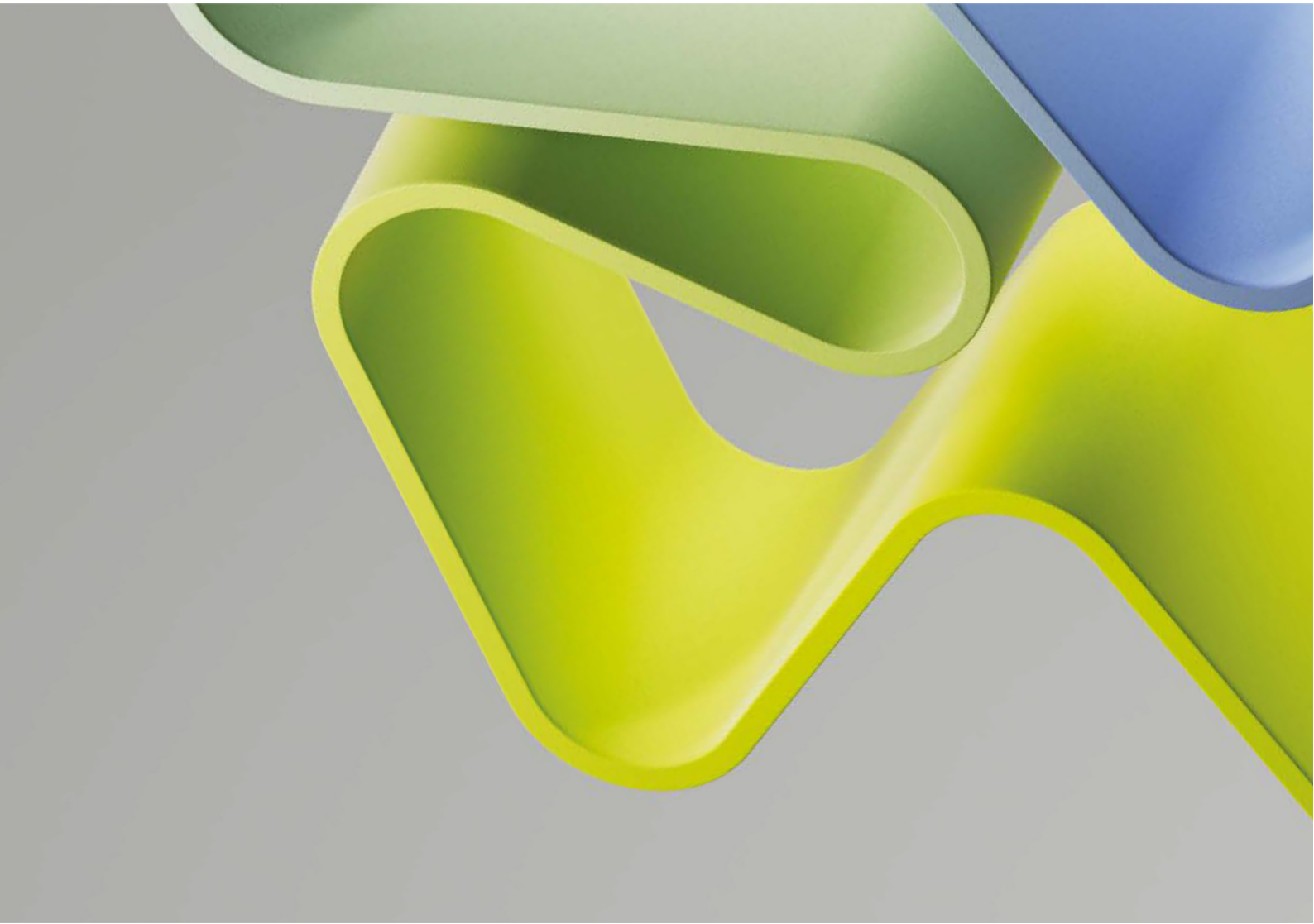
The Research Council of Norway

National report

Evaluation of Medicine and Health in Norway 2023-2024

March 2025

(corrected May 2025)



Content

Preface by the Research Council of Norway

The Research Council of Norway (RCN) has been given the mission by the Ministry of Education and Research to perform subject-specific evaluations. The RCN carried out an evaluation of Norwegian research within medicine and health in 2023-2024. The evaluation of medicine and health is a part of the evaluation of life sciences, which is being carried out as two evaluations: Evaluation of Biosciences 2022-2023 and Evaluation of Medicine and Health 2023-2024.

The primary aim of the evaluation of medicine and health 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 (HT).

The evaluation was carried out by international peers with reference to the Evaluation protocol for life sciences in Norway 2022-2023.

The evaluation has been done at three levels. First, three hundred and fifteen research groups were evaluated by eighteen expert panels divided by subjects and disciplines within the field of medicine and health across sectors. Thereafter, eight evaluation committees were established to evaluate the sixty-eight participating administrative units (faculty/institute/department/division/centre). The assessments and recommendations from the evaluation committees are compiled in 68 reports. These reports give important input to the individual administrative units. Each administrative unit has a responsibility to follow up on the recommendations provided in their evaluation unit report. The chairs of the eight evaluation committees constitute the national evaluation committee which was requested to compile a report based on the assessments and recommendations from the 68 independent evaluation unit reports. The national report will be used by the Research Council in developing national funding schemes and in dialogue with the ministries and institutions involved in the development of medicine and health research.

The national report 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

Lysaker March 1st, 2025

Composition of the national committee

This national report offers an overall assessment of the state of medicine and health research in Norway and present recommendations for future development. All committee members support the conclusions and recommendations.

Professor
Martin Ingvar (chair)
Karolinska Institutet

Professor
Falko Sniehotta
Heidelberg University

Professor Dame
Til Wykes
King's College London

Professor emerita
Ingalill Rahm Hallberg
Lund University

Professor
Anja Krumeich
Maastricht University

Professor
Søren Brunak
University of Copenhagen

Professor
Johan Hellgren
University of Gøteborg

Professor
Jørgen Frøkiær
Aarhus University

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

Executive summary

This is the report of the national evaluation committee, which was asked by the RCN to evaluate Medical and health research in Norway over the period 2012-2022 to identify and confirm the quality and the relevance of research performed at Norwegian Higher Education Institutions (HEIs), across the Institute Sector and across the health trusts (HT)[1]. The report builds on the previous evaluations of 317 research groups and 68 administrative units in this research field, which were carried out in 2024 and documented in separate reports.

Public medical and health research is, with 15% of all research expenditure in Norway an important research area. The quality of the research is generally good to excellent in terms of both output and scientific impact, although there is variation in quality (size and location of admin units matter, as does ambition level) and potential to achieve much more.

Funding for medical and health research is for a large part (64%) core funding independent of the institution's performance, coming from the relevant government sources. This is, considered from an international perspective, quite high. Most of the other funding is assignments and competitive funding, coming from RCN, ministries or other national sources (excl. industry). International funding and industry funding are low. This does not only limit the research budgets but also has effects on participation in the international research arena (low international funding) as well as on societal impact (low industry funding).

Research infrastructures are generally at a good level, but there is room for improvement regarding the levels of access and engagement. The position of registries is of specific importance, driven by the trend towards personalised medicine and the need for quantitatively based evidence. Norway has a good national health registry system, complemented by many generally not yet nationally coordinated clinical registers. A coordinated national approach, developed in collaboration with the research community, can make this registry system outstanding in international perspective.

To further strengthen the research in Norway, research careers need to be made more attractive and offer opportunities for career progression and personal development, including opportunities to learn about the rapid research design and methods development.

Co-publication analysis shows here is a lot of cooperation in the medical and health research in Norway, both nationally and internationally. At the national level (admin units from) the big universities and big university hospitals have a central position in these cooperations. A more programme based (instead of project based, i.e. longer term wider investments over longer periods of time) form of national cooperation addressing complex societal challenges and aimed at achieving impacts together, would be beneficial. Interdisciplinary and intersectional research can increase the contribution of esp. smaller units to high quality research and impact. User involvement in research increases relevance and likelihood of research success and impact, should be part of the approach, but is now variable and in most places low.

Internationally, only a few administrative units collaborate in EU projects, and even fewer are leading EU projects. More international outreach (also beyond EU, e.g. NIH) could help raise the standing of Norwegian research and help attract research to Norway. Focus should be on cooperating with the best international partners in the field, not necessarily on partners that are already known.

The national committee finds the integration between research and knowledge translation, implementation and implementation science underdeveloped and not forming a continuous

[1] The health trusts are in this evaluation (EVALMEDHELSE) processed and evaluated as an own sector.

process from discovery, intervention to implementation. Generally, the interface to industry is ad hoc and unstructured. Similarly for initiatives around vendor funding for startups. In the institute sector, the interface towards (national) policy is better.

Norway shares with the rest of Europe the split ownership between primary and secondary care. The latter is organised at the level of regions whereas the municipalities are responsible for all primary health care and also care and social service for the elderly. There is a need for evidence based knowledge in this area but at the same time the research environment is often not ideal either because funding is limited or because the research done is not enough practice oriented. An improvement of the scientific output from this segment of healthcare cannot be expected without a decisive and coordinated effort (organisation, funding, policies and competence).

Institutes like NORCE and, esp. smaller, HEI outside big cities would benefit for going for a more permanent long term relationship providing research and implementation programmes rather than commissioned projects.

Despite the opportunities for improvement of societal impact, there are many good examples of (societal) impact of research, ranging from new medicines and treatment methods, new health policies and startup companies to prevention of diseases, lower costs for health care, new clinical guidelines and wellbeing of patients and public.

Main recommendations are (see chapter 7 for full details):

- Improve the coordination of research funding to promote the competitiveness of the medical and health research in Norway.
- Increase the competitiveness of Norwegian medical and health research by focusing research on goal-oriented programmes across administrative units and organisations and connecting these to international state of the art.
- Make medical and health research more attractive for young and/or foreign staff and develop clear career perspectives for researchers.
- Develop and implement a good, nationally coordinated registry system as a backbone for and a strong asset of Norwegian medical and health research.
- Increase societal impact of medical and health research and communicate this impact.

Sammendrag

Dette er rapporten fra den nasjonale evalueringskomitéen i EVALMEDHELSE som på oppdrag fra Forskningsrådet er bedt om å evaluere norsk medisinsk og helsefaglig forskning for å identifisere og bekrefte kvalitet og relevans av forskning utført ved norske høyere utdanningsinstitusjoner (HEI), på tvers av instituttsektoren og på tvers av helseforetak[2] i perioden 2012-2022. Rapporten bygger på evalueringer av 68 innmeldte administrative enheter og inkluderer evaluering av deres til sammen 317 forskningsgrupper. Evalueringen ble gjennomført i 2024.

Offentlig medisinsk og helseforskning utgjør 15 % av alle forskningsutgifter i Norge og er et viktig forskningsområde. Kvalitet på forskning som utføres er generelt god til utmerket på bakgrunn av oppnådde resultater og forventede samfunnseffekter, selv om det er variasjon i kvalitet (størrelse og plassering av administrasjonsenheter betyr noe, det samme gjør ambisjonsnivå). Det er et stort potensial for å oppnå mye mer.

Finansiering av medisinsk og helsefaglig forskning er for en stor del (64 %) basisfinansiering uavhengig av institusjonens ytelse, og kommer fra ulike offentlige kilder. Dette er ganske høyt sett fra et internasjonalt perspektiv. Mesteparten av den øvrige finansieringen er oppdrag og konkurranseutsattemidler fra Forskningsrådet, departementer eller andre nasjonale kilder (industri ikke inkludert). Internasjonal finansiering og industrifinansiering er lav. Dette begrenser ikke bare forskningsbudsjettene, men det medfører lav deltakelse på den internasjonale forskningsarenaen (lav internasjonal finansiering) samt reduserte samfunnseffekter (lav industrifinansiering).

Forskningsinfrastrukturen er generelt sett god, men det er rom for forbedringer både når det gjelder tilgang til og bruk av infrastruktur. Helseregistrenes posisjon har en spesiell betydning og er drevet av trender som persontilpasset medisin og økt behovet for dokumentasjon. Norge har mange nasjonale helseregistre i tillegg til mange ennå ikke nasjonalt koordinert, kliniske registre. En nasjonal koordinering av helseregisterne vil være enestående i internasjonalt perspektiv.

For å styrke medisin- og helseforskningen i Norge ytterligere, må forskerkarrierer gjøres mer attraktive og det må være muligheter for karriereutvikling og personlig utvikling, inkludert muligheter til innføring og opplæring i rask forskningsdesign og metodeutvikling.

Sampubliseringsanalyse viser at det er mye samarbeid innen medisinsk og helsefaglig forskning i Norge, både nasjonalt og internasjonalt. På nasjonalt nivå har de store universitetene (administrative enhetene) og de store universitetssykehusene (administrative enhetene) en sentral posisjon i disse samarbeidene. Det anbefales en mer programbasert form for nasjonalt samarbeid (langsiktig bredere investeringer over lengre perioder) som adresserer komplekse samfunnsutfordringer og har som mål å oppnå felles samfunnseffekter. Tverrfaglig og tverrsektoriell forskning vil bidra til forskning av høy kvalitet og gi samfunnseffekter, men vil også bidra til mer forskning av høy kvalitet i de mindre forskningsenhetene. Brukerinvolvering i forskning øker relevans og sannsynlighet for at forskningsresultater oftere tas i bruk og bør være obligatorisk i all forskning. Det er stor variasjon i inkludering av brukere, for det meste er det liten involvering.

[2] Deltakende helseforetak er i denne evalueringen omtalt samlet som en egen sektor.

Det er bare noen få administrative enheter som deltar i EU-prosjekter, men det er enda færre som leder EU-prosjekter. Mer internasjonalt samarbeid også utover EU, f.eks. NIH, kan bidra til å heve statusen til norsk medisinsk og helsefaglig forskning. I tillegg vil denne type samarbied også bidra til å tiltrekke forskningkompetanse til Norge. Det bør fokuseres mer på å samarbeide med de beste internasjonale partnerne på feltet/ene og mindre på å inngå samarbeid med partnere som allerede er kjent for miljøene.

Den nasjonale komiteen finner at integrasjonen mellom forskning og kunnskapsoverføring, implementering og implementeringsvitenskap, er underutviklet og ikke danner en helhetlig prosess fra oppdagelse, intervensjon til implementering. Generelt er kommunikasjonen mot industrien ad hoc og ustrukturert. Det samme gjelder for initiativer rundt leverandørfinansiering for oppstartsbedrifter. I instituttsektoren er grensesnittet mot gjeldende politikk bedre.

