SEMINAR: PUBLIC HEALTH RESPONSE AND SOCIAL COUNTERMEASURES

Time: 17 December, 9:30-11:30
Place: Zoom

- **Opening**
  Welcome to the seminar with **Sveinung Hole** from Trond Mohn Stiftelsen and **Ole Johan Borge** from The Research Council of Norway
- **First group of introductions (3-5 minutes teasers)**
  - **Bjørn Sætrevik:** *Perceived Risk and Precautions during a Pandemic Outbreak*
  - **Øyvind Ihlen:** *Pandemic Rhetoric, Trust and Social Media: Risk Communication Strategies and Public Reactions in a Changing Media Landscape (PAR-TS)*
  - **Jose Julio Gonzalez:** *Systemic Pandemic Risk Management*
  - **Hossein Baharmand:** *COvid19 Network Technology based Responsive Action*
- **Panel discussion (20 min)**
  Trond Viggo Torgersen in a conversation with **Camilla Stoltenberg** from the National Institute of Public health and the project leaders **Øyvind Ihlen** and **Kristin Sørung Scharffscher**.
- **Second group of introductions (3-5 minutes teasers)**
  - **Jo Røislien:** *COVID communication: Fighting a pandemic through translating science*
  - **Jason D. Whittington:** *COVID-19 Seasonality: The effect of environmental variation on the spatio-temporal dynamics at national, regional and global scales*
  - **F. Le Ron Shults:** *Emotional Contagion (EmotiCon): Predicting and preventing the spread of misinformation, stigma, and anxiety during a pandemic*
  - **Birgitte Freiesleben de Blasio:** *COVID-19 in Norway: A real-time analytical pipeline for preparedness, planning and response during the COVID-19 pandemic in Norway*
- **Closing remarks**
- **Breakout session (60 min)**

PRACTICAL INFORMATION

To attend the Seminar please follow the link to the Zoom meeting: Meeting link
Meeting ID, link and password, will be also sent to registered participants by email (registration form).

Presentations and panel discussion

The first part of the seminar consists of short project presentations and a panel discussion. It is not possible to ask questions at this stage, but the speakers will be available and happy to answer all questions during the breakout session planned for the second part of the seminar.

For questions directed to the speakers of the panel discussion, please send an email to the Research Council of Norway to Amanda Jonassen (amj@rcn.no). The Research Council will forward your questions and the answers will be posted on the website after the meeting.

Breakout session

Each speaker will extensively present his/her project in a dedicated breakout room in the second part of the seminar. Speakers are free to structure their breakout session as they prefer, and participants can comment and ask questions to the speaker and/or the project team.

In order to make sure that all participants can attend one or several meetings, if they wish, there has been created individual Zoom meetings for each presented project. You may access the meetings though our web page Emergency Call for Proposals COVID19 – Fellesseminarrekke, or by clicking the links below:

1. **Breakout meeting 1: Bjørn Sætrevik**
2. **Breakout meeting 2: Øyvind Ihlen**
3. **Breakout meeting 3: Jose Julio Gonzalez**
4. **Breakout meeting 4: Hossein Baharmand**
5. **Breakout meeting 5: Jo Røislien**
6. **Breakout meeting 6: Jason D. Whittington and Nils Christian Stenseth**
7. **Breakout meeting 7: F. LeRon Shults**
8. **Breakout meeting 8: Birgitte Freiesleben de Blasio**

NB: you are free to attend all meetings, by entering or exit each meeting as you please.

MODERATOR:
OLE JOHAN BORGE,
THE RESEARCH COUNCIL OF NORWAY

Ole Johan Borge is department director for Health Research and Health Innovation at the Research Council of Norway. Before joining the Research Council, he was director of The Norwegian Biotechnology Advisory Board and head of Department for health and ICT in Innovation Norway. Borge holds a degree in agriculture, a master degree in biotechnology from the University of Oslo and a Ph.D. degree on stem cell biology from the University of Lund, Sweden. He has research experience from Nycomed Bioreg AS in Oslo, Hipple Cancer Research Center i Dayton, Ohio, USA and the Medical Faculty at the University of Lund, Sweden.

