



SHE

Centre for Sustainable
Healthcare Education



ANNUAL REPORT 2021



CENTRE FOR
EXCELLENCE
IN EDUCATION



UiO : University of Oslo

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1. Results compared to the application and Centre plan:

1.1 How does the vision of the Centre, the work packages/ focus areas and activities fit together?

The SHE vision is as follows: *Globally anchored health professionals make sustainable healthcare decisions without compromising future and global needs.* The mission of SHE is to contribute to this global vision by advancing, promoting and expanding the field of education for sustainable development (ESD) in higher education nationally and globally.

The following five broad focus areas are defined in order to accomplish this mission:

1. **Learning content:** SHE defines and develops sustainability and ESD related content to be implemented in healthcare education locally, nationally and globally. The impact of climate change on health, antimicrobial resistance and social and political drivers of health are examples of such content.
2. **Learning skills and approaches:** SHE develops and implements skillsets and generic competencies needed to adapt the sustainable development agenda to healthcare education. Examples of competencies that SHE adapts and operationalizes are systems thinking, anticipatory thinking, collaborative competency and critical reflection. Based on these skills, SHE pilots innovative pedagogical approaches to promote knowledge and skills relevant to sustainable healthcare. Team-building, conflict-based reasoning and datathons are examples of such methods and approaches.
3. **Implementation of ESD:** SHE implements contents, skills and approaches into new and existing educational programmes locally, nationally and globally. One of the main activities under this focus area is the development of an Honours Certificate in sustainability in medical education, which is an interdisciplinary supplement at the Masters level targeting health professional students already enrolled in a medical or health professional master's programme.
4. **Translational research for ESD:** SHE conducts research that 1) translates relevant sustainability research into educational innovations and practices, for instance by developing databases or decision-models to be applied in educational settings, that 2) analyses and tests such practices, and 3) that translates from education to research by involving students in data analysis or in defining future research projects.
5. **Sharing of ESD models:** SHE shares the SHE-models locally, nationally and globally through dissemination, collaboration and networking. One of our main platforms for collaboration is the Circle U. University Alliance, which aims to develop joint courses and programmes targeting students from all partner countries on topics such as sustainability and health.



These focus areas are supported by seven interactive work packages, which are interlinked with the focus areas as outlined in figure 1.

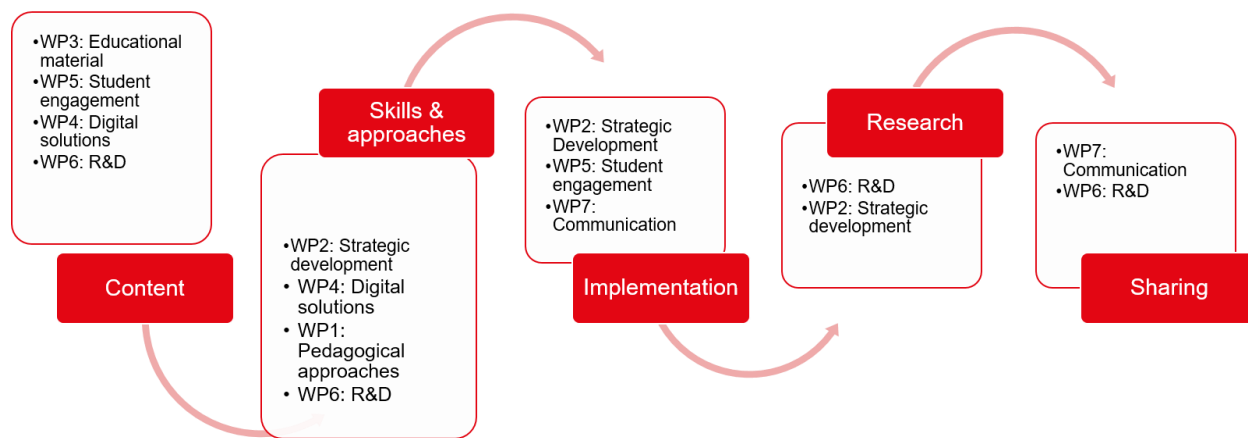


Figure 1: Interlinkages between focus areas and work packages

Underpinning all focus areas is the emphasis on co-creation with students to enhance knowledge exchange and create a stimulating learning environment.

1.2 Describe, assess, and analyse the most important accomplishments and activities of each work package/ focus area the actual year.

Five particularly important accomplishments in 2021 should be emphasized:

1. Team training is implemented into the introductory courses offered to first year students in medicine, nutrition and dentistry. The team training delivered represents a fundamental shift in conceptualizing decision-making in medicine from an individual cognitive function to a collective endeavour, in line with the ESD principles of systems-thinking and collaborative learning.
2. A large database of medical and medical-related texts, named the Oslo Medical Corpus (OMC), has been developed in close collaboration with an international research network, Genealogies of Knowledge, led by one of our affiliate professors, Mona Baker, and with strong involvement of an international group of students and young researchers. The OMC is accompanied by an open access software interface and visualization tools to allow students to explore how SDG-terms are used and understood in different discursive environments. As such, the OMC provides a generic, state-of-the-art methodology and learning resource that can be used to enhance critical reflection about sustainability and other core health political concepts and their underpinning ideologies.



