Forskningsrådet

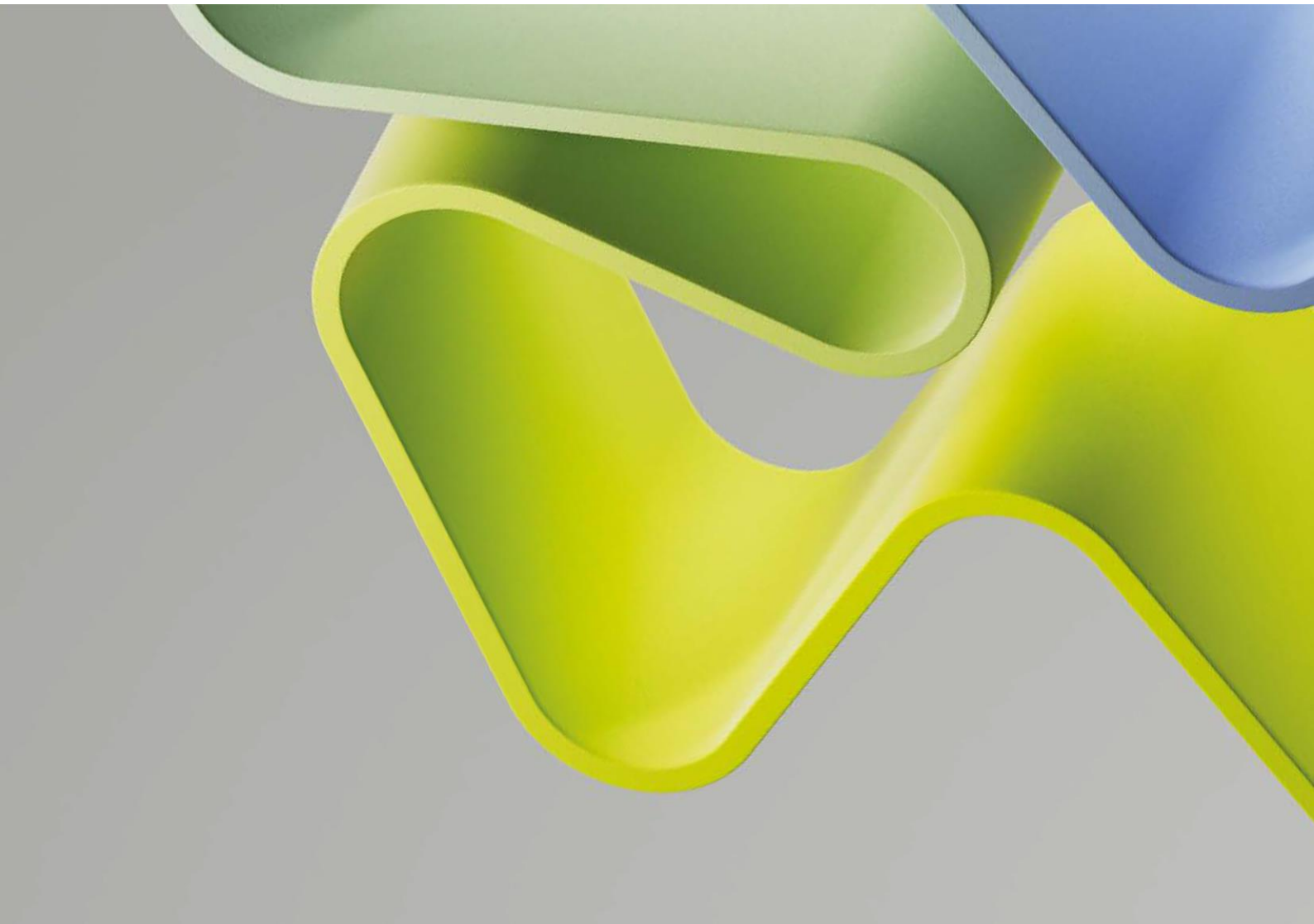
Evaluation of Life Sciences 2022-2024

Evaluation of medicine and health 2023-2024

Evaluation report

ADMINISTRATIVE UNIT: Division of Prehospital Services
INSTITUTION: Oslo University Hospital and University of Oslo

December 2024



Contents

Statement from Evaluation Committee Health Trust 2

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

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

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

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

Evaluation committee Health Trust 2 consisted of the following members:

Professor Martin Ingvar (Chair)
Karolinska Institute

Professor Ashley Blom
University of Sheffield

Professor Signe Borgquist
Aarhus University

Professor Vibeke Elisabeth Hjortdal
University of Copenhagen

Professor Thomas Kubiak
Johannes Gutenberg University Mainz

Professor Gavin Perkins
Warwick Medical School

Professor Erica Villa
University Hospital of Modena

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

Oslo, December 2024

Profile of the administrative unit

At the Oslo university Hospital/University of Oslo Division of Prehospital Services (PRE) all researchers are part of one research group, the Prehospital Research Group (PRG).

In terms of research staff, as of 2022 PRG consisted of three professors (currently two), five associate professors, seven senior physicians and 15 PhD students. Women represent a minority in two groups, professors (0%) and senior physicians (29%).

The division has a research strategy and action plan for 2024-2025, setting clear goals for research and quality improvement. It aims to expand research activities, focusing on clinical strengths and needs. A newly established Department of Research and Quality Improvement—the first of its kind in Norway's prehospital services—supports quality initiatives and serves as a hub for research projects. Key research areas include cardiac arrest, patient safety in transport, prehospital medical treatment, new technology, and resource allocation, with collaboration from leading engineering researchers and a focus on patient perspectives.

