

# Annual Newsletter

## NORDIC PHARMACOEPIDEMOLOGICAL NETWORK



*Figure 1 Participants of the 15th Annual NorPEN meeting, November 2023. Oslo, Norway*

Dear NorPEN members,

I am delighted to introduce the first annual NorPEN newsletter, providing an overview of NorPEN highlights from the past year as well as a glimpse into what lies ahead in 2024. I would like to thank the members of the NorPEN executive committee 2023, the NorPEN education subcommittee (the EduGroup), and the organizers of last year's NorPEN meeting in Oslo for your time and investment in NorPEN during 2023.

A significant undertaking for the NorPEN executive committee during 2023 involved the revision of our bylaws. The new bylaws were approved by the NorPEN executive committee during the annual meeting in Oslo and are now accessible on our webpage.

I hope that you will welcome this new initiative and explore the contents of our newsletter.

Looking forward to seeing many of you throughout 2024,

*Lotte Rasmussen*, Chair of the NorPEN executive committee

### CONTENTS

The NorPEN executive committee 2024.....	2
Summary of the 15 <sup>th</sup> annual NorPEN meeting in Oslo.....	3
Information about the 16 <sup>th</sup> annual NorPEN meeting in Copenhagen, November 2024.....	3
News from the EduGroup, results from the student education survey.....	4
A selection of 2023/2024 publications from the NorPEN member groups.....	6

## The NorPEN Executive Committee 2024

The NorPEN executive committee in 2024 consists of the following regular members and their substitutes from each of the Nordic countries:

### *Research groups:*

Lotte Rasmussen, PhD, assistant professor, University of Southern Denmark (Denmark, chair)  
 Maurizio Sessa, PhD, associate professor, University of Copenhagen, (Denmark)  
 Carolyn Cesta, PhD, assistant professor, Karolinska Institutet (Sweden, co-chair)  
 Björn Pasternak, PhD, senior researcher, Karolinska Institutet (Sweden)  
 Jacqueline Cohen, PhD, senior researcher, Norwegian Institute of Public Health (Norway)  
 Angela Lupattelli, PhD, professor, University of Oslo (Norway)  
 Heidi Taipale, PhD, senior researcher, Niuvanniemi Hospital (Finland)  
 Mika Gissler, PhD, professor, Finnish Institute for Health and Welfare and Karolinska Institutet (Finland)  
 Lárus Steinþór Guðmundsson, PhD, associate professor, University of Iceland (Iceland)

### *PhD students:*

Chaitra Srinivas, PhD student, Norwegian Institute of Public Health (Norway)  
 Saad Hanif Abbasi, PhD student, University of Southern Denmark (Denmark)

### *Pharmacoepidemiological societies:*

Kristine Allin, PhD, associate professor, Aalborg University Copenhagen (Denmark)  
 Miia Artama, PhD, professor (tenure), University of Tampere (Finland)

### *Register holders:*

Maarit Leinonen, PhD, chief physician, Finnish Institute for Health and Welfare (Finland)  
 Heini Kari, PhD (Finland), senior researcher, Social Insurance Institution of Finland (Finland)

*Don't hesitate to reach out to us if you have any questions or ideas for NorPEN activities!*



Lotte Rasmussen



Maurizio Sessa



Heidi Taipale



Mika Gissler

Lárus Steinþór  
Guðmundsson

Jacqueline Cohen



Angela Lupattelli



Carolyn Cesta



Björn Pasternak



Maarit Leinonen



Heini Kari



Kristine Allin



Chaitra Srinivas



Saad Hanif Abbasi



Miia Artama

## The 15<sup>th</sup> annual NorPEN meeting 2023 in Oslo

In November, the 15<sup>th</sup> annual NorPEN meeting with the theme “Strengthening our Nordic Network for Preparedness and Impact” was held with great success in Oslo. The meeting was organized by the research groups at the Norwegian Institute of Public Health and the University of Oslo and chaired by Jacqueline Cohen. There were **113 participants** from Denmark, Finland, Norway, Sweden, Italy, Netherlands, and United Kingdom. We started with a half-day pre-conference course on Target Trial Emulation and the Welcome Reception at the University of Oslo. Then, we had 8 invited speaker presentations, 15 10-min oral presentations, 15 3-min PharmacoepiSLAM presentations, and 17 posters presented over 2 days at Oslo Congress Centre. Some of the highlights were talks on “*The future of (emergency) pharmacoepidemiology*” by Anton Pottegård (Professor, University of Southern Denmark), “*Data harmonization initiatives in Europe and the role of Open Science*” by Daniel Prieto-Alhambra (Professor, University of Oxford), and “*Challenges and opportunities when Nordic drug prescription registries inform antiseizure medication labelling*” by Marte Bjørk (Professor of Neurology, University of Bergen). These talks highlighted the importance of our research for informing regulatory decisions and discussed strategies to improve timeliness and transparency in our studies. In addition to the excellent scientific program, there were plenty of opportunities for networking with a friendly and welcoming group of researchers!