Norge har, som resten av Europa, delt eierskap mellom primær- og spesialisthelsetjenesten. Sistnevnte er organisert på regionsnivå, mens kommunene er ansvarlige for all primærhelsetjeneste og også omsorg og sosiale tjenester for eldre. Det er behov for evidensbasert kunnskap på dette området, men samtidig er eksisterede forskningsmiljøer ofte ikke det ideelle stedene for denne type forskning enten fordi finansieringen er begrenset eller fordi forskningen som utføres ikke er nok praksisorientert. En forbedring av det vitenskapelige utbyttet fra dette segmentet av helsetjenesten kan ikke forventes uten en avgjørende og koordinert innsats (organisering, finansiering, politikk og kompetanse).

Institutter som NORCE og spesielt mindre administrative enheter i UH-sektoren utenfor de store byene vil ha fordel av å gå for et mer permanent langsiktig forhold som gir forsknings- og implementeringsprogrammer i stedet for oppdragsprosjekter.

Til tross for mulighetene for forbedring av samfunnseffekter, er det mange gode eksempler på (sammfunns)effekter av forskning som spenner fra nye medisiner og behandlingsmetoder, nye helsepolitikker og oppstartsbedrifter til lavere kostnader for helsevesenet, nye kliniske retningslinjer og økt pasienters og publikums velvære.

Hovedanbefalingene (se kapittel 7 for utfyllende informasjon) er:

- *Bedre koordinering av forskningsfinansiering for å øke konkurranseevnen til medisinsk og helsefaglig forskning i Norge.*
- *Øke konkurranseevnen til norsk medisinsk og helsefaglig forskning ved å fokusere på målrettede programmer på tvers av administrative enheter og organisasjoner, og koble disse til internasjonal toppforskning.*
- *Gjør medisinsk og helsefaglig forskning mer attraktiv for unge og/eller utenlandske forskere, og utvikle klare karriereveier for forskere.*
- *Utvikle et nasjonal koordineringsystem for alle helseregistrene, hvilket vil være unikt i et internasjonalt perspektiv.*
- *Øke samfunnseffektene av medisinsk og helsefaglig forskning og formidle effektene.*

Det er det engelske sammendraget som er det gjeldende.

1. General observations on Norwegian medicine and health research

This evaluation concerns the research in the field of medical sciences in the public sector, the largest thematic area in Norwegian research, in 2019 totalling NOK 12.0 bln, or approximately 15% of total research.

In international perspective, the Norwegian medical and health research has a very strong specialisation in health sciences and in psychology (across almost all subfields) and an average specialisation in clinical sciences (however, within clinical sciences the fields of psychiatry and rheumatology show a high specialisation as well).

The expenditure on medical and health research is divided across three sectors: the higher education sector (universities and other higher education institutions (HEI), appr. 60%), the institute sector (national research institutes, appr. 20%) and the business sector (appr. 20%). The R&D expenditure in the health trusts (hospitals)[3] was appr. 40% partly in the HEI (university hospitals), partly in the institute sector.[4]

In this evaluation 317 research groups in 68 administrative units participated. Participation in the evaluation was voluntary, and not all organisations performing medical and health research in Norway joined. No figures are available on the participation rate, but according to RCN most of the administrative units that were expected to carry out medicine and health research participated in this evaluation. Overall, more than 9200 researchers were working in the units participating in the evaluation, ranging from small to large, from very focused on one topic to rather broad, and coming from across the country.[5]

In this respect the Committee underwrites that themes can be relevant in specific places, e.g.:

- Younger universities and health trusts outside the big cities often experience structural and capacity limitations to do research at the international scientific forefront. They however are in a position to address issues in research and teaching with high relevance to the regional and national scene.
- Some specialised research can, because of numbers of patients, numbers of staff and high investments needed, only be done in the large university hospitals. Admin units in smaller health trusts and universities have therefore often chosen topics for research that are relevant to their community and that are not necessarily in direct competition to the larger units, for instance the adoption of nursing research as a focus.
- Institutes have operational tasks, especially NIPH (Norwegian Institute of Public Health) and STAMI (The National Institute of Occupational Health in Norway), surveillance of health and health threats in general and for STAMI occupational health. They also have the task to raise preparedness to deal with fast or slowly emerging health threats, which is dependent on ongoing research, skills and methods development as well as to make sure that data/surveillance is available allowing the researchers to change mode quickly when needed.

[3] The health trusts are not a separate sector in national R&D statistics but are included in both HEIs and the institute sector. In EVALMEDHELSE, health trusts/hospital sector are referred to as a separate sector.
[4] RCN, 2021
[5] SSBN, 2024a

2. Strength and weakness of Norwegian medicine and health research in an international context

Medical and health sciences have been the largest research area in the HEI sector in Norway for many years, amounting to approximately one quarter of all research in the HEI sector[6]. In the HEI, Clinical medical fields, health sciences and basic medical/dental fields are the major research fields, accounting for almost two thirds of medical and health research (in the HEI). Psychology and social sciences account for 10% and 6%, respectively. Sports sciences is in international comparison fairly large with 2.5 %. Research on medical technology however is small with only 1.1% (although some medical technology research may take place outside the sample of evaluated admin units)[7].

In 2022 the medical and health researchers in Norway contributed to 7800 publications in medical health sciences, 37% more than in 2013, but stable as fraction of total Norwegian research output across all fields of science. The higher education sector accounts for 57% of the publications, the health trust sector for 35% and the institute sector for 8%. In terms of citation, the Norwegian publications are cited 37% more often than the world average for publications in comparable fields period 2013-2021[8], this is in line with e.g. Denmark, Sweden, Netherlands, USA and China (but clearly behind UK, the leader in this area UK)[9]. Almost all administrative units participating in the evaluation have more than 10% of their publications in the top 10% best cited publications in the field they are active in[10]. In general terms, this means that the Norwegian research is cited well, in some areas/admin units very well.

The quality of research and publications, as evaluated by the 18 expert panels, was on average high (in between 'Quality that is recognised internationally in terms of originality, significance and rigour' and 'Quality that is internationally excellent in terms of originality, significance and rigour, but which falls short on the highest standards of excellence') with the highest scores in the institute sector, closely followed by the health trusts and the higher education institutions. The quality of the research however varies quite a lot as is shown by the distribution of the scores for the research groups on the quality dimension. Although almost all research meets the published definition of research for the purposes of this assessment, however, there is still 10% of the groups that only just meets the published definition.

17% of the research groups has, according to the evaluation panels, a research and publication quality that is 'outstanding in terms of originality, significance and rigour', meaning they are among the international leaders in their field. Another 38% has a research and publication quality that is 'internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence'. On the other criterion for research quality ('contribution of the research group to the research process') 18% of the

[6] SSBN, 2024a
[7] SSBN, 2024a
[8] NIFU, 2024b
[9] NIFU, 2024a
[10] NIFU, 2024b

research groups has the highest score (‘The group has played an outstanding role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication’) and 41% the next highest score (‘The group has played a very considerable role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication’). There is a strong correlation between the two scores on the quality dimension.

The variation in scores is much higher in the higher education institution and health trusts sectors than in the institute sector (where all scores are average or above). Based on this evidence the national evaluation committee for EVALMEDHELSE concluded that, with a few exceptions, research quality and integrity in Norwegian public research in the field of health are good to excellent in terms of both output and scientific impact.

Some admin units have very high levels of internationally excellent research. In general, these are larger units embedded in bigger university organisations that have high levels of resources. However, there are also pockets of excellence in admin units that have limited resources as well: these groups have a strong research focus and choose strong research partners. In order to achieve excellence, size matters, as well as ambition.

Most groups that produce lower quality research have only a few permanent researchers, often only parttime working on research, with a large teaching load (e.g. in colleges) and/or large clinical tasks in the health trusts (or operational tasks in the institute sector). For such small groups it is very difficult to meet the high and expensive (methodological) demands for research at an international level. Especially in regions outside the bigger cities this may be the case, since there the hospital trusts and HEI are small anyway because the population in the region is too small to make large units viable.

In other units, ambitions are too low to really be able to excel. The focus is too short term (next 5 years), and too broad, without a strong strategy,), a tendency that is amplified by funding of bottom-up researcher led approaches instead of funding of research programmes that nudge towards enduring research directions.

3. The general resource situation

3.1 Funding

In 2021 total expenditure in Norway on R&D in medical and health sciences in the higher education and health sectors was 9932 MNOK. The expenditure was 41% in university hospitals, 11% in other health trusts, 33% in universities, 49% in other higher education institutions and 9% in institutes[11].

Research institutes participating in this evaluation get most of their general income for surveillance of the health situation and health threats to the country, reporting to ministries about it and respond to specific requests from ministries. This requires them to be updated, monitor, analyse and report on all the areas under their umbrella. In turn that requires methods in place as well as developing new methods, for which research is necessary, and therefore a contribution for research is included in the funding from the ministries (STAMI and NIPH) or attract specific funding from ministries (NORCE). All institutes supplement their research funding with competitive RCN funding, EU funding, other national funding and, where appropriate and possible, business funding. With the supplementary funding they are able to double their research budget. The block grant for research is awarded annually, which hinder long term planning and investments. This general concern can be overcome with multiyear funding cycles for all types of funding (projects, programs and base funding). This is important, especially if the balance between base funding and competitive funding is shifted.

The basic funding in the hospital sector (including university hospitals) is embedded in the general budget allocation from the Ministry of Health and Care Services (in 2021, 58% of total budget). In addition 21% of the budget is made available through the health trusts as performance based (70%) and competitive funding (30%). In the HEI sector the basic funding is 69% (as block grant from the Ministry of Education and Research)[12].

The national committee finds the basic funding in terms of percentage of total funding fairly high international perspective, but generally not lavish[13]. Especially organisations with limited research activities (smaller health trusts and HEI) are unlikely to reach critical mass in research without higher basic funding. Furthermore, for international collaborations and long-term project sustainability, basic funding can be a limiting factor.

Besides the basic funding, competitive funding from RCN amounts 11% of funding for medical sciences and health research in Norway. This percentage of competitive funding is considered quite low and does, in the opinion of the national committee, focus too little on goal-oriented programmes with clear roadmaps (and too much on individual projects). Funding from ministries amounts 13%, and this concerns assignments and project subsidies, 7% of funding comes from other national Norwegian sources[14].
International funding (3%), including funding from the EU (2%), is low, and there seem to be many more opportunities here, in Horizon Europe as well as in ERC. Acquiring EU funds is

[11] All data in this chapter from: SSBN, 2024a
[12] NIFU, 2024c
[13] Vetenskapsradet, 2024: In Sweden basic funding for universities is 42.2% (2021),
[14] SSBN, 2025

(generally) more difficult than acquiring national funds and this requires a more professional approach to project development and administration (e.g. by way of EU service offices). The benefits are much broader than only financial: EU projects also give access to networks at the forefront of science and technology and can help further develop the research agenda. Business funding is also rather low (2%). Industrial pharma and MedTech activities are limited in Norway, but the opportunities to work with international companies are not developed.

The admin units in this evaluation representing Norwegian health research, could, or maybe even should in the eyes of the national committee, find opportunities for further funding in international programmes as well as with industry (esp. in the field of medical technologies, which seems not to be the focus of the research in admin units in the evaluation, but which is a sizeable industrial sector in Norway).

National funding should prioritise creating synergies within the Norwegian research system. This requires stronger coordination among major funders to align goals, key performance indicators, and program areas. Additionally, efforts to build critical research mass outside major urban administrative centers should be supported through increased base funding for smaller research organisations, with interagency coordination ensuring effectiveness.

Programme funding should take precedence over project funding at the ministries and RCN and could partially replace base funding. These programmes should drive collaborative efforts toward concrete (medical) goals, promote cross-organisational cooperation, and ensure broad access to methodological expertise. They should also enhance knowledge transfer across Norway and expand patient datasets, turning geographic diversity into an advantage. Over time, such programmes could evolve into virtual research centers, similar to the NIPH Centre for Fertility and Health.

3.2. Personnel[15]

Overall, 9212 researchers were working in the units participating in the evaluation: 4045 (44%) in the higher education sector (University of Oslo (UiO), Norwegian University of Science and Technology (NTNU), University of Bergen (UiB) and University of Tromsø (UiT), account for 77% of these); 4469 (49%) in the health trust sector (of which 2036 in Oslo University Hospital (OUS), and 833 in Haukeland University Hospital (HUH, Bergen) and 698 (8%) in the institute sector (of which 465 in the Norwegian Institute of Public Health). The growth in researchers in the higher education sector and health trusts since 2013 was similar (around 40%). The number of researchers in the institute sector did grow more modestly with 16%.

In the Higher Education Institutions, the growth was mainly in the personnel groups of assistant professors and researchers/postdocs (70% and 59% resp.). The number of professors and PhDs also increased considerably (21% and 27%). In general, the ratio professor/associate professor/postdoc/PhD is approximately 1:1:1:1,5, in international perspective a low number of postdocs and PhDs per (senior) researcher. The low number of postdocs limits the career perspectives for young researchers that have just received their

[15] SSBN, 2024a

PhD degree. Training of more PhDs will strengthen research, hospitals, industry and policy: not all PhD graduates will pursue a career in research.

In 2021, the average age of professors was 58 years, with 40% of the professors over 62 years of age, which makes succession plans necessary. Associate professors are on average 50 years old.

Most staff originate from Norway, and it is assumed (based on number of foreign PhD holders) that 23% of all researchers in the medical evaluated HEI were foreign researchers (excluding PhD students), most of them in the researchers and postdoc group. The percentage of foreign researchers has not increased since 2017. The number of foreign PhD students is estimated at 26% (based on awarded doctoral degrees in 2021).

In the health trust sector, in 2021, 41% of staff was senior physician, 10% physician, 4% psychologist, 33% researcher/postdoc and 12% PhD student. The average age of senior researchers in health trusts is much lower than in HEI (e.g. 51 years for senior physicians and 39 for physicians). Only 16% of the senior physicians is older than 62 years of age, probably since the clinical work in health trusts is quite strenuous esp. in the combination of research, and not often done at higher ages. The researcher/postdoc group in health trusts is older than the comparable group in HEI (47 against 39). In most health trusts, there is a clear tension between clinical practice and research, that leads to high workloads as well as to pressure on research, since patients always get priority.

Foreigners are rarely employed in health trusts. Only in the group of researchers/postdocs 10% has a foreign background[16], probably because in health trusts client contact is important in most functions, and for this fluent Norwegian is a prerequisite condition.

In the institute sector the average age is 46 (constant over the last 10 years) with a 10% staff above the age of 62 years. The number of foreign researchers is 13%.

From the evaluations of the research groups and admin units it becomes clear that there are difficulties in recruiting and retaining early-career researchers (e.g., PhD students and postdocs), especially in remote locations. The Norwegian language requirement is an issue that reduces the opportunities to attract foreigners (and keep them).

