Forskningsrådet

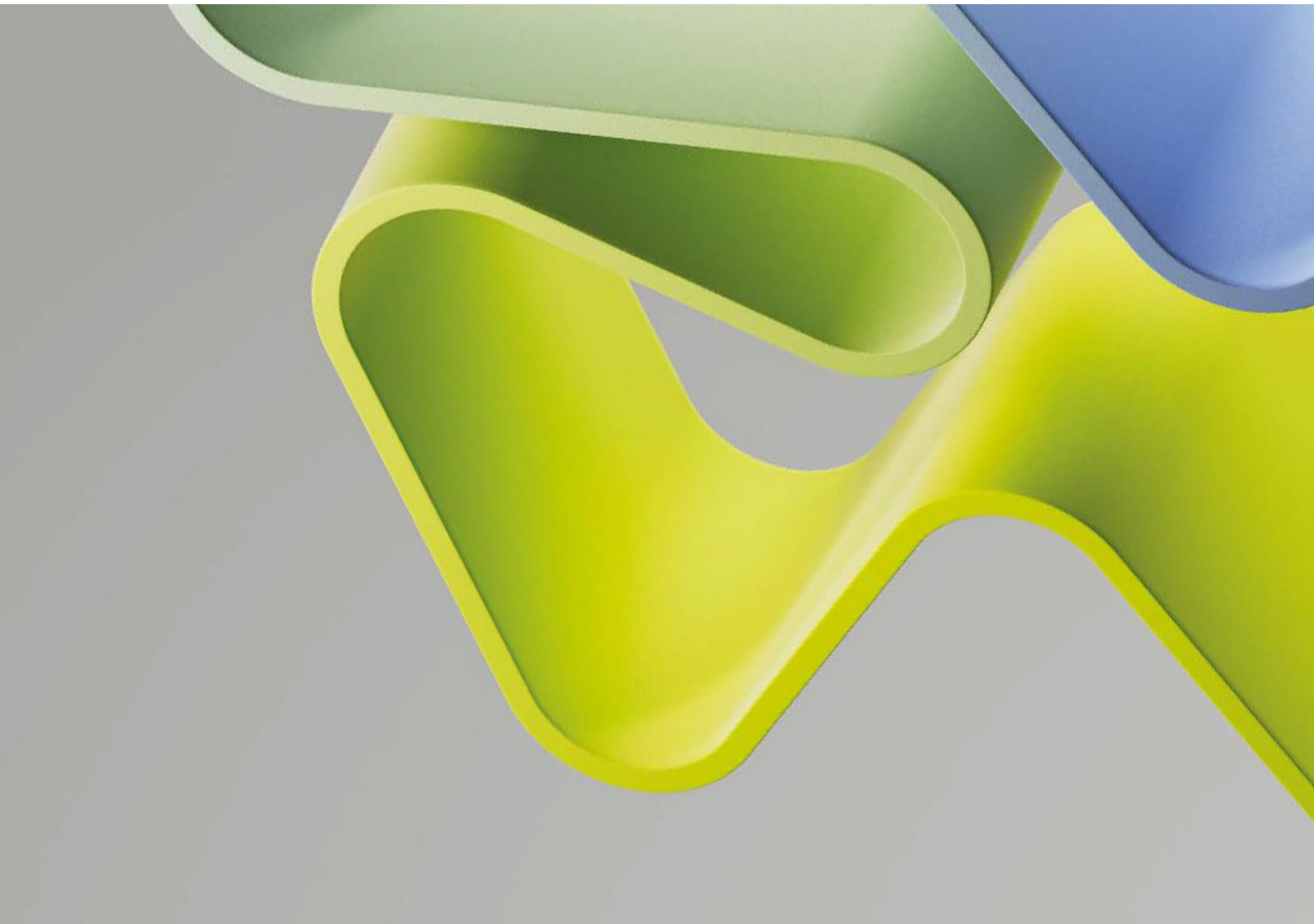
Evaluation of Life Sciences 2022-2024

Evaluation of medicine and health 2023-2024

Evaluation report

ADMINISTRATIVE UNIT: Haukeland University Hospital
INSTITUTION: Haukeland University Hospital

December 2024



Contents

STATEMENT FROM EVALUATION HEALTH TRUSTS 3 4

PROFILE OF THE ADMINISTRATIVE UNIT 5

OVERALL EVALUATION 7

RECOMMENDATIONS 8

1. STRATEGY, RESOURCES AND ORGANISATION OF RESEARCH 9

1.1 Research strategy 9

1.2 Organisation of research 11

1.3 Research funding 13

1.4 Use of infrastructures 14

1.5 Collaboration 15

1.6 Research staff 16

1.7 Open Science 18

2. RESEARCH PRODUCTION, QUALITY AND INTEGRITY 19

2.1 Research quality and integrity 19

3. DIVERSITY AND EQUALITY 22

4. RELEVANCE TO INSTITUTIONAL AND SECTORIAL PURPOSES 23

4.1 Health trusts 24

5. RELEVANCE TO SOCIETY 25

APPENDICES 30

Statement from Evaluation Health Trusts 3

This report is from Evaluation Committee Hospital Trust 3 which evaluated the following administrative units representing the hospital trust in the Evaluation of medicine and health 2023-2024:

- Akershus University Hospital, Akershus University Hospital (AHUS)
- Haukeland University Hospital, Haukeland University Hospital
- Division of Laboratory Medicine, Oslo University Hospital and University of Oslo
- Division of Medicine, Oslo University Hospital and University of Oslo
- Division of Radiology and nuclear medicine, Oslo University Hospital and University of Oslo
- Division of Surgery, Inflammatory Diseases and Transplantation, Oslo University Hospital and University of Oslo
- Division of Technology and Innovation, Oslo University Hospital and University of Oslo
- St. Olavs University Hospital, St. Olavs University Hospital
- Stavanger University Hospital, Stavanger University Hospital (SUH)

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 Hospital Trust 3. All members of the committee have agreed with the assessments, conclusions and recommendations presented here.

Evaluation committee Hospital Trust 3 consisted of the following members:

Professor Jørgen Frøkiær (Chair)
Aarhus University

Professor Geoff Bellingan
University College London Hospitals

Associate Professor Dirk Bender
Aarhus University

Professor Tomas Jernberg
Danderyd Hospital

Associate Professor Tuomo Meretoja
Helsinki University Hospital

Professor Shakila Thangaratinam
University of Liverpool

Professor Marie Wahren-Herlenius
Karolinska Institute Karolinska Institutet

Veerle Bastiaanssen, Technopolis Group, was the committee secretary.

Oslo, December 2024

Profile of the administrative unit

Haukeland University Hospital (HUH) is the second-largest hospital in Norway, one of six university hospitals and the regional hospital for Western Norway. The hospital's investment in medical and health-related research and innovation is extensive. As a general clinical hospital, many research staff are full-time clinicians who perform research part-time. Research can be found ranging from specialized research environments and research groups to research and innovation at a very clinical level as part of daily working in other teams. In principle research activity can be seen in all clinical departments. Over 1200 staff members have research as part of their position, and around 80 staff members are reported as full-time researchers. More than half of these are employed in temporary research positions (mainly PhD students and postdoctoral fellows). Importantly, most of them are not temporary staff members, even if their research position is temporary, as most of them have been granted leave from their permanent, clinical work to dedicate themselves to research for a period of time. This is part of the hospital's strategy to invest in the competence of staff. Many members of the clinical/scientific units at HUH have a part time affiliation (20-50 %, totalling 100-120 % positions) with one of the local higher education institutions (HEIs). Most often they are affiliated with The University of Bergen (UiB), where the position is split between research and education activities. Other staff members have their main position at the HEI and a smaller position at HUH. This not only increases their time for research, but also ties the hospital and HE institutions closer together and encourages translational and transdisciplinary research groups across the institutions.

There are a number of research groups including Cardiac markers, Oncology, Endocrine Medicine, Bergen Respiratory Group, Research group for infection and microbiology, Bergen MS Research Group, DECODE- PD, Renal Research Group, Dept Radiology, Dept Gynaecology and the Division of Psychiatry and Dept of Addiction Medicine listed for HUH while other research groups are listed as part of UiB including University of Bergen's, Department of Biomedicine, Department of Clinical Dentistry, Department of Clinical Medicine, Department of Clinical Science, Department of Global Public Health and Primary Care University of Bergen, Faculty of Psychology

HUH aims for research and innovation at the hospital to be clinically oriented and contribute to providing patients with outstanding and safe healthcare services. The concept of the Clinical Trials Hospital is a crucial initiative to integrate research and innovation into patient care throughout the entire hospital, and thereby to fulfil the goals in the national strategy for clinical trials that was adopted in 2021. The Clinical Trial Units (CTU) at HUH have broad experience and advanced facilities for early clinical trials for both adults and children, and a high-quality laboratory facility for handling of chemical and biological materials including living cells. The hospital has developed competence plans for research that are mandatory to complete.

