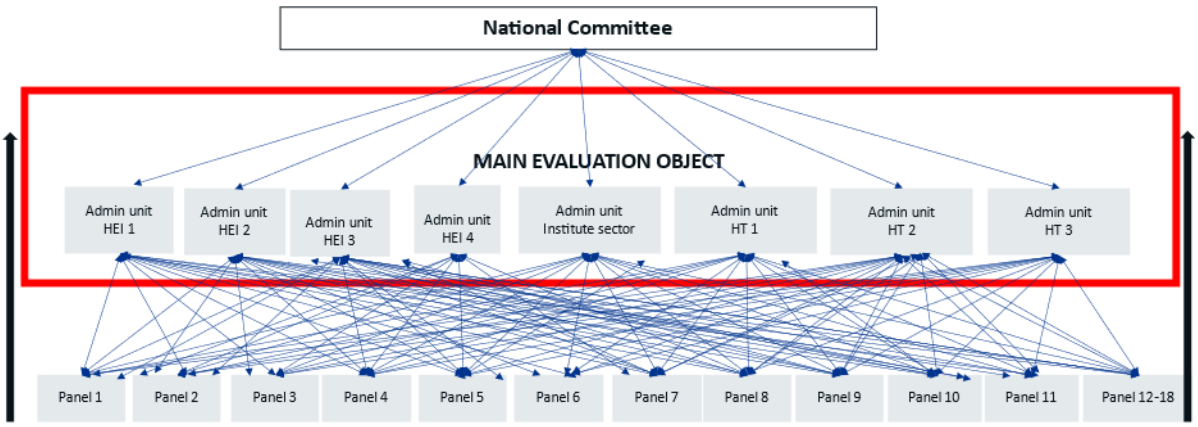
Evaluation of Medicine and health 2023-2024

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

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

Evaluation of medicine and health (EVALMEDHELSE) 2023-2024
The evaluation of medicine and health includes sixty-eight administrative units (e.g., faculty, department, institution, center, division) which are assessed by evaluation committees according to sectorial affiliation and other relevant similarities between the units. The administrative units enrolled their research groups (315) to eighteen expert panels organised by research subjects or themes and assessed across institutions and sectors.

Organisation of evaluation of medicine and health 2023-2024



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

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

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

The web page for the evaluation of medicine and health 2023-2024: [Evaluation of medicine and health sciences (forskningsradet.no)]

Forskningsrådet

Se vedlagte adresseliste

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

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

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

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

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

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

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

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

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

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

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

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

Administrative enheter (hovedevalueringsobjektet i evalueringen) – skjema 1

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

Forskergrupper – skjema 2

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

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

Invitasjon til å foreslå eksperter – skjema 3

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

Obs. Det er to faner i regnearket:

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

Utfylte skjemaer (3 stk):

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

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

Tilpasning av mandat – frist 30. september 2023

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

Forskningsrådet

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

Digitalt informasjonsmøte 15. mai 2023, kl. 14.00-15.00.
Forskningsrådet arrangerer et digitalt informasjonsmøte for alle som ønsker å delta i EVALMEDHELSE.

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

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

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

Med vennlig hilsen
Norges forskningsråd

Ole Johan Borge	Hilde G. Nielsen
avdelingsdirektør	spesialrådgiver
Helse	Helse

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

Kopi
Helse- og omsorgsdepartementet
Kunnskapsdepartementet

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

The Research Council of Norway

Evaluation of life sciences in Norway 2022-2023

LIVSEVAL protocol version 1.0

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

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Oslo, 5 April 2022

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1 Introduction

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

1.1 Evaluation units

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

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

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

1.2 Minimum requirements for research groups

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

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

1.3 The evaluation in a nutshell

The assessment concerns:

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

The Research Council of Norway (RCN) will:

- provide a template for the Terms of Reference[1] for the assessment of RPOs and a national-level assessment in life sciences
- appoint members to evaluation committees and expert panels
- provide secretarial services
- commission reports on research personnel and publications based on data in national registries
- take responsibility for following up assessments and recommendations at the national level.