To strengthen the research in Norway, research careers need to be made more attractive. New groups of young researchers need to be attracted, career perspective should be provided (special attention for postdocs), and (in hospital trusts) competition between clinical work and research should be tackled. Specific attention should be paid to regions outside Oslo.

3.3. Infrastructure

Research Infrastructures are an enabler of research. Since 2010 Norway has had a roadmap for research infrastructure (broader than just medicine and health) that is aligned with the European ESFRI roadmap and updated after each major call for funding for research infrastructure under the auspices of the Research Council. The most recent roadmap was published in 2023. Sharing and reuse of research data, international cooperation on research infrastructures and sustainability are the overarching objectives of

[16] SSBN, 2024a

this roadmap[17]. The roadmap includes infrastructures for clinical trials in the primary and specialist health services, registries and biobanks, as well as technology platforms related to bioinformatics/systems biology, gene sequencing and various 'omics' techniques, NMR analyses and other imaging technologies and structural determinations. Norway is part of major European initiatives in the fields of imaging technologies, clinical research and biobanks.

The evaluation shows there are some very good examples of available research infrastructure, but also that there is room for improvement regarding the levels of access and engagement. It should be considered how infrastructures increasingly could become drivers of research projects rather than mainly service cores.

Some equipment is too expensive for one organisation, e.g. technological equipment like PET scanners, a cyclotron or a supercomputer. The acquisition of this type of equipment needs a national approach (or even a Nordic approach) and sharing across organisations: not only sharing the equipment but sharing the actual research projects so that a broad knowledge base is developed. Maintenance and operation needs also to be shared, and competences for operation should have a large continuity and should not be dependent on temporary staff.

Registries have played an important role in medical and health research in the past years, driven by the need for quantitative evidence. Norway has a good national health registry system, complemented by many generally not yet technically and semantically coordinated National Quality Registers and some very good longitudinal datasets (like the HUNT study and the Tromsø study).The insight that the causes and effects of diseases are determined by many personal factors including genetics, environmental factors, etc. have led to great expectations in the field of personalised medicine, but integrated availability of structured electronic patient record data is a prerequisite for effective development of personal treatment. Norway has a good starting position but should invest to keep up with international developments. Raw electronic patient data should be made available and made accessible real time. Central competence building across the various registries should be promoted (esp. in the way data are formed (semantic level), stored and transferred (technical) and made accessible (legal level)), and visibility of the data should be promoted or even enforced at a national level so that the registries can become a backbone for the Norwegian health system and a strong asset for Norwegian research.

[17] RCN, 2023

4. PhD training, Recruitment, Mobility and Diversity

4.1 PhD training

Statistics Norway reports 1896 PhD students in 2021 in the participating administrative units, 72% in the higher education sector and 28% in the health trusts (PhDs in health trusts can only receive their PhD degree from a degree-granting institution). No data are provided about PhD students among the staff of the institutes but based on the self-evaluations and interviews with the institutes, there are quite a number of PhDs that are located in institutes where they do their research work. They get their degree from a university (degree granting institution). Interaction between actual workplace and academic promotor is not always optimal. The four largest employers of PhDs in the HEI are the UiO (362, 26% of HEI total), NTNU (318, 23%), UiB (231, 17%) and UiT, the Arctic University of Norway (185, 14%). In the health trust sector 80% of the PhD students is employed in the university hospitals, of which again 65% (319) in OUS.

All in all, 44% of all medical PhD students are located in Oslo[18]. The number of PhDs per research field seem to reflect the general distribution of research fields in Norway (see above).

464 students received a PhD degree in the field of Medical and Health Sciences in 2023[19]. PhD students in the Health, Welfare and Sport field take longer to get their degree than the 'average' PhD student in Norway, but the drop-out rate is lower. From those students that started in the period 2018-2023 with a PhD in this field, 15.2% graduated within 3 years (13.9% for all fields); 44.4% graduated within 5 years (48,2%); 35,6% is still in the same course of study (27.7%) and 20.1% dropped out (24.1%)[20].

A national learning environment for research methods and making research designs is lacking in Norway. This means that all admin units develop their own programmes, even where capacity to do so is missing. Academic training of PhDs benefits from a broader learning environment interaction than just with their promotor, or, in institutes, just with the colleagues in the institute. Whether this environment is provided greatly depends on the supervisor or the research group in which the PhD is embedded. Attention to this is necessary.

4.2 Recruitment

From the evaluations of the admin units it becomes clear that there are difficulties in recruiting and retaining early-career researchers (e.g., PhD students and postdocs), especially in remote locations.

[18] SSBN, 2024a

[19] Statista, 2025

[20] SSBN, 2024b

The models to recruit externally at the early independent career stage were widely different. More focus on start-up packages and considering these an investment for the dynamic future of research environments would help.

4.3 Mobility

Numbers about staff mobility are not provided to the evaluation committee, and especially about national mobility there are no indications about mobility either.

In terms of international mobility, the assumption of Statistics Norway that most researchers with a foreign PhD degree are foreigners[21], suggest that getting a PhD abroad and then returning to Norway is uncommon. However actual data are not provided/not known.

As stated above it is estimated that 23% of all researchers in the medical evaluated HEI were foreign researchers (excluding PhD students), while the number of foreign PhD students is estimated at 26%[22]. In health trusts foreigners are rare (10% in the group of researchers/postdocs 10%). In the institute sector the number of foreign researchers is 13%. Overall, this would mean that approximately 1250 researchers (or 13.6%) in the evaluated admin units are of foreign origin. The share of foreign R&D personnel has slowly increased over the years but is still low. The Norwegian language requirement is an issue that reduces the opportunities to attract foreigners (and keep them), especially in health trusts, but also in other organisations.

Career perspectives for researchers are unclear: The gap between getting a PhD degree and becoming a professor or senior physician is too large. There is a low number of postdocs (making it difficult for PhD graduates to make it to the next step) and opportunities for postdocs to obtain permanent positions are also limited. With a large number of professors in the HEI retiring within a couple of years there seem to be some new perspectives, but the group below professor level is also already quite old. Succession plans for leadership are not common.

4.4 Diversity

In the medical and health sciences, women form the majority of researchers: 62% in HEI, 54% in in HT and 63% in the research institutes. In the most advanced career levels (professors, senior physicians) the percentage of women increased from just above 30% in 2013 to 47% in 2021 (data for HEI and health trusts). This means that in absolute numbers the number of female staff in the highest categories doubled! At all the other levels female researchers are in the majority: 59-70% in the HEI and 55-67% in the health trusts[23]. Data on gender at management level are not known, although, based on impression of the national evaluation committee, women are represented less pronounced than at lower levels.

In the institute sector, gender equality policies are in place and well implemented. Even though there is still some progress to be made to promote women to the more advanced

[21] SSBN, 2024a
[22] For comparison (Statista, 2025): In 2023, 54% of PhD graduates (across all disciplines) was female, 40% were non-Norwegian citizens
[23] SSBN, 2024a

career levels, attention should also be paid to attract more men to this research field (and to higher education in general).

What is really missing from an international perspective, is a strategy on other social exclusion as well as on ethnicity including indigenous populations in Norway. This could have advantages for health research, not only in terms of attracting more researchers, but also on the choice of research topics.

These data are collected at admin unit level, but not available at a national level because of GDPR.

5. Research Cooperation nationally and internationally

5.1 Admin units' cooperation within and between different sectors

The network analysis provided by NIFU[24] (based on the national co-publications) shows that the national network in Norway is quite connected. The administrative units from UiO and the OUS that participated in this evaluation have, as part of the biggest organisations in the Norwegian medical and health research system, a central role. Other bigger universities are connected to many smaller universities and health trusts as well. Some smaller universities and health trusts also have surprisingly high numbers of connections, also across the sectors. There is also cooperation with NIPH (broad) and the cancer registry (inside cancer research). NORCE and the STAMI are not showing in the network graph. The cooperation pattern of the topics they are covering seems to be outside the core areas of the admin units covered by EVALMEDHELSE.

Even though there are many co-publications, nationwide cooperation focused on common goals (with aligned or even integrated research agendas, e.g. within specific programmes or even a national strategy) may be a way to lift research quality further. Countrywide knowledge exchange needs to be incentivised, and research results need to be exchanged in an open way between institutions. The rest of the country needs connection to the larger universities and university hospitals like in Oslo, Bergen, Trondheim or Stavanger, not competition with them.

Interdisciplinary and intersectional research is important to address complex societal challenges. Several administrative units faced difficulties initiating and operationalising interdisciplinary efforts, suggesting a need for better infrastructure and support systems to enable such collaborations. A good way to do this would be to organise research not along discipline or (internal) group, but more programmatic, along common goals, facilitating internal and external cooperation.

5.2 Admin units research cooperation nationally and internationally[25]

Co-authorship is a commonly used indicator of research cooperation. In the field of medical sciences 53% of the publications show national co-authorship and 65% of the publications show international co-authorship. National co-authorship is much higher than in other science fields (24% average national co-publication rate for all Norwegian research publications), which shows that the medical field is well connected nationally, but which is also a sign of the larger size of the medical and health research field in Norway than other

[24] NIFU, 2024b

[25] Data in this chapter from: NIFU, 2024c and NIFU, 2024d

research fields. The international co-publication rate is, according to the national committee in line with countries comparable to Norway.

Patterns in international cooperation are less clear than national cooperation patterns. Although there are high numbers of international co-publications, only a few administrative units collaborate in EU projects, and even fewer are leading EU projects. For a majority of admin units, the amount of international funding including EU funding is low.

More international outreach (also beyond EU, e.g. NIH) could help raise the standing of Norwegian research and help attract people to Norway. Focus should be on cooperating with the best international partners in the field, not necessarily on partners that are already known. Norwegian researchers should also have the ambition to lead more of these international projects.

6. Societal impact and the role of research in society, including Open science

6.1 General reflections

Open Science

Policies and practice with regard to open science seem well established if it comes to publishing in open access journals. The means/abilities to implement open science strategies at lower levels in the system are not always provided. Open Access Publication is not/hardly affordable in small centres. Policies and practice with regard to open science with regard to availability of research data are to a lesser extent implemented.

Most administrative units did not touch upon issues beyond publication and data availability. This can affect research in the future, e.g. with linking raw personal data to personal medicine approaches Norway is much behind rest of Europe.

User involvement in research

User involvement is about including all the relevant users, e.g. patients, health trust staff, industry representatives, policy makers, etc. in all stages of the research, from research design to research evaluation. This is likely to increase relevance, since user needs are clear from the beginning and can be integrated into the research approach. It also increases the likelihood of success, since user reflections can form an extra input in the research phase, and user experiments may be easier to arrange. Experience from the national committee shows that user involvement increases when funders (or others) ask before a project is started how end users are involved in setting up the project and how they will be involved in using the knowledge.

Even though RCN introduced user involvement as a criterion in all applications in 2015, in Norway, user involvement and engagement are underdeveloped. In the research group evaluations however, only a small minority of the groups was considered to have an outstanding social partner involvement in all aspects of the research, while more than 1/3d of the groups showed no or only a modest attention to this aspect. The evaluation committee would expect that the admin units should look widely at involvement techniques that are successfully used in other countries, to develop clear plans with the resources that are required to implement this as soon as possible.

Societal impact

Societal impact of research in the medical field cannot easily captured in one number. It can have many forms, including effects on prevention of disease, effects on patients and public, effects on treatment methods, effects on costs of treatment, effects on education, effects on policies, new products for industry with economic effects like turnover, profits and employment, etc.

Societal impact of (medical) research is not systematically and centrally monitored in Norway. There is also limited communication to the general public of how the research impacts society.

Reports from the regional health authorities to the Ministry of Health and Care Services on innovation activities in the Health Trusts indicate increasing activity since 2015 (stagnated by COVID in 2021 and 2022)[26]. In addition, to get a better picture of impact, for this evaluation the administrative units were asked to provide case descriptions to identify what they considered noteworthy societal impacts of their research. In total almost 250 case studies were received. Based on this information case studies and the description of societal impact that the research groups provided in their self-evaluations, the peer review panels that evaluated the research groups, gave a qualitative appreciation of the societal impact of the group, ranging from “There is little documentation of the contribution of the group to economic, societal and/or cultural development in Norway and/or internationally” via “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” to “The group has contributed extensively to economic, societal and/or cultural development in Norway and/or internationally”. According to this assessment, the societal impact of medical and health research in Norway is in line with impact elsewhere. In about 45% of the groups there is more than average impact, including approximately 14% of groups contributing extensively.

The national committee recognises there are many good examples of (societal) impact of research (see examples below). Despite this, the committee finds the integration between research, knowledge translation, and implementation in society underdeveloped and not forming a continuous process from discovery to implementation. Connections between disciplines relevant across the value chain should be enhanced. This can also be part of a programmatic approach as described in 3.1.

Generally, the interface to industry was ad hoc and unstructured. Similarly for initiatives around vendor funding for startups. There is in many places a mindset that research cannot be translated, but there are also examples of admin units that made a difference over the past years. Overall, the medical and health research field in Norway seems to be lacking strategies on how to become attractive to industry to, for instance regarding ease of locating and ease of investment.

Especially in the institute sector, and related to their overall task, the interface towards policy is better developed although there is room for development both in terms of the administrative and management structure and the way collaboration between research and knowledge translation is shaped. NORCE even has a special knowledge translation centre, to implement research-based knowledge into practice. However, in the institute sector, research is generally quite descriptive not interventionist and, here again, the focus is more on projects than on programmes, limiting the opportunities to get evidence for policy makers to deal with societal problems.

Norway shares with the rest of Europe the split ownership between primary and secondary care. The latter is organised at the level of regions whereas the municipalities are responsible for all primary health care and also care and social service for the elderly. There

[26] NIFU, 2024e

is a need for evidence based knowledge in this area but at the same time the research environment is often not ideal either because funding is limited or because the research done is not enough practice oriented. An improvement of the scientific output from this segment of healthcare cannot be expected without a decisive and coordinated effort (organisation, funding, policies and competence).

Institutes like NORCE and local HEI would benefit for going for a more permanent long term relationship providing research and implementation programmes rather than commissioned projects.

6.2 Review of the EVALMEDHELSE impact cases

Of the almost 250 impact cases that were submitted by the administrative units as part of EVALMEDHELSE to illustrate their societal impact, eleven are presented below in a short summary. All impact cases submitted to EVALMEDHELSE will be available in a summary report on the Research Council's website from April 2025.

The eleven selected cases do neither cover all impacts that the medical and health research in Norway has had in the past 10 years (it is only a small sample), nor do they necessarily represent the best examples of impact (since it depends very much on the criteria that are used to quantify impact, what is considered the largest impact). The eleven cases were selected by the national committee to illustrate the different pathways that can lead form research to impact and the different impacts medical and health research can have.