The strategic plan for research and innovation at HUH described in their Plan for research and innovation 2023-2026, adopted in March 2023. The plan aims to concretize the goals outlined in the hospital's Development Plan 2022-2035 and has five focus areas for research and innovation. The Director of the hospital oversees communication channels within the hospital especially with the leaders of the 28 departments in the hospital. There are also monthly meetings with broader leadership of the departments in an open presentation and discussion of status and progress to maximise synergy and prioritise tasks within the hospital.

Fortnightly HUH runs an open meeting in the main auditorium and online presenting new scientific results as well as other results and news from the departments in a meeting

directed towards all staff members. HUH works systematically to disseminate our research and development to patients and public through the media and via events. One important way of updating the general public on relevant research and development at HUH is the participation in the Norwegian National Science Week, hosted by RCN. The administrative unit publishes well with over 850 annual publications [second largest in Norway] and good open access representation in this.

Overall evaluation

This evaluation was carried out in line with the Terms of Reference laid out by Haukeland University Hospital and the Faculty of Medicine, Bergen University (BiU).

Overall, the committee were impressed by the work and organisation of the Haukeland University Hospital (HUH) Administrative Unit. The committee noted however that the way HUH and BiU split which areas they presented, made aspects of the evaluation process confusing and it would be important to look at this in the future as it appeared that the two parties were further apart than we believe they are in reality. The hospital and university should also more formally describe their common health goals and their joint strategic aims.

The HUH administrative unit had set good local and regional strategic goals and have invested extensively in health research and innovation. They are also clearly focused on improving the outcomes for patients but also for staff and families through research and education. The unit has some excellent research groups and focused support of some of these may propel them into successfully gaining EU funding to the benefit of the whole institution.

The committee were impressed on how engaged the leadership teams seem to be between the hospital and university on local collaborations despite some comments heard in the evaluation that “we are not fully integrated” and how disparate the responses make this look.

The HUH Administrative unit should also be complimented on the range of support systems in place to help research staff and keep research integrated into the clinical arena, though the committee felt it important the leadership team guard against over-reliance on too many shorter term research roles especially when trying to build a strong research group. With the breadth of 28 clinical teams there will be an ongoing pressure to recruit, train, mentor and develop new leaders but the committee felt this had been working well so far.

Recommendations

The committee recommends that steps continue to be taken to ensure that the hospital and the university more formally are able to describe their common health goals and the joint strategic aims that they need to realise these.

The committee believe that the way HUH and Bergen University split which areas they presented made aspects of the evaluation process confusing and it would be important to look at this in the future as it appeared that the two parties were further apart than we believe they are in reality. This could need discussions with the RCN to ensure common alignment.

The committee recommends that the hospital and the university jointly ensure they have a longer-term view for infrastructure so they can continue to support the research and innovation plans

The committee recommends that the institutions ensure that they are clear if there are bottlenecks to the support needed by the research groups so they can help in the resolution of these.

Allied with the above recommendation, the committee recommends that, where possible, funding from industry and other sources should be improved. This can include the leadership teams working with the research groups to identify opportunities for increased industrial interactions and funding avenues.

The committee recommends that the research groups should work with patients/patient groups and family groups to increase the co-creation of research plans and protocols.

The committee asks if there would be benefit from a focus on some of the larger more successful research groups to take the next steps to gaining large EU funding, thus helping secure the overall funding base of the HUH research. This could also help guard against an over-reliance on too many short term research roles by building stronger resilient research groups.

1. Strategy, resources and organisation of research

1.1 Research strategy

Their self-assessment notes Haukeland University Hospital (HUH), the second-largest hospital in Norway, invests extensively in health research and innovation with several cutting-edge research environments functioning at international level. They believe it is also important to have breadth in research. Research is one of the 4 main tasks required by law at HUH, along with patient care, education of staff, and training of patients and families. They aim for research and innovation to improve healthcare services for the population, to be clinically oriented, and their concept is of a Clinical Trials Hospital to integrate research into patient care throughout.

They adopted the national strategy for clinical trials in 2021. Their experienced Clinical Trial Units (CTU) have advanced facilities and a high-quality laboratory facility. The hospital has mandatory competence plans for research. The most important strategic document for research and innovation is the HUH Plan for research and innovation 2023-2026, adopted March 2023. This formalises the goals outlined in the hospital's Development Plan 2022-2035 and has five focus areas for research and innovation: These areas are the ToR they ask the evaluation committee to focus on:

1) Organization of Research
2) Clinical Trials Hospital
3) More and Better Use of Health Data and Biobanks
4) Innovation
5) Collaboration and Infrastructure for Research and Innovation

HUH is committed to the Regional Strategy for research and innovation (2024-2030), a collaborative strategy between the institutions in The Regional Liaison Committee for Research and Innovation in Western Norway Health Authority Area. Many HUH research groups are common or collaborating closely, and the goal is for closer collaboration throughout the western health region.

The HUH institutional strategic research program has five categories:

1) Co-funding of EU and RCN grants
2) Secure funding to support establishment of larger research centres, e.g. Mohn Centres, K.G. Jebsen Centres, Centres of Excellence, Centres for Clinical Treatment Research etc.
3) Incentive programme for top funding for research positions
4) Program for smaller measures and profiling of research
5) Study nurse qualification program

The committee's evaluation

It was not clear to the committee why and how the returns in this review were made as not all groups appeared [28 directors at HUH we believe] and the overall mapping of the research groups and which made returns and why, wasn't obvious. When asked at the interview the leadership team responded that this illustrates that “we are two parts in this work and are not fully integrated. So, when deciding on how to approach this with HUH and the university we decided to do the work separately which meant we didn’t cover everything. We might do it differently next time”. Importantly they also noted that, “leading professors and clinicians in the majority, work in both places, and report in both. This is despite the fact it is in reality a very integrated system”. The hospital has a flat structure

with 4 central staff organisations and then all the clinics. The department of research does not decide anything about the clinics. Despite this the committee were impressed by the work and organization of the Haukeland University Hospital (HUH) administrative unit it appeared that the hospital and the university were in reality working more closely than the story told in the review. If the hospital and university could more formally a describe their common health goals and their joint strategic aims and could work with the RCN to agree a more helpful split in the future this would probably help.

Equally the committee noted that in the self-assessment there was a good description of both HUH's research strategy and the Regional Strategy for research and innovation for institutions in the Regional Liaison Committee for Research and Innovation in Western Norway Health Authority Area. What wasn't clear was, were these strategies really working?

Overall, there was a good summary of the scope of HUH – size and approach and ToR. The Plan for Research and Innovation 2023 – 2026 was well written with (i) Organisation of Research (ii) Clinical Trials Hospital (iii) Enhanced and better use of Health Data and Biobanks (iv) Innovation (v) Collaboration and Infrastructure. These are all sensible and this was patient focused with early trails prioritised. They described a balance between university/HUH leads and Pharma which sounds pragmatic though not sure if this works. They also describe that research responsibility in units lies within the leadership of level 2 unit/project leader and not clear if this works. The document notes a number of things that need to be achieved including:

- All clinical level 2 units should integrate trials into research plan
- Units should have access to study nurses to support clinical trials…
- HUH should ensure research competence plans tailored & accessible
- Units should allocate plans to relevant leaders…
- Private trial clinical should be used to build competence and capacity
- Units need SOPs so hospital research frameworks are implemented.
- The hospital should establish a network for leadership support.

These are all laudable and sound – though the document does not give evidence this is being achieved across the field. This will in part be because of the way reporting has been broken up and only part seen by this committee.

They make good lot of Clinical Trials Unit for Adult and Children which sounds exciting and clearly conducting significant research, but as the committee did not see metrics on how well and efficiently this is utilised, for example trial set up times or occupancy etc. It is not clear how well this is working.

Overall, the leadership teams' strategic approach was sound "we need to work smarter; to use technology and need to innovate and educate the patients so they can take care of themselves. We need to solve problems that come with an aging society, and this is a goal for the hospital and is a shared responsibility with the university. We want to do research that has an impact on the patient care."

The committee´s recommendations

As noted in the overall review, the committee recommends that steps continue to be taken to ensure the hospital and university more formally are able to describe their common health goals and the joint strategic aims they need to realise these. It remains unclear if the overall research strategies for HUH and for the Regional Strategy for research and innovation for institutions in the Regional Liaison Committee for Research and Innovation in Western Norway Health Authority Area are working, as opposed to simply effective

individual or combined clinics and academics driving research and innovation. This committee did not have sight of the universities strategy(s) or assessment of impact.