MODERATOR:
SVEINUNG HOLE, TROND-MOHN FOUNDATION

Sveinung Hole is Chief Executive Officer at Trond Mohn Foundation, Chief Executive Officer for Stiftelsen Kristian Gerhard Jebsen. Hole holds the position of Chairman of BerGenBio ASA and he is on the board of 7 other companies and has been the head of 5 different companies.

Hole is the leader of the government appointed task force HelseOmsorg 21 and participates also in the group: Nasjonalt kunnskapsprogram for Covid-19.

In the past Sveinung Hole held the position of Chairman at VoluSense AS, Managing Partner at Sarsia Seed Management AS, Director-Anesthesia & Intensive Care at Helse Bergen HF Haukeland Universitetssjukehus, Managing Director-Regional at Berlitz Corp. and Director-Marketing & Strategy at Telenor ASA.

Hole received a graduate degree from BI Norwegian Business School.

MEET THE SPEAKER:
BJØRN SÆTREVIK, UNIVERSITY OF BERGEN

Bjørn Sætrevik is a clinical psychologist (2003) with a Ph.D. in cognitive neuroscience (2007). He is an associate professor in general psychology at the Department of psychosocial science at the University of Bergen and leads the Operational psychology research group. Most of Sætrevik's research is related to applied decision making in safety critical environments.

He has published on factors influencing human performance, situation awareness and error prevention, perceived risk, cognitive control of attention, implicit learning, teamwork, leadership and communication. Sætrevik is interested in discussions around open and transparent science.

Project:

Perceived Risk and Precautions during a Pandemic Outbreak

During a pandemic, the behavior of the general population determines the spread of the contagion, the load on medical services, and the ultimate societal impact of a disease. How individual members of the population understand the risk scenario determines their response to a pandemic, which precautions they take, and the social dynamics they engage in. Social and behavioral science is needed to respond optimally to the COVID-19 pandemic. The current project will measure, track and predict the impact of risk perception and communication on (i) individual decisions and behavior, (ii) motivation and compliance with public advice, (iii) and social dynamics during a pandemic outbreak. PANDRISK will be among the first projects which transfer knowledge to the specific applied topic of human behavior during a pandemic outbreak.

To achieve this, the project will perform the following work-packages:
WP1: Survey of psychological variables related to pandemic's early phases already collected
WP2: Four longitudinal surveys following up WP1
WP3: Develop and apply smartphone app for tracking pandemic's relation to mental health, movement and social interaction
WP4: Various extensions and generalizations of WP2, among them a US sample (NY) for comparison
WP5: Project management and communication with stakeholders

The transdisciplinary research team includes expertise in cognitive, biological and social psychology, behavioral aspects of safety, medical psychology with psychophysiological measurements, mental health consequences of long-term trauma, public health policy and communication among the general public. The research team is complemented by Scientific advisory board made up of relevant public, private and civil society service providers.

MEET THE SPEAKER:
ØYVIND IHLEN, UNIVERSITY OF OSLO

Dr. Øyvind Ihlen is full professor in the Department of Media and Communication (IMK) at the Universtiy of Oslo (UiO). He is co-director of POLKOM – Center for the Study of Political Communication; Regional editor of Public Relations Inquiry and Norwegian editor of Rhetorica Scandinavica. His research focuses in particular on strategic communication of political issues. Ihlen has received several international prizes and published over 120 academic works.

Full bio and publication list is found at http://oyvindihlen.wordpress.com/
Citation statistics: Google scholar.
Academic Interests: Strategic communication, public relations, political communication, journalism, corporate social responsibility and rhetoric.

Project:
Pandemic Rhetoric, Trust and Social Media: Risk Communication Strategies and Public Reactions in a Changing Media Landscape (PAR-TS)

A certain level of trust is a prerequisite for society. During a crisis like COVID-19, trust is put to the test. The PAR-TS project approaches this to study four interrelated areas: First of all, we study how the Norwegian health authorities attempt to build trust in their handling of the crisis and the advice they provide. Secondly, we focus on the role played by social media in this regard, as sites were where the handling of the crisis is discussed. Thirdly, we research reactions in the public in terms of trust, fear and behavioral change. Do people trust and follow the advice of the authorities? Do they trust each other to behave accordingly? Do they trust the media's coverage of the crisis and the authorities? handling? On this background, we then formulate ideas for risk and crisis communication strategies that can be used in future pandemic outbreaks. The basic goal is to assist society in coping with such situations.