The work of the administrative unit in relation to its sector can be illustrated through its work on technological innovation, development, and validation. Through collaboration with industry partners, the division evaluates and implements new technologies such as biosensors and ballisto-cardiography, and other monitoring devices for use in home monitoring, for prehospital treatment and during transport. The division expects the impact of this research to be seen in enablement of home monitoring to relieve the healthcare system, improved treatment outcomes, as well as increased patient satisfaction. Allocation of resources and destination decisions for prehospital patients is an emerging field of research, exploiting emerging technological advances such as using mobile phone cameras to smooth the transfer of information between Emergency Medical Call Centres (EMCC) and the callers. Moreover, the division contributes to national and international studies on public health and healthcare systems, sharing their expertise and data to contribute to broader scientific advancements, especially within the field of registry studies on cardiac arrest, see impact case. By engaging in such research, they aim to foster collaboration, stimulate innovation, and promote knowledge sharing within the medical community. The impacts of their research activities can be seen in the direct benefits to the healthcare sector and the "young" field of prehospital care, but also in the broader scientific community.

Based on its self-assessment, in the future, the division might take advantage of internal strengths such as clinical relevance and human resources. Specifically, clinically relevant research directly improves patient care and outcomes, with strong ties to quality improvement ensuring practical application. PRE researchers are skilled healthcare professionals with broad academic expertise and strong national and international networks in prehospital care and emergency medicine. This leads to numerous invitations to congresses, aiding the dissemination of findings to the scientific community, policymakers, and the public. Moreover, the administrative unit might also take advantage of external opportunities such as quality improvement initiatives due to the high interest in development of sustainable healthcare by implementing research findings into clinical practice. The division may also be impacted by internal weaknesses such as the young research culture which struggles with recognition and integration within the broader clinical environment, leading to a lack of support and understanding for the role and importance of research.

Overall evaluation

The overall assessment of the evaluation committee, considering the Terms of Reference provided by the administrative unit, that the work undertaken by PRE has strong institutional, sectorial and societal relevance as evidenced through its focus on improving systems to drive improvements in patient's outcomes. This is clearly articulated through the excellent impact case studies submitted.

Despite research in the pre-hospital environment being in its infancy, Norway in general and specifically PRE have a strong reputation, particularly in cardiac arrest research. This is evidenced through their publication profile and hosting of national infrastructure such as the cardiac arrest and defibrillator registries.

Resources available to the administrative unit are small and compounded by limited grant income over the assessment period. The lack of resources has constrained efforts to improve gender balance, particularly at senior levels within the unit. Furthermore, the limited resources are spread over several thematic areas leading to conflict between research and clinical priorities. Consideration should be given to whether this is the optimal approach or whether the strategic ambition is better delivered through focusing resources and future investment in 1-2 areas of strength.

The goals set out in PRE's research strategy and action plan appear limited in ambition relative to their potential and institutional goals. Key areas to pursue in the years ahead include evolving the strategic focus, playing a greater role in national and international leadership and collaboration and the pursuit of a small number of large programme level grants. Interdisciplinary research with data scientists would enable the group to take their existing expertise in technology development and data integration to the next level.

Recommendations

- Focus on 1 or 2 areas to achieve critical mass. The research group evaluation identified international eminence of the groups work in cardiac arrest. This should be considered a priority for investment and growth.
- Increase external funding. Research funding will be the major barrier to realising the administrative unit's ambition over the next period. Collective focus on 1-2 substantive bids may yield better strategic returns than multiple smaller applications.
- Weigh the advantages of an increased focus on quality improvement and patient safety which aligns well with institutional and societal perspective carefully against the opportunity cost of achieving substantial external funding and publications of the highest scientific quality.
- Consider forming an external advisory board to assist the administrative unit to navigate the complexity of its partnerships and to help provide strategic focus to future growth plans, given the challenging research landscape, the involvement of multiple research partners and breadth of research activities,
- Consider the changes required to the research action plan beyond 2024-2025 to achieve the ambition of sustained growth and that will deliver internationally excellent and impactful research.
- Consider if the strategic ambitions are best served by continuing as a small administrative unit or whether their ambitions might be best served by pooling resources and combining activities with a larger administrative unit such as the Division of Emergencies and Critical Care.
- Consider prioritising relationships with those assessed as providing the greatest opportunity for growth. Developing and maintaining deep strategic relationships with multiple partners is challenging and will likely dilute the depth of engagement with partners.
- (For OUS/UiO) Consider developing a framework to support researchers to identify relevant funding opportunities, provide guidance and support to prepare high quality grant applications and develop an internal peer review process to increase competitiveness of applications.
- (For OUS/UiO) Consider defining expectations for administrative units in terms of external grant income and develop a framework to monitor performance.
- Develop a research funding strategy which targets a smaller number of large, long term strategic awards over multiple small project grants. The strategy should consider funder mix including defining ambition in relation to industry funding.
- Develop a strategy to exploit the opportunities available through national structures for health and social care research.
- Establish systems for monitoring adherence to FAIR principles similar to the monitoring that is now in place for open access publications.
- Develop plans for how the cardiac arrest and AED registry (with linkage to databases which can provide longer term outcomes) can be exploited for clinical trials and other collaborative research.
- Establish PRE as the national reference centre for out of hospital cardiac arrest and the national centre for pre-hospital care in Norway and promote to the international community. Enhance the significance and reach of PRE through the strategic development of research networks across Norway, the Nordic counties and internationally. They are already in a position of strength as their clinical operations cover one fifth (Ambulance Services) and one third (Emergency Medical

Communications Centre) of the country to lead such developments in Norway and beyond.