1.2 Organisation of research

The self-assessment notes HUH operates a flat management structure with 28 directors. Clinics and departments report to the Hospital CEO. The Plan for research and innovation states all clinical units at the hospital are responsible for defining goals for their research, and to prioritise what is achievable with available resources. Responsibility lies with the leadership of the level 2 unit where the project leader is employed. Department of Research and Development (R&D) ensures governing documents are accessible, and R&D supports, providing a range of services including grant applications, study design and protocol help, budgeting, collaboration agreements, contract negotiations, approval processes, and clinical trial monitoring. The project leader is responsible for conducting the research and follow-up of study personnel. Most research is conducted within the clinical departments but HUH also offers an experienced Clinical Trials Unit (CTU), with one facility for children and one for adults. The CTU prioritises early phase human pharmacotherapy studies and conducts trials for external clients, esp. pharmaceutical industry. CTU is affiliated to European clinical infrastructure networks (ECRIN, EATRIS) and national networks (i.e. NorCRIN, NorTrials).

HUH Department of R&D has a dedicated section for research and innovation, with a secretariat and support research in clinical trial units and a range of regional and national support functions. Other sections (Competence Development, eHealth, Health Service Development and Patient Safety) also have research related tasks. As the largest hospital in Western Norway, HUH performs several regional services related to research administration for the four other hospitals, an advantage as it enhances collaboration. HUH believes a clear synergy is that, as their research is mainly carried out on data from their own patients this contributes to relevant development of medical knowledge. Also, as multiple departments and many staff roles within the hospital are involved, this ensures knowledge developed through research is used in patient care and in training staff and families.

HUH’s Section for Competence Development focuses on the planning, implementation, and evaluation of competence measures in hospital and university departments. There is also regional collaboration with higher education institutions. Several patient and user organisations formed a user involvement committee, with representatives in hospital boards and committees. Regular meetings with the 28 department leaders discuss strategic headlines, including prioritisation of research/innovation, challenges coming up and how to run safe healthcare services providing of good quality within the given resources. Monthly the director engages broader department leadership in an open meeting to maximise synergy and prioritise tasks within the hospital. HUH runs regular open meetings presenting new scientific results directed towards all staff and works to disseminate research to patients and public through media and events. Participation in the Norwegian National Science Week, hosted by RCN also helps, HUH has participated since the start, and many researchers / departments have presented their research and novel treatments.

The committee's evaluation

Clearly a lot of research and innovation is on-going and clearly also there is good structure and organisation going into supporting this. The committee and the expert groups did not feel that the review process gave good enough overview of this. Certainly, for this Unit and its counterpart University. For example, the documentation describes a balance between university and HUH in working with industry / pharmaceutical companies [this can include in

the CTUs]. This description sounds effective and pragmatic but it's not clear if this really works and if this is enhanced by the strategic approaches of the organisations. It probably is, but it is hard to determine this from the information provided. Similarly, HUH is part of the NorTrials initiative, responsible for the NorTrials Brain centre and its aim is to increase clinical trials in brain health. Again, the committee was not clear if this was part of the return and if this was working [when looking at the question “synergies between different purposes of the administrative unit”]?

The committee were impressed at many of the points made by the leadership team in the interview, especially that over 5% of patients are participating in clinical trials. “That is a national goal, we’ve had to work very hard to reach this and are very proud of this”. They went on to state “Our main goal is to have more clinical trials and to maybe do it digitally and prioritise the right treatments for the right people to not over treat patients.” Again, very good aims and if the track record above is correct then this too may be achieved. It was not clear if patients were engaged enough in co-creating research plans and protocols.

The leadership team also noted that infrastructure will need to develop including digital and the committee agreed that this is an important observation. They also noted that the infrastructure from the university and the hospital are complementary to each other which is good and will need to remain so. This allows them to do translational research from the university. They commented that prioritisation of resources for research / innovation was mainly a joint thing, suggesting again good synergy between the hospital and university; more than is apparent from the documentation and from some of the responses in the interviews. They noted that they only finance “what will go through in competition” as this will involve the university, the hospital, workers representatives etc.

On their research strengths the leadership team commented that they have good opportunities for funding for clinical trials, as in addition to any grants and to industry funding, they had access to public funding of clinical trials , giving examples of the opening of a cancer centre which is a cooperation between the university and the hospital, which is funded privately. They also discussed the balance between different clinical fields with surgical fields sometimes lagging in clinical trials. The change in societal approaches to working in and out of hours was also important especially with an increasing predominance of a female workforce. They were keen to look at ways to co-operate internationally for example to promote surgical research. They noted the creation of an orthopaedic warranty register to report on longer term developments as one potential example. The national quality register has really improved survival of hip replacement patients, and they have stopped using certain implants because of this real-world data.

From some of the individual groups it is clear that funding is a stress and increasing industrial links will help. It is not clear if there are any bottlenecks in processes supporting the research, for example access to the CTUs or for central support.

The committee notes the Units comments that public trust in health care, patient willingness to participate in research, linked with availability of extensive patient data sets and Norway’s use of a general personal ID number means researchers can combine data from multiple data sources to obtain knowledge about a wide range of research questions. Of note, of the 59 Norwegian health registries, 18 are based in Bergen.

The committee’s recommendations

The committee recommends that the hospital and university ensure they have joint longer-term view of infrastructure challenges that will continue to support the research / innovation agenda for these institutions.

The committee recommends that the institutions ensure they are clear if there are bottlenecks in the support needed by the research groups and that, where possible, funding from industry and other sources should be improved for the research groups and the leadership team works with research groups to identify opportunities for increased industrial interactions and funding avenues.

The committee did not see detailed information to be clear if the research teams were maximizing their research or innovation outputs from the available big data resources given that 18 of the national registries are based in Bergen.

The committee was also keen to ensure that patients are sufficiently involved in co-creating research plans and protocols.

1.3 Research funding

The self-assessment states: As a general hospital, many staff are full-time clinicians who perform research part-time. In total 1242 staff have research as part of their position, about 80 staff are reported as full-time researchers. More than half are employed in temporary research positions (PhD and postdoctoral fellows), importantly, most are not temporary staff members, only their research position is temporary, as most have been granted leave from their clinical work to dedicate themselves to research for a period. This is part of the hospital's strategy to invest in the competence of our own staff. Many staff have a part time affiliation (20-50 %) with one of the local higher education institutions, mostly with The University of Bergen (UiB) this includes senior researchers who are not physicians.

The institutional goal has been that 5% of the total budget should go to research. In 2022 663 MNOK was used for research, which equalled 4.47% of the budget. The research at HUH is increasingly funded by external sources, with a goal of 20% of the research to be externally funded. The Regional Health Authorities joint project funds KlinBeForsk, which provides important funding for national research projects. HUH has secured NOK 198 308 000 from KLINBEFORSK since inception. Their external funding sources include RCN, EU, KG Jebsen, Trond Mohn Foundation, The Norwegian Cancer Society, and others. HUH has been fortunate to receive not only competitive funding for research projects, but also larger private donations for infrastructure used in research. The main research grants come from competitive grants from the Western Norway Health

Authority (NOK 705 338 045), grants are given to a wide variety of projects including senior scientists, recruitment of young scientist as well as postdocs. there has been a steady increase in the amount of grants since 2018.

While EU funding has been low at HUH, the strategic goal is to increase this, not only by increasing the number of projects, but also by formalising HUH's role in some ongoing collaborations where the hospital has not been a formal partner.

HUH has been increasingly successful in securing RCN funding including by securing grants as coordinator for the first Centre for research driven innovation within the health sector in Norway, including research-based innovation on Mobile Mental Health (NOK 96 000 000). The first RCN Centre for Clinical Treatment Research, Neuro-SysMed, is also located at HUH (NOK 160 000 000) which has leveraged successful external grants. Too. UiB and HUH have collaborated on several larger research initiatives, an agreement between the two institutions regulates where these collaborative centres have been located, mainly based on the main position of the project leader. This means that many of these centres being located at the UiB, although the research is often carried out by joint research groups of the two institutions.

The committee's evaluation
HUH has clearly generated a broad range of funding which is very positive, and this also appears to work well between HUH and UiB [subject to some of the caveats noted earlier in being able to draw theses conclusions]. They have a good engagement of a range of staff in research and this is helpful with many PhD and post-doctoral fellows adding to the richness of this. Their regional leadership role has been successful and attracted funding.

The details on EU funding are limited and this is an area they state they need to focus on more. Similarly, their approach to industrial funding is not very explicit and given the CTUs and their work with databases and regional leadership this should be an area they can be more active and financially successful in.

The committee´s recommendations
The committee recommends that the HUH leadership team focus on their larger research groups gaining successful EU funding and if there are any specific deficits in the support that is affecting their capability in obtaining such funding

The committee recommends that the institutions ensure they are clear if there are bottlenecks in the support needed by the research groups and that, where possible, funding from industry and other sources should be improved for the research groups and the leadership team works with research groups to identify opportunities for increased industrial interactions and funding avenues.