MEET THE SPEAKER:
JOSE JULIO GONZALEZ, STEPCHANGE AS

Jose Julio Gonzalez, dr.techn., dr.rer.nat., was Professor for Information and Communication Technology at the Department for ICT, University of Agder, Norway, until he retired in 2019. He created 2011 and directed 2011-2014 the Centre for Integrated Emergency Management (CIEM) http://ciem.uia.no/. He was scientific coordinator for the H2020 project Smart Mature Resilience (2015-2018). He got the King's Medal for Merit for his merits to improve societal security. Currently he works as Executive Research Advisor for the company Stepchange AS in Kristiansand, Norway.

Project:
Systemic Pandemic Risk Management

The Covid pandemic has emphatically shown the validity of Brundtland's famous statement: "everything is connected with everything". The Covid response was overwhelmed by escalating vicious circles, because Covid's risk factors are interdependent. The health system was unprepared: masks and respirators were missing; infection of professionals in hospitals and nursing homes stressed the capacity of the health system; and much more. Covid also affected other health factors: the waiting time for patients with life-threatening diseases increased; patients did not seek medical attention for fear of becoming Covid-infected; in developing countries, tuberculosis and malaria cases are increasing owing to scarcity of resources. Covid affected all sectors of society, mostly negatively, but sometimes positively. In Italy, tax revenues increased significantly because closed banks reduced access to cash, and people had to resort to traceable electronic transactions. Increased taxes meant increased resources to fight back the pandemic.

Traditional Vulnerability Assessment/Risk Management (VARM) assess threats independently of each other as the probability that incidents will occur and what negative consequences they may have, yielding static, time-independent variables. Traditional VARM misses the inherent dynamics caused by interdependencies between the risk factors. They give rise to vicious circles, thus increasing the probabilities of risk factors over time.

SPRM extends methods for systemic analysis and management of interdependent risk factors that were first used by the SPMR project staff in the H2020 project Smart Mature Resilience (2015-2018). The new methods are used to evaluate the Covid response in the Agder County with the participation of a focus group from Kristiansand municipality, the Agder County Hospital and other relevant stakeholders. The evaluation will lead to more effective prevention and management of new Covid waves and future pandemics.

MEET THE SPEAKER:
HOSSEIN BAHARMAND, UNIVERSITY OF AGDER

Hossein Baharmand is a postdoctoral fellow at the Department of Information and Communication Technology. He has a doctorate in ICT from UiA and a master's degree in Industrial Engineering from Yazd University, Iran. His professional interests are mainly logistics and value chain management, decision-making, and technology development with a focus on humanitarian missions. He has published in a number of areas in journals such as Transportation Research Part E, Annals of Operations Research, International Journal of Disaster Risk Reduction, and Technology in Society.

Project:
COvid19 Network Technology based Responsive Action

The CONTRA project deals with the last mile delivery problem of the COVID-19 vaccine: from countries entry points (like international airports) to regional health facilities. Public health officials worldwide often aim to deliver vaccines to targets effectively (in the right quantity and condition), efficiently (with the lowest costs and on-time), sustainably (with as few environmental effects as possible), and fairly. However, the goals are difficult to achieve, specifically in middle- and low-income countries. After entering countries and customs clearance, vaccines must be transported to refrigerated national storage facilities by cooling-enabled transportation means, which are often hard-to-find. From national to regional facilities, clinics, or pharmacies, vaccines are usually hauled overland by truck or motorcycle - sometimes even being walked the final leg on the back of a healthcare worker. Besides the cooling challenge, social distancing measures, redeployment of frontline workers, and the possibility of large numbers of people falling sick could further disrupt the COVID-19 response plans and impact the COVID-19 vaccine delivery to patients.