3. SHE has launched a series of activities to create awareness among future health professionals about the complex interlinkages between climate and health and to involve students in innovative thinking about how to contribute to a greener health care system. These activities include a national report about climate and sustainability in Norwegian medical and healthcare education suggesting necessary changes in the training of future doctors and a new elective course for medical students on climate change and health.
4. The Centre has secured additional external funding to develop research-based learning content and skills to handle anti-microbial resistance (AMR), which is one of the major global threats to sustainable development in healthcare. An AMR unit has been established at SHE, led by Prof. Sundeep Sahay, with the aim of establishing an international network of students and teachers working on AMR and developing digital learning resources to support this initiative.
5. Despite the difficulties associated with launching the Centre in the middle of the pandemic, the Centre has been able to establish a strong management structure and achieve integration within the Faculty of Medicine, the University of Oslo and the Circle-U. University Alliance. The board at the Faculty of Medicine has decided upon an organizational structure which includes SHE as an independent Centre situated at the top level of the faculty, with the right to seek assistance and support from the various administrative sections (such as economy, communication, human relations). The Centre Management Board ensures close links between the Centre, the executive strategies of the university and the core activities of the departments, and an International Advisory Board has been established that provides important input on the international responsibilities and ambitions of the Centre. Collaboration with students has been formalized through a student management group, consisting of four students, who lead WP5, Student Involvement. This has proved to be an exceptionally important and well-functioning group who are assisting SHE's leadership with new and creative initiatives to support broad involvement of students at our own faculty as well as nationally.

Below we present the most important activities from each focus area, providing more details about the five accomplishments above. We also analyse and assess the expected results and impact of the activities and how they contribute to the goals of the Centre.

Focus area 1 – Learning content

A major achievement is the launch of the above mentioned elective course on climate change and health. The course was planned during the autumn semester of 2021 and launched in January 2022, led by Dr. Erlend Aasheim in collaboration with Prof. Dan Banik and with contributions from renowned Norwegian scientists and policy makers. As part of their assignment, the students were trained in how to influence policy makers and communicate effectively about climate issues to various target groups. The course received high scores in the student evaluation and the didactic course model has been presented at different venues and submitted to an international journal in order to facilitate educational change outside our national context. The students



involved in the above mentioned report on climate and sustainability in Norwegian medical curricula have also developed course material to be implemented into various modules in the medical programme nationally. This material can be accessed [here](#).

During the Covid 19 lockdown, international students faced a hard time, both socially and economically. SHE decided to combine the aim of maximizing student engagement with a wish to support international students by offering a number of scholarships, engaging students in storytelling, developing ideas and voicing concerns relating to living through the coronavirus pandemic. Some of the essays form the basis of the podcasts “Folkefeber” and “Pediatrismertepodden”. These podcasts are also examples of student-led development projects which were financed by SHE and resulted in ESD relevant learning material. Podcasts are now incorporated as an output of regular teaching e.g., in an elective course about knowledge and power in health care sector. Although we are very satisfied with the strong student involvement in the development of learning resources, we see the need to ensure stronger teacher ownership and close collaboration between relevant teachers in planning and developing future projects. A priority area for the coming year will therefore be to facilitate joint development of learning material between teachers and students in order to enhance implementation of new learning content.

Another major emphasis in 2021 has been to prepare for and begin the development of a knowledge bank of cases that can support sustainable evidence-based decision making in primary health care. The case bank will feature descriptions in which various aspects of sustainability and their inherent conflicts come into play. Seed money has been announced (coordinated by Prof. Nina Vøllestad) in order to engage student and primary health practitioners to identify and analyse exemplary cases which can serve as new educational content, and possibly as research data to encourage students to be co-researchers. This agenda will be an important priority area in the coming year.

Focus area 2 – Learning skills and approaches

SHE bases its educational principles on a set of fundamental values that we believe provide a good foundation for making wise and long-term decisions in line with the Sustainable Development Goals. More specifically, we aim to develop a model launched by UNESCO that summarizes important [key skills in order to realize](#) the Sustainable Development Goals. Our Centre aims to translate and adapt these areas of expertise into professional healthcare decisions and the education of future healthcare professionals.

We aim to introduce our students to these competencies and train them in applying the competencies to decisions related to health and health services. For this, we need realistic, relevant, and complex examples from the health sector that illustrate genuine dilemmas which decision-makers have to deal. During the last year, new teaching material was developed aiming at introducing students to the recommended key competences in order to make sustainable health



care decisions. This new material will be offered as an introductory course to first-year students inside and outside the Faculty of Medicine in order to spark wider interest in sustainability.

One of the projects explores how to introduce the international movement towards appropriate medical care (choosing wisely) to Norwegian students in medicine and nutrition. The aim is to develop a student-run program to inspire students to become leaders/change agents who are able to include sustainability as a premise for wise clinical decisions. This one-year national program is offering some of the best and most engaged students and supporting their involvement in extra curriculum activities by inviting them to identify a project considered to be of vital importance for sustainable wise decisions in (e.g. clinical decisions about antibiotic treatment). In addition, the students recruited from the four medical faculties in Norway will be offered courses about leadership, how to become a change agent, implementing and evaluating organizational changes.

SHE invests in developing and adopting collaborative critical reflection rather than uncritical knowledge acquisition and application. Our point of departure is that effective implementation of the SDGs in higher education requires robust engagement with the controversies they continue to generate globally rather than uncritical agreement on their content as understood within limited local spaces.

The Oslo Medical Corpus (OMC), specifically developed for fostering collaborative critical reflection, is the first of its kind anywhere in the world, will run into millions of words, and is accompanied by a state-of-the-art suite of visualization tools. It is carefully designed to support work on current and future student projects and provide an empirical foundation for ongoing critical analyses of discourses and counter discourses on sustainability and evidence-based medicine. Several student projects which draw on the OMC are currently in process. Researchers affiliated to the Centre have also published extensively in 2021 and have submitted a substantial number of grant applications, all designed to support further development of research-led sustainable healthcare education delivered by SHE, drawing on the OMC as data and corpus analysis as methodology. The next step will be to develop a datathon educational model, where students can collectively identify and discuss conceptual nuances and dilemmas evident in discourses on sustainability in the healthcare system, as attested in the Oslo Medical Corpus. Datathons are envisaged as student-led, highly interactive and will consist of live, hands-on, brainstorming sessions in which students will interrogate the OMC and be exposed to different and novel interpretations of the data arising from their own analysis or the analysis of other datathon participants. The datathon model will be trialled and implemented into the study programs at the Faculty of Medicine (including the planned honours certificate in sustainability education, see below) and in collaboration with Circle U partners. The student-driven analysis will also form the basis for future research projects in line with our translational research agenda. A proposal has been submitted to the INTPART programme at the Research Council of Norway in order to push forward this agenda, in collaboration with Circle U. partners as well as

Chinese universities. All these projects and the open access resources they build on will contribute significantly to the global sharing of ideas, tools and models developed by SHE. In the



report from HK Dir's site visit at SHE in 2021, the reviewer emphasized the potential of the OMC for the future development of the Centre, arguing that "the Centre's work with the medical corpus has a generic and formative profile that could be useful for other study programs and professions".