- Given the relatively small size of the administrative unit, explore opportunities for collaboration across hospital based medical and surgical specialities. PRE can offer expertise, insights and access to patient pathways which collectively would feed into their stated goal of achieving the best care for each patient.
- Explore collaboration with industry partners (for example for the development and testing of new devices, diagnostics and treatments) to generate research funding and promote sector growth.
- Consider developing an international strategy which sets out the ambition for collaboration, leadership and funding in the international space.
- Develop plans on how the cardiac arrest and AED registry (with linkage to databases which can provide longer term outcomes) can be exploited for clinical trials and other collaborative research.
- Explore opportunities for developing a career pathway for post-doctoral researchers with the wider institution (OUS / UIO) and charitable Foundations in order to develop the next generation of research leaders which will be critical for sustainability. Consider how the unit could support the develop early career researchers and increase their chances of obtaining start-up grants, fellowships and project funding.
- Evolve expectations for senior researchers beyond current focus on at least one application for external funding (action plan 2024-25) to embrace institutional ambitions for a focus on quality over quantity of research outputs.
- Consider maintaining oversight through registration of data assets, whether data were archived and whether requests for data sharing were received, accepted or refused.
- Given the administrative units relatively small size, consider opportunities for collaboration at institutional level with the seminar series addressing other dimensions of diversity (spirituality, cultural competence, racism).
- Review the extent to which research participants reflect the demographics (e.g. gender, age, ethnicity, disability, migrants) of the population served.
- Continue with the current strategy which has high relevance to institutional and sectorial purpose.
- Identify and exploit the opportunities for commercialisation of innovative approaches to patient care in the pre-hospital setting.

1. Strategy, resources and organisation of research

The Division of Prehospital Services (PRE) is one of 15 administrative units based at Oslo University Hospital and University of Oslo. Internationally prehospital research is in its infancy. It is a challenging area to research due the unpredictable nature of acute injury and illness, the time critical nature of interventions, variation in the level of capacity an individual patient has to consent to participate in research and transition of care on to hospital providers which makes follow-up challenging. The Division of Prehospital Services is recognised internationally for its early entry to this research area, particularly in cardiac arrest research.

1.1 Research strategy

The administrative unit focuses on 4 distinct research areas relevant to the care of patients before their arrival in hospital. It is well placed to research in pre-hospital care as they are responsible for ambulance services covering one fifth of Norway and the Emergency Medical Communications Centre which covers a third of the Norwegian population. The main fields of research include (i) cardiac arrest (ii) transfer and retrieval including patient safety and transport medicine (iii) prehospital medical treatment, new technology and biosensors including collaboration with world leading engineering researchers (iv) safe and optimal prioritization and resource allocation.

The administrative unit overarching goal for research is to achieve the best care for each patient using the most appropriate resources while maintaining preparedness for the next – and yet unknown – patient. The research strategy is described in the document “Research strategy and action plan: Division of Prehospital Services Strategic goal 7” and outlines the ambition for close alignment between clinical and research activities, collaboration within and between departments and regional and international scientific partners. There is a clear focus on service innovation and improvement to enable optimisation of patient safety and patient pathways whilst striving for a strong research culture. The administrative units research strategy aligns to the overarching institutional vision that “Our research shall generate new knowledge to the benefit of patients”. The researchers highlighted that quality improvement projects are publishable, although the evaluation panel notes it is less common such outputs, particularly single centre, are published in leading journals.

The action plan for research (2024-2025) sets out key priorities that: all clinical departments should participate in at least one research project, growth in man-years allocated for research (0.7% to 1.5%), sustain publications at current levels, 2-4 new PhD projects and 2-4 completions, exploitation of potential from electronic patient records and that all senior researchers participate in one application for external funding.

Despite its international reach, the administrative unit is very small. This core group has built links with researchers at neighbouring institutions and collaborates closely with the Division of Emergencies and Critical Care.

The committee's evaluation

In undertaking this evaluation, the committee referred to the terms of reference, noting the request for a qualitative assessment of strategic targets and the extent to which PRE can achieve its research and societal targets.

The committee considered that overall, despite is small scale and the relative youth of pre-hospital research that PRE is performing well relative to their strategic objectives. The

committee noted research strategy is primarily focused at the local / regional level with less clear ambition for activity at the national and international level. The shift in focus to quality improvement research aligns with the strategy of improving local health system and patient outcomes. The extent to which this transition will enable winning substantive national / international research grants and publications which will influence practice outside the local health system requires careful exploration.

The action plan for research aligns with the University of Oslo strategy but is limited in ambition, likely reflective of the limited resources available at their disposal and the short time horizon (2024-2025). The mechanisms through which the administrative unit could leverage additional institution support should be explored.

To achieve and sustain international excellence in the field requires building a critical mass of researchers in a particular area. With the very limited resources available to the administrative unit, it is difficult to see how a critical mass could be achieved across the 4 designated research areas. To move to the next level will require either investment of substantial resource across the 4 areas or a strategic decision to focus on 1 or 2 areas.