The cases come from all three sectors in Norwegian research (HEI, INST and HT), include examples from bigger and smaller organisations (or from collaborating partners), and from all over Norway. The impact case studies also cover various medical domains (biotechnology, cardiology, handling of the Covid pandemic, nursing, oncology, psychology).

Many cases have effect on multiple issues. The examples include cases of impact on new medicines and treatment methods (case studies C, D, G); impact on clinical guidelines (nationally and internationally, case studies F, J, K); patient treatment/recovery (case studies C, J); impacts on societal costs of disease (case studies A, J); impact on cooperation with industry (case study B); impact on public policy (case studies A, B, F, G, H, J, K); impact on economic activity (case studies B, C, D); impact on education (case study E); impact on well-being of patients (case studies A, B, E, I); new economic activity in spin-offs (case studies C, D); impact on costs of health care (case studies H,J); and impact on public awareness (case studies A, F, I).

Together, the case descriptions provide a good picture of the impacts of medical research in Norway in the past 10 years. There is a great potential in continuously publicising various examples of impact in order to further the understanding of the need for research funding in the eye of the public.

Case study A: Sami Nursing, University of Tromsø.

Reasoning: In order to provide care to the Sámi in their native language the University of Tromsø has created a Bachelor's programme in Sámi Nursing.

The Bachelor's programme in Sámi Nursing holds significant importance not only for the Sámi community but also for the broader population. This program emphasises the Northern Sámi language, Sámi cultural studies, contemporary Sámi issues, and the concept of cultural safety within the nursing profession. The availability of nurses fluent in Sámi is crucial for patient care in the North and serves as a valuable measure of quality in the provision of healthcare services.

Case study B: Therapy Light rooms / Innovative Light solutions to improve health and quality of life (Psychology, University of Bergen)

Reasoning: This is included as it has links to industry as well as improving the lives of those with dementia and their caretakers. The new lights are likely to be adopted nationally and probably internationally, with economic effects for the industry partner.

Baseline mapping demonstrated that light conditions in nursing home dementia units were below the industrial standards, regardless of season, and not suitable according to scientific standards to support a robust circadian rhythm. A randomised controlled trial demonstrated immediate benefits on sleep and psychiatric symptoms of a dynamic ceiling-mounted light therapy on nursing home patients with dementia. The project influenced public policy and services, prompting a heightened focus on enhancing lighting in both the light and health industries. The light therapy improved sleep as observed by the nursing home staff and neuropsychiatric symptoms, in particular depression. The new and improved LED technology is more economic and environmentally friendly with less power consumption. The industry partner has received more requests from different nursing homes. Although this impact is in its early stages it has a lot of potential for wide international impact

Case study C: Cardiac biomarkers (Akershus University Hospital and Institute of Clinical Medicine, University of Oslo)

Reasoning: The impact of the research group in developing biomarkers for severe cardiac disease to guide clinical decisions is of direct relevance for patient care. Several clinical trials have been conducted using the biomarkers. The observations in the group have also generated intellectual property rights and led to establishment of two spin-off biotechnology companies.

The Cardiovascular Research Group at Akershus University Hospital (Ahus, hospital) and Campus Ahus (University of Oslo) is a leading international group in studies on cardiac biomarkers. Cardiovascular disease and myocardial dysfunction are among leading causes of death in the Western world. Biomarkers are imperative for guiding clinical decisions and follow up principles in care of cardiovascular disease. The cardiovascular research group at Ahus hospital and Campus Ahus perform clinical and experimental studies of cardiac biomarkers, and as examples have demonstrated high-sensitivity cardiac troponin I and T to

identify subclinical and clinical myocardial injury, and the novel biomarker secretoneurin as a novel cardiac biomarker for heart failure. The administrative unit offers large clinical cohorts and state-of-the-art laboratories, collaboration with international enterprises as well as national diagnostic companies are established.

The work from 2012-2022 includes clinical studies with established cardiac biomarkers, which have direct relevance on patient care, and integrated, translational research on novel cardiac biomarkers. The work was performed in close collaboration with industry partners and has led to significant advancements for clinical care, intellectual property rights (IPR), and the establishment and development of two Norwegian biotechnology companies. As the principal partner of CardiNor AS (Oslo, Norway), a CE-approved SN ELISA assay was developed, which is currently validated in clinical studies. In parallel molecular work, SN is pursued as a drug concept for treatment of ventricular arrhythmias with on-going IPR work.

Case study D: Fostering biotech excellence, a case showcasing innovations and startups (Division of Laboratory Medicine - KLM, Oslo University Hospital and University of Oslo).

Reasoning: The impact of Vaccibody is demonstrated both in the financial success and the successful production of numerous vaccines including the first Nykode based on targeted vaccines against cancer and infectious disease. Nextera was based on a novel phage display technology applied in target discovery and TCR and antibody drug development in oncology and autoimmunity. Authera is a pre-clinical-stage biotechnology company dedicated to the discovery and development of novel therapeutic biologics.

Innovations in the RCN CoE Centre for Immune Regulation (CIR) led to three startup companies in the Biotech sector. The first, Vaccibody (now Nykode) was based on targeted vaccines against cancer and infectious disease. The driven innovation relating to Vaccibody included 10 PhDs and > 50 research papers, encompassing a diverse collection of publications on vaccines for cancer and infectious disease. The technology was based upon targeted delivery of vaccine antigen for strong B (antibody) and T cell responses. Vaccibody was established in 2007, currently has 200 employees, is listed on the Oslo Stock Exchange and has extensive list of trials and industrial collaborations.

Nextera was based on a novel phage display technology applied in target discovery and TCR and antibody drug development in oncology and autoimmunity.

Authera was based upon breakthrough understandings of complex FcRn biology and its ligands, IgG antibodies and albumin, and collaborates with a range of global biotech and pharma companies. All three companies have expanding activities, value and impact and exemplify an emergent biotech sector in Norway.

Case study E: Bridging Body and Mind through effective interventions, tools, and health literacy (Oslo University, Psychology Department, IPS)

Reasoning: The cost of chronic pain is very high on social welfare. This adaptation of ACT for chronic pain has had effects on four separate areas in Norway – policy, workplace integration, public awareness and literacy and is cost-effective. All impact is national but it is likely that this will also have international impact in the future.

This research (Randomised controlled trials (RCTs) on Acceptance and Commitment Therapy-based work rehabilitation and IPS adaptations for chronic pain) realised significant improvements in workforce reintegration and mental well-being, which in turn led to:

1. National Health Policy Changes: The research contributed to workplace health interventions recognised by the Norwegian Directorate of Health, including ACT-based programmes and IPS adaptations that are now part of Norway's recommended treatment approaches for chronic pain and mental health in the workplace.
2. Improvement in Workforce Reintegration: The ACT-based work rehabilitation model has significantly reduced long-term sick leave and improved work participation rates. This intervention has been adopted in Norwegian health services as a key method for helping individuals on extended leave due to chronic pain or mental health issues re-enter the workforce effectively.
3. Health Literacy and Public Awareness: Through publications, seminars, and collaborations, including the Oslo Chronic Fatigue Consortium, the Mind Body Lab has reached thousands of practitioners and patients with evidence-based information on managing stress, pain, and fatigue.
4. Cost-effective Health Solutions: By demonstrating the cost-effectiveness of IPS and ACT interventions, the research has informed funding decisions within Norwegian healthcare, highlighting that these methods not only improve patient outcomes but also reduce healthcare expenses by preventing long-term disability and unnecessary treatments fatigue has been widely referenced, with over 16,000 views, and has influenced public and professional understanding of chronic stress management.

Case study F: NIPH, division of Mental and physical health: Real-time surveillance of covid-19 immunisation program in Norway

Reasoning: This case is about real-time surveillance of covid-19 immunisation and an excellent example of the interaction between research - decision and policymaking in real-time. An excellent element of this research is inclusion of circular communication between practice, reporting observations, register, real time analysis of data, and reporting to authorities and back into practice. The research had impact on the scientific as it demonstrates the importance of available register data that can be used to master a life-threatening situation like a pandemic.

"Real-time surveillance of covid-19 immunisation program in Norway" is an excellent example of research that in real-time provided evidence-based knowledge that changed policy recommendations and clinical practice to manage the pandemic and protect the public from severe complications related to immunisation for covid-19. The ability to, in real-time,

monitor and adapt the immunisation program would not have been possible without the long history of building registers, having access to scientific resources and experiences, and the political mandate to monitor, analyse and pass on the latest knowledge to those taking it to national decision making and into practice. An excellent element of this research is inclusion of circular communication between practice, reporting observations, register, real time analysis of data, and reporting to authorities and back into practice. The research had impact on the scientific community via publications in high impact journals, and international and European organisations responsible for dealing with the pandemic. Real-time recommendations on which vaccine to use, on handling of risk or side effects of different vaccines, etc., had a highly important impact on the public. The research also had public impact as a measure to counter rumours and inform societal debate regarding vaccine safety by providing evidence-based knowledge. Another lesson to be learned is the importance of investing in infrastructure and international collaboration to handle public health threats in real-time.

Case study G : Nucleic acid extraction – Covid diagnostics for a nation, NTNU; Faculty of Medicine and Health Sciences

Reasoning: This case highlights the importance of long-lasting expertise in basic research for the timely development of diagnostic test for COVID19, also thanks to a cross disciplinary collaboration at NTNU. NTNU has a strong international reputation and over time managed to build strong collaborative networks within and outside the University. Thus, an environment was created to conduct research along the entire value chain. The impact case illustrates how all steps constituting this chain have been combined to generate societal impact, including basic research. It also shows the importance of interdisciplinary collaboration and intersectional collaboration at local and national level.

The research has highlighted the importance of long-lasting expertise in basic research for the timely development of diagnostic test for Covid-19 also thanks to a cross disciplinary collaboration at NTNU. This test was the most used extraction test for PCR based corona diagnostics in Norway. The expertise and technology in the research group on nucleic acid extraction and detection, and implementation on advanced liquid handling systems combined with microbial and viral diagnostics expertise was essential for this innovation. Fundamental was also the proximity to the competent research environments of the Department of chemical engineering at NTNU and the proximity to St Olavs University Hospital in Trondheim. Six papers by the research group published in international journals are listed. The NTNU corona test had an enormous impact on the test capacity, monitoring and controlling infection spread in the Norwegian society during the pandemic. This impact case clearly demonstrates how strong and robust basic research teams have a unique potential for innovation which is of particular importance for preparedness.

Case study H: Continuity in general practice as predictor of mortality, acute hospitalisation, and use of out-of- hours care: a registry-based observational study in Norway, University of Bergen; Department for Global Public Health and Primary Care

Reasoning: This case points out how research results were reported in newspapers and led to high level political discussion in several European countries.

Continuity of care in general practice is shown to increase patient satisfaction, improve health, and contribute to more efficient use of total health care. However, when holding different policy goals against each other access has often been prioritised over continuity of care. In the research environment, there has been a focus on the utilisation of health care with continuity of care as one main pillar. Research was conducted with the aim to increase knowledge regarding continuity of care and analyse the association between longitudinal continuity with a named regular general practitioner (RGP). The duration of the RGP-patient relationship (I.e. being listed to the same RGP) was used as a predictor for the use of OOH services, acute hospital admission, and mortality in 2018. The research led to a publication of the study that was covered by media and led to high level political discussions in several European countries.

Case study I: Capitalising on Norwegian birth cohort and registry data to generate real-world evidence about medications in pregnancy, UiO Dept. of Pharmacy

Reasoning: There is a great need for human data and research about the safety and efficacy of medication strategies during pregnancies. The case has established novel insight into the long-term drug safety in utero and is an excellent example of comprehensive data analysis and secondary use of health data giving value back to the population. Of note is also the advanced biostatistical and causal inference methods.

The unique Norwegian birth cohort and health registries were utilised in this multidisciplinary project studying the long-term effects and safety of drugs during pregnancy. The results have helped promoting the safety and well-being of pregnant women and their children. Normal drug testing always excludes pregnant volunteers. Real-life pharmaco-epidemiological studies provide important information on these critical gaps in knowledge for the benefit of the safety and well-being of foetuses and their mothers. The projects have downstream resulted in numerous impactful projects for example articles on the effects of analgesics and antidepressants impacting DNA methylation in the offspring. Further perinatal pharmaco-epigenetic studies were followed and reported.

Case study J: Exercise therapy or arthroscopic partial meniscectomy for degenerative meniscal tear in middle aged patients: randomised controlled trial with two-year follow-up, Martina Hansens Hospital

140 middle-aged patients with degenerative meniscal tears were during October 2009-September 2012 recruited from two Norwegian orthopaedic hospitals, Ullevål University Hospital (54 patients) and Martina Hansens Hospital (MHH-C) (86 patients). The patients were randomised (1:1) to treatment with either surgery or exercise therapy. The surgery was performed as an arthroscopic procedure (“keyhole” surgery) with excision of meniscal tissue and the exerciser therapy program included physiotherapist-assisted strengthening

exercises twice or three times a week over a period of 12 weeks. The follow-ups at 3, 6, 12 and finally 24 months included patient reported outcomes measures (PROMs) and physical performance and muscle strength tests. No difference in patient reported outcomes between the intervention groups 2 years following treatment.

The published article received wide media attention at the time of publication with a high altmetric score and has subsequently been highly cited. This procedure was very common prior to this trial and has now largely been abandoned world-wide.

Case study K: Human papillomavirus (HPV) and cervical cancer prevention strategies, University of Oslo, Institute of Health and Society

Reasoning: This is a good example for excellent health services research influencing guidelines and practice not only in Norway, but also the WHO's Global Strategy to Eliminate Cervical Cancer. Research is excellent throughout and links to impact are clear with strong evidence of population benefit.

The research produced by HELSAM's faculty has informed and impacted national and international recommendations for the prevention and control of human papillomavirus (HPV)-related diseases. Nationally, the changes to Norway's cervical cancer screening and HPV vaccination policies have been influenced by the HELSAM research team. Internationally, researchers at HELSAM were pivotal in designing the WHO's Global Strategy to Eliminate Cervical Cancer, adopted by the World Health Assembly in 2020. Rapid response insights on COVID-related disruptions emphasise the need for adaptive research. Overall, HELSAM's research team, resonates through policy changes, shaping international and national healthcare agendas, and providing timely responses to emerging challenges, exemplifying a transformative influence on both global and local health initiatives.