One of the principal goals of SHE in 2021 has been to foster collaborative learning through the TEAMS project, which is integrated in the ongoing training of doctors and clinical nutritionists, at the same time as research is connected to the different teaching and learning activities in order to evaluate and hence improve the first year of the education programs. Standard medical education, embedded in the evidence-based logic, promotes medical decisions on the basis of evidence only, and reinforces the individual character of medical responsibility. In contrast, team training represents a reconceptualization of collaborative work in education, which shifts the focus of education from individual learning and acquisition of medical knowledge, to strategies for enhancing collaboration and collective decision-making. During 2021, the need to strengthen the qualifications of teacher assistants was identified and measures have been taken and will further be tested and evaluated in the coming year.

Focus area 3 - Implementation of ESD

Content, skills and approaches are piloted within existing educational programmes at the Faculty of Medicine, as outlined above. This process is facilitated by the fact that SHE is situated at Faculty level, and with strong involvement in SHE activities by the faculty management and the rectorate. Still, more work needs to be done in order to enhance the integration of SHE activities into every level of the organization.

The European University Alliance Circle U is also an important international testbed for innovations and practices developed by SHE. SHE collaborates closely with Circle U through its Executive Chairman, Eivind Engebretsen, who is also an Academic Chair of Global Health and a WP lead at Circle U, and through SHE's administrative leader, Trine Kleven, who is also an administrative coordinator in Circle U. The OMC and the datathon models described above will for instance be trialed and implemented through summer schools and regular joint courses offered to the whole Circle U community. Two summer schools (Evidence and democracy in times of crisis and Rethinking global health) introducing and drawing on these resources are already planned for the summer of 2022. Prof. Mona Baker and Prof. Eivind Engebretsen, in collaboration with the University of Paris Chair Federico Tarragoni, will develop a regular joint course entitled "Democracy – a conceptually controversial word", which draws on corpus methodology and the OMC.

One of the main activities under this focus area is the development of an Honours Certificate in sustainability in medical education, which is an interdisciplinary supplement at the

Master's level targeting health professional students already enrolled in a medical or health professional master's programme. This programme aims to inspire a paradigmatic shift in



medical education nationally and globally by using system-thinking as a lens to understand health problems and train future professionals to tackle such problems. This implies a break with traditional “bedside-teaching” principles, which mainly focus on how to encounter individual patients and their problems. This programme will offer the first formal training in medical education nationally and offer a unique approach to medical education globally. A report presenting national and international educational programs as background and inspiration for SHE’s new master supplement has been completed. Members of the working group for curriculum development have been appointed. International specialists have been engaged to draft the curriculum for the innovative education method (datathons), plus drafting the program plan for trainer of trainers (ToT) on how teachers and students can implement the new pedagogical method. The process for offering the planned honours certificate for health professional students within the entire Circle U community is underway.

Focus area 4 – Translational research for ESD

Translational research is a well-developed field within medical science that involves various research activities characterized by the common goal of bridging the gap between research and clinical practice. The concept is most often used about clinical trials designed to test results from laboratory research on patients, but also encompasses knowledge implementation, including guideline recommendations, databases and knowledge resources targeting clinicians. More recently, the concept has also been used to designate processes of co-creation in which clinicians and patients contribute to setting the research agenda. Although well developed in medicine, the concept is far less used in medical education. The various research activities at SHE can be understood as translational research in the sense that they share the purpose of translating research-based knowledge about sustainability into education, and vice-versa, using the classroom as a laboratory for research about sustainability in healthcare. The Knowledge in Translation (KNOWIT) group, which is part of SHE, has published widely about these topics throughout the year 2021 (see complete list in appendix 5). The group has for instance published a paper outlining an agenda for the use of the Oslo Medical Corpus for exploring concepts and their underpinning ideologies in medicine (Buts and al. 2021).

There are several types of research undertaken by SHE that serves this overall translational purpose. First, the OMC project contributes to this translational research agenda in several ways: 1) by developing a database that can be used in student research projects, 2) by including students in developing this database, 3) by using the database as a basis for collaborative analyses of concepts in the classroom (through datathons), and 4) by using the findings from the datathons as a basis for developing research projects.

A second type of translational projects undertaken by SHE are projects that explore implementation processes in education. Building on a strong track record of similar



projects in the KNOWIT group, the Centre has two postdoc projects that explore collaborative decisions in the TEAM groups (Dr Carolina Rau), as well as the implementation of models for sustainable evidence-based decisions in primary care (Dr. Sietse Wieringa).

A third type of translational research involves reviewing relevant literature within a specific topic (such as climate and health or AMR) and developing educational models or interventions based on this review (eg. models for sustainable decisions or complexity thinking in medical education). One study about evidence-based thinking in policy and education about AMR, for example, is in preparation for submission to the Lancet. Another paper about complexity thinking in medical education is under review in Social Science and Medicine.

Focus area 5– Sharing of ESD models

Much effort has been made by SHE to develop digital resources, databases and learning tools that are openly accessible to the broader academic community and beyond. Several of these initiatives have been student led, including the podcast «Folkefeber», which focuses on the interface between social equities and health. Prof. Dan Banik’s podcast «In Pursuit of Development» has successfully disseminated knowledge on topics related to sustainability and health. Recent episodes have discussed political development, COVID-19 and vaccine distribution, COVAX, aid and sustainability (see full list in Appendix 7). With listeners in 160 countries, the podcast has a wide reach. Part of this agenda also consists of developing and implementing new technologies that can transform weak health systems in low-resource settings and to develop MOOCs, applications on digital platforms for disease surveillance, and eLearning resources to be used by students and practitioners in low-income countries. The *DMgtAsia* - Digital Platforms for Disease Surveillance and Control (Funded by Diku under UTFORSK, led by Prof Sundeep Sahay) is one example of a project serving this purpose.