1.4 Use of infrastructures

HUH has established several major infrastructures for R&D and it participates in national infrastructures listed in the Norwegian roadmap for research infrastructures. In addition, they have established several research infrastructures in addition to those included on the road map, including CTU's, the Mohn Cancer Research Laboratory, The Research Unit for Health Surveys, and the Molecular Imaging Centre. UiB is the main collaborating partner for HUH for research and several infrastructures and core facilities have been established in close collaboration between HUH and the Faculty of Medicine for combined research groups at the institutions. Some of the infrastructures at HUH, such as Biobank Norway, have been established in collaboration with other research institutions and are of great value for interdisciplinary research. HUH is working to establish a proton therapy centre which will be a national research infrastructure. Some of the core facilities shared between HUH and UiB are also partners in national infrastructures such as the Molecular Imaging Centre which is partner in the national infrastructures NALMIN and NORMOLIM. HUH hosts NorCRIN, which is a partnership between all the six university hospitals in Norway. Its primary objective is to strengthen and simplify collaboration in all categories of clinical research in Norway. The NorCRIN collaboration works towards more clinical trials (both researcher-initiated and industry-funded), more national and international (Nordic/EU) clinical trials as well as including more patients in the studies by creating standard operating procedures, coordinating courses, and providing support for administrative staff and researchers who conduct clinical trials. NorCRIN is also the node of the European Clinical Research Infrastructure Network (ECRIN-ERIC).

The committee's evaluation
Impressive development of research associated infrastructure for HUH, joint with HUH and UiB and regional and nationally with ongoing development [e.g. the Proton centre and their joint approach with NorCRIN and Biobank Norway for national]. This is impressive as it involves both clinical trial support [CTU's, Research Unit for Health Surveys etc.] and also

spans across to cover more basic clinical research support [Mohn Cancer Research Laboratory and the Molecular Imaging Centre etc.

These excellent facilities should help in the successful approach towards two recommendations the committee made which are that the institutions ensure that they are clear if there are bottlenecks to the support needed by the research groups so they can help in the resolution of these and also that, where possible, funding from industry and other sources should be improved. This can include the leadership teams working with the research groups to identify opportunities for increased industrial interactions and funding avenues.

Some of these investments will come with longer term funding pressures and capital replacement programs that will need a careful future planning approach, presumably jointly between the hospital and the university in many cases. With this scale of infrastructure, the committee believe this should help with increasing EU and international collaborations.

The committee´s recommendations
As noted in the overall recommendations, the committee recommends that the hospital and the university jointly ensure they have a longer-term view for infrastructure so they can continue to support the research and innovation plans.

1.5 Collaboration

The self-assessment notes the following on collaborations: Collaboration with the Faculty of Medicine at UiB is particularly important with formation of many joint research groups, areas of shared expertise and resources, often with employees in combined positions, as well as in joint projects, research centres, and infrastructure. As a university hospital situated at the same campus our collaboration encompasses research, education, and innovation.

As a large university hospital there are also collaborations across disciplines with other UiB faculties and departments, e.g., physics, bioinformatic, chemistry, psychology, biology etc. This allows us to conduct interdisciplinary research and created joint projects and centres. Two examples of such collaboration are the Mohn Medical Imaging and Visualization Centre and the Mohn Research Centre for Regenerative Medicine. These centres are examples of strategic initiatives from HUH and UiB, financed by the Trond Mohn Foundation for five years. Another example is the collaboration with UiB based out of the Infection and Microbiology research Group which successfully oversees three centres. Two of these centres, the Influenza Centre, and the National Advisory Unit for Tropical Infectious Diseases, receive permanent funding from the Norwegian Department of Health and Care Services. The Combatting Antimicrobial Resistance centre is also managed by this group. The group has published 441 high impact papers since 2012. Other HUH collaborations are highlighted in the NIFU Bibliometric Report; publications spanning from 2020 to 2022 reveal UiB as the predominant national co-authoring institution (2091 publications), followed by the University of Oslo (504), Oslo University Hospital (503), and NTNU (278).

HUH and the Western Norway University of Applied Sciences also share areas of expertise and resources, including machine learning and artificial intelligence, and the scope of collaboration is increasing. In conjunction with major regional institutions like UiB, HVL, and VID, a collaboration forum has been established to strategically addresses research and education matters, working towards common goals in health-related research for the region.

Alrek Health Cluster is another important collaboration arena, especially in research and innovation involving primary healthcare and cross-sector collaboration with municipalities.

The leadership team acknowledge that their success has been more evident in the national sphere than internationally and have ambitions to increase international collaborations. HUH is also involved in several national and international research consortiums and networks focusing on health-related research, many with external funding.

HUH has a solid base of collaborations with international partners. As an example, HUH has since 2015 participated in over 25 projects funded by the EU through different funding programmes. Many of our researchers and groups have also developed broad international networks over the years, something which shows in the proportion of publications that involve international collaborators has increased from 47,1 % in 2013 to 60,4 % in 2022. Notably, Nordic institutions such as Karolinska Institute, Uppsala University, and Aarhus University Hospital are frequent collaborators. HUH most frequently collaborated with partners in USA (1478 publications), Sweden (1394), UK (1397), and Germany (974).

The committee's evaluation
It is apparent that HUH has a strong focus on R&D and recognise this requires active and successful collaborations. They have obviously been most successful with this with their local university, UiB and within their own institution and as they note in their interview, they have a lot of shared rooms and equipment and co-operate when applying for funding from centres from private donors which suggests a real degree of mutual engagement for mutual benefit. They have a good record of other regional partnerships and some national and international successes too and these do appear to be growing.

It is obvious that collaborations with the EU and abroad are going to be important and will need continued focus. In the same vein collaborations with pharma and industry will also be important, including in the use of big data and making maximal use of the 18 registries based in Bergen. This will require active engagement and may require enhancement of their digital support. They have had good success with public funding, and this can be an advantage that they should continue to try and lever for further growth.

The leadership team clearly meets regularly with the HUH leadership and with UiB leadership, which is vital for local interactions. The committee notes that this may not extend to international collaborative approaches. In the interview, the leadership team noted they have more of a challenge with establishing international collaborations. HUH has access to a system of scholarships and many researchers have their own international networks but international cooperation does not have top level engagement at the university. They did note a central push for EU collaboration, but it did not appear that this came with much structure to how to achieve it. Overall, the committee felt the leadership teams should be congratulated on how engaged they seem to be between the hospital and university on local collaborations; which makes it surprising to hear the earlier comments that “we are not fully integrated” and how disparate the responses make this look.

The committee´s recommendations
The evaluation committee feels that both HUH and UiB need to work on how, given their infrastructures and regional and national collaborations, they can support their R&D teams to gain stronger collaborative footholds in EU and further afield.

1.6 Research staff

HUH collaborates with HEIs to allow staff to participate in PhD programs while still employed part-time or full-time at the hospital. The degree is typically funded by Regional

Health Authority PhD grants, HEIs or other external funding sources. Less commonly some are able to pursue their PhDs as part of their clinical work, funded directly by the clinic. There has been an increase from 59 PhD degrees/year in 2012 to 62 PhD degrees/year in 2022. Collaboration is with UiB in particular, but also with other HE institutions. A large number of HUH staff are affiliated with both the hospital and an HE institution. Staff with a PhD who want a research career often to apply for Regional Health Authority funding (postdoctoral or clinical researcher fellowships or short-term projects,) aimed at different stages of their career. Typically, this allows them to decide if they wish to work full-time or part-time in the field. Postdocs at HUH can participate in the Postdoc Development Programme offered by the Faculty of Medicine at the UiB which helps develop successful academic careers. HUH established a strategic research program in 2016, where staff can apply for top funding of researcher stipends, to make HUH an attractive place to work for researchers, and to aid international recruitment. This also funds a training program for experienced nurses, to qualify them as study nurses and allows them to train at the CTU. This all helps make clinical research at HUH an integrated part of everyday clinical work.

Research centres also facilitate applications to support staff in their research career and typically include a number of PhD and postdoc positions. Most medical staff at HUH work mainly with patient care, while research is a smaller part of their position. This integrated system supports the goal that patients have access to experimental treatments through clinical trials. As a part of specialist training of junior medical doctors, candidates have 2 days every month for teaching and training on their own and a formal program for all junior doctors where research protocols, methods and presenting result from clinical studies are included. Several departments at HUH have positions for junior doctors where they can use up to 50% of their work time for research and development in a 2-year period. These are often connected to the PhD program at the UiB and other HEI in the region. Senior physicians will, upon application, be given four months leave every five years for R&D while still receiving a full salary. Approximately 75 work-years are used every year for this type of leave they can apply for funding for stays abroad. Resources are allocated to research for all kinds of personnel, doctors, nurses, physiotherapists, bioengineers, technicians. Most research is funded via Western Norway Regional Health Authority and other competitive sources, or via industry as part of drug trials etc. The implementation of the Clinical Trials Hospital is expected to result in more staff becoming involved in research.