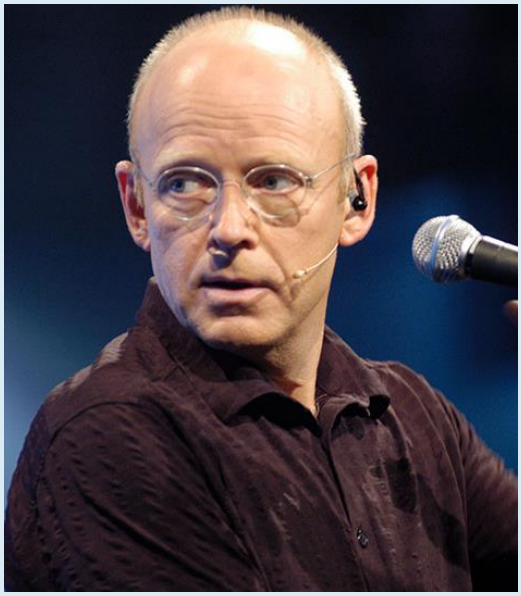
CONTRA aims to develop a decision support system for pandemic responders to design an effective, efficient, sustainable, and fair COVID-19 vaccine supply chain inside countries while considering uncertainties like the number of vaccines needed. The project gathers eight researchers and an SME from Norway, Belgium, and Turkey. The partners will use state-of-the-art approaches and technologies over the course of 18 months to develop a suite of open-source tools and methods to address the CONTRA objective in two phases. First, CONTRA researchers will conduct rapid analyses to provide actionable advice regarding COVID-19 vaccine distribution and delivery in Norway (potentially applicable to other high-income countries). Second, findings from the first phase be broadened to the contexts of low- and middle-income countries.

MEET THE SPEAKER: KRISTIN SØRUNG SCHARFFSCHER, UNIVERSITY OF STAVANGER

Kristin Sørung Scharffscher is Associate Professor at Department of Safety, Economics and Planning at University of Stavanger.
Sørung Scharffscher's research areas are risk communication, gender perspectives in societal safety, complex emergency operations, gender-based protection, crisis management, international humanitarian organisations and the UN system.

Project:
Fighting pandemics with enhanced risk communication: Messages, compliance and vulnerability during the COVID-19 outbreak
The PAN-FIGHT project will investigate political and social dimensions of the COVID-19 pandemic, by addressing health risk communication in relation to social and cultural dynamics. We will offer new knowledge on how national and local authorities as well as health institutions can enhance their risk communication to mitigate social vulnerabilities. In so doing, we will contribute to improved preparedness, resilience and societal safety. The COVID-19 pandemic provide an unprecedented opportunity for governments, researchers, health systems and the population at large to assess their resilience and improve preparedness. Future pandemic pathogens can be much more sinister. Of paramount interest in this context is how national and local authorities communicate with their citizens about risks associated with the COVID-19 virus. National and local variations in risk communication appear to have triggered similarly varied reactions in the general public, with subsequent impact on vulnerabilities conditioned by social and cultural differences. Bringing together some of Europe and the United States' most competent researchers on risk communication, societal safety and health emergencies, this project will a) investigate to what extent national variations in authorities' risk communication strategies can be linked to the ways in which members of the public adhere to governmental guidelines, requirements and restrictions; b) identify any correlations between risk communication, adherence, and factors such as social capital, age, gender, socio-economic status and household composition; and c) translate this knowledge into internationally aligned, evidence-based, and culturally sensitive risk communication strategies. The greatest risk to this project is the COVID-19 pandemic itself, with unpredictable health effects on those involved and possible prolonged restrictions on mobility and personal contact. We will counteract the latter with a robust digital infrastructure.

CHAIR OF THE DISCUSSION PANEL: TROND-VIGGO TORGERSEN



Trond-Viggo Torgersen is a physician, television host, artist, comedian and former children's commissioner (ombudsman).

Torgersen has been awarded the Paul Robeson award (1990), the TV Award (The Society for the Preservation of Traditional Standard Norwegian's award in 2003), "Gullruten" Honorary Award (2013) and the Mensa Award (2020).