SHE has put a lot of effort in developing strong networks nationally and internationally. One project (led by Dr. Erlend Aasheim and Prof. Kristin Heggen) has explored possible areas for fruitful cooperation between Oslo municipality and SHE on topics related to climate change and sustainability. Several meetings between SHE, the Norwegian Directorate of Health and Oslo Municipality have been organized in order to identify which area of health care will benefit the most from including a PhD-research project. It will preferably be a project which could also include students who have their clinical training at Oslo Municipality. Representatives from Oslo Municipality have participated in the elective course offered by SHE in order to update their knowledge and identify areas of interest as well as strengthen the links and interaction between the municipality and SHE. The beginning of 2022 witnessed a setback in the planning due to the Ukraine war and the expectation to offer refugees health care in Oslo.

One of our main platforms for collaboration and sharing of knowledge is the European University Alliance Circle U. As one of the 42 [European University Alliances](#) co-funded



by the Erasmus+ Programme and Horizon 2020 of the European Union, Circle U. is led by the [University of Oslo \(Norway\)](#) and includes eight other European Universities who share a commitment to developing knowledge in service to society: [King's College London \(UK\)](#); [Aarhus University \(Denmark\)](#); [Humboldt University \(Germany\)](#); [UCLouvain \(Belgium\)](#); [University of Belgrade \(Serbia\)](#), [University of Paris \(France\)](#), [University of Pisa \(Italy\)](#) and [University of Vienna \(Austria\)](#). The [Knowledge Hubs on Climate, Democracy and Global Health](#) form the basis for developing courses, summer schools and degree programmes, supporting bottom-up joint initiatives to embed learning co-creation, virtual mobility and interdisciplinary exchanges across all partner universities. Prof. [Eivind Engebretsen](#) has been appointed Circle U. Chair of Global Health and is responsible for the Knowledge Hubs at the University of Oslo. His mission statement can be found [here](#). Through this collaboration, educational courses, programmes and approaches developed through SHE will be implemented at European level. The summer schools on Evidence and Democracy in Times of Crises and Rethinking Global Health planned in 2022, the new joint course on “Democracy – a conceptually controversial word” and the planned honours certificate on sustainability in medical education are concrete examples of this collaboration.

A key activity in the first phase of SHE has been to map barriers for internal knowledge sharing between the different work packages in SHE and between the SHE team and other parts/groups at the faculty and university. A project led by Prof Nina Vøllestad has identified several barriers to knowledge translation between SHE’s different activities as well as to interaction with teaching staff at the local level. Based on these findings, SHE had decided to allocate seed funding to support relevant teacher activities at the local level. We will also organize our work in projects in order to ensure collaboration across the various work packages.

2. Dissemination of knowledge and practices

In line with the concept of translational research for education outlined above, SHE views dissemination and impact more as a case of co-creation than as separate phases in the R&D activities. Dissemination and impact have been and will be a rolling item on the Board and International Advisory Board meetings. We will continue to enlist members of our wider networks in identifying people and organizations who may be useful to and interested in supporting SHE’s work.

SHE has a strong international focus through our international guest professors and has also developed close collaboration with the European University Alliance Circle U. (financed through Erasmus +). As detailed above, we consider the European network created through Circle U. as a testbed for innovations developed at the Centre. By trialling innovations such as our student-led datathons and by collaborating with Circle U. on courses and an honours certificate we aim to ensure that SHE has an impact on a European scale. We see this platform as a main arena for institutional and global impact in the future.



In the coming year, we will widen the focus of dissemination and sharing with an ambition to reach:

- across the educational program, PhD, and post-doctoral program.
- across contexts, from healthcare sciences to humanities and social sciences
- across institutions, nationally and internationally (assisted by Circle U)
- across sectors; research institutes, government, business
- across activist groups (e.g. climate activists)

SHE's website is the main channel for communicating news about our activities to Higher Education Institutions, authorities, researchers, students and stakeholders. Supportive channels include a newsletter circulated by email, Twitter, LinkedIn, Instagram, and Facebook. We have increased traffic and followers in our channels (ex. 2 new followers on Twitter every day, approx. 50 % of our followers on LinkedIn are working with Higher Education). We see a huge growth in engagement from students, researchers and stakeholders. Both Facebook and Instagram are created by the students at SHE. The student leaders have more generally taken the main responsibility for developing and coordinating our social media profiles, targeting the student population. The Oslo Medical Corpus website will provide an additional channel for disseminating SHE news and activities.

We organize a variety of events. In 2021 these included mainly two kinds of public event:

1. SHEtalks. A researcher's lunch. The aim is to connect researchers affiliated with or interested in the work of the Centre and to discuss aspects of sustainability, health, education, research and the SDGs.

2. Seminars on Sustainability and topics such as the economy, nutrition, loneliness, democracy, otherness, etc. where the presenters are a researcher and a student. The aim is to focus on sustainability, its meaning in the context of different areas and topics, and to look at challenges in a broad sense. Another purpose is to disseminate information about SHE among various Higher Education Institutions, researchers and students. See Appendix 7 for more information.

SHE has launched scholarships in order to mobilize students' creative abilities and provide them with an active role in updating sustainability challenges relevant to the faculty's educational activities. In our second announcement, we highly recommended students to find a teacher/researcher they are eager to work with, and who can be an important resource to support their project. See Appendix 2 for more information.