The committee´s recommendations

- Focus on 1 or 2 areas to achieve critical mass. The expert panels evaluation identified international eminence of the groups work in cardiac arrest. This should be considered a priority for investment and growth.
- Increase external funding. Research funding will be the major barrier to realising the administrative unit's ambition over the next period. Collective focus on 1-2 substantive bids may yield better strategic returns than multiple smaller applications.
- Weigh the advantages of an increased focus on quality improvement and patient safety which aligns well with institutional and societal perspective carefully against the opportunity cost of achieving substantial external funding and publications of the highest scientific quality.
- Consider forming an external advisory board to assist the administrative unit to navigate the complexity of its partnerships and to help provide strategic focus to future growth plans, given the challenging research landscape, the involvement of multiple research partners and breadth of research activities,
- Consider the changes required to the research action plan beyond 2024-2025 to achieve the ambition of sustained growth and that will deliver internationally excellent and impactful research.

1.2 Organisation of research

PRE, the administrative unit, benefits from the very close collaboration between Oslo University Hospitals and University of Oslo. It sits organisationally as one of 15 clinical divisions which form the Faculty of Medicine. The researchers have access to infrastructure such as laboratories, equipment, core facilities, biobanks, comparative medicine and other important support for research and innovation, such as biostatistics, clinical trial unit and administrative support from both OUS and UiO.

The administrative unit benefits from shared leadership positions between OUS and UiO for the roles of Head of Division and Head of Research ensuring a co-ordinated approach to clinical service delivery and research. A shared research coordinator provides administrative support for researchers in the administrative unit. The administrative unit has recently established a Department of Research and Quality Improvement to provide support

for quality improvement initiatives to provide core infrastructure support for internal and externally funded grants.

The group benefits from common activities to strengthen research quality, integrity and good practice include; regular research group meetings, journal club meetings, yearly research seminar (2 days) and yearly writing retreat (6 days). A comprehensive research mentorship programme focuses on supporting the next generation of researchers.

The committee's evaluation

The organisation of prehospital research is complex as it spans the interface between community and hospital-based care and transcends multiple care pathways. Success is dependent on building effective multidisciplinary collaborative networks involving doctors, nurses, paramedics, emergency call handlers and scientists. Despite this complex landscape, PRE has been successful in bringing together multiple partners to work as a single research group. PRE have enhanced the research environment through engaging the Department of Research and Quality Improvement and the Air Ambulance Department (the main employers) with partners from the Norwegian Air Ambulance Foundation, Oslo Metropolitan University and Norwegian University of Science and Technology.

The committee´s recommendations

- Consider if the strategic ambitions are best served by continuing as a small administrative unit or whether their ambitions might be best served by pooling resources and combining activities with a larger administrative unit such as the Division of Emergencies and Critical Care.
- Consider prioritising relationships with those assessed as providing the greatest opportunity for growth. Developing and maintaining deep strategic relationships with multiple partners is challenging and will likely dilute the depth of engagement with partners.

1.3 Research funding

PRE is almost solely funded through the hospital (OUS). The share of total budget dedicated to research and development in PRE was 0.5 % in 2022. This is reported as the lowest fraction of division budget for research among all the divisions at OUS. In addition to this there is direct government funding for a national advisory unit (approximately 5 MNOK per annum) and the Norwegian Cardiac Arrest Registry (2,1 MNOK per annum) and Norwegian AED Registry (1,7 MNOK).

There has been negligible success with competitive grants with PRE reporting no EU or Research Council of Norway funded projects from 2018-2022. Small project grants have been received from Foundations. In-kind support is provided through externally funded PhD studentships.

The PRE research strategy sets a low ambition for growth in research funding over the next period.

The committee's evaluation

The level of funding currently available to PRE limits the scale of future ambitions. For PRE to transition to the next level will require focus and attention on securing large external

research grants. The change in funders focus from discovery science to applied health research should help achieve this ambition.

PRE are well placed to exploit the external opportunities described in the SWOT analysis for academic and commercial funding (e.g. technology development, data integration) and to seek collaboration with other successful speciality research groups who wish to extend their applied health research across the patient pathway.

The group would benefit from identifying strategic national and international collaborations which would enable pursuit of substantive external funding.

The committee´s recommendations

- (For OUS/UiO)Consider developing a framework to support researchers to identify relevant funding opportunities, provide guidance and support to prepare high quality grant applications and develop an internal peer review process to increase competitiveness of applications.
- (For OUS/UiO) Consider defining expectations for administrative units in terms of external grant income and develop a framework to monitor performance.
- Develop a research funding strategy which targets a smaller number of large, long term strategic awards over multiple small project grants. The strategy should consider funder mix including defining ambition in relation to industry funding.

1.4 Use of infrastructures

PRE's self-assessment reports that the use of national infrastructure is limited to NorCRIN – the national infrastructure for clinical trials. No participation in international or European infrastructure is reported.

Institutional policies supporting the FAIR principles are hosted by the University of Oslo Library. These are supported by training courses provided by the University library in relation to sharing and archiving data. The institutional guidelines for data management lack any institutional or research group responsibility monitoring for adherence with FAIR principles.

The Norwegian Cardiac Arrest Registry exemplifies PRE's commitment to making data available for researchers, quality improvement and development (within regulatory and ethical frameworks). Data are made available to the media, internal hospital administration and to researchers, although the extent of data sharing is not formally monitored or reported.

The committee's evaluation

The limited use of national and absent use of European infrastructure is a missed opportunity. The Norwegian Road Map for Research Infrastructure describes several national facilities which align with the research strategy for PRE (e.g. Primary Care Research Network (PCRN) and the Health Data Programme, ICT) which warrant further investigation.