OUR PANEL GUEST: CAMILLA STOLTENBERG, NORWEGIAN INSTITUTE OF PUBLIC HEALTH

Camilla Stoltenberg is the Director General of the Norwegian Institute of Public Health.

Stoltenberg is a physician and researcher, with a PhD from University of Oslo**.** Stoltenberg has a crucial role in the National Health Registry Project. The project aims to modernise the health registries in Norway. Stoltenberg was also the leader of the national FUGE platform, Biobanks for Health, and is now co-chair of Biobank Norway, a national infrastructure for research biobanks. She has had core functions in the Norwegian Mother and Child Cohort (MoBa) study since 2001 and is leading the Norwegian part of the Autism Birth Cohort study. Her research focuses on causes and risk factors for autism and other neurodevelopmental disorders.

MEET THE SPEAKER:
JO RØISLIEN, UNIVERSITY OF STAVANGER

Jo Røislien is Adjunct Associate Professor at the Department of Mathematical Sciences. Røislien has an MSc in statistics, and a PhD in geostatistics, both from NTNU. Jo Røislien is a profiled research and science communicator. He developed and hosted the popular science show "Siffer" ("Digits") on NRK and was the first ever Norwegian to be a host on Discovery Channel.

Project:

COVID communication: Fighting a pandemic through translating science

An infectious disease is a special type of health challenge with its potential for rapid incidence growth. When dealing with such exponential growth regarding potential spread, if an imposed societal measure does not feel drastic, it may already be too late. This has strong implications for public health communication. Bringing about attitude change and acceptance for strict regulations requires explaining health science topics so that also non-experts can quickly understand. How to go about to succeed at this is largely unknown. As media habits have changed, video has become a preferred medium constituting almost 80% of all internet traffic. Yet little is known about how to most effectively use video for relaying complex health messages.

The aim of this study is to develop effective, evidence-based video communication for translating complex but important health messages about infectious diseases and pandemics, using COVID-19 as a case to learn and prepare society for handling also future pandemics. Creating effective science communication requires interdisciplinary collaboration, and the project will bring together health professionals and scholars, media creatives, psychologists, statisticians and professional communicators. The study population will include representatives from both the general public and decision makers as part of a holistic approach to how health related risk is understood and communicated on all levels. The general population is a heterogenous group and a one-size-fits-all solution is not to be expected.

MEET THE SPEAKERS:
JASON D. WHITTINGTON, UNIVERSITY OF OSLO
NILS CHRISTIAN STENSETH (PI), UNIVERSITY OF OSLO

Jason Whittington is an ecological researcher, and the Scientific Director of the Nordic Centre of Excellence NorMER. Whittington's research focus is on the behavioral ecology and population dynamics of species in response to ecosystem variability. His overall aim is to align and merge Arctic and Antarctic themes to realize an overall better understanding of threats and challenges to earth's polar ecosystems.

Nils Christian Stenseth is an evolutionary biologist working on a broad spectrum of systems and topics. Stenseth's main position is at the University of Oslo, primarily working at the Centre for Ecological and Evolutionary Synthesis, CEES). Stenseth is also professor II at UiA where he works as an active scientist and as a chair of the Board at the Centre for Costal Research (CCR).

Project:

COVID-19 Seasonality: The effect of environmental variation on the spatio-temporal dynamics at national, regional and global scales

COVID-19 Seasonality is a Norwegian based project with strong collaborations with leading research and response organisations in China, Iran, UK, USA, and the African Union to develop fundamental information and inform the response to the ongoing COVID-19 pandemic.

The objectives are organized into three main actions: (I) Extract - will determine how the weather and seasonal factors affect the patterns of growth of the COVID-19 epidemic; (II) Predict - will use data on the weather and seasonal factors that COVID-19 to assess how epidemic will change in the future in Norway and other countries; and (III) Prepare - will evaluate the risk of future pandemics, similar to COVID-19, in Norway and other countries from new and emerging infectious diseases (EIDs).

COVID-19 Seasonality will produce quantitative models to forecast the seasonal conditions in Norway and other countries that favor and hinder the transmission of SARS-CoV-2, improving predictions of epidemic trends.