3. Further progress

Generally, we believe that SHE is well on track to achieve its defined 2,5 year goals:

- Available resources and future needs have been identified.
- Management routines are established and functional.
- Collaborative Network has been established and projects have been launched.
- SHE development of skill sets, digital tools and courses has begun in collaboration with students.

A major focus in the coming year will be to enhance the implementation of our activities in existing and new educational programmes at the Faculty of Medicine and beyond. Several measures have already been mentioned, and are summarized here:

- We will announce seed funding for supporting “grass-roots” initiatives by teachers at the various study programmes at the Faculty of Medicine.
- We will continue and expand the collaboration with Circle U by developing joint courses and a master’s supplement (honours certificate) targeting health professional students in all collaborating countries.
- We will organize training of trainers (ToT) courses for teachers at the Faculty of Medicine and beyond, focusing on ESD skills and approaches developed at SHE.
- We will organize our work in terms of projects that ensure exchange and synergies between work packages and which better emphasize the outputs of our work.

We have accumulated unspent funds (approx. 4,2 million) for 2021 due to two different factors:

1) The covid-19 pandemic has made it necessary to postpone several activities (such as mobility, conferences, ToT courses, etc which require physical attendance). 2) We have obtained external funding from other sources (Erasmus+, RCN and HK Dir) to support our activities. We plan to use the accumulated unspent funds for 1) seed funding to enhance teacher involvement and 2) recruitment of a new associate professorship affiliated to the Centre. With this plan our budget will be in balance by the end of 2023.



Appendix

Appendix 1: SHE Projects 2021

Project title	Period	WP	Description	Participants
Team training and collective decision-making in medical education	2020-	1	This project explores the introduction of team training strategies in medical education as a fundamental shift in conceptualizing decision-making in medicine from an individual cognitive function to a collective endeavor.	Jarle Breivik (PI), Eivind Engebretsen, Carolina Rue Steuernagel, Hanna Mülder, Kristin M. Heggen
AMR Unit	2021-	2&6	SHE has set out to establish a research and education unit on multidisciplinary approaches to antimicrobial resistance (AMR) in a global context.	Sundeep Sahay (PI), Ernst Kristian Rødland, Ida Lillehagen, Eivind Engebretsen, Gabriela Saldanha, Mona Baker, Kyunghye Kim, Firdaousse Ouknider
Students for Sustainability & Wise Decisions	2021-	5	This project explores how to introduce the international movement towards appropriate medical care (choosing wisely) to Norwegian students in medicine and nutrition. The aim is to develop a student-run program to inspire students to become leaders/change agents who are able to include sustainability as a premise for wise clinical decisions.	Kristin Heggen (PI), Siri H. Quamme, Martin S. Aagaard, Rie Mols, Ben Bjørsvik, Mathieu Børkja, Evgenia Taranova
Sustainability challenges in community health	2021-	4&6	A pre-project phase exploring areas of interest related to climate change and sustainability in healthcare, as well as exploration of possible areas for fruitful cooperation between Oslo municipality and SHE. Discussions about possible research designs, how to identify the best qualified and motivated PhD candidates, composition of supervisor team, available resources and the time frame.	Erlend T. Aasheim, Kristin Heggen
Health decisions and prioritization in Primary Care	2021-	7	Develop cases from various priority settings in primary care.	Nina Vøllestad
Sustainable Healthcare Education for Primary care	2021-	2&6	The aim of this project is to explore, critique and develop how primary healthcare education could contribute to sustainable clinical decisions in line with the UN SDGs, and how to design educational programs that enable primary care professionals to take evidence-based sustainable healthcare decisions.	Elin Olaug Rosvold, Sietse Wieringa, Kristin Heggen, Eivind Engebretsen, Trish Greenhalgh



Oslo Medical Corpus	2021-	2&6	The aim of the educational activities conducted by SHE is to raise student awareness about how concepts related to the SDGs gain from and might serve many and sometimes conflicting agendas as they find their way from the political to the professional and practical levels of the healthcare system. During the first period, intensive work has been done to develop the Oslo Medical Corpus (OMC), in collaboration with the international research team and students at SHE, to address this specific goal.	Mona Baker (PI), Eivind Engebretsen, Kristin M. Heggen, Tony Sandset, Ida Lillehagen, Gina F. Henrichsen, Hilde Vandeskog, Kyung Hye Kim, Gabriela Saldanha, Saturnino Luz, Shane Sheehan, Henry Jones, Jan Buts, Luis Pérez-Gonzalez, Marcela Fraas + team of 3 students.
The politics of concepts in Global Health	2021-	2&6	We are collaboratively designing and testing a corpus-assisted datathon model in which students at SHE and Circle U partner institutions will first receive training in corpus analysis in an intensive summer school setting, and then be brought together to engage in collective corpus analysis and interrogation of key concepts of the sustainability agenda in order to confront its paradoxes and ambivalences, and to debate ways in which these paradoxes might be addressed through productive (rather than antagonistic) disagreement.	Eivind Engebretsen (PI), Mona Baker, Jan Buts, Henry Jones, Saturnino Luz, Antoinette Mary Fage-Butler, Loni Kraus Ledderer, Btihaj Ajana, Irena Fiket, Kristin M. Heggen, Tony Sandset, Ida Lillehagen, Gina F. Henrichsen, Hilde Vandeskog, Gabriela Saldanha, Shane Sheehan, Marcela Fraas
Climate and Health in Medical Education in Norway	2020-	2	Providing an overview of educational content related to climate crises and health in Norwegian medical education and identification of best practices from international universities. In addition, a presentation of appropriate content and methods for training health professionals.	Anne Kveim Lie (PI), Lene Frost Andersen, Ritika Sharma (UiO) and professors and students from University of Bergen, NTNU and The Arctic University of Norway
Elective Course (in Norwegian) for medical students: Climate change and health (Klimaendringer og helse)	2021-	3&4	The course focuses on climate change as both the greatest threat to public health of our time, and our greatest opportunity. It covers topics such as how climate change harms health, and how health professionals can play a central role in the work against climate change. Students also learn how to communicate effectively about why climate change must be stopped.	Erlend T Aasheim (PI), Dan Banik
Student engagement in sustainable development	2020-2021	3	Student Ritika Sharma carried out a survey on how students relate to sustainable development.	Dan Banik
Research group Knowledge in Translation (KNOWIT)	2012-	6	This group explores factors that impede or facilitate translation processes in healthcare and develops concepts and	Eivind Engebretsen (PI)