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

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

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

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

1.4 Target groups

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

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

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

2 Assessment criteria

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

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

2.1 Strategy, resources and organisation

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

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

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

2.2 Research production, quality and integrity

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

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

2.3 Diversity and equality

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

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

2.4 Relevance to institutional and sectoral purposes

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

Higher Education Institutions

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

The purposes of Norwegian HEIs are defined as follows in the Act relating to universities and university colleges[2]

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

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

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

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

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

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

Research institutes (the institute sector)

Norway's large institute sector reflects a practical orientation of state R&D funding that has long historical roots. The Government's strategy for the institute sector[3] applies to the 33 independent research institutes that receive public basic funding through the RCN, in addition to 12 institutes outside the public basic funding system.

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

The institutes should:

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

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

The hospital sector

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

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

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

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

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

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

2.5 Relevance to society

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

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

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

3 Evaluation process and organisation

The RCN will organise the assessment process as follows:

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

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

3.1 Division of tasks between the committee and panel levels

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

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

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

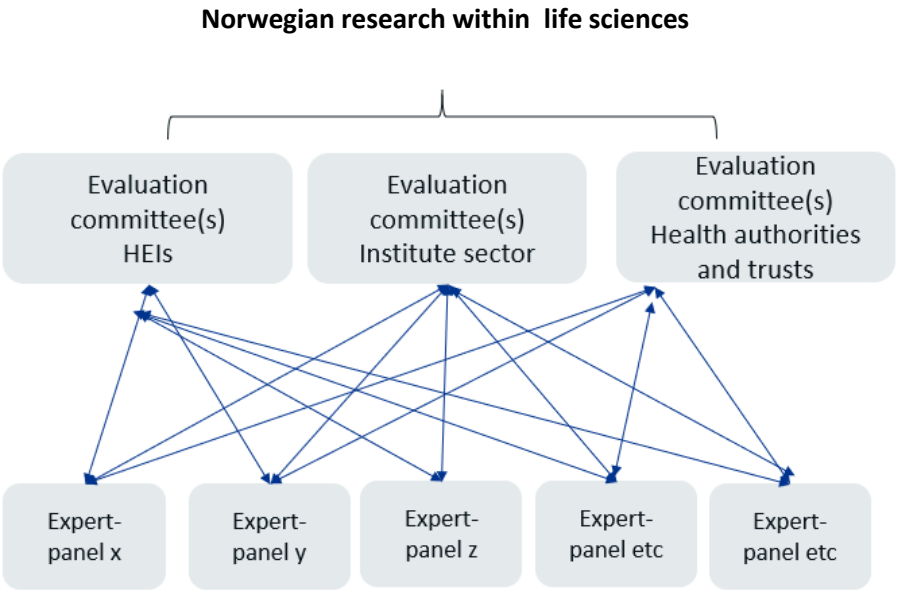

Figure 1. Evaluation committees and expert panels

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

3.2 Accuracy of factual information

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

3.3 National level report

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

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

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

Appendix A: Terms of References (ToR)

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

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

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

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

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

1. …
2. …
3. …
4. …

…

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

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

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

The documents will include the following:

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

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

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

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

Appendix B: Data sources

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

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

National registers

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

Self-assessments

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

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

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

Table 1. Types of evaluation data per criterion

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

Evaluation of Medicine and Health (EVALMEDHELSE) 2023-2024

Self- assessment for administrative units

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

Institution (name and short name):_____
Administrative unit (name and short name): _____
Date:_____
Contact person:_____
Contact details (email):_____

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Introduction

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

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

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

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

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

Thank you!

Guidelines for completing the self-assessment

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

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

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

1.Strategy, resources and organisation

1.1 Research strategy

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

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

Table 1. Administrative unit`s strategies

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

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

1.2 Organisation of research

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

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

1.3 Research staff

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

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

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

Table 2. Research staff

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

1.4 Researcher careers opportunities

a) Describe the structures and practices to support researcher careers and help early-career researchers to make their way into the profession.

b) Describe how research time is distributed among staff including criteria for research leave/sabbaticals (forskningstermin/undervisningsfri).

c) Describe research mobility options.

1.5 Research funding

a) Describe the funding sources of the administrative unit. Indicate the administrative unit´s total yearly budget and the share of the unit's budget dedicated to research.

b) Give an overview of the administrative unit's competitive national and/or international grants last five years (2018-2022).

Table 3. R&D funding sources
Please indicate R&D funding sources for the administrative unit for the period 2018-2022 (average NOK per year, last five years).