Anton Pottegård, Professor,  
University of Southern Denmark

Niklas Norén, Chief Science Officer,  
Uppsala Monitoring Centre

Marte-Helene Bjørk, Professor,  
University of Bergen

## The 16<sup>th</sup> annual NorPEN meeting November 18-20, 2024 in Copenhagen

Please join us November 18-20, 2024 for the 16<sup>th</sup> annual NorPEN meeting in Copenhagen. The theme of the meeting will be “**Use of Artificial Intelligence in Pharmacoepidemiology**”. As usual, there will be plenty of time for networking and NorPEN will host a social dinner. The meeting is being chaired by Maurizio Sessa, associate professor, University of Copenhagen. More information will follow later. Check our website for news or subscribe to the EduGroup email list to get information on upcoming events in pharmacoepidemiology.

## News from the EduGroup

The NorPEN EduGroup has been very active during 2023 and currently consists of 11 members with representatives from four of the Nordic countries. Within the NorPEN EduGroup Seminar Series, a total of six webinars were held during 2023 with great attendance by both members of NorPEN research groups and researchers and students from outside NorPEN. Remember that previous recordings and slides can be found on the NorPEN website under the “Education” and “Seminars” [www.norpen.org](http://www.norpen.org).

## Results from the Student Survey

In December 2023, the EduGroup carried out an online survey among students in the Nordic countries to identify their educational needs in pharmacoepidemiology.

The invitation to the survey was promoted at the NorPEN conference, sent out through the EduGroup email list, and nationally in Denmark, Norway and Sweden through the pharmacoepidemiology societies and direct contact with research groups. The results, as well as the resulting conclusions, are summarized in brief.

There were 24 respondents to the survey (21 PhD students and 3 pre-PhD/masters); while data on the actual number of PhD students in pharmacoepidemiology (or a pharmacoepidemiology related topic) are not available, the EduGroup approximates that there are at least 50 ongoing PhD projects in the Nordic countries.

Although it is not known what proportion of the total number of PhD students the invitation reached, the EduGroup believes that the response rate to the survey was likely <50% relative to the total number of PhD students in pharmacoepidemiology in the Nordics.

Further, more than half had never participated in the NorPEN annual meeting (among whom 6 were not aware of the meeting), 50% had never participated in a NorPEN EduGroup online seminar, and two-thirds had never visited the education section of the NorPEN website. Based on these data, and especially considering that the results are based on a selected subset of the PhD students who were reached by the survey and chose to respond,

the first conclusion of the survey is:

**NorPEN can do more to increase awareness of the network and its activities among early-career pharmacoepidemiologists.**

The EduGroup encourages all colleagues to share information about NorPEN with any new team members as early as possible, to enable and support their engagement in NorPEN-promoted educational activities.

As for key survey results assessing educational needs, almost no respondents answered that their needs in basic pharmacoepidemiology were not being met, whereas one third of the respondents answered that their needs in advanced pharmacoepidemiology methods were not being met. Further, one third identified education in programming not being met.

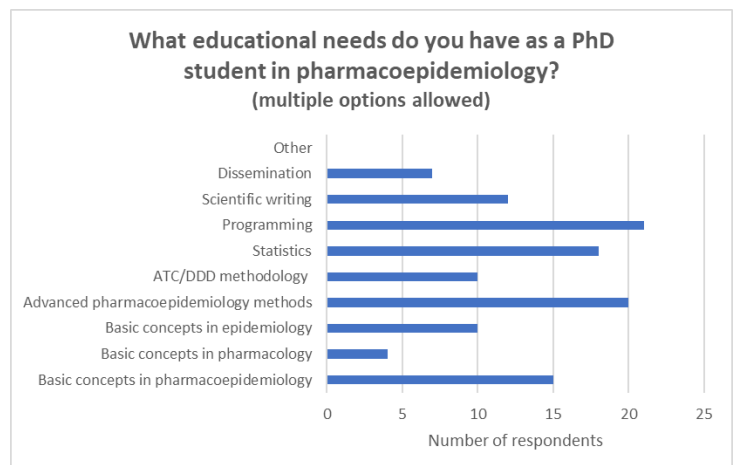


Figure 2 EduGroup Survey, responses to question on educational needs in pharmacoepidemiology (24 respondents).

While training in programming is more generic and could be addressed through non-NorPEN activities at local and national level as well as online, the EduGroup concludes:

**It is essential to continue to promote knowledge sharing and work towards PhD-level pharmacoepi courses, workshops, and seminars being made available to as broad audience as possible.**

In line with this, an upcoming course in intermediate pharmacoepidemiology, arranged by the Norwegian Society of Pharmacoepidemiology at the University of Oslo, will be made available online and open to all PhD students in the Nordic countries (more information to follow).