The committee's evaluation

HUH describes an impressive array of ways to integrate research staff with their heavy clinical workload and commitments. They also clearly are integrated with the UiB and other local HEIs and have mechanisms to support this. One thing they will need to guard against is over-reliance on relatively short-term roles for researchers if trying to establish a strong group. They are aware that international collaborations are going to be important and how to drive this more is important.

The interviews also discussed the importance of good leadership and, with 28 departments this will vary. They have some departments where the clinical workload and service requirements make embedding research more of a challenge and they have some smaller departments where lack of scale can make it harder to deliver on all the key fronts including education, innovation and research. Equally keeping your leadership team live, enthused, with regular new faces and new ideas and being able to shoulder the difficult balance of leading clinical, operational, research and educational portfolios in a financially constrained environment is an ongoing challenge but needs to be carefully watched and nurtured.

The way HUH describes their work with the national research support network NorCRIN in terms of facilitating research nurses to complete a national course in study nursing looks positive and effective.
Overall, the teams at HUH should be complimented on the range of support systems they have put in place to help research staff and keep research integrated into the clinical arena

The committee´s recommendations
The committee was keen that the leadership teams do not rely on too many shorter term research roles in their groups and recommend that, certainly for the larger research groups they provide some base funding to allow more sustained longer-term appointments to help build a strength in key research group.

Allied with the above recommendation the committee also recommended that HUH work with the senior leadership team and their research groups, so they identify train or recruit and mentor new leaders and leaders for the future across the breadth of the 28 clinic teams.

1.7 Open Science

HUH and UiB staff have access to the same publications and databases, via an institutional agreement. HUH researchers with university affiliation, can access publications via national agreements between HE institutions and some publishers. Researchers with external grants follow granting institutions' policies for open access publication, and often have allocated money for this. Some clinics fund OA publishing via their budgets. A fund where researchers could apply for OA funding was discussed in 2019 but not established. Open access to data is complex due to a large amount of our data being patient data protected by GDPR, but HUH follows national policies being as open as possible. From 2021, all scientific publications funded by Regional Health Authorities should be openly available. HUH has, via the Regional Liaison Committee for research, worked on coordinating the efforts related to Open Science, especially focusing on suitable electronic systems for sharing research data in a safe environment. Projects funded by regional health authority must report every year, openly available via https://forskningsprosjekter.ihelse.net/. As a research hospital, our role is also to inform and train patients, their next of kin and to the public. Our open science philosophy therefore extends to inviting patients and their families to actively participate in research and innovative processes in healthcare. HUH publications are increasingly OA moving from 29% in 2013 to 83% in 2022. Some groups, including oncology, have been proactive in sharing data sets. Similarly, we make dataset openly available whenever this does not conflict with patients' right to privacy. Ownership of data is defined by the immaterial rights agreements entered into individual projects. Legal advisers at HUH assist in setting up contracts with external partners. Electronic research data must be safely stored on the hospital's research server. The Data Management SOP outlines the responsibilities of the sponsor. NorCRIN has developed a number of templates for various needs, such as a Data management report.

The committee's evaluation
The committee was clear that HUH has robust approaches to open science and the progress in OA publications demonstrates this.

The committee´s recommendations
The evaluation committee has no further recommendations.

2. Research production, quality and integrity

Research at HUH is delivered through the 28 hospital departments and also through the close collaboration with UiB. A number of key departments have leading research groups including the Cardiac markers group, Oncology, Endocrine Medicine, Bergen Respiratory Group, Research group for infection and microbiology, Bergen MS Research Group, DECODE- PD, Renal Research Group, Dept Radiology, Dept Gynaecology and the Division of Psychiatry and Dept of Addiction Medicine. There are a number of other research groups which have been part of the UiB return including within the University of Bergen's, Department of Biomedicine, Department of Clinical Dentistry, Department of Clinical Medicine, Department of Clinical Science, Department of Global Public Health and Primary Care University of Bergen, Faculty of Psychology.

The Focus of research is broadly clinically oriented and contribute to providing patients with outstanding and safe healthcare services. As noted earlier the concept of the Clinical Trials Hospital is a crucial initiative to integrate research and innovation into patient care throughout the entire hospital, and thereby to fulfil the goals in the national strategy for clinical trials that was adopted in 2021. The Clinical Trial Units (CTU) at HUH have broad experience and advanced facilities for early clinical trials for both adults and children, and a high-quality laboratory facility for handling of chemical and biological materials including living cells. The hospital has developed competence plans for research that are mandatory to complete. The hospital and university have however also invested more extensively in research including impressive basic clinical research support [Mohn Cancer Research Laboratory and the Molecular Imaging Centre etc.

HUH has built up infrastructure and capacity over twenty years to take care of legal responsibilities and handling of patients included in clinical research. Most of the regional health authority's responsibilities regarding research quality and integrity has been delegated to HUH who have set up several high-quality systems to support this. HUH regularly revises its own research projects with the intention of finding deviations from protocol, learning and improving practices and establishing best practice. The unit has staff to provide legal and research ethical advice, medical advice, statistical advice, and services along with courses in basic medical research and good clinical practice (GCP) to the hospital's research staff and also organizes a regional centre for medical quality registers as well as a unit with experienced clinical research support staff promoting a compliant clinical research environment involving researchers, industry collaborators and patient- and public representatives. In addition, an independent team with qualifications to monitor clinical studies in the health region has been set up. HUH hosts the Norwegian Clinical Research Infrastructure Network (NorCRIN) and the Norwegian node of the European Clinical Research Infrastructure Network (ECRIN-ERIC). The research staff have on a regular basis attended courses and teaching about The Norwegian Health Research Act (2008). As a part of the implementation of Research Ethics Act in 2017 a Regional Committee for Research Integrity was formed.

2.1 Research quality and integrity

This part presents the overall evaluation of each research group that this administrative unit has registered for the evaluation. These evaluations of the research groups have been written by one of the 18 expert panels that have evaluated the registered research groups

in EVALMEDHELSE. The panels carry the sole responsibility for their evaluations. The evaluation committee is not responsible for the assessments at research group level.

Bergen Multiple Sclerosis Research Group (BMSRG)
The Bergen Multiple Sclerosis (MS) Research Group provides an outstanding environment for supporting the production of world-leading research which is comparable to the best work internationally in this area. Its strategy for achieving this is cohesive and comprehensive. The contribution to education is excellent. The group has developed an extensive network of external collaborators, both nationally and internationally, to support the mobility of staff, and the production of high-quality research. The group has played a very considerable role in terms of societal contribution through robust clinically oriented research; educational programmes for clinicians, researchers and people affected by MS; and active engagement of its members with both professional and patient organisations, and health authorities; thereby directly influencing patient care.

Bergen Respiratory Research Group (G7)
Strengths of the Bergen Respiratory Research Group are their clear strategy and appropriate benchmarks, the good funding portfolio – a good mix of public and private funding and the fact that funding has increased significantly (by 50%) over the last 5 years. The research group also has good national and international links, provides a good contribution to education and has excellent quality outputs that are nationally leading and internationally competitive. Finally, the group has played a role in national guidelines, shows clear evidence of disciplined leadership and is a leading respiratory group nationally. Weaknesses relate to the fact that there is no statement on whether the benchmarks are reached, over half of the income is from the host institutions and there is no mention of public and patient outreach in the self- assessment. There is also a lack of evidence of patient involvement in research design and conduct (co-creation). Staff and PhD students have high clinical loads which restricts research activity, and the research group is geographically spread.

Cardiac Markers
Considering this group has only formally existed for 3 years, there has been good initial activity. The quality of outputs is good and there is a solid basis and good potential to increase the research activity to a much higher level. The group has contributed to societal impact with

DECODE-PD
DECODE produces very high-quality work. There are some organisational concerns related to centralised leadership which may limit the leadership opportunities for senior researchers. So too does the reliance on non-permanent staff positions potentially limit the work undertaken. There is no explicit report of mentorship schemes to support early and mid-career researchers. Similarly, there appears limited involvement in users throughout the research process. The group makes a positive contribution to education, supervising a growing number of students across all levels of education.

Endocrine Medicine (Endo)
The level of research of the Endocrine Medicine research group is reasonable. The group is not well described as a group. It appears as if several research groups or even individual researchers are incorporated into this network, but the strategy, the description of the infrastructure and the organisation of the group are not clear. The report lacks clear information on many aspects of the self-assessment questions, which makes it difficult to easily judge the quality of the group. For example, it is difficult to understand the real entity of the funding received by the Endocrine Medicine Unit. While the text under the heading “Research group´s resources” reports several notable grants, both national and international, Table 2, that should report these funding in detail, reports completely different information. On the same line, the choice of publications in does not fully reflect the quality

of the papers actually produced in the observation period. One has to open the provided link to fully appreciate the scientific production.