7. Recommendations

The national committee is of the opinion that the medical and health research in Norway is of good quality and has good societal impact to examples where research is of top level and where there is excellent impact. However, there are opportunities to reach top level across a broader part of the system and for increasing societal impact. In order to achieve this, actions should be taken in the domains of organisation, human resource management, incentives and data management. The five most important recommendations to achieve this are:

1. **Improve the coordination of research funding to promote the competitiveness of the medical and health research in Norway.**

   - ***Aim to create synergies and critical mass across the research system***

   ✓ ***Organise a strategic discussion on whether the research resources on specific topics should be pooled or whether they should be spread out geographically***. Take into account experiences on what has been achieved with the (fundamental) restructuring of the research environment in many units, often merging smaller colleges into larger structures. The committee would encourage avoiding duplication and silo based working between organisations and encourage a focus on cooperation (e.g. virtual research groups across organisations) instead of solely promote competition on project level. Also include the role of regions and municipalities (esp. in rural areas), in the health care system and their needs for research in the discussion[27]. Make a decision based on the outcome of the discussion.

   ✓ ***Increase base funding for smaller health trusts and smaller HEI*****,** so they can be equipped to do good research and become attractive partners in national and international cooperation.

   ✓ ***Consider central provision of methodological expertise*** to increase research power of smaller admin units which cannot afford developing all methodological expertise inhouse by themselves.

2. **Increase the competitiveness of Norwegian medical and health research by focusing research on goal-oriented programmes across administrative units and organisations and connecting these to international state of the art.**

   ✓ ***Develop goal oriented research strategies and increase focus in the research*** (either by reducing the number of research topics, or by cooperating with other entities). Such strategies can also provide a basis for better planning of recruitment.

   ✓ ***Increase collaboration and joint work at*** strategic level as well as in the delivery of the research.

   ✓ ***Obtain more competitive international funding*****.** Be more ambitious, make resources available for application support for Horizon and ERC, also as a consortium leader, cooperate with the international leaders in the field, look beyond Europe (e.g. NIH).

   ✓ (for institutes) ***Strengthen the portfolio of intervention studies,*** again moving from projects to goal oriented programmes, and by increasing cooperation (esp. with regional and municipal authorities providing health and social care but also with universities). This increases the opportunities to get evidence for policy makers to deal with (suddenly arising) societal problems.

   ✓ ***Direct funding from projects (and maybe base funding) to society oriented programmes.*** The programmes should be focused on clear societal targets[28], with clear roadmaps and milestones, where researchers cooperate across research groups and organisations to achieve common goals. This unites larger and smaller groups into

[27] Kunnskapsdepartementet, 2020

[28] Targets could be offering solutions for medical problems but could also be about furthering thematic insights and could involve methodological, ethical or other topics that cut across more clinically oriented research.

networks to mobilise critical mass, it promotes interdisciplinary collaboration across the value chain, involves the different regions as well as user groups across Norway, and contributes to relevance, quality and impact and makes it possible to measure progress.

- ✓ ***Reward research groups/researchers that participate in international programmes,*** e.g. award national bonuses for successful applications in Horizon and/or develop a mechanism for compensation for highly ranked (but not funded) ERC applications. These rewards can lower the threshold to consider (considerable) efforts in applications for these prestigious grants and may create a more international orientation.
- ✓ ***Promote cooperation of public research with industry,*** esp. in the field of medical technologies, which seems not to be the focus of the research in admin units in the evaluation, but which is a sizeable industrial sector in Norway. This could e.g. be done by developing a cooperative industry programmes focused on PhDs and postdocs, look for example at the Luxembourg FNR Industrial fellowship scheme (Industrial Fellowships - FNR)

3. Make medical and health research more attractive for young and/or foreign staff and develop clear career perspectives for researchers.

- ***Develop clear career perspectives for researchers.*** The gap between getting a PhD degree and becoming a professor or senior physician is large. Programme based research has a better base for recruitment than singular research projects.
- ***Put more focus on start-up packages for external recruits at the early independent career stage.*** Consider these an investment for the dynamic future of research environments.
- ***Switch to a more international culture, where English and Norwegian are operating languages.*** Attracting foreign staff is the easiest/fastest solution to attract more staff for research. Having to learn to speak Norwegian is a serious barrier for this.
- ***Develop affirmative action to attract researchers to smaller health trusts outside Oslo and Bergen.*** Consider higher salaries in the North, a number of automatically funded PhDs or post docs with each professor position, etc.
- **Be vigilant about the increasing gender gap** in recruitment to health research and make efforts to understand why men shy away from research.
- ***Develop inclusion strategies that are broader than gender strategies alone.*** Set clear goals and measure progress.
- For admin units in the HT sector: ***Implement incentives to do research, in order to reduce the tension between clinical practice and research.***
- ***Develop succession plans for leadership***, in cases where retirement for present leaders is close. Take the gender balance into account, as women are (still) underrepresented in senior positions.

4. Develop and implement a good, nationally coordinated registry system as a backbone for and a strong asset of Norwegian medical and health research.

- ***Make research across registries possible.*** In order to achieve this, it is necessary to review all registers available and develop an effective organisation structure, using national and international standards for data exchange, including the EU framework for interoperability (Operational, technical, semantic and legal), as well as a nationally established practice for data privacy vs. secondary use of health data (i.e. GDPR vs. EHDS).
- ✓ ***Develop a semantic standard for registries that*** is encouraged for all health registries, clinical registries and longitudinal datasets to use

- ✓ ***Adopt a technical standard for registries*** that is obligatory for all health registries, clinical registries and longitudinal datasets.

- ***Promote the use of structured clinical patient data with real time accessibility.***
- ***Promote the visibility of the data so that the registries can become a backbone for the Norwegian health system***

5. Increase societal impact of medical and health research and communicate this impact

- ***Develop methods to manage impact more explicitly*** and in such a way maximise impact.
- ***Increase user involvement in all stages of research***.
- ***(Develop methods to) Monitor impact (more) systematically***, e.g. use of research in adapting clinical guidelines, number of patients in registries, number of qualified research projects that use the registries etc.
- ***Improve and increase communication about impact of research to the general public***
- ***Provide funding for open access publication and opening up of data as part of research grants.*** *Open Science is strengthening the research system. At present, open science is the responsibility of the admin units, and they make good progress in this field, but esp. smaller admin units in smaller organisation do not have the means to fund open publication.*

Evaluation of medicine and health

Introduction

The Research Council of Norway (RCN) has been given the mission by the Ministry of Education and Research to perform subject-specific evaluations. The evaluation of life sciences is conducted in 2022 - 2024. The evaluation of biosciences takes place in 2022 - 2023, and the evaluation of medicine and health takes place in 2023-2024 (Figure 1).

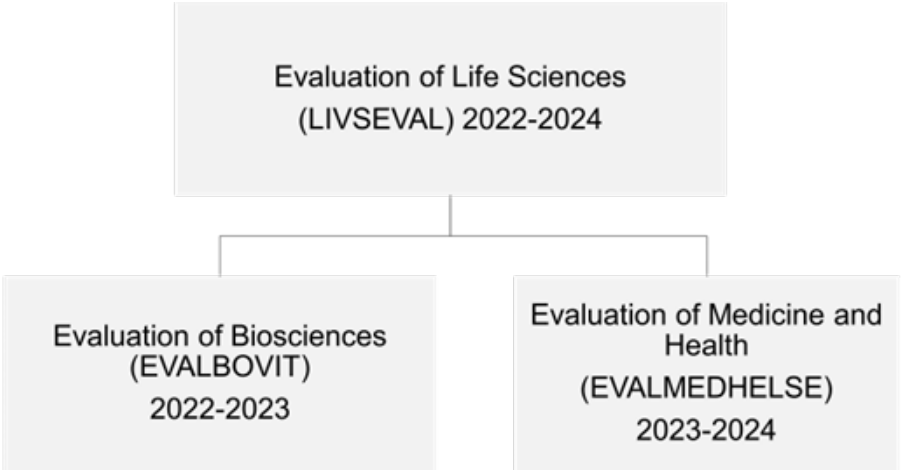


Figure 1. Evaluation of Life Sciences 2022-2024

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 will result in recommendations for the institutions, the Research Council of Norway (RCN), and the ministries.

Each institution has a responsibility to follow up the evaluation's recommendations given in the evaluation reports to the administrative units. Research Council of Norway aims to use the outcomes of the evaluation as a knowledge base for further discussions with the institutions on issues such as general plans and national measures relating to legal research. The RCN will use the evaluation in its development of funding instruments and in the advice, it gives to the ministries.

Methods

Evaluation protocol

The RCN created the evaluation protocol, decided the assessment criteria (Appendix B) and planned the review process. The evaluation protocol was decided by the portfolio board of Life sciences April 2022.

Terms of reference

The terms of reference and assessment criteria were adapted to the institutions' own strategies and objectives. The institutions' terms of reference contained specific information about the research unit that the evaluation committee was to consider in its assessment (Appendix A in the evaluation protocol).

Registration of administrative unit

All research performing organisations in the field of life sciences were invited to the evaluations. Twenty-two administrative units responded positively to participation in EVALBIOVIT (2022-2023) (Table 1) and sixty eight administrative units responded positive participate in EVALMEDHELSE (2023-2024) (Table 2). Institutions enrolled to the evaluation by submitting Terms of reference for participating administrative unit in addition to research groups.

Table 1. Names of participation administrative units in EVALBIOVIT 2022-2023

Administrative unit	**Institution**
Computational Biology Unit (CBU)	UiB
Department for Biotechnology and Nanomedicine	Sintef Industry
Department of biological sciences	UiB
Department of Biology	NTNU
Department of Biosciences	UiO
Department of Biotechnology and Food Science	NTNU
Department of Chemistry, Bioscience and Environmental Engineering	UiS
Department of Natural history	NTNU
Faculty of Bioscience	NMBU
Faculty of Biosciences and Aquaculture	Nord university
Faculty of Biosciences, Fisheries and Economics	UiT
Faculty of Chemistry, Biotechnology and Food Science	NMBU
Faculty of Environmental Sciences and Natural Resource Management	NMBU
Faculty of Science and Engineering	UiA
Natural History Museum (NHM)	UiO
Nofima	Nofima
Norwegian Institute for Nature Research (NINA)	NINA
Research department	NPI
The Advisory and Research Program unit	Institute of Marine Research
The Arctic University Museum	UiT
The Faculty of Veterinary Medicine	NMBU
University Museum of Bergen	UiB

Table 2. Names of participation administrative units in EVALMEDHELSE 2023-2024

Administrative unit	**Institution**
AHUS	AHUS
Cancer Registry of Norway	Cancer Registry of Norway
Centre for Psychopharmacology	Diakonhjemmet Hospital
Centre for Fertility and Health	NIPH
Department of Biomedicine	UiB
Department of Clinical Dentistry	UiB
Department of Clinical Dentistry	UiT

Department of Clinical Medicine	UiT
Department of Clinical Science I	UiB
Department of Clinical Science II	UiB
Department of Community Medicine	UiT
Department of Global Public Health and Primary Care	UiB
Department of Health and Care Sciences	UiT
Department of Medical Biology (IMB)	UiT
Department of Pharmacy	UiO
Department of Pharmacy	UiT
Department of Physical Performance	NIH
Department of Psychology	NTNU
Department of Psychology	UiT
Department of Psychology	UiO
Department of Research	Sunnaas Rehabilitation Hospital
Department of Social Education	UiT
Department of Sports Medicine	NIH
Division of Cancer Medicine	OUS
Division of Cardiovascular and pulmonary diseases	OUS
Division of Climate and Environmental Health	NIPH
Division of Clinical Neuroscience	OUS
Division of Emergency and Critical Care	OUS
Division of Gynaecology and Obstetrics	OUS
Division of Head, Neck and Reconstructive Surgery	OUS
Division of Health Services	NIPH
Division of Infection Control	NIPH
Division of Laboratory Medicine	OUS
Division of Medicine	OUS
Division of Mental and Physical Health	NIPH
Division of Mental Health and Addiction	OUS
Division of Paediatric and Adolescent Medicine	OUS
Division of Prehospital Services	OUS
Division of Radiology and Nuclear Medicine	OUS
Division of Surgery, Inflammatory Diseases and Transplantation	OUS
Division of Technology and Innovation	OUS
Faculty of Dentistry	UiO
Faculty of Health and Social Sciences	HVL
Faculty of Health and Sport Sciences	UiA
Faculty of Health Sciences	UiS
Faculty of Health Sciences (HV)	OsloMet
Faculty of Health Sciences and Social Care	Molde University College
Faculty of Health, Welfare and Organisation	Østfold University College
Faculty of Medicine and Health Sciences	NTNU
Faculty of Nursing and Health Sciences	Nord universitet
Faculty of Psychology	UiB

Faculty of Social and Health Sciences	HINN
Haukeland University Hospital	HUS
Health and Social Sciences Division	NORCE
Helse Møre og Romsdal hospital trust	Helse Møre og Romsdal hospital trust
Institute of Basic Medical Sciences	UiO
Institute of Health and Society	UiO
Lovisenberg Diaconal Hospital	Lovisenberg Diaconal Hospital
Martina Hansens Hospital	Martina Hansens Hospital
National Institute of Occupational Health	STAMI
NCMM	UiO
RBUP Øst og Sør	RBUP Øst og Sør
RBUP Nord	UiT
REMEDY	Diakonhjemmet Hospital
Research Institute of Modum Bad	Modum Bad
School of Sport Sciences	UiT
St. Olavs Hospital	St. Olavs Hospital
Stavanger University Hospital	SUS

Organisation
The evaluation has been done at three levels (Figure 2).

First evaluation level – Evaluation of research groups in expert panels
The administrative units enrolled their research groups to be assessed by expert panels divided by subjects and disciplines within the field of medicine and health across sectors. The eighteen expert panels consisted of four to six international experts per panel.

Second and main evaluation level – Evaluation of admin units in evaluation committees
The administrative units were assessed by evaluation committees according to sectorial affiliation and/or other relevant similarities between the units. The evaluation committees had expertise in the main disciplines of the medicine and health and various aspects of organization and management of research and higher education. The eight evaluation committees consisted of 4-8 international committee members per evaluation committee.

Third and evaluation of the national level
The national evaluation committee consisted of the eight chairs of the eight evaluation committees. The national committee was requested to compile a report based on the assessments and recommendations from the 68 independent administrative evaluation unit reports.