Whilst PRE are making good use of research data in accordance with FAIR principles – particularly in relation to the Norwegian Cardiac Arrest Registry institutional oversight appears limited. Maintaining public trust in the use of data is critical to receiving the publics on-going support. The lack of robust monitoring procedures for the storage and use data places PRE and OUS/UiO at risk of losing the confidence of patients and the public in the event of a data breach.

The committee´s recommendations

- Develop a strategy to exploit the opportunities available through national structures for health and social care research.
- Establish systems for monitoring adherence to FAIR principles similar to the monitoring that is now in place for open access publications.
- Develop plans for how the cardiac arrest and AED registry (with linkage to databases which can provide longer term outcomes) can be exploited for clinical trials and other collaborative research.

1.5 Collaboration

Collaboration is a golden thread which runs through the administrative unit's self-evaluation. Unconstrained by institutional relationships PRE have established successful regional collaborations bringing together multi-disciplinary teams from OUS, UiO, Oslo-Metropolitan University, Norwegian University of Science and Technology, Østfold University College and Norwegian Air Ambulance. National collaborations have been established with Universities of Stavanger and Bergen and Norwegian Cardiovascular Disease Registry, National Institute for Public Health.

There are fewer formal international collaborations relating to PhD training (Kiel Germany, Bilbao Spain) or project specific (Pavia, Italy). PRE were a member of the EU COST action research network focusing on sudden cardiac arrest prediction and resuscitation networks and also hosted an international Masterclass for Cardiac Arrest Registry Researchers. Whilst the administrative unit provides support for international collaboration this appears to be opportunistic rather than driven by strategy.

The committee's evaluation

The committee considered there was good cooperation with Norwegian hospitals and universities, government, private companies and the third sector. A major strength of PRE is their multi-professional collaborations bringing together medical doctors, nurses, paramedics and methodologists across research projects. PRE also has strong collaborations with patients and the public and emergency medical services playing a leading role in the national Saving Lives Together project, AED-registry and NAKOS-portalen.

The existing collaboration with the Division of Emergency and Critical Care is commended. Opportunities to extend this further through joint grant applications, support with grant writing and internal peer review should be explored.

International cooperation for cardiac arrest is commended. It is less well developed in other areas.

The committee´s recommendations

- Establish PRE as the national reference centre for cardiac arrest and the national centre for pre-hospital care in Norway and promote to the international community. Enhance the significance and reach of PRE through the strategic development of research networks across Norway, the Nordic counties and internationally. They are already in a position of strength as their clinical operations cover one fifth (Ambulance Services) and one third

(Emergency Medical Communications Centre) of the country to lead such developments in Norway and beyond.

- Given the relatively small size of the administrative unit, explore opportunities for collaboration across hospital based medical and surgical specialities. PRE can offer expertise, insights and access to patient pathways which collectively would feed into their stated goal of achieving the best care for each patient.
- Explore collaboration with industry partners (for example for the development and testing of new devices, diagnostics and treatments) to generate research funding and promote sector growth.
- Consider developing an international strategy which sets out the ambition for collaboration, leadership and funding in the international space.

1.6 Research staff

The administrative unit is very small. The self-assessment reports states that in 2024 there are only four employees with academic positions (2 adjunct professors (level II), 1 adjunct professor (administrative) and 1 associate professor. In addition, there are 7 senior physicians with PhD's (3 have assigned time for research and the remainder use internal or external funding to have temporary assignments for research projects) and several associated research group members. The NIFU RCN Research Evaluation 2023 reports that the group has grown from 8 members in 2017 to 11 in 2021 – these are all senior physicians (n=9) or PhD students (n=2). There was a single researcher / postdoc in 2017 and none in 2021. There is a single female in the research team (who is a PhD-student). here is a single female in the research team who is female.

The committee's evaluation

The administrative unit is constrained by its small size and the lack of clear pathways for transition from PhD through to senior researcher. This is not unsurprising for the sector (pre-hospital care) in which they operate, where opportunities for mid-career roles for EMS researchers are limited. The absence of a clear pathway for career progression and incumbent senior staff all being male make it difficult for the administrative unit to address gender disparities.

The committee´s recommendations

- Explore opportunities for developing a career pathway for post-doctoral researchers with the wider institution (OUS / UIO) and charitable Foundations to develop the next generation of research leaders. This will be critical for sustainability. Consider how the unit could support and develop early career researchers and increase their chances of obtaining start-up grants, fellowships and project funding.
- Evolve expectations for senior researchers beyond current focus on at least one application for external funding (action plan 2024-25) to embrace institutional ambitions for a focus on quality over quantity of research outputs.

1.7 Open Science

PRE follows the UiO strategy for open access (2022) which emphasises making publications openly accessible. There are plans to launch a national repository for scientific publications in 2024.

Training is available from the University Library in relation to sharing and archiving data. The institution is committed to the FAIR principles for data. PRE have engaged with data sharing activities through the Norwegian Cardiac Arrest registry and the Norwegian AED registry which make data available for research, quality improvement and development on reasonable request which can be requested through an on-line portal.

The committee's evaluation

PRE have made substantial progress in open access publishing seeing rates increase from 38% in 2013 to 87% in 2022.

Responsibilities for adherence with data archiving and access rest with researchers which creates a risk if there is no institutional oversight.