Research Group for Infection and Microbiology
As evidenced by their leadership of high-impact publications (including nature medicine) and several international grants, the Infection and Microbiology research group should be considered world-class in terms of research quality. Their influence on WHO guidelines indicates their strong contribution to societal impact. This is despite a light technological environment (which explains the essential need for the group to externally collaborate). The organisation does, however, facilitate good clinical integration and cohort support.

Renal Research Group (RRG)
The research environment is outstanding enabling the production of excellent research. The group take a leading role in several major projects and plays a very considerable role in the research process through to publication. The output profile of the group indicates a quality that is outstanding in terms of originality, significance and rigour. The group have made a very considerable real-life societal impact and has very considerable user involvement across its research portfolio.

Oncology
The main strength of this group is the ability to carry out and publish excellent quality translational research contributing to improve the knowledge based on well stablished technologies: ctDNA, organoids as cancer models, DNA methylation, single cell genomics, among others. They refer also to a very relevant clinical trial on the use of PARP inhibitors in triple negative breast cancer developed as a national academic trial, which has been published in a very high impact factor journal. The researchers of this group have a strong leadership and a good level of collaboration with other national groups. To make this sustainable, it may be critical that they open themselves for a more international network of cooperation. Their main weakness is the scarcity of internationally funded projects. The societal impact of their research is clear; however, some improvement must be done on haw to involve patients and patient advocacy groups in the planning and development of future studies.

3. Diversity and equality

The Helse Bergen personnel handbook has a section promoting equal rights and working against discrimination. Part of the HUH strategic planning is that staff should reflect the diversity of the population at all levels, with a goal of having a balanced workforce, and that staff members can combine a career with family responsibilities. The annual improvement survey for all staff members is an organization-wide tool to improve the working environment and maps how staff evaluate their working environment includes questions on workload, physical work environment (including whether necessary adaptions are made), discrimination, bullying and conflicts. The survey is followed up by every unit, making it possible to target any issues that arise in the department or section at an early stage. Trade unions play an important role in assisting staff members who experience any breach of the anti-discrimination policies, as do the safety representatives (local to every department and the senior safety representative), and there are systems in place to allow these roles to take their right place in the organization.

The committee's evaluation
HUH has well detailed policies for diversity and equality stretching further than gender balance. The figures provided show on the gender balance a good balance of women not only at PhD level (63% women) and post-doctoral level (57%) but at 51% women for physicians and 49% for senior physicians. It was not clear what the figure was for professors and professor emeritus – but this may be due to the complex reporting with HUH and UiB. There were no data presented that the well detailed policies for the other protected characteristics including race, religion, and disabilities were being achieved.

The committee´s recommendations
The committee has no further recommendations regarding diversity and equality.

4. Relevance to institutional and sectorial purposes

The Ministry of Health has earmarked funds for research for projects which are clinically relevant. With their national action plan for clinical trials the government launched a vision that clinical research should be an integrated part of all clinical practice and patient treatment. HUH is aligned with these policies aiming to contribute to sector specific, as well as wider heath care development. HUH as the regional hospital for Western Norway is in a central position for patient treatment education and research to improve healthcare for the population. Most clinical units cannot conduct research solely with their own resources interdisciplinary collaboration is often necessary, involving laboratory and medical, along with various other specialties. HUH has a research support system that assists researchers across Western Norway with clinical trials, this includes data management (especially VieDoc), administration and advising in the application process (CTIS), monitoring for all clinical trials and reporting of SUSARs to the EMA on behalf of two regions in Norway.

NorCRIN, the national research infrastructure and network has a primary objective to strengthen and simplify collaboration in clinical research in Norway; it is a collaboration between all six university hospitals in Norway. HUH is the NorCRIN host with the team located there and HUH is also responsible for 7 network work packages. HUH has a regional function for assessment of new methods and provides advice on the introducing new methods in clinical practice across the nation. The group helps ensure that key principles are considered before a decision is made, raises awareness about quality management and gather input on which methods should be prioritized for national method assessment. This may impact on which new methods that will be implemented in Norwegian hospitals.

HUH has a strong commitment to increase innovation activity, underlined in the Plan for research and innovation and has dedicated innovation support staff and research and legal advisers who assist innovators. HUH staff collaborate with other innovation support staff at hospitals in the region via a regional forum for innovation. Together with the higher education institutions in the region HUH established a Technology Transfer Office [TTO], VIS innovasjon. Through VIS our researchers can have their idea evaluated and be assisted in developing it further with commercialisation. HUH is also co-owner of Eitri, a medical incubator located within the hospital grounds, which brings together startups, students, health professionals, researchers, established industry, service providers and investors. Launched in 2021 the incubator works to grow the health innovation sector in the region. HUH collaborates in transdisciplinary research with Alrek Helseklynge, a health cluster which is focused on innovative health and care services locally and globally. HUH will use the experience for our Centre for Research Based Innovation on Mobile Mental Health to further strengthen our culture for innovation. Successful innovations translated into commercial products will be rewarded by 2/3 of the profit going back to the researcher and the research environment. Innovators may apply for funding, either via the regional health authority, or seed funds from HUH.

The committee's evaluation
HUH has a range of approaches to supporting sector-wide research and innovation and to driving potential commercialization. They have described effective incentivization in this regard too.

The committee´s recommendations
The committee has no further recommendations.

4.1 Health trusts

The Clinical Trials Hospital is a framework and facilitation mechanism, aiming to stimulate experimental treatment and innovation into patient care throughout the hospital. Clinical trials generate revenue for HUH used for further academic initiated research projects. The biobanks are examples of what enables our researchers to seek collaborations and conduct high-quality research and innovation. HUH is currently working towards accreditation as a Comprehensive Cancer Centre (CCC) which will strengthen our efforts in patient treatment, research, and innovation, hopefully increase the number of patients in clinical trials and allow closer collaboration between different clinics at HUH involved in advanced cancer care.

HUH has close collaboration with relevant higher education institutions, primarily UiB, HVL and VID Specialized University. HUH participates in several arenas for cooperation regarding education especially the regional collaboration body for education and regional collaboration body for research and innovation. Here, HEIs and hospitals meet to discuss issues concerning collaboration and the two collaboration bodies also cooperate on other relevant issues and hold an annual joint meeting. HUH has an established system and policy facilitating combined positions. Combined positions are considered an important measure to ensure recruitment, development and retain competence for health care workers in all parts of the Western Norway Regional Health Authority area. Combined positions are an important tool to ensure relevant clinical practice and to stimulate research and implementation of research results into clinical practice.

HUH actively contributes in UiB’s Medical Student Research Programme (MSRP) through marketing of the program internally as well as proposing student projects and supervising. HUH has developed websites for announcement of student theses/projects (e.g., master’s thesis, medical thesis) which is part of a regional initiative to make the announcement process of student theses more transparent and efficient for all.

The committee's evaluation
HUH has engaged in many Western Norway regional processes to improve heath care and education with research and innovation. They have good engagement on education with the local and regional higher education institutions and have been innovative in the way they try to support students and educational initiatives. Currently it is not clear to what extent students use this website initiative, but they have just been launched .

The committee´s recommendations
No further recommendations.

5. Relevance to society

The long-term plan refers to the national action plan for trials, which is an integral part of HUH's goals in the hospital's own Plan for research and Innovation. HUH delivers high-quality research within several of prioritised areas including Personalised medicine, where our researchers have contributed to this becoming key to several research areas, especially in cancer research but also heart, lung medicine, infection and other areas. HUH contributes increasingly to another priority area - Sex and gender-related differences in health, where researchers in sleep disorders, cardiology, psychiatry and more traditional women's health research are in the forefront of their respective fields. HUH extensively collaborate with HE institutions in the region and contribute to their research and education of health personnel. HUH collaborates with the TTO (VIS), Eitri Medical Incubator, Alrek Health Cluster and primary healthcare services on research and innovation. More than 30 units at HUH are engaged in international health projects, 15-25 employees are deployed to these projects at any time, the hospital's international centre has a coordinating role. Projects collaboration on PhD projects where candidates from countries like Malawi and Ethiopia come to Bergen to complete their theses, but also training of personnel locally and clinical and research projects in many clinical areas. HUH has a responsibility to the greater society as public health, high quality of patient care and acceptable quality of life for the population in our area. HUH is committed to the UN SDGs, and focuses on the following in particular:

3. Good Health and well-being, as a health provider, research institution, and by creating a work environment which allows our employees to thrive

4. Quality education, by collaborating closely with HE institutions and contribute to lifelong learning for our staff

6. Clean water and sanitation, by reducing the use of chemicals. By 2030, 75% of products used should be produced in a way that protects patients, staff and environment.

7. Affordable and clean energy, by reducing energy consumption. Between 2013 and 2020, HUH has implemented measures to save around 12 000 MWh per year.

8. Decent work and economic growth, by ensuring that procurements, smaller purchases and building projects contribute to good working conditions in all parts of the delivery chain.