			models to understand, evaluate and facilitate such processes.	
Master's Degree/Honours Certificate in sustainability in medical education	2020-	2	This is a program that can be taken as a supplement to another MA degree at University of Oslo and elsewhere by students who have a particular interest in sustainability in healthcare. The first step has been to provide an overview of existing educational master's programs, summarizing aims, teaching and learning methods, content, and examples of evaluation forms and methods. This will provide a list of important questions to be considered when establishing sustainable healthcare education.	Judy Overall, Eivind Engebretsen, Kristin M. Heggen, Elin O. Rosvold
In Pursuit of Development (Podcast)	2020-	3	Prof. Dan Banik's podcast «In Pursuit of Development» has successfully disseminated knowledge on topics related to sustainability and health. Recent episodes have discussed political development, COVID-19 and vaccine distribution, COVAX, aid and sustainability (see full list in Appendix 7). With listeners in 160 countries, the podcast has a wide reach.	Dan Banik
Virtual Presence	2020-	6	This is a project that explores how loneliness technologies (ie. robots that replace sick children at school and digital tools used in elderly care) can be used as instruments for more sustainable healthcare and how future health professionals can understand and engage with such technologies.	Gemma Hughes, Eivind Engebretsen, Trish Greenhalgh, Clemet Askheim, Marit Haldar (PI)
Digital Health and Human Rights	2020-	6	The project is focusing on how new technologies might transform weak health systems in low-resource settings, with a special emphasis on people living with HIV, migrants, women and girls - groups who rarely have input into the policy decisions that shape what kinds of data are gathered about them, by whom, and how that data is used or managed.	Tony Sandset



Appendix 2: Student Scholarship Projects (WP5)

Project title	Description	Participants	Teacher/Mentor	Outcome
Implementing LARG	The podcast will focus on healthcare workers and decision-makers/managers in the healthcare sector.	Sahand Baratinardin		Podcast
Relation between hypothyroidism and obesity	The project is measuring the possible relation between thyroid hormones deficiency and obesity in Somali immigrants living in Oslo, Norway.	Omnia Alaaeldien Zaki Mohamed Khalil		Article and E-learning program
Combatting inappropriate use of antibiotics among immigrants in Norway	The project seeks to develop an online self-paced course to aware the immigrant students about the Norwegian health system specifically regarding the use of antibiotics.	Saima Orangzeb		E-learning program
Podcast innen dermatologi og venerologi	we talk about skin conditions; symptoms, how to diagnose and treatment methods. Its about eczema, moles and skin cancer, acnea and scabies, just to mention some topics.	Marti Berg Mathisen		Podcast huden.din
Folkefeber sesong 2	Podcast on social inequalities in health	Amanda Spjeldnæs, Ida Sofie Rettedal Skjæveland, Sine Grude	Anne Kveim Lie	Podcast Folkefeber
Folkefeber sesong 3	Podcast on social inequalities in health	Amanda Spjeldnæs, Ida Sofie Rettedal Skjæveland, Sine Grude	Anne Kveim Lie	Podcast Folkefeber
How equal is Norway?	An analysis of migrant workers' occupational health and safety in Norway	Nabaraj Adhikari		
Migrant women	Challenges faced by midwives in Maternity Service Provision to Newly Arrived Migrant Women	Mackenzie Kay	Johanne Sundby, Benedikte Lindskog, Sukhjeet Bains	Articles
Evidence-based Public Health in the era of Pandemic-based infodemic	Infodemic has been entwined with the pandemic and has been a crucial part ever since the pandemic started. It has harmed the interest of communities and is still a posing problem for public health, for example, vaccine hesitancy. This project lays importance on	Anum Fatima	Dominique A Caugant (Norwegian institute of Public health)	Articles



	spreading of Evidence-Based Public Health (EBPH) information & guidelines in a comprehensible manner so that anyone who reads it is able to understand.			
Prostata cancer in Tanzania	Clinical characteristics, survival rates and health seeking behavior among patients diagnosed with prostate cancer receiving treatment at Ocean Road Cancer Institute in Dar Es Salaam, Tanzania: A mixed-method study	Mette Frier Hansen	Elia John Mmbaga og Ane Haaland	Article
Towards sustainable healthcare	Towards sustainable healthcare: Prediction of Norway's health workforce (number of doctors and nurses) by regression analysis in the next two decades (2021-2040)	Sahand Baratinardin	Tron Anders Moger	Article
Bangladesh & Covid-19	The teaching experience of Dhaka, Bangladesh school teachers and assessment of mental health status during the Covid-19 pandemic.	Cinderella Akbar Mayaboti	Dr. Ibrahimu Mdala	Article
Floods and colds	Climate change and health	Anne Sigrid Lindblad Stokke, Camilla Sende Grägg		Podcast
A sustainable health sector – a sustainable working life	Sustainable innovation in health sector	Steffen Alvestad Falkevik	Helge Skirbekk	Podcast
Sustainable food system	Educating students about sustainable food system in accordance with the UN food system summit & scientific advisory	Saeka Zafar, Rayhaneh Lashkari		Lectures and E-learning modules