COVID-19 Seasonality uses basic research approaches and applies the obtained insights to one of the biggest challenges of our time. The improved understanding of the spatio-temporal dynamics of COVID-19 pandemic will contribute profoundly to improve the preparedness against future diseases in Norway as well as globally.

MEET THE SPEAKER: F. LERON SCHULTS, NORCE NORWEGIAN RESEARCH CENTRE

F. LeRon Shults is a professor at the Institute for Global Development and Social Planning at the University of Agder and Scientific Director of the Center for Modeling Social Systems in Kristiansand, Norway. He has published 18 books and over 130 scientific articles and book chapters on topics such as multi-agent artificial intelligence, social simulation, sustainability, ethics, epistemology, cognitive psychology, and the philosophy of science. Shults' most recent books are *Human Simulation* (Springer 2019) and *Practicing Safe Sects* (Brill 2018). In addition to being the PI of the EmotiCon project, he is also co-PI of the "Religion, Ideology, and Prosociality" project (EEA-Norway) and the "Modeling Religious Change" project (Templeton Foundation)."

Project:

Emotional Contagion (EmotiCon): Predicting and preventing the spread of misinformation, stigma, and anxiety during a pandemic

How - and why - does misinformation, stigma and anxiety spread in the wake of a pandemic such as COVID-19? The "Emotional Contagion" (EmotiCon) project will develop a multi-agent artificial intelligence model designed to predict and prevent, or at least mitigate, this sort of spreading as societies prepare for the next pandemic or the next wave of COVID-19. The project is run through the Center for Modeling Social Systems at NORCE. The data that will inform the development of the EmotiCon model will come from extensive social media analysis and a new survey of Norwegian attitudes and behaviors during the national 'dugnad' in response to the pandemic. The model will be developed in collaboration with a team of international advisory collaborators, and subject matter experts who represent ten municipalities in Norway.

The Emoticon project will provide new computational tools for assessing and altering the dynamics of emotional and behavioral contagion during public health crises. Our team has already published computational models with the ability to simulate the effect of disease contagion threats on the attitudes and behaviors of human populations. Simulated agents have cognitive architectures and weighted social network ties that affect beliefs and behaviors based on social psychological theories such as 'terror management theory.' They have been empirically validated in relation to real world data. We will adapt these models to simulate the social contagion effects of disease contagion threats under a wide variety of parameters, including those of poorer countries. This will provide stakeholders with an empirically validated 'artificial society' that can serve as a simulation platform within which they can experiment with intervention strategies designed to mitigate the spread of anxiety, stigma, and misinformation during the COVID-19 crisis and future pandemics.

MEET THE SPEAKER:
BIRGITTE FREIESLEBEN DE BLASIO,
THE NORWEGIAN INSTITUTE OF PUBLIC HEALTH

Birgitte Freiesleben De Blasio (born 1968) is Department Director at the Department of Infectious Diseases Epidemiology and Modelling at the Norwegian Institute of Public Health. Freiesleben de Blasio is also professor II at the department of biostatistics at the University of Oslo. She has a PhD in Physics from Niels Bohr Institute, University of Copenhagen. She leads the group of researchers at NIPH working with infectious disease modelling, which is a collaboration between NIPH, the University of Oslo, NR and Telenor.

Project:

COVID-19 in Norway: A real-time analytical pipeline for preparedness, planning and response during the COVID-19 pandemic in Norway

The corona virus pandemic is a threat to the health of people around the world. Politicians need high-quality data on the spread of the infection as well as estimates of the effect of political actions to stop the spread. We will use both mathematical models and collect data on symptoms from the population to give a detailed, weekly picture of the epidemic in Norway. An important way to limit the epidemic is to reduce person-to-person contact. We will collect data on people's movements within Norway from mobile phone data. In combination with data on the symptoms of disease in the general populations, enables us to give good predictions for the spread of the virus in the community. The model can inform politicians by showing how different types of public health actions can reduce person-to-person contact. The methods we are developing are at the forefront of statistical science and will have importance for understanding the spread of other infectious diseases. We collect new information in existing cohorts, including the Norwegian Mother, Father and Child Cohort Study (MoBa) and the Norwegian Influenza Study (NorFlu), linked to registry information on COVID-19, to understand why some persons run a larger risk of infection and severe disease than other people do. These studies include essential information based on earlier genotyping and immunological studies. Such information, together with information on education, occupation, and earlier health will be necessary for better analyses and understanding of how SARS-CoV-2 will affect the health of the population. We also analyze data from the whole Norwegian population, starting with the general population registry. To this registry, we will link information from the Norwegian Patient Registry, the Primary Health Care Registry, the Communicable Disease Registry and the Cause of Death Registry to arrive at a complete picture of the consequences of the epidemic in Norway.