12. Responsible consumption and production, by doing more while using less. HUH is committed to recycling, reusing and reducing waste in all parts of the service.

13. Climate Action. HUH has a goal to become fossil free by 2030 by eliminating emissions from oil and gas, including transport emissions. HUH follows ISO14001.

17. Partnership for the goals. HUH collaborates with many partners on the SDGs. The collaborations include our own sector, like the interregional collaboration "Green hospitals", but also extends to other sectors.

The committee's evaluation
The committee notes from the impact cases that virtually all the groups have demonstrated through excellence in research or education that they have made a real impact to the local regional or Norwegian society in general. Hepatitis C research in substance abuse population is of massive societal benefit and should influence care worldwide. Similarly, the psychiatric group have undertaken real practical research that will improve speed of care

and outcomes for schizophrenic patients. The MS group has active membership engagement, very strong education and a great publication record and their research is very clinically orientated. They work closely with both professional and patient organisations, and health authorities. Similarly, the respiratory group have a very transparent education profile to help patients and have influenced nationally witnessed by their work on the national guidelines. The DECODE-PD group makes a positive contribution to education, supervising a growing number of students across all levels of education while the excellent infection and microbiology group have also made societal impact not just through their very high-quality publications but through their influence on WHO. Likewise with excellent clinical trial work the oncology group has impacted on society, for example in their publication on the use of PARP inhibitors in triple negative breast cancer, a national academic trial, which has been published in a very high impact factor journal.

The committee was impressed by the strong efforts of the HUH administrative unit to improve the lot for patients, their families and for staff through research and innovation.

The committee´s recommendations
The committee recommends that the research groups should be encouraged to involve patient groups in co-collaboration in trial design.

Comments on impact case 1 Department of Microbiology
Molecular testing of samples from patients with lower respiratory tract infections provides faster and more accurate microbial results than standard-of-care testing so can optimize patient treatment and reduce antibiotic overuse.

Underpinning research: Most patients with community acquired pneumonia do not receive an etiological diagnosis. Treatment is based om clinical and empirical guidelines. Developments in molecular methods can increase speed of detection and allow directed treatment, thus reduce unnecessary antibiotic use, and improve patient outcome. The Department of Microbiology has streamlined infrastructure for rapid sample handling from arrival right through to electronic delivery of analysis reports to the patient information system.

Collaborative research between HUH (Department of Microbiology), and UiB ascertained that routine PCR testing for pathogens provides faster and more targeted microbial treatment for patients with suspected community acquired pneumonia.

This is a very practical study, and it is good that the important details form delivery of samples to the laboratory, the internal laboratory handling and the electronic reporting have all been improved in addition to the headline use of PCR to speed diagnosis and make this more accurate. The committee note this has not been published yet and awaits this closing of the loop, but this is important and useful work operationally.

Comments on impact case 2 Dep. of Radiology (in collaboration with Dep. of Gynaecology)
Gynaecologic cancer patients at HUH are routinely offered advanced imaging by pelvic imaging (MRI) and (PET-CT) in parallel, with histologic/molecular tumour profiling. A platform for artificial intelligence guided automated tumour profiling in combination with other imaging- and tissue markers has been developed. This will be utilized for further refining pretreatment staging, prognostication and monitoring of therapeutic response in gynaecologic cancers.

Importantly, the implementation of imaging guided tailored treatment schemes (minimally invasive- or extended therapy) according to risk profiles, is essential for providing best standard of patient care.

In endometrial cancer, PET-CT has been shown to yield better accuracy than MRI for predicting lymph node metastases (Fasmer et al., Eur. Radiol. 2020); however, using selective PET in patients with high-risk MRI findings only, may represent a safe alternative to PET and MRI in all (Fasmer et al., Eur Radiol. 2023). Furthermore, preoperative pelvic MRI yields important staging information and imaging markers that may guide choice of surgical procedure (Dyvik et al., Insights Imaging 2022). In cervical cancer, interobserver reproducibility for MRI based 2018 staging parameters is good and tumour size yields strong prognostic power. Pelvic MRI is also essential for establishing correct tumour stage pre-therapeutically, guiding choice of primary treatment (primary surgery or chemoradiation with curative intent) in cervical cancer (Wagner-Larsen et al., Eur Radiol. 2022). We have also developed a machine learning platform for accurate automated tumour segmentations from MRI in uterine endometrial- and cervical cancer (Hodneland et al., Scientific Reports 2021; Cancers 2022) that enables automated radiomic tumour profiling enabling better prognostication in endometrial cancer (Fasmer et al., JMRI 2021) and in cervical cancer (Wagner-Larsen et al., Cancer Medicine 2023). The artificial intelligence (AI) guided machine learning platform was awarded Innovation support of 1 MNOK from Helse-Vest Regional Health in 2024-25 (technical PI: senior researcher Erlend Hodneland) for further development and potential implementation into the standard routine clinical workflow. The research group has developed an organoid endometrial cancer mouse model (Berg et al., Commun Med 2021) where preclinical MRI- and PET-CT findings mirror imaging findings in human endometrial cancers (Espedal et al., J Transl Med 2021). This preclinical model is now utilized for further testing of novel therapies.

This impact case shows great bench to bedside translational research – speeding patient diagnostics and improving accuracy and allowing models to be tested in the laboratory to investigate new and different approaches.

Comments on impact case 3 Division of Psychiatry - Personalized antipsychotic drug treatment

In this documented differential effectiveness between antipsychotic medications and different response patterns in patients with schizophrenia-spectrum disorder and that men and women respond differently to particular antipsychotics. We have found that childhood trauma may influence antipsychotic effectiveness, but substance use does not. Use of antipsychotics compared to periods with non-use strongly reduces all-cause mortality risk.

Little is still known about group level differential effectiveness antipsychotic drugs between first line drugs for schizophrenia spectrum disorders in every-day clinical practice. It is unknown which individuals will have the optimal benefit/ harm ratio for any particular drug, as substantial, unpredictable inter-individual differences between patients exist so treatment generally follows a trial-and-error approach with few qualifiers for choice of any first-line drug. The chosen antipsychotic drug should be used for 4-6 weeks to evaluate its effectiveness. In the event of problematic side effects or insufficient beneficial effects, change to another antipsychotic drug is recommended followed by the same procedure of evaluation of the next drug. After two mistrials, change to clozapine, the only superior antipsychotic drug in treatment-resistant cases, is indicated. As a result, identifying optimal antipsychotic drug may be delayed by several months. We designed the RCN-funded Bergen-StavangerInnsbruck-Trondheim Study (BeSt InTro) to produce data on clinical decision making and to compliment treatment guidelines. BeSt InTro is a pragmatic, randomized, controlled effectiveness study comparing amisulpride, aripiprazole and olanzapine, three first-line antipsychotic drugs. The study had a one-year follow-up and was designed and conducted independently of pharmaceutical industry. Through BeSt InTro we have found clinically important differential effectiveness between the antipsychotic medications for reducing symptoms of psychosis at group level (Johnsen, 2020 (Lancet Psychiatry) in that men and women responded very differently to amisulpride and amulpride was less effective and had more side effects compared to in men and that concomitant substance abuse or dependence do not, contrary to common beliefs, influence

effectiveness or side effects of antipsychotic drugs. However, childhood trauma may influence antipsychotic effectiveness with delayed response to antipsychotic drugs. Based on the common side effects of antipsychotic drugs related to weight gain and adverse impact on serum lipids and glucose, it has been expected that antipsychotics increase mortality risk. In a 696-patient cohort, all patients with schizophrenia discharged after an acute hospital admission and followed for up to 10 years, we found that periods with non-use of antipsychotic drugs compared to periods with use of were associated with almost three times higher risk of death meaning use of antipsychotic drugs reduced the risk of premature death substantially. This finding has direct relevance to clinical decision making in psychosis treatment. This research is very important and will directly improve the care of schizophrenic patients and their outcome.

Comments on impact case 4 Department of Addiction Medicine - INTRO HC
Integrated treatment of hepatitis C is a treatment model developed at HUH and has substantially increased treatment initiation and sustained virologic response to hepatitis C for people with substance use disorders and those who inject drugs. By linking care together with opioid agonist therapy while simplifying the algorithm for treatment and follow-up, Western Norway are now among the global frontrunners in elimination of hepatitis C. The is a simple idea, benefitting from collaboration between users and researchers.