Appendix 3: Goals and Milestones 2020-2024

Work packages (WPs) and milestones (M)	2020				2021				2022				2023				2024			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
WP1: SDG Courses and Pedagogical Approaches																				
Overall course plan developed																				
First cohort of courses developed																				
Second cohort of courses developed																				
Third cohort of courses developed																				
Pedagogical methods developed																				
Team based education courses																				
WP2: Strategic ESD Development and Adaptation																				
Overall plan for MA program developed																				
Content development of MA program																				
Implementation of MA program																				
Implementation of SDG courses (WP1) in existing programs																				
UNESCO skill courses																				
Career development and leadership courses																				
WP3: Educational Material Development in EDS																				
MOOCs developed																				
Online seminars																				
WP4: Digital Solution Development in ESD																				
Digital translation of course content in WP1																				
Student feedback schemes developed																				
WP5: Promote student and teacher engagement in ESD																				
Student driven seed-funding																				
Peer-to-peer teaching schemes planned and developed																				
Peer-to-peer teaching schemes implemented																				
WP6: Research and development for ESD																				
Development of implementation tools																				
Research on EBM model																				
Research on implementation of programs and courses																				
WP7: Networking and dissemination																				
Maintain up-to-date information about SHE																				
Consolidate a national and international network of students, teachers and stakeholders																				
Conferences and workshops																				



Appendix 4: Expenditures and budget 2021

NOK – Norwegian kroner	Budget 2021	Expenditures 2021
<i>Personnel and indirect costs</i>		
Personnel	3 772 902	2 429 420
Indirect costs	732 543	485 884
SUM – Indirect costs	4 505 445	2 915 303
<i>Other costs</i>		
Other expenses	0	0
Purchase of services	626 815	517 223
Equipment	0	0
Other operating expenses	2 580 000	117 800
SUM – Other costs	3 206 815	635 023
TOTAL	7 712 260	3 550 327



Appendix 5: Publications

- Vandeskog, H.O, Heggen, K.M., Engebretsen, E. [Gendered vulnerabilities and the blind spots of the 2030 Agenda's leave no one behind pledge](#). Critical Policy Studies. (2021)
- Buts, J., Baker, M., Luz, S., Engebretsen, E. [Epistemologies of evidence-based medicine: a plea for corpus-based conceptual research in the medical humanities](#). Medicine, Health Care and Philosophy. (2021)
- Heggen, K.M., Berg, H. [Epistemic injustice in the age of evidence-based practice: The case of fibromyalgia](#). Nature.com - Humanities and Social Sciences Communications (2021)
- Engebretsen, E., Ottersen, O.P. [Vaccine Inequities, Intellectual Property Rights and Pathologies of Power in the Global Response to COVID-19](#). International Journal for Health Policy and Management (IJHPM) (2021)
- Engebretsen, E., Wahlberg, A., Ottersen, O.P. Counter Innovations. Responsibility of universities to act on the SDGs. In: Brink, C (ed.). The Responsive University. Leiden: Brill Publishing (2021)
- Sandset, Tony Joakim Ananiassen; Villadsen, Kaspar; Heggen, Kristin & Engebretsen, Eivind. [Discipline for pleasure: a new governmentality of HIV prevention](#). BioSocieties (2021)
- Sandset, Tony Joakim Ananiassen. [The necropolitics of COVID-19: Race, class and slow death in an ongoing pandemic](#). Global Public Health (2021)



- Sandset, Tony Joakim Ananiassen. "Translating global epidemics: The case of Ebola." *The Routledge Handbook of Translation and Health*. Routledge, 2021. 269-284.

Appendix 6: Keynotes and invited conference presentations

- Eivind Engebretsen, The politics of sustainability in global health, Korea-China LEADership Program 2021
- Eivind Engebretsen and Mona Baker, Evidence and Uncertainty – in the time of Pandemics, Tolerating Uncertainty, King’s College London 2021
- Eivind Engebretsen, Panelsamtale: Hvordan lykkes med prosjektsamarbeid for bedre utdanningskvalitet? v/Linda Rutledal, NHH, Eivind Engebretsen, UIO, Anja Olsen Moberg og Leva Serapinaite, HK-dir, Erasmus-seminaret 2021
- Kristin Heggen acted as an international expert during the spring semester for students at Medical University of Lodz, Poland in workshops titled: «Sustainability, health, and evidence based decision making»
- Kristin Heggen: «The future of health professions education - Emerging international trends»
25th anniversary for Family Medicine, North-Western State Medical University in Saint-Petersburg (Russia) named after I.I. Mechnikov
- Kristin Heggen: Betydningen av teori i utdanningsforskning. Presentasjon på den årlige nasjonale konferansen om utdanningsforskning, NTNU – 2021



Appendix 7: Events

Student Webinar 22/4 «Who is SHE?»

By Ritika Sharma, Martin Aagaard, Siri Hundstad Quamme, Mathilde Røed Jørgensen

Student event 22/10: UN Day: «How Climate Change Affects Health Services»

By students in SHE & UN Students

Cooperation: UN Union and House of Literature, Oslo

SHEtalks, a research lunch

16/12: «Mediated relationships between humanitarian aid workers and beneficiaries»

By researcher Carmen Delgado Luchner

2/12: «Education for sustainable healthcare decisions in Primary care»

By researcher Sietse Wieringa

Cooperation: Oxford University

18/11: «Antibiotic Resistance»

By researcher Ida Lillehagen, Professor Sundeep Sahay and PhD student Yogita Thakral

Cooperation: Department of Informatics, University of Oslo

7/10: «A Marie Curie Project about sustainability and translation»

By Dr. Marta Araldi

30/9: «The Oslo Medical Corpus as a platform for socially engaged education and research on sustainability»

By Professor Mona Baker and Professor Eivind Engebretsen



8/4: «Book Launch: Sustainable Sexual Health, analyzing the implementation of the SDGs»
By researcher Tony Sandset, Professor Eivind Engebretsen, Professor Kristin M. Heggen

25/3: «How much health can a tonne of carbon buy? »
By Anand Singh Bhopal, University of Bergen

Seminar Sustainability & health issues

26/10: «Bærekraft & Ernæring» (Sustainability & Nutrition)
Professor Lene Frost Andersen and student Siri Hundstad Quamme
Cooperation: HumSam, library at University of Oslo