Thank you for attending the seminar!

Evaluation of the seminar

After the seminar, you will receive a link to an evaluation form. We would highly appreciate your feedback.

For further information or question, please feel free to contact us

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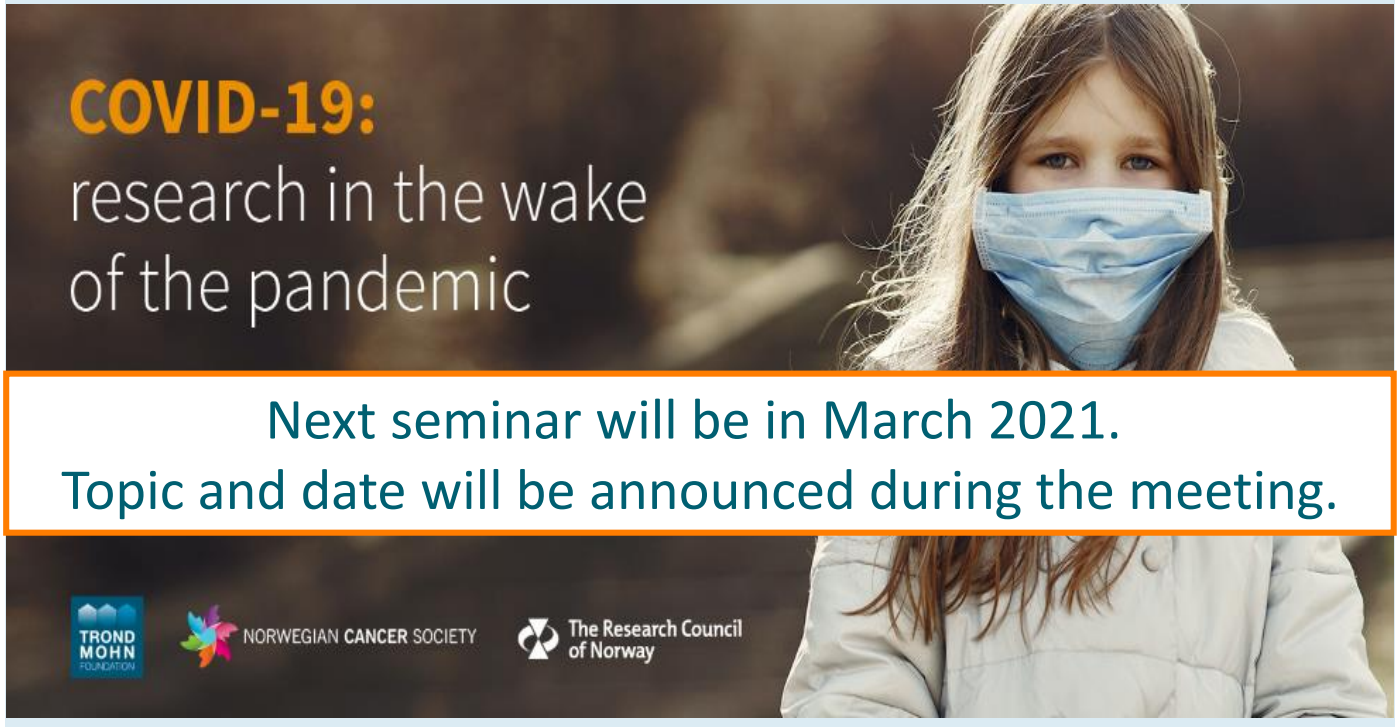

Next seminar will be in March 2021.
Topic and date will be announced during the meeting.