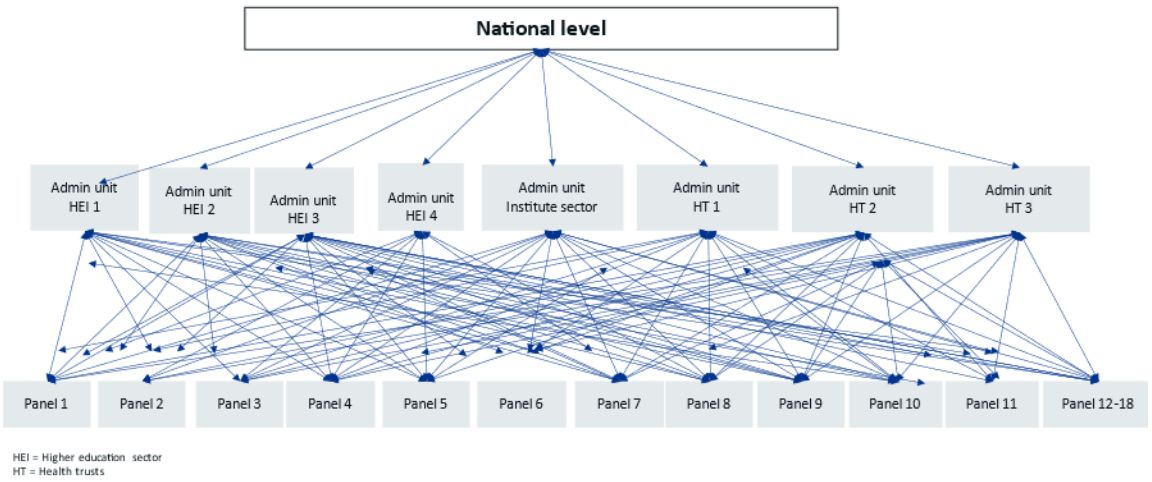


Figure 2. Organisation of the evaluation of medicine and health in three levels; expert panels, evaluation committees and the national level.

External evaluation secretariat

The Research Council has established an external evaluation secretariat for the evaluation. The external secretariat was responsible for the implementation of the evaluation process.

Data

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 (18 expert panel reports)
- Bibliometric data (*NIFU*)
- Personnel data (*SSB)*
- Funding data – The Research Council´s contribution to medicine and health research (*RCN*)
- Indicators for innovation (RCN)
- Extract from the Student Survey (*NOKUT*)

Limitations

This national report of the evaluation of medicine and health sciences in Norway 2023-2024 is the result of an extensive process of peer review of medicine and health sciences at 3 levels of the Norwegian research system: the research group level, the administrative unit level (department/institute/centre/institution) and the national level. At the lower levels of the evaluation, many comments have been made by those involved in the expert panels and evaluation committees about the evaluation process, most of them focusing on the limited amount of time that evaluators could spend on each group or administrative unit evaluated, and the limited direct interaction that the expert panels had with the groups (only a self-evaluation report) and the evaluation committees with the administrative units (a self-

evaluation report and an (online) interview of 1.5 hours with the (management) of the units). Although we share these concerns, we think that this design of the evaluation process has provided good quality inputs for a robust assessment at the national level. Important in achieving robust results have also been the composition of the national evaluation committee, consisting of the chairs of the committees that performed the administrative unit evaluations. Improvements in future evaluations (without increasing costs) are:

- Improved data availability (especially details about the role of hospital trusts as this is not an own sector in national statistics. It is split between the HEI and the institute sector).
- Better instructions for the groups and administrative units preparing the self-evaluations (including more instruction on what the boundaries of groups are).
- Scores that better reflect the underlying idea of research excellence (only 2-3 scores: Quality, Impact, Viability), and better calibration of scores across evaluated research groups (especially at research group level).
- Moving the interviews to earlier in the evaluation process, which will, earlier in the process, give better understanding of the administrative units and increase the time available for writing of the administrative unit reports.
- It would also be good to undertake a discussion about the nature of participation and whether it should be voluntary or obligatory.

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Appendices

The Research Council of Norway

Evaluation of life sciences in Norway 2022-2024

LIVSEVAL protocol version 1.0

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

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1 Introduction

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

1.1 Evaluation units

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

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

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

1.2 Minimum requirements for research groups

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

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

1.3 The evaluation in a nutshell

The assessment concerns:

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

The Research Council of Norway (RCN) will:

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

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

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

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

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

1.4 Target groups

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

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

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

2 Assessment criteria

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

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

2.1 Strategy, resources and organisation

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

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

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

2.2 Research production, quality and integrity

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

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

2.3 Diversity and equality

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

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

2.4 Relevance to institutional and sectoral purposes

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

Higher Education Institutions

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

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

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

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

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

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

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

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

Research institutes (the institute sector)

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

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

The institutes should:

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

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

The hospital sector

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

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

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

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

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

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

2.5 Relevance to society

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

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

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

3 Evaluation process and organisation

The RCN will organise the assessment process as follows:

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

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

3.1 Division of tasks between the committee and panel levels

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

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

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

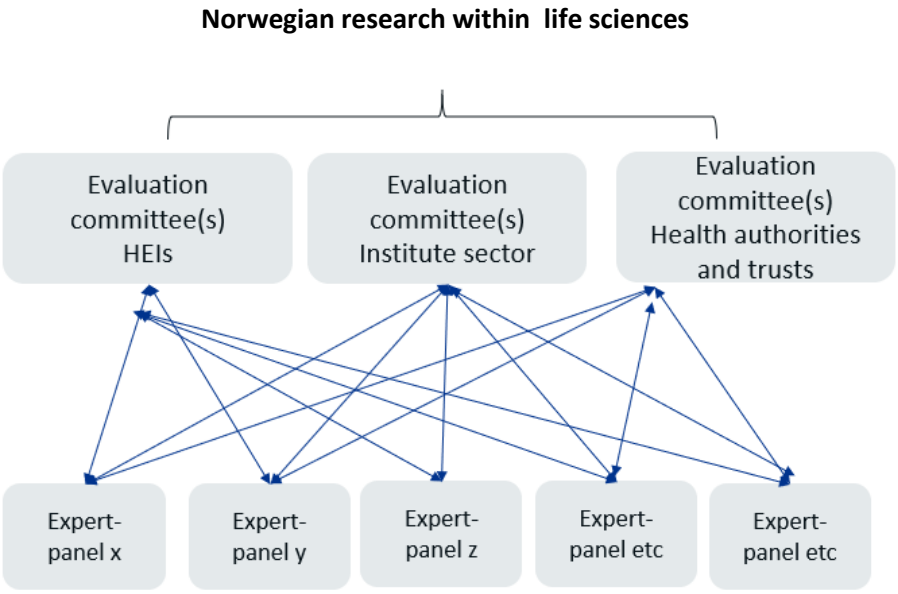

Figure 1. Evaluation committees and expert panels

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

3.2 Accuracy of factual information

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

3.3 National level report

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

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

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

Appendix A: Terms of References (ToR)

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

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

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

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

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

1. …
2. …
3. …
4. …

…

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

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

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

The documents will include the following:

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

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

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

Assessment report
We ask you to report your findings in an assessment report drawn up in accordance with a format specified by the life sciences secretariat. The committee may suggest adjustments to this format at its first meeting. A draft report should be sent to the [administrative unit] and RCN]. 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 within the deadline given by the secretariat. 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 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.

Data providers

- Norwegian Agency for Quality Assurance in Education (NOKUT)
- Research Council of Norway (RCN)
- Statistics Norway (SSB)
- Nordic institute for studies of innovation, research and education (NIFU)

Available data material

1) **Administrative unit**
    a. **Data from administrative units:**
        i. *Self-assessment covering all assessment criteria*
        ii. *Administrative data on funding sources*
        iii. *Administrative data on personnel*
        iv. *Administrative data on research infrastructure and other support structures*
        v. *SWOT analysis*
        vi. *Impact cases*
        vii. *Any supplementary data needed to assess performance related to the Terms of Reference, strategic goals and specific tasks of the unit*
    b. **Data from expert panels**
        i. *Panel report for each expert panel in the evaluation*
        ii. *Assessment reports per participating research group*
    c. **Data from National data providers**
        i. *Publication and citation analysis (NIFU)*
        ii. *Statistics for use in the evaluations (SSB)*
        iii. *The Norwegian Research System (NIFU)*
        iv. *Bibliometrics Higher Education Sector (NIFU)*
        v. *Bibliometrics Institute Sector (NIFU)*
        vi. *Bibliometrics Health Trusts (NIFU)?*
    d. **Data from the Research Council of Norway**
        i. *Research Council of Norway contribution to the evaluation (RCN)*
        ii. *Extract from the Survey of academic staff (NOKUT)*
        iii. *Extract of the Student Survey (NOKUT)*

2) Research groups

b. Data from the research groups

i. *Self-assessment covering the first two assessment criteria (see Table 1)*
ii. *Research group data on funding sources*
iii. *Research group data on personnel*
iv. *Publication profiles*
v. *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*
vi. *Any supplementary data needed to assess performance related to the benchmark defined by the administrative unit*

c. Data from National data providers

i. *Publication and citation analysis (NIFU)*

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 (changes may occur)

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

Members of the National Committee of EVALMEDHELSE 2023-2024

Name	Title	Institution	Chair of committee
Falko Sniethotta	Professor	Medicine Mannheim, Germany	Higher Education Institution 1
Til Wykes	Professor dame	King´s College, UK	Higher Education Institution 2
Søren Brunak	Professor	University of Copenhagen, Denmark	Higher Education Institution 3
Anja Kumeich	Professor	Maastricht University, Netherland	Higher Education Institution 4
Ingalill Rahm Hallberg	Professor emerita	Lund University, Sweden	Institute sector
Johan Hallgren	Professor	University of Gothenburg, Sweden	Health Trust 1
Martin Ingvar	Professor	Karolinska Institutet, Sweden	Health Trust 2
Jørgen Frøkiær	Professor	Aarhus university, Denmark	Health Trust 3

Institution	Administrativ unit	Name of research group	Panel group	Expert panel
AHUS	AHUS	Cardiovascular Research Group	3b Clinical research	3b-2
AHUS	AHUS	Clinical mental health research group	5 Psychology	5a
AHUS	AHUS	Clinical Neuroscience Group	3b Clinical research	3b-1
AHUS	AHUS	Clinical radiology	3a Clinical research	3a-2
AHUS	AHUS	Department of Clinical Molecular Biology (EpiGen)	2 Molecular Biology	2c
AHUS	AHUS	HØKH	4 Public health	4c
AHUS	AHUS	Microbiology and Infectious diseases	2 Molecular Biology	2a
AHUS	AHUS	Obsteric and Gynecology research group	3a Clinical research	3a-1
AHUS	AHUS	Orthopedic Research Group	3b Clinical research	3b-3
AHUS	AHUS	Pediatric research group AHUS PAEDIA	3a Clinical research	3a-1
AHUS	AHUS	Surgical Research Group (SRG)	3a Clinical research	3a-1
AHUS	AHUS	Translational Cancer Research Group	3a Clinical research	3a-2
Cancer Registery	Cancer Registery of Norway	Cancer Registery	Group 4	4e
Diakonhjemmet Hospital	Center for Psychopharmacology	Center for Psychopharmacology	1 Physiology	1b
Diakonhjemmet Hospital	REMEDY	REMEDY	3b Clinical research	3b-3
Haukeland University Hospital	Haukeland University Hospital	Bergen Multiple Sclerosis Research Group	3b Clinical research	3b-1
Haukeland University Hospital	Haukeland University Hospital	Bergen respiratory research group	3b Clinical research	3b-2
Haukeland University Hospital	Haukeland University Hospital	Broegelmann Research Laboratory	3b Clinical research	3b-3

Haukeland University Hospital	Haukeland University Hospital	Cardiac markers	3b Clinical research	3b-2
Haukeland University Hospital	Haukeland University Hospital	DECODE-PD	3b Clinical research	3b-1
Haukeland University Hospital	Haukeland University Hospital	Endocrine Medicine	3b Clinical research	3b-3
Haukeland University Hospital	Haukeland University Hospital	Oncology	3a-Clinical research	3a-2
Haukeland University Hospital	Haukeland University Hospital	Renal research group	3b Clinical research	3b-2
Helse Møre og Romsdal hospital trust	Helse Møre og Romsdal hospital trust	Internal medicine HMR	3b Clinical research	3b-3
Helse Møre og Romsdal hospital trust	Helse Møre og Romsdal hospital trust	Neur-HMR	3b Clinical research	3b-1
Helse Møre og Romsdal hospital trust	Helse Møre og Romsdal hospital trust	Obstetric and pediatric research group Ålesund	3a Clinical research	3a-1
Helse Møre og Romsdal hospital trust	Helse Møre og Romsdal hospital trust	Oncology research group	3a Clinical research	3a-2
Helse Møre og Romsdal hospital trust	Helse Møre og Romsdal hospital trust	Orthopaedic research HMR	3b Clinical research	3b-3
Helse Møre og Romsdal hospital trust	Helse Møre og Romsdal hospital trust	Psyciatry	5 Psychology	5b
Helse Møre og Romsdal hospital trust	Helse Møre og Romsdal hospital trust	Radiology	3a Clinical research	3a-2
Helse Møre og Romsdal hospital trust	Helse Møre og Romsdal hospital trust	SUR-HMR	3b Clinical research	3b-1
Inland Norway University of Applied Sciences	Faculty of Social and Health Sciences	Critical Public Health Research Group	4 Public health	4a

Inland Norway University of Applied Sciences	Faculty of Social and Health Sciences	Health and Mastery in an Interdisciplinary Perspective	4 Public health	4a
Inland Norway University of Applied Sciences	Faculty of Social and Health Sciences	Trainome	1 Physiology	1a
Lovisenberg Diaconal Hospital	Lovisenberg Diaconal Hospital	ClinHealth	4 Public health	4d
Lovisenberg Diaconal Hospital	Lovisenberg Diaconal Hospital	MAGIC	4 Public health	4c
Lovisenberg Diaconal Hospital	Lovisenberg Diaconal Hospital	Psychiatric Genetic Epidemiology	4 Public health	4e
Martina Hansens Hospital	Martina Hansens Hospital	Martina Hansens Hospital Research group	3b Clinical research	3b-3
Modum Bad	Modum Bad	Modum Bad	5 Psychology	5a
Molde University College	Faculty of Health Sciences and Soial Care	Nursing	4 Public health	4d
Molde University College	Faculty of Health Sciences and Soial Care	Physiology	1 Physiology	1a
Møre ad RomsdalHospital trust	Stavanger University Hospital (SUH)	Breast Cancer Research Group	3a Clinical research	3a-2
NIH	Department of Physical Performance	Department of Physical Performance	4 Public health	4b
NIH	Department of Sports Medicine	Department of Sports Medicine	4 Public health	4b
NIPH	Centre for Fertility and Health	Centre for Fertility and Health	4 Public health	4e
NIPH	Division of Climate and Environmental Health	Chemistry toxiology(KMKT)	1 Physiology	1a
NIPH	Division of Climate and Environmental Health	Department of Air Quality and Noise	4 Public health	4b
NIPH	Division of Climate and Environmental Health	Department of food safety	4 Public health	4b
NIPH	Division of Health Services	Centre for Epidemic Interventions Research	4 Public health	4d
NIPH	Division of Health Services	Cluster for Health Services Services	4 Public health	4c