The committee´s recommendations

- Consider maintaining oversight through registration of data assets, whether data were archived and whether requests for data sharing were received, accepted or refused.

2. Research production, quality and integrity

Introduction

The administrative units scientific focus is on pre-hospital care. Within this broad area they identify four main fields of research (i) cardiac arrest (ii) transfer and retrieval (iii) pre-hospital medical treatment, new technology and biosensors (iv) safe and optimal prioritization and resource allocation.

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

Research integrity matters are regularly discussed between the heads of research in each administrative unit and Head of Klinmed and at the University of Oslo Research Committee and at administrative unit seminars. PRE consider research integrity as core to their activities and regularly include discussions in unit seminars and meetings. Recent discussion topics included publication ethics, co-authorship, reporting misconduct.

2.1 Research quality and integrity

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

Prehospital Research Group

In Cardiac arrest research, they are at a good international level due to the Norwegian Cardiac Arrest Registry, where they also collaborate and take a leading role. Within the other topics, research is based on regional/local data and national data. The main limitation is the few senior researchers and no full-time professor, which probably is and certainly will be a limitation in supervision capacity. Their involvement in user and patient organisations is credited. Especially the “Saving Lives Together” campaign has had and has significant value in the population and contributes to improved survival after cardiac arrest. Also, the campaign significantly involves laypersons and the population.

3. Diversity and equality

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

The focus of the described activities relates to addressing the gender imbalance. Specific interventions include the institutional level postdoctoral programmes for female researchers.

The committee's evaluation

The administrative unit is small and has seen little growth or turnover in senior staff during the period of assessment. This has limited opportunities to put policies into action to address gender disparity amongst the senior leadership team.

There was less evidence of addressing other aspects of diversity (ethnicity, age, disability, ethnicity, religion, sexual orientation or other personal characteristics being less prominent in the self-assessment).

The committee´s recommendations

- Given the administrative units relatively small size, consider opportunities for collaboration at institutional level with the seminar series addressing other dimensions of diversity (spirituality, cultural competence, racism).
- Review the extent to which research participants reflect the demographics (e.g. gender, age, ethnicity, disability, migrants) of the population served.

4. Relevance to institutional and sectorial purposes

The administrative unit has a strong focus on improving outcomes for patients in the prehospital setting. Using applied health research, clinical trials and medical simulation research methodologies enables their research to be readily accessible to clinicians, patients and the public. Exemplars of their relevance to institutional and sectorial purposes includes evaluation of new technologies including biosensors and monitoring devices to enable remote monitoring, building a database of automated external defibrillator locations for use in an emergency and a patient facing resource to provide guidance for acute illness, cardiac arrest or major trauma.

Aligned with the unit's multidisciplinary approach to conducting research, the researchers undertake formal education roles in medical and paramedical student training programmes as well as post graduate training for doctors, nurses and paramedics. Opportunities are sought to integrate the units research into teaching when possible. The unit makes good use of digitally enhanced learning to reach beyond local audiences. This has enabled their reach to extend outside of healthcare to Police, Fire, Rescue and non-government organisations and charities and directly to members of the public.

Opportunities for students on relevant educational programmes to become involved in research activities at the administrative unit are provided through masters, PhD and medical students placements. Given the units relatively small size they have done well to provide opportunities for 20 medical students over the last 10 years. The collaboration with Norwegian University of Science and Technology where the unit provides datasets and research supervision presumably occurs by the host institution could be a model to grow opportunities for student research without overburdening the limited academic staff available within the unit.

The committee's evaluation

The current strategy has high relevance to institutional and sectorial purpose.

The committee´s recommendations

- Continue with the current strategy which has high relevance to institutional and sectorial purpose.

5. Relevance to society

The administrative unit's ethos of providing "the best care for each patient using the most appropriate resources while maintaining preparedness for the next – and yet unknown" exemplifies the integration of evidence based practice and research to mitigate the ever increasing patient demand for urgent and emergency healthcare in Norway and beyond. The promotion of access to health registry data through the cardiac arrest registry provides a unique opportunity for system wide planning and research. The self-assessment highlights their contribution to sustainable healthcare, public health challenges (mental health) and aspirations to integrate research into clinical services and UN Sustainable Development Goals 3 (Good Health and Well-being) and 8 (Decent Work and Economic Growth).

The committee's evaluation

The societal relevance of the administrative unit's activities is high as demonstrated through the clear focus on optimising the health system to improve the outcomes for individual patients. The administrative unit focus is aligned with the key priorities for the Norwegian Long-term plan for research and higher education and societal challenges more widely within the health context.

The administrative unit has access to significant support for innovation and commercialisation through one of Norway's largest technology transfer officers Inven2 AS and through internal support of UiO Growth House. However these activities form a small proportion of the research activity undertaken. Given the rich clinical environment in which the administrative unit is situated, the unit's ethos of undertaking research for the benefits of patients, greater consideration should be given to the capitalising on commercialising the innovative work being undertaken. Through the incentive share system this would benefit the researchers as well as generating funds for the administrative unit which could be ringfenced for future research.

The committee´s recommendations

- Identify and exploit the opportunities for commercialisation of innovative approaches to patient care in the pre-hospital setting.

Comments on impact case 1: Development and testing of a naloxone nasal spray for opioid overdose

Deaths from opiate overdoses are rising globally. Opiate overdose can be effectively treated with naloxone but until recently access to this drug was largely limited to healthcare professionals. The administrative unit, in close collaboration with the Norwegian University of Science and Technology developed and commercialised a high concentration naloxone nasal spray that can be administered by laypersons.