21/9: «Sustainability & Pandemics»
Research Professor Sverre Erik Mamelund and student Ida Sofie Rettedal Skjæveland
Cooperation: OsloMet

26/5: «Bærekraft & ensomhet» (Sustainability & Loneliness)
Professor Marit Haldar and student Ida Maria Martinsson
Cooperation: OsloMet

27/4: «Sustainability / Democracy»
Professor Dan Banik and student Siri Hundstad Quamme
Cooperation: Centre for Development and environment, University of Oslo

Prof. Dan Baniks podcast «In Pursuit of Development» has successfully disseminated knowledge on topics related to sustainability and health. 3 seasons monologues and interview with politicians, civil servants, activists, media personalities and academics. With listeners in 160 countries, the podcast has a wide reach. [Here is link to the website.](#)



Appendix 8: In Media

- Kleven, T., Engebretsen, E. [Studentinvolvering i SHE](#), leder, MED-nytt nr. 20-2021
- [Vi sløser bort ressurser i den febrilske jakten på eksterne midler](#), Tony Sandset fast spaltist i Khrono, 18/10-2021
- [Historien bak koronakonflikten om luftsmitte](#), Morgenbladet, 16/10-2021
- [Koronaforskere i skyttergravsforskning](#). Morgenbladet, 15/10-2021
- Heggen, K.M., Engebretsen, E., Rosvold, E. O., Gladhaug, I.P., [Nasjonal satsning på klima og bærekraft ved de fire medisinske fakultetene](#), debatt, Khrono, 4/2-2021



Appendix 9: People in SHE



[Eivind Engebretsen](#)

Executive Chairman



[Kristin Margrete Heggen](#)

Director



[Trine Kleven](#)

Administrative Manager



Researchers

- [Eivind Engebretsen](#), SHE
- [Kristin M. Heggen](#), SHE
- [Tesfamichael Alaro Agago](#), KNOWIT and Jimma University
- [Clemet Askheim](#), KNOWIT
- [Mona Baker](#), KNOWIT, Genealogies of Knowledge Research Network/Oslo Medical Corpus
- [Trish Greenhalgh](#), SHE, University of Oxford
- [Gina Fraas Henriksen](#), KNOWIT/Oslo Medical Corpus
- [Gemma Hughes](#), KNOWIT and University of Oxford
- [Ida Lillehagen](#), KNOWIT/Oslo Medical Corpus
- [Tony Joakim Sandset](#), KNOWIT
- [Carolina Borges Rau Steuernagel](#), KNOWIT
- [Hilde Ousland Vandeskog](#), KNOWIT/Oslo Medical Corpus
- [Erlend T. Aasheim](#), SHE
- Ingrid Aarsland, SHE
- Jorunn Marie Myhre, SHE
- [Marta Arnaldi](#), KNOWIT and University of Oxford
- [Sietse Wieringa](#), KNOWIT og University of Oxford
- [Sundeep Sahay](#), SHE and Department of Informatics
- [Gabriela Saldanha](#), KNOWIT, Oslo Medical Corpus
- [Shane Sheehan](#), University of Edinburgh/Oslo Medical Corpus
- [Saturnino Luz](#), University of Edinburgh/ Oslo Medical Corpus

Center Management Board

- [Eivind Engebretsen](#), Vice-Dean of Postgraduate studies/Professor - and Executive Chairman of SHE
- [Elin O. Rosvold](#), Pro-Dean in Medical Studies
- [Bjørn Stensaker](#), Vice-rector for Education
- [Anders Malthe-Sørensen](#), Director of Center for Computing in Science Education
- [Jarle Breivik](#), Professor at Institute of Basic Medical Sciences
- [Knut Lundin](#), Professor at Institute of Clinical Medicine
- [Magnus Løberg](#), Associate Professor at Institute of Health and Society
- Oline Marie Sæther/Amanda Rose Magnum, students



- Ayna Mousavi/Sine Grude, students

[The Directorate for Higher Education and Skills](#) is a board observer. The Director of SHE acts as secretary to the board.

Students in SHE

- Siri Hundstad Quamme
- Mathilde Røed Jørgensen
- Ritika Sharma
- Martin Aagaard



International Advisory Board



International Advisory Board



- [Ole Petter Ottersen](#), Professor and the Vice-Chancellor at Karolinska Institutet, Sweden. Ottersen is the chair of IAB.
- [Trish Greenhalgh](#), Professor of Primary Care Health Sciences, Oxford University, United Kingdom.
- [Jonathan Grant](#), Professor & Director of Different Angles, Cambridge.
- [Helen Clark](#), former Prime Minister of New Zealand and former UN Development Program (UNDP) Administrator.



Appendix 10: Mandates

Executive Chair (50 %)

- Support the Director in ensuring scientific, strategic and conceptual development of SHE
- Lead the Centre Management Board in the execution of its obligations and responsibilities to SHE
- Act as liaison between International Advisory Board, Centre Management Board and Centre Executive
- Financial management of SHE
- Represent SHE in relevant for a internally and externally (with emphasis on Circle U)
- Work package lead of Circle U (WP5)
- Lead R&D activities at SHE (with emphasis on the research group KNOWIT)

Director (50 %)

- Ensure professional and efficient daily management of SHE
- Personnel responsibility for SHE staff
- Ensure synergy across all activities of the WPs.
- Prepare matters for board meetings in the CMB and IAB
- Foster student and teacher participation in planning and implementation of all activities.
- Ensure an adequate and comprehensive monitor and evaluation of all Centre activities.
- Represent SHE in relevant for a internally and externally
- Lead R&D activities at SHE (with emphasis on the WPs)



Administrative Manager (100 %)

- Ensure professional and efficient coordination of activities at the Centre
- Ensure professional communication on SHE
- Secretary for The Centre Management Board (CMB)
- Take part in the management of the Centre
- Coordinator Circle U. (WP5)
- Report to Director and Executive Chairman