When the project started in 2016, the prevalence of chronic hepatitis C was in the range of 50-60% for IV users. Globally, 3-400 000 deaths per year were related to hepatitis C. The time between transmission and severe consequences is typically thirty years. Highly effective antiviral medications are now available tablets daily over a period of twelve weeks, with most receiving sustained virologic response. Even though treatment was increasingly available, two thirds of those in need of treatment had not initiated treatment by 2017. We hypothesized that the treatment delivery platform was an important reason for this. The integrated treatment included a change in the organization of treatment and follow-up, with people already providing follow-up of substance use with opioid agonist therapy or from community care centres taking the leading role in the diagnostics and treatment of hepatitis C. Diagnosis and clarification of the best management was done in a single consultation while conventional treatment would typically require three outpatient visits and each of these initiated by a letter by mail. When diagnosed, the integrated treatment delivery was provided by the same team providing opioid agonist therapy from community centres; no additional follow-up or visits required, conventional treatment would have required three additional outpatient visits. The results confirmed that among those randomized to integrated treatment, 98% initiated treatment for hepatitis C while the corresponding number for those who received standard treatment was 77%. Time to treatment initiation was twice as fast and 93% of those who were randomized to integrated treatment and tested, were “cured” from hepatitis C in contrast to 73% with standard treatment. The study was highly cost effective by implementing integrated treatment and care of hepatitis C together with opioid agonist therapy, Western Norway are now among the global frontrunners in elimination of hepatitis C with the prevalence having fallen to less than 7%. The integrated treatment model has now become the new gold standard and is increasingly implemented in much of the world. It has substantially simplified the treatment and follow-up experience for patients while providing superior treatment outcomes.

This case study is and outstanding example of real-world clinical innovation and impact and deserves widespread recognition.

Comments on impact case 5 High-efficacy multiple sclerosis therapy to a sustainable cost to the society
The Bergen MS-Research Group has led Norwegian participation in >50 clinical trials and pioneered the use of high-efficacy off-label rituximab to a societal sustainable cost. The group started using off-label rituximab therapy for breakthrough disease, the surprising high

efficacy increased use, in collaboration with Swedish colleagues. The group were also national coordinators for industry sponsored development of the next generation agent called ocrelizumab. This was approved for MS treatment by the FDA then EMA in 2018.

Through their work with the Norwegian MS-Registry and their established quality control system for off-label rituximab they confirmed the high efficacy of rituximab, at a level reported in ocrelizumab trials but at an annual cost of about 7 500 NOK, not the 230 000 NOK for ocrelizumab [>30x the cost]. Thus off-label rituximab appears to be a sustainable cost for society, so they submitted an initiative for a Norwegian Health Technology Assessment of MS-therapy, including rituximab and a proposed a non-inferiority, double-blinded randomized clinical trial comparing rituximab to ocrelizumab, the OVERLORD-MS trial. In conjunction they submitted an initiative to update Norwegian MS-Treatment Guidelines to include rituximab as a treatment option and designed several studies for evaluation efficacy and safety of rituximab in clinical practice, generating real would evidence data. They established international collaborations to promote rituximab at a sustainable cost world-wide through the Multiple Sclerosis International Federation

The Norwegian Health Technology Assessment (HTA) for New Methods approved these plans. The OVERLORD-MS trial has fully recruited [Nov. 2022] and will report Q2/Q3 2025. Now the Norwegian MS-registry shows 96% of newly diagnosed patients receive high-efficacy rituximab therapy from the time of diagnosis. They note rituximab is highly effective, but patients have a small but significant increased risk of hospitalisation due infections.

This is an incredible story of clearly planned clinical research with an eye on improving patient outcomes and balancing this with a societal impact as the licenced therapy is so expensive. Their approach has all the merits of good research governance, of national and international collaboration and this is a fantastic example of clinical innovation that helps patients and society.

Appendices

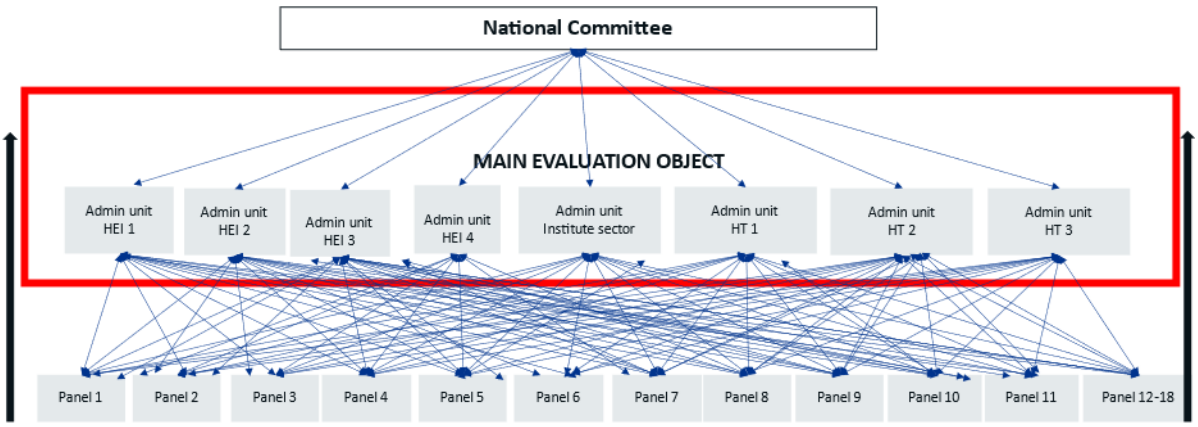
Evaluation of Medicine and health 2023-2024

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.

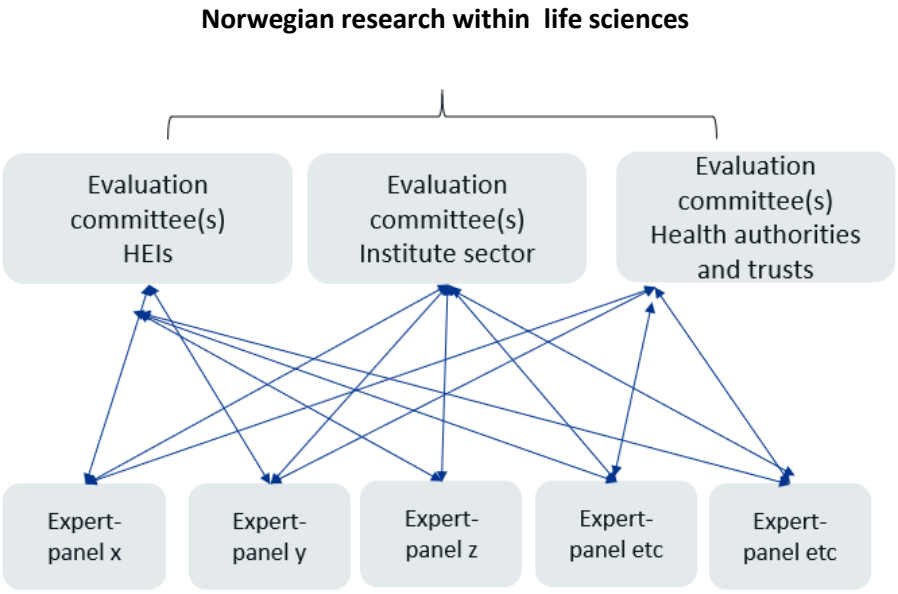


Figure 1. Evaluation committees and expert panels

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 3
Guidelines for completing the self-assessment 4
1. Strategy, resources and organisation 5
1.1 Research strategy 5
1.2 Organisation of research 7
1.3 Research staff 7
1.4 Researcher careers opportunities 8
1.5 Research funding 8
1.6 Collaboration 9
1.7 Open science policies 11
1.8 SWOT analysis for administrative units 11
2. Research production, quality and integrity 12
2.1 Research quality and integrity 12
2.2 Research infrastructures 12
3. Diversity and equality 13
4. Relevance to institutional and sectorial purposes 14
4.1 Sector specific impact 14
4.2 Research innovation and commercialisation 14
4.3 Higher education institutions 15
4.4 Research institutes 15
4.5 Health trusts 15
5. Relevance to society 16
5.1 Impact cases 16

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
UiB	Department of Clinical Science I	Bergen Multiple Sclerosis Research Group (BMSRG)*	Panel 3b-1
UiB	Department of Clinical Science II	Bergen respiratory research group**	Panel 3b-2
Haukeland University Hospital	Haukeland University Hospital	Cardiac markers	Panel 3b-2
UiB	Department of Clinical Science I	DECODE-PD*	Panel 3b-1
Haukeland University Hospital	Haukeland University Hospital	Endocrine Medicine	Panel 3b-3
UiB	Department of Clinical Science II	Oncology Research Group (ORG)**	Panel 3a-2
UiB	Department of Clinical Science I	Renal research group (RRG)*	Panel 3b-2
UiB	Department of Clinical Science II	Research group for infection and microbiology**	Panel 3b-3

*The evaluation of the research groups BMSRG, DECODE-PD og RRG are included in the evaluation report of the administrative unit Haukeland University Hospital. This in agreement with UiB and Department of Clinical Science I.

** The evaluation of the research groups Bergen respiratory research group and Research group for infection and microbiology are included in the evaluation report of the administrative unit Haukeland University Hospital. This in agreement with UiB and Department of Clinical Science II.

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 978-82-12-04074-8 (pdf)