NIPH	Division of Health Services	Cluster for systematic reviwes and health technology assessment	4 Public health	4d
NIPH	Division of Health Services	Global health cluster	4 Public health	4d
NIPH	Division of Infection Control	Centre for Antimicrobial Resistance	4 Public health	4b
NIPH	Division of Infection Control	Department of Bacteriology	2 Molecular Biology	2a
NIPH	Division of Infection Control	Department of Virology	4 Public health	4b
NIPH	Division of Infection Control	Department of Infection control and Preparedness	4 Public health	4b
NIPH	Division of Infection Control	Department of Infection Control and Vaccines	4 Public health	4b
NIPH	Division of Infection Control	Department of Methods Development and Analytics	4 Public health	4b
NIPH	Division of Mental and Physical Health	Centre for Disease Burden	4 Public health	4e
NIPH	Division of Mental and Physical Health	Centre for Evaluation of Public Health Measures	4 Public health	4a
NIPH	Division of Mental and Physical Health	Child Health and Development	5 Psychology	5b
NIPH	Division of Mental and Physical Health	Childhood and Families	5 Psychology	5b
NIPH	Division of Mental and Physical Health	Department of Chronic Diseases	4 Public health	4e
NIPH	Division of Mental and Physical Health	Department of Health Promotion	4 Public health	4a
NIPH	Division of Mental and Physical Health	Mental Health and Suicide	5 Psychology	5b
NIPH	Division of Mental and Physical Health	Physical Health and Aging	4 Public health	4e
NIPH	Division of Mental and Physical Health	PsychGen	5 Psychology	5a
NORCE	Health and Social Sciences Division	Regional Centre for Child and Youth - Mental Health and welfare	5 Psychology	5b

Nord universitet	Faculty of Nursing and Health Sciences	Caring in Health Care	4 Public health	4d
Nord universitet	Faculty of Nursing and Health Sciences	Drug and drug management	4 Public health	4c
Nord universitet	Faculty of Nursing and Health Sciences	Epidemiologym Health- Care and Population - based studies	4 Public health	4c
Nord universitet	Faculty of Nursing and Health Sciences	Equitable Community Participation and Marginalised groups	4 Public health	4a
Nord universitet	Faculty of Nursing and Health Sciences	Ethics, relationships and actions in nursing and health sciences	4 Public health	4f
Nord universitet	Faculty of Nursing and Health Sciences	Mental Health	4 Public health	4a
NTNU	Department of Psychology	Adult Clinical Psychology	5 Psychology	5a
NTNU	Department of Psychology	CES	5 Psychology	5b
NTNU	Department of Psychology	EWeR	5 Psychology	5a
NTNU	Department of Psychology	Healthy workplaces	5 Psychology	5b
NTNU	Department of Psychology	Learning and skill development	5 Psychology	5b
NTNU	Department of Psychology	OPS	5 Psychology	5b
NTNU	Department of Psychology	TtiT	5 Psychology	5b
NTNU	Faculty of Medicine and Health Sciences	Anaesthesia and Emergency Medicine	3b Clinical research	3b-1
NTNU	Faculty of Medicine and Health Sciences	Centre for Care research	4 Public health	4c
NTNU	Faculty of Medicine and Health Sciences	Centre for Excellence in Molecular Inflammation Research (CEMIR)	2 Molecular Biology	2a
NTNU	Faculty of Medicine and Health Sciences	Circuits and Plasticity	1 Physiology	1b

NTNU	Faculty of Medicine and Health Sciences	Exercise, circulation and respiration	1 Physiology	1a
NTNU	Faculty of Medicine and Health Sciences	GeMS	3b Clinical research	3b-1
NTNU	Faculty of Medicine and Health Sciences	HUNT	4 Public health	4e
NTNU	Faculty of Medicine and Health Sciences	IMPACTS	4 Public health	4a
NTNU	Faculty of Medicine and Health Sciences	Integrative Neuroscience Group	2 Molecular Biology	2c
NTNU	Faculty of Medicine and Health Sciences	K.G. Jebsen Centre for Genetic Epidemiology	4 Public health	4e
NTNU	Faculty of Medicine and Health Sciences	MR Unit	3a Clinical research	3a-2
NTNU	Faculty of Medicine and Health Sciences	Musculosekeletal Research group	4 Public health	4d
NTNU	Faculty of Medicine and Health Sciences	NorHEAD	3b Clinical research	3b-1
NTNU	Faculty of Medicine and Health Sciences	NTNU Low Birth Weight in a lifetime perspective	3a Clinical research	3a-1
NTNU	Faculty of Medicine and Health Sciences	Regional Centre for Child and Youth	4 Public health	4a
NTNU	Faculty of Medicine and Health Sciences	Registry research for the health care services	4 Public health	4c
NTNU	Faculty of Medicine and Health Sciences	Research group for cancer and palliative care	3a Clinical research	3a-2
NTNU	Faculty of Medicine and Health Sciences	Sensory and Motor Systems	1 Physiology	1b
NTNU	Faculty of Medicine and Health Sciences	Space, time and memory	1 Physiology	1b
NTNU	Faculty of Medicine and Health Sciences	The ultrasound research group	3a Clinical research	3a-2
NTNU	Faculty of Medicine and Health Sciences	Unit of Laboratory medicine	2 Molecular Biology	2c
NTNU	Faculty of Medicine and health sciences	Women's health and PCOS	3a Clinical research	3a-1
OsloMet	Faculty of Health Sciences	(Re)habilitation - individual, services and socitey	4 Public health	4d

OsloMet	Faculty of Health Sciences	Acute critically ill and injured	4 Public health	4c
OsloMet	Faculty of Health Sciences	Ageing, Health and Welfare	4 Public health	4f
OsloMet	Faculty of Health Sciences	Applied and Experimental Behaviour Analysis in Clinical Practice	4 Public health	4f
OsloMet	Faculty of Health Sciences	Behavioral principles – from animal models to human cultures	5 Psychology	5b
OsloMet	Faculty of Health Sciences	CARE Research group	4 Public health	4a
OsloMet	Faculty of Health Sciences	Clinical Interventions and assistive Technology	3b Clinical research	3b-3
OsloMet	Faculty of Health Sciences	Disease and Environmental Exposures	2 Molecular Biology	2a
OsloMet	Faculty of Health Sciences	Empowerment	4 Public health	4a
OsloMet	Faculty of Health Sciences	Experimental Studies of Complex Human Behavior	4 Public health	4f
OsloMet	Faculty of Health Sciences	Genomics and Microbial Pathogens	2 Molecular Biology	2a
OsloMet	Faculty of Health Sciences	Intervention in work and everyday life	4 Public health	4a
OsloMet	Faculty of Health Sciences	Learning and interaction	4 Public health	4f
OsloMet	Faculty of Health Sciences	Medicines and Patient Safety	4 Public health	4c
OsloMet	Faculty of Health Sciences	Mental Health	5 Psychology	5b
OsloMet	Faculty of Health sciences	Midwifery science	3a Clinical research	3a-1
OsloMet	Faculty of Health Sciences	Musculosekeletal Health	4 Public health	4d
OsloMet	Faculty of Health Sciences	PublicHealthNutrition	4 Public health	4b
OsloMet	Faculty of Health Sciences	Quality of Life	4 Public health	4a

Østfold University College	Faculty of Health, Welfare and Organisation	Miliey therapy and higher education pedagogy	5 Psychology	5b
Østfold University College	Faculty of Health, Welfare and Organisation	Person-centered healthcare and the digital society	4 Public health	4d
Østfold University College	Faculty of Health, Welfare and Organisation	Psychosocial work research group	5 Psychology	5b
Østfold University College	Faculty of Health, Welfare and Organisation	The acute, critically ill patients	4 Public health	4d
Østfold University College	Faculty of Health, Welfare and Organisation	Welfare professions, digitalisation and work	4 Public health	4d
OUS	Division of Cancer Medicine	Department of Cancer Genetics	2 Molecular Biology	2c
OUS	Division of Cancer Medicine	Department of Cancer Immunology	2 Molecular Biology	2b
OUS	Division of Cancer medicine	Department of Haematology	3a Clinical research	3a-2
OUS	Division of Cancer Medicine	Department of Molecular Cell Biology	2 Molecular Biology	2b
OUS	Division of Cancer Medicine	Department of Molecular Oncology	2 Molecular Biology	2c
OUS	Division of Cancer medicine	Department of Oncology, medical physics and of gynecological oncology	3a Clinical research	3a-2
OUS	Division of Cancer Medicine	Department of Radation Biology	2 Molecular Biology	2c
OUS	Division of Cancer Medicine	Department of Tumor Biology	2 Molecular Biology	2c
OUS	Division of Cancer medicine	Institute for cancer genetics and informatics	3a Clinical research	3a-2
OUS	Division of Cardiovascular and pulmonary diseases	Dept of Cardiology	3b Clinical research	3b-2
OUS	Division of Cardiovascular and pulmonary diseases	IEMR	3b Clinical research	3b-2
OUS	Division of Cardiovascular and pulmonary diseases	Institute for Surgical Research	3b Clinical research	3b-2
OUS	Division of Cardiovascular and pulmonary diseases	TKA	3b Clinical research	3b-2
OUS	Division of Clinical Neuroscience	DivNeuroscience	3b Clinical research	3b-1

OUS	Division of Emergency and Critical Care	DECC	3b Clinical research	3b-1
OUS	Division of Gynaecology and Obstetrics	MatFetInt	3a Clinical research	3a-1
OUS	Division of Gynaecology and Obstetrics	NorWH	3a Clinical research	3a-1
OUS	Division of Gynaecology and Obstetrics	ResCOG- FFK	3a Clinical research	3a-1
OUS	Division of head, neck and reconstructive surgery (HHA)	Department of Ophthalmology	3a Clinical research	3a-1
OUS	Division of Laboratory Medicine	Department of Forensic Sciences	1 Physiology	1b
OUS	Division of Laboratory Medicine	Department of Immunology	2 Molecular Biology	2a
OUS	Division of Laboratory Medicine	Department of Medical Biochemistry	2 Molecular Biology	2b
OUS	Division of Laboratory Medicine	Department of Medical Genetics	2 Molecular Biology	2c
OUS	Division of Laboratory Medicine	Department of Microbiology	2 Molecular Biology	2a
OUS	Division of Laboratory Medicine	Department of Pathology	2 Molecular Biology	2b
OUS	Division of Laboratory Medicine	Department of pharmacology	1 Physiology	1b
OUS	Division of Medicine	Department of digital health research	4 Public health	4d
OUS	Division of Medicine	Dept Endocrinology	3b Clinical research	3b-2
OUS	Division of Medicine	Dept. of infectious diseases	3b Clinical research	3b-3
OUS	Division of Medicine	MED_GER	3b Clinical research	3b-1
OUS	Division of Medicine	Oslo renal research group & acute medicine research group	3b Clinical research	3b-2
OUS	Division of Medicine	Oslo-CCHR	3b Clinical research	3b-2
OUS	Division of Medicine	Research group for gastroenterology	3b Clinical research	3b-3

OUS	Division of Medicine	The research group for experimental and clinical respiratory medicine	3b Clinical research	3b-2
OUS	Division of Mental Health and Addiction	Child and Adolesecent Mental Health Services	5 Psychology	5a
OUS	Division of Mental Health and Addiction	Eating Disorders Research Group	5 Psychology	5a
OUS	Division of Mental Health and Addiction	National Centre for Suicide Research and Prevention	5 Psychology	5b
OUS	Division of Mental Health and Addiction	Norwegian Centre for Mental Disorders Research	5 Psychology	5a
OUS	Division of Mental Health and Addiction	Personality Psychiatry	5 Psychology	5a
OUS	Division of Mental Health and Addiction	Psychotherapy	5 Psychology	5a
OUS	Division of Mental Health and Addiction	Section for clinical addiction research	5 Psychology	5a
OUS	Division of Mental Health and Addiction	SERAF	5 Psychology	5a
OUS	Division of Paediatric and Adolescent Medicine	Division of Paediatric and Adolescent Medicine	3a Clinical research	3a-1
OUS	Division of Preshospital Services	Prehospital Research Grup	3b Clinical research	3b-1
OUS	Division of Radiology and nuclear medicine	Division of Radiology and Nuclear Medicine	3a Clinical research	3a-2
OUS	Division of Surgery, Inflammatory Diseases and Transplantation	Translational Research Group	2 Molecular Biology	2c
OUS	Division of Surgery, Inflammatory Diseases and Transplantation	RHI	3b Clinical research	3b-3
OUS	Division of Surgery, Inflammatory Diseases and Transplantation	Surgial research group	3b Clinical research	3b-3
OUS	Division of Surgery, Inflammatory Diseases and Transplantation	Transplantation medicine	3b Clinical research	3b-2

OUS	Division of technology and Innovation	The intervention centre	3a Clinical research	3a-2
RBUP Eastern and Southern Norway	RBUP Eastern and Southern Norway	RBUP Eastern and Southern Norway	4 Public health	4d
St. Olavs Hospital	St. Olavs Hospital	BRACT	1 Physiology	1b
St. Olavs Hospital	St. Olavs Hospital	CAG-IBD	3b Clinical research	3b-3
St. Olavs Hospital	St. Olavs Hospital	CAG-Multiple myeloma center	3a Clinical research	3a-2
St. Olavs Hospital	St. Olavs Hospital	Centre for obesity research and innovation	3b Clinical research	3b-2
St. Olavs Hospital	St. Olavs Hospital	NorHEAD	3b Clinical research	3b-1
St. Olavs Hospital	St. Olavs Hospital	Research group for Occupational Medicine	4 Public health	4f
St. Olavs Hospital	St. Olavs Hospital	Trondheim sleep and chronobiology research group	5 Psychology	5a
St. Olavs Hospital	St. Olavs Hospital	Warning Signs and treatment of acute suicide risk in psychiatric chrises	5 Psychology	5a
St. Olavs Hospital	St. Olavs Hospital	Children’s and Women’s health	3a Clinical research	3a-1
STAMI	STAMI	STAMI	4 Public health	4f
Stavanger University Hospital	Stavanger University Hospital	Breast Cancer Research Group	3a Clinical research	3a-2
Stavanger University Hospital	Stavanger University Hospital	Cardilogy research group	3b Clinical research	3b-2
Stavanger University Hospital	Stavanger University Hospital	Centre for Alchol and Drug Research	5 Psychology	5b
Stavanger University Hospital	Stavanger University Hospital	Clinical Immunology	3b Clinical research	3b-1
Stavanger University Hospital	Stavanger University Hospital	NCMD	3b Clinical research	3b-1
Stavanger University Hospital	Stavanger University Hospital	Nursing and Health care	4 Public health	4d