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

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

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

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

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

1.6 Collaboration

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

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

Table 4a. The main national collaborative constellations with the administrative unit
Please categorise the collaboration according to the most important national partner(s): 5-10 institutions in the period 2012-2022. Please delete lines which are not in use.

National collaborations

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

Table 4b. The main international collaborative constellations with the administrative unit
Please categorise the collaboration according to the most important international partner(s): 5-10 international institutions in the period 2012-2022. Please delete lines which are not in use.

International collaborations

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

Impacts and relevance of the collaboration	

1.7 Open science policies

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

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

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

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

1.8 SWOT analysis for administrative units

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

Internal	**Strengths**	**Weaknesses**
External	**Opportunities**	**Threats**

2. Research production, quality and integrity

2.1 Research quality and integrity

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

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

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

2.2 Research infrastructures

a) Participation in national infrastructure

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

Table 5. Participation in national infrastructure

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

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

b) Participation in international infrastructures

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

Table 6. Participation in international infrastructure

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

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

c) Participation in European (ESFRI) infrastructures

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

Table 7. Participation in infrastructures on the ESFRI Roadmap
Please give a description of up to 5 participations that have been most important to your administrative unit.

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

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

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

3. Diversity and equality

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

Table 8. Administrative unit policy against discrimination
Give a description of up to 5 documents that are the most relevant. If the administrative unit uses the strategies, policies, etc. of a larger institution, then these documents should be referred to.
Please delete lines which are not in use.

No.	**Name**	**Valid period**	**Link**
1			

4. Relevance to institutional and sectorial purposes

4.1 Sector specific impact

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

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

4.2 Research innovation and commercialisation

a) Describe the administrative unit's practices for innovation and commercialisation.

b) Describe the motivation among the research staff in doing innovation and commercialisation activities.

c) Describe how innovation and commercialisation is supported at the administrative unit.

Table 9. Policies for innovation including IP policies, new patents, licenses, start-up/spin-off guidelines
Describe up to 5 documents of the administrative unit's policies for innovation, including IP policies, new patents, licenses, start-up/spin-off guidelines, etc., that are the most relevant. If the administrative unit uses the strategies, policies, etc. of a larger institution, then present these documents. Please delete lines which are not in use.

No.	Name	Valid period	Link
1			

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

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

4.3 Higher education institutions

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

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

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

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

4.4 Research institutes

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

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

4.5 Health trusts

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

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

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

5. Relevance to society

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

5.1 Impact cases

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

Impact case guidelines

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

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

Timeframes

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

Page limit

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

Maximum number of cases permitted per administrative unit

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

Naming and numbering of cases

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

Publication of cases

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

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

Please write the text here

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

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

1. Summary of the impact (indicative maximum 100 words)
This section should briefly state what specific impact is being described in the case study.

2. Underpinning research (indicative maximum 500 words)
This section should outline the key research insights or findings that underpinned the impact, and provide details of what research was undertaken, when, and by whom. This research may be a body of work produced over a number of years or may be the output(s) of a particular project. References to specific research outputs that embody the research described in this section, and evidence of its quality, should be provided in the next section. Details of the following should be provided in this section:

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

3. References to the research (indicative maximum of six references)
This section should provide references to key outputs from the research described in the previous section, and evidence about the quality of the research. All forms of output cited as underpinning research will be considered equitably, with no distinction being made between the types of output referenced. Include the following details for each cited output:
- Author(s)
- Title
- Year of publication
- Type of output and other relevant details required to identify the output (for example, DOI, journal title and issue)
- Details to enable the panel to gain access to the output, if required (for example, a DOI or URL).

All outputs cited in this section must be capable of being made available to panels. If they are not available in the public domain, the administrative unit must be able to provide them if requested by RCN or the evaluation secretariate.

4. Details of the impact (indicative maximum 750 words)
This section should provide a narrative, with supporting evidence, to explain:

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

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

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

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

Institution	Administrative unit	Name of research group	Expert panel
Oslo University Hospital and University of Oslo	Pediatric and adolescent clinic	Division of Paediatric and Adolescent Medicine	Panel 3a-1

Scales for research group assessment

Use whole integers only – no fractions!

Organisational dimension

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

Quality dimension

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

Score	Research and publication quality	Supporting explanation
5	Quality that is outstanding in terms of originality, significance, and rigour.	**The quality of the research is world 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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