The underpinning research explored the pattern, severity and outcomes of opiate overdose on Oslo city centre according to location as well as assessing the doses of naloxone administered by ambulance staff. Randomised cross over trials elucidated the pharmacokinetic and pharmacodynamic properties of nasal naloxone and defined the safe drug dose for the nasal spray formulation. The clinical effectiveness was tested in a double-dummy, blinded, non-inferiority trial (comparing to standard care of intramuscular naloxone) in adults with suspected opiate overdose. Whilst the nasal route was less effective than

intramuscular naloxone, the study confirmed proof of concept, paving the way for commercialising of the product by DNE Pharma.
The nasal morphine drug is now licenced in 12 European. Its use is recommended in Norwegian health policy and commands 80% of market share in Scandinavia. Whilst quantitative data were not available on usage, there is little doubt the drug will have saved lives, providing strong evidence of relevance to society.

Comments on impact case 2: The Norwegian Cardiac Arrest Registry as impact of cardiac arrest research and as prerequisite for further research and improvement

The administrative unit have been studying cardiac arrest for over 4 decades and now host the Norwegian cardiac arrest registry. Over 3000 people a year receive resuscitation attempts from ambulance staff each year in Norway with around 400 lives being saved annually. Norway is regarded internationally as a centre of excellence for cardiac arrest research and for the effectiveness of their emergency response to cardiac arrest.

The underpinning research has described the impact of cardiac arrest in Norway through the cardiac arrest registry, explored the effectiveness of advanced life support treatments and described how training call handlers in the emergency control centre can improve cardiac arrest recognition.

The research has informed international cardiac arrest treatment guidelines providing the opportunity for international reach and impact of their work. Within Norway they built an automated external defibrillator (AED) registry which allows laypersons time critical access to lifesaving defibrillators. Evidence derived from the registry shows a small but important increase in AED use between 2017-2022.

Appendices

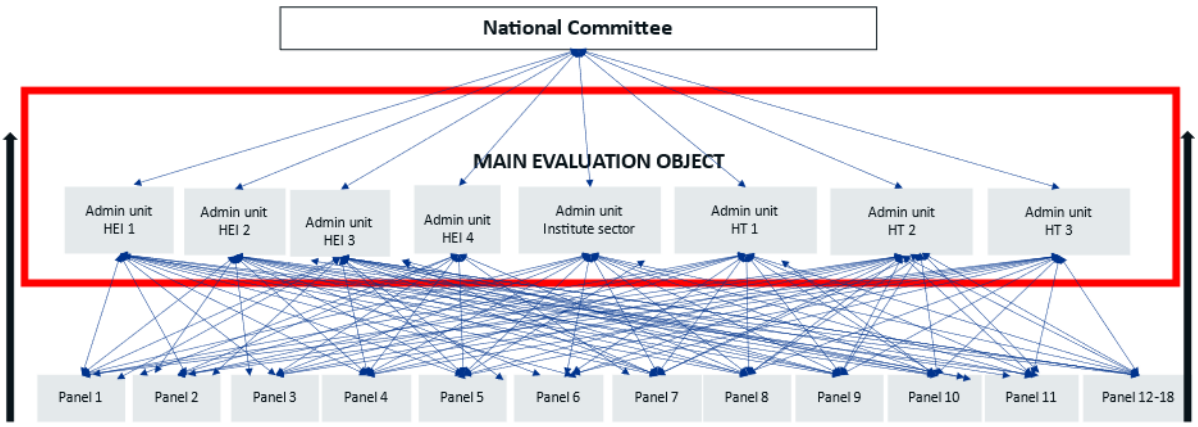
Evaluation of Medicine and health 2023-2024

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

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

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

Organisation of evaluation of medicine and health 2023-2024



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

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

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

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

Forskningsrådet

Se vedlagte adresseliste

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

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

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

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

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

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

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

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

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

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

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

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

Administrative enheter (hovedevalueringsobjektet i evalueringen) – skjema 1

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

Forskergrupper – skjema 2

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

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

Invitasjon til å foreslå eksperter – skjema 3

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

Obs. Det er to faner i regnearket:

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

Utfylte skjemaer (3 stk):

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

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

Tilpasning av mandat – frist 30. september 2023

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

Forskningsrådet

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

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

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

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

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

Med vennlig hilsen
Norges forskningsråd

Ole Johan Borge	Hilde G. Nielsen
avdelingsdirektør	spesialrådgiver
Helse	Helse

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

Kopi
Helse- og omsorgsdepartementet
Kunnskapsdepartementet

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

The Research Council of Norway

Evaluation of life sciences in Norway 2022-2023

LIVSEVAL protocol version 1.0

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

The Research Council of Norway
Visiting address: Drammensveien 288
P.O. Box 564
NO-1327 Lysaker

Telephone: +47 22 03 70 00
Telefax: +47 22 03 70 01
post@rcn.no
www.rcn.no

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

Oslo, 5 April 2022

ISBN 978-82-12-Klikk her for å fylle ut (xxxxx-x). (pdf)

1 Introduction

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

1.1 Evaluation units

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

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

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

1.2 Minimum requirements for research groups

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

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

1.3 The evaluation in a nutshell

The assessment concerns:

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

The Research Council of Norway (RCN) will:

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

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

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

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

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

1.4 Target groups

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

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

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

2 Assessment criteria

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

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

2.1 Strategy, resources and organisation

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

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

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

2.2 Research production, quality and integrity

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

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

2.3 Diversity and equality

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

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

2.4 Relevance to institutional and sectoral purposes

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

Higher Education Institutions

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

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

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

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

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

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

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

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

Research institutes (the institute sector)

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

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

The institutes should:

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

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

The hospital sector

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

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

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

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

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

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

2.5 Relevance to society

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

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

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

3 Evaluation process and organisation

The RCN will organise the assessment process as follows:

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

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

3.1 Division of tasks between the committee and panel levels

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

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

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

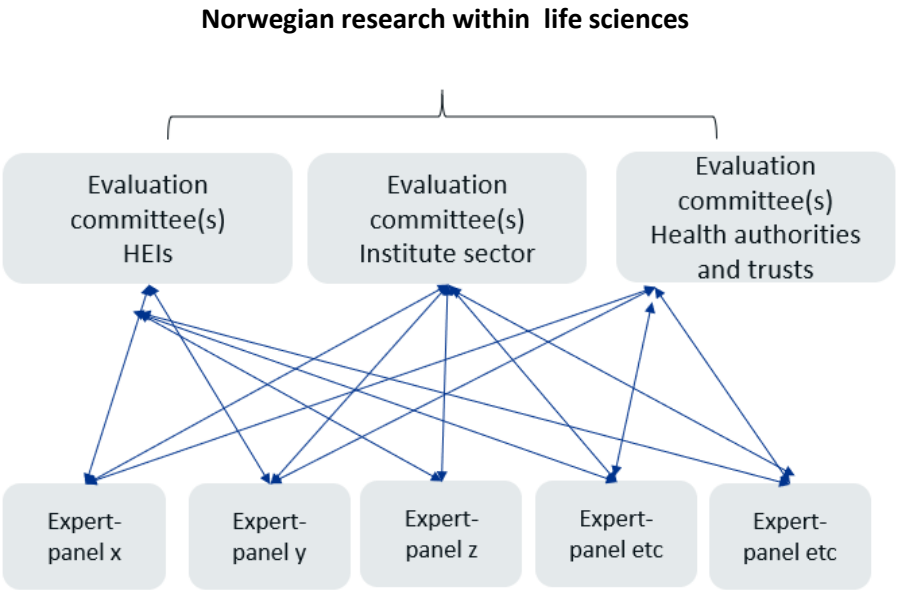


Figure 1. Evaluation committees and expert panels

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

3.2 Accuracy of factual information

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

3.3 National level report

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

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

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

Appendix A: Terms of References (ToR)

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

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

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

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

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

1. …
2. …
3. …
4. …

…

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

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

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

The documents will include the following:

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

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

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

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

Appendix B: Data sources

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

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

National registers

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

Self-assessments

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

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

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

Table 1. Types of evaluation data per criterion

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

Evaluation of Medicine and Health (EVALMEDHELSE) 2023-2024

Self- assessment for administrative units

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

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

Content

Introduction

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

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

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

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

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

Thank you!

Guidelines for completing the self-assessment

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

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

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

1.Strategy, resources and organisation

1.1 Research strategy

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

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

Table 1. Administrative unit`s strategies

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

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

1.2 Organisation of research

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

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

1.3 Research staff

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

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

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

Table 2. Research staff

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

1.4 Researcher careers opportunities

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

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

c) Describe research mobility options.

1.5 Research funding

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

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

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

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

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

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

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

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

1.6 Collaboration

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

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

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

National collaborations

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

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

International collaborations

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

Impacts and relevance of the collaboration	

1.7 Open science policies

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

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

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

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

1.8 SWOT analysis for administrative units

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

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

2. Research production, quality and integrity

2.1 Research quality and integrity

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

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

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

2.2 Research infrastructures

a) Participation in national infrastructure

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

Table 5. Participation in national infrastructure

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

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

b) Participation in international infrastructures

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

Table 6. Participation in international infrastructure

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

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

c) Participation in European (ESFRI) infrastructures

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

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

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

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

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

3. Diversity and equality

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

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

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

4. Relevance to institutional and sectorial purposes

4.1 Sector specific impact

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

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

4.2 Research innovation and commercialisation

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

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

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

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

No.	Name	Valid period	Link
1			

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

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

4.3 Higher education institutions

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

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

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

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

4.4 Research institutes

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

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

4.5 Health trusts

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

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

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

5. Relevance to society

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

5.1 Impact cases

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

Impact case guidelines

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

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

Timeframes

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

Page limit

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

Maximum number of cases permitted per administrative unit

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

Naming and numbering of cases

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

Publication of cases

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

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

Please write the text here

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

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

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

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

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

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

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

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

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

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

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

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

Institution	Administrative unit	Name of research group	Expert panel
Oslo University Hospital and University of Oslo	Division of Prehospital Services	Prehospital Research Group (PRG)	Panel 3b-1

Scales for research group assessment

Use whole integers only – no fractions!

Organisational dimension

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

Quality dimension

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

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

Forskningsrådet

Norges forskningsråd
Besøksadresse: Drammensveien 288
Postboks 564
1327 Lysaker

Telefon: 22 03 70 00
Telefaks: 22 03 70 01

post@forskningsradet.no
www.forskningsradet.no

Publikasjonen kan lastes ned fra
www.forskningsradet.no/publikasjoner

Design: [design]
Foto/ill. omslagsside: [fotokreditt]

ISBN 978-82-12-04069-4 (pdf)