Stavanger University Hospital	Stavanger University Hospital	SAFER Births - Forskningsgruppe for simulering	4 Public health	4d
Stavanger University Hospital	Stavanger University Hospital	SESAM	5 Psychology	5a
Stavanger University Hospital	Stavanger University Hospital	TIPS	5 Psychology	5a
SunnaasRehabilitation Hospital	Department of Research	Department of Research	3b Clinical research	3b-1
UiA	Faculty of Health and Sport Sciences	Centre for e-health	4 Public health	4a
UiA	Faculty of Health and Sport Sciences	Health and Quality of life in a famility perspective	4 Public health	4a
UiA	Faculty of Health and Sport Sciences	Physical activity and Health across the LifeSpan	4 Public health	4b
UiA	Faculty of Health and Sport Sciences	Priority Research Centre for Lifecourse Nutrition	4 Public health	4a
UiB	Department of Biomedicine	Basic and Translational Neuroscience	1 Physiology	1b
UiB	Department of Biomedicine	Cardiovaskular research	1 Physiology	1a
UiB	Department of Biomedicine	Metabolism and Cancer Unit	2 Molecular Biology	2c
UiB	Department of Biomedicine	Structural biology and drug discovery	2 Molecular Biology	2b
UiB	Department of Biomedicine	Systems Biology and Translational Cell Signaling	2 Molecular Biology	2c
UiB	Department of Biomedicine	Translational Cancer Research	2 Molecular Biology	2c
UiB	Department of Clinical Science I	Bergen Multiple Sclerosis Research Group	3b Clinical research	3b-1
UiB	Department of Clinical Science I	Centre for Cancer Biomarkers	3a Clinical research	3a-2
UiB	Department of Clinical Science I	DECODE-PD	3b Clinical research	3b-1
UiB	Department of Clinical Science I	Renal research group	3b Clinical research	3b-2
UiB	Department of Clinical Science I	Section of Nutrition	4 Public health	4b

UiB	Department of Clinical Science II	Research group for infection and microbiology	3b Clinical research	3b-3
UiB	Department of Clinical Science II	Bergen respiratory research group	3b Clinical research	3b-2
UiB	Department of Clinical Science II	Broegelmann Research Laboratory	3b Clinical research	3b-3
UiB	Department of Clinical Science II	Centre for pharmacy	1 Physiology	1b
UiB	Department of Clinical Science II	Mohn Center for diabetes precision medicine	3b Clinical research	3b-2
UiB	Department of Clinical Science II	Oncology	3a-Clinical research	3a-2
UiB	Department of Clinical Science II	Paediatric Follow-up Group	3a Clinical research	3a-1
UiB	Department of Clinical Science II	Precision Oncology	3a Clinical research	3a-2
UiB	Department of Clinical Science II	TOR	1 Physiology	1a
UiB	Department of Global Public Health and Primary Care	BCEPS	4 Public health	4c
UiB	Department of Global Public Health and Primary Care	Centre for international health	4 Public health	4f
UiB	Department of Global Public Health and Primary Care	Section for general practice	4 Public health	4f
UiB	Department of Global Public Health and Primary Care	Section for epidemiology and medical statistics	4 Public health	4e
UiB	Faculty of Psychology	Addiction Research Group	4 Public health	4a
UiB	Faculty of Psychology	Bergen Bullying Research Group	4 Public health	4f
UiB	Faculty of Psychology	Bergen fMRI-group	5 Psychology	5a
UiB	Faculty of Psychology	Bergen sleep and chronobiology network	4 Public health	4f
UiB	Faculty of Psychology	DICE	5 Psychology	5b
UiB	Faculty of Psychology	Grief, Trauma and Seroius somatic illness	4 Public health	4c

UiB	Faculty of Psychology	Operational psychology research group	4 Public health	4f
UiB	Faculty of Psychology	Public mental Health	4 Public health	4a
UiB	Faculty of Psychology	Research Group for Clinical Psychology	5 Psychology	5a
UiB	Faculty of Psychology	Social Influence Processes on Adolescent Health	4 Public health	4a
UiB	Faculty of Psychology	Society and Workplace Diversity group	4 Public health	4a
UiO	Department of Pharmacy	Medicinal Chemistry	1 Physiology	1b
UiO	Department of Pharmacy	Pharmaceutical Analytical Chemistry	1 Physiology	1b
UiO	Department of Pharmacy	Pharmaceutical micobiology and immunity	2 Molecular Biology	2a
UiO	Department of Pharmacy	Pharmaceutics	1 Physiology	1b
UiO	Department of Pharmacy	Pharmacognosi	1 Physiology	1b
UiO	Department of Pharmacy	Pharmacology	1 Physiology	1a
UiO	Department of Pharmacy	PharmaSafe - PharmacoEpidemiology & Drug Safety research group	4 Public health	4e
UiO	Department of Psychology	Centre for Lifespan Changes in Brain and Cognition	5 Psychology	5a
UiO	Department of Psychology	Clinical Psychology	5 Psychology	5a
UiO	Department of Psychology	Cognitive and Clinical Neuroscience	5 Psychology	5a
UiO	Department of Psychology	HUP	5 Psychology	5b
UiO	Department of Psychology	MAKS	5 Psychology	5b
UiO	Department of Psychology	PROMENTA	5 Psychology	5b
UiO	Faculty of Dentistry	Biomat	1 Physiology	1a

UiO	Faculty of Dentistry	Oral physiology and cancer research group	1 Physiology	1a
UiO	Faculty of dentistry	Understanding salivary gland function	3a Clinical research	3a-1
UiO	Institute of Basic Medical Sciences	Cardiovascular physiology	1 Physiology	1a
UiO	Institute of Basic Medical Sciences	Chromatin biology	2 Molecular Biology	2b
UiO	Institute of Basic Medical Sciences	Clinical Nutrition	3b Clinical research	3b-2
UiO	Institute of Basic Medical Sciences	Department of Behavioural Medicine	4 Public health	4f
UiO	Institute of Basic Medical Sciences	Hybrid Technology Hub Centre of Excellence	2 Molecular Biology	2b
UiO	Institute of Basic Medical Sciences	Immunobiology	2 Molecular Biology	2b
UiO	Institute of Basic Medical Sciences	Membrane dynamics	2 Molecular Biology	2b
UiO	Institute of Basic Medical Sciences	Molecular Nutrition	2 Molecular Biology	2b
UiO	Institute of Basic Medical Sciences	Neuroanatomy	1 Physiology	1b
UiO	Institute of Basic Medical Sciences	Neurophysiology	1 Physiology	1b
UiO	Institute of Basic Medical Sciences	Nutritional epidemiology	4 Public health	4b
UiO	Institute of Basic Medical Sciences	Oslo Centre for Biostatistics and Epidemiology	4 Public health	4e
UiO	Institute of Health and Society	Centre for Medical Ethics	4 Public health	4c
UiO	Institute of Health and Society	Department for Interdisciplinary Health Sciences	4 Public health	4a
UiO	Institute of Health and Society	Department of Community Medicine and Global Health	4 Public health	4f
UiO	Institute of Health and Society	Department of General Practice	4 Public health	4f

UiO	Institute of Health and Society	Department of Health Management and Health Economics	4 Public health	4c
UiO	Institute of Health and Society	Department of Public Health Science	4 Public health	4f
UiO	NCMM	NCMM	2 Molecular Biology	2b
UiS	Faculty of Health Sciences	Centre for Resilence in Health Care	4 Public health	4c
UiS	Faculty of Health Sciences	Health promotion and innovative approaches for sistainable health services	4 Public health	4a
UiS	Faculty of Health Sciences	Life Phenomena and Caring	4 Public health	4f
UiS	Faculty of Health Sciences	Participation in school, working life and treatment	4 Public health	4f
UiS	Faculty of Health Sciences	Professional relations in health and welfare	4 Public health	4f
UiT	Department of clinical dentistry	Oral health research group	3a Clinical research	3a-1
UiT	Department of Clinical Medicine	Brain and Circulation Research Group	3b Clinical research	3b-1
UiT	Department of Clinical Medicine	Cardiovascular research group, clinical	3b Clinical research	3b-2
UiT	Department of Clinical Medicine	Psychiatry Research Group	5 Psychology	5a
UiT	Department of Clinical medicine	Research group for child and adolescent health	3a Clinical research	3a-1
UiT	Department of Clinical Medicine	Thrombosis Research Group	3b Clinical research	3b-2
UiT	Department of Community Medicine	Epidemiology of Chronic disease	4 Public health	4e
UiT	Department of Community Medicine	Health Services Research	4 Public health	4c
UiT	Department of Community Medicine	System Epidemiology	4 Public health	4c
UiT	Department of Health and Care Sciences	Centre for Care research North	4 Public health	4c

UiT	Department of Health and Care Sciences	Healthcare Professional Practice	4 Public health	4d
UiT	Department of Health and Care Sciences	Public Health and Rehabilitation	4 Public health	4f
UiT	Department of Health and Care Sciences	Research group for health and professional education	4 Public health	4f
UiT	Department of Health and Care Sciences	Rural and Remote Nursing and Healthcare in Arctic and North-Sàmi Area	4 Public health	4d
UiT	Department of Medical Biology	Autophagy Research Group	2 Molecular Biology	2b
UiT	Department of Medical Biology	Cardiovascular Research Group	1 Physiology	1a
UiT	Department of Medical Biology	Centre for Forensic Genetics	2 Molecular Biology	2a
UiT	Department of Medical Biology	Host-Microbe Interaction	2 Molecular Biology	2a
UiT	Department of Medical Biology	Immunology Research Group	2 Molecular Biology	2b
UiT	Department of Medical Biology	Pharmacology and Toxicology	2 Molecular Biology	2b
UiT	Department of Medical Biology	RNA and Molecular Pathology	2 Molecular Biology	2c
UiT	Department of Medical Biology	Translational Cancer Research Group	2 Molecular Biology	2c
UiT	Department of Medical Biology	Tumor Biology Research Group	2 Molecular Biology	2c
UiT	Department of Medical Biology	Vascular Biology Research Group	1 Physiology	1a
UiT	Department of Pharmacy	Cell Signalling and Targeted Therapy	2 Molecular Biology	2b
UiT	Department of Pharmacy	Drug Transport and Delivery	1 Physiology	1b
UiT	Department of Pharmacy	Identification and prevention of suboptimal medicine use	4 Public health	4e

UiT	Department of Pharmacy	MicroPop-Microbial Pharmacology and Population Biology	2 Molecular Biology	2a
UiT	Department of Pharmacy	Natural products and medicinal chemistry	1 Physiology	1b
UiT	Department of Psychology	Behavioral and Translational Neuroscience	1 Physiology	1b
UiT	Department of Psychology	Behavioral, aging and dementia	5 Psychology	5a
UiT	Department of Psychology	Clinical Psychology	5 Psychology	5a
UiT	Department of Psychology	Cognitive neuroscience	5 Psychology	5a
UiT	Department of Psychology	Cognitive neuroscience	5 Psychology	5b
UiT	Department of Psychology	Health psychology	5 Psychology	5b
UiT	Department of Psychology	Human factors in high risk environments CARE	5 Psychology	5b
UiT	Department of Psychology	Social Psychology	5 Psychology	5b
UiT	Department of Social Education	The Artic Centre for Welfare and Disability Research	4 Public health	4f
UiT	Institute of Clinical Medicine (ICM) and Institute of medical biology (IMB)	Translational Cancer Research Group	3a Clinical research	3a-2
UiT	Regional Centre for Child and Youth Mental Health and Child Welfare	Evidence-Based Practice	5 Psychology	5b
UiT	Regional Centre for Child and Youth Mental Health and Child Welfare	Preventive and health promoting interventions	5 Psychology	5b
UiT	School of Sport Sciences	School of Sport Sciences	4 Public health	4b
UiT	Department of Health and Care Sciences	Life courage and life promoting phenomena	4 Public health	4a

Western Norway University of Applied Sciences	Faculty of Health and Social Sciences	Comparative Services Research	4 Public health	4c
Western Norway University of Applied Sciences	Faculty of Health and Social Sciences	DiaBEST	4 Public health	4c
Western Norway University of Applied Sciences	Faculty of Health and Social Sciences	Mental health and substance buse	4 Public health	4a
Western Norway University of Applied Sciences	Faculty of Health and Social Sciences	Personlised health services	4 Public health	4d

Scales for research group assessment

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

Score	Research and publication quality	Score	Research group's contribution Groups were invited to refer to the Contributor Roles Taxonomy in their description https://credit.niso.org/
5	Quality that is outstanding in terms of originality, significance and rigour.	5	The group has played an outstanding role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
4	Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence.	4	The group has played a very considerable role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
3	Quality that is recognised internationally in terms of originality, significance and rigour.	3	The group has a considerable role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
2	Quality that meets the published definition of research for the purposes of this assessment.	2	The group has modest contributions to the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
1	Quality that falls below the published definition of research for the purposes of this assessment.	1	The group or a group member is credited in the publication, but there is little or no evidence of contributions to the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.

Societal impact dimension

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.

Panel group	Description	Panel number
Panel group 1 PHYSIOLOGY Physiology-related Disciplines (human physiology), including corresponding translational research	Anatomy, physiology, neurobiology, toxicology, pharmacology, embryology, nutritional physiology, pathology, basic odontological research	Panel 1a Panel 1b
Panel group 2 MOLECULAR BIOLOGY including corresponding translational research	Microbiology, immunology, cell biology, biochemistry, molecular biology, genetics, genomics, biotechnology including bioinformatics	Panel 2a Panel 2b Panel 2c
Panel group 3a CLINICAL RESEARCH	All surgery, anaesthesiology, oncology, physical medicine and rehabilitation, gynaecology, paediatrics, dermatology and venereology, ophthalmology, otolaryngology and all clinical odontology	Panel 3a_1 Panel 3b_2
Panel group 3b CLINICAL RESEARCH	All internal medicine (cardiology, nephrology/urology, gastroenterology, endocrinology, haematology, infectious diseases, respiratory tract diseases, geriatric medicine), neurology, rheumatology, radiology and medical imaging and other clinical medical disciplines	Panel 3b_1 Panel 3b_2
Panel group 4 PUBLIC HEALTH Public Health and Health-related Research	Public health, community dentistry and community nutrition. Epidemiology and medical statistics. Health services research, preventive medicine, nursing research, physiotherapy, professional research, occupational medicine, behavioral research and ethics, other health-related research	Panel 4a Panel 4b Panel 4c Panel 4d Panel 4e Panel 4f
Panel group 5 PSYCHOLOGY Psychology and Psychiatry	Clinical psychology, social-, community- and workplace psychology, organizational psychology, personality psychology, developmental psychology, cognitive psychology, biological psychology and forensic psychology. Psychiatry, including geriatric psychiatry, child and adolescent psychiatry, biological psychiatry, and forensic psychiatry	Panel 5a Panel 5b

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