In addition, the EduGroup encourages any current or prospective course and seminar organizers to make their activities as widely available as possible. The EduGroup is developing a list of recommendations to help ensure educational opportunities are open to as many as possible through as many channels for participation as possible.

Survey respondents suggested that links to free education material and resources as well as recommended papers and reading lists, e.g. introductory and advanced methods, be added to the Education section of the NorPEN website. The EduGroup will work towards making such material available and welcomes any suggestions on key pharmacoepi readings and materials from the NorPEN community (by reaching out to [bjorn.pasternak@ki.se](mailto:bjorn.pasternak@ki.se)).

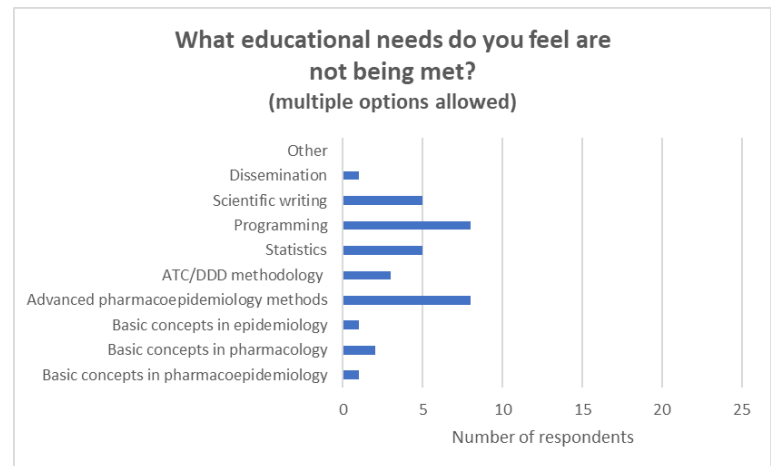


Figure 3 EduGroup Survey, responses to question on what educational needs in pharmacoepidemiology are not being met (24 respondents).

## New publications from the NorPEN member groups

On our webpage ([www.norpen.org](http://www.norpen.org)) we have collected a list of published NorPEN papers where collaborators are from more than one Nordic country and are based on data or describe data from more than one Nordic country. If you want to have your recently published NorPEN paper on our list, please email the title and author names to [info@norpen.org](mailto:info@norpen.org)

## Selected Publications 2023/2024

**Efficacy and effectiveness of antipsychotics in schizophrenia: combining evidence from randomised controlled trials and real-world data.** Efthimiou O, Taipale H, Radua J, Schneider-Thoma J, Pinzón-Espinosa J, Ortuño M, Vinkers CH, Mittendorfer-Rutz E, Cardoner N, Tanskanen A, Fusar-Poli P, Cipriani A, Vieta E, Leucht S, Tiihonen J, Luykx JJ. *Lancet Psychiatry* 2024; 11: 102-111. <https://pubmed.ncbi.nlm.nih.gov/38215784/>

**Comparative Risk of Major Congenital Malformations With Antiseizure Medication Combinations vs Valproate Monotherapy in Pregnancy.** Cohen JM, Alvestad S, Suarez EA, Schaffer A, Selmer RM, Havard A, Bateman BT, Cesta CE, Zoega H, Odsbu I, Huybrechts KF, Kjerpeseth LJ, Straub L, Leinonen MK, Bjørk MH, Nørgaard M, Gissler M, Ulrichsen SP, Hernandez-Diaz S, Tomson T, Furu K. *Neurology* (2024) <https://pubmed.ncbi.nlm.nih.gov/38165339/>

**Trajectories of ADHD medication use before, during, and after pregnancy: a population-based study from Norway and Sweden.** Srinivas C, Karlstad Ø, Stigum H, Furu K, Cesta CE, Reutfors J, Cohen JM. *Pharmacoepidemiology and Drug Safety* (2023) <https://pubmed.ncbi.nlm.nih.gov/37309052/>

**Safety of GLP-1 Receptor Agonists and Other Second-Line Antidiabetics in Early Pregnancy.** Cesta CE, Rotem R, Bateman BT, Chodick G, Cohen JM, Furu K, Gissler M, Huybrechts KF, Kjerpeseth LJ, Leinonen MK, Pazzagli L, Zoega H, Seely EW, Patomo E, Hernández-Díaz S. *JAMA Internal Medicine* (2023) <https://pubmed.ncbi.nlm.nih.gov/38079178/>

**Metformin Versus Insulin and Risk of Major Congenital Malformations in Pregnancies With Type 2 Diabetes: A Nordic Register-Based Cohort Study.** Kjerpeseth LJ, Cesta CE, Furu K, Engeland A, Gissler M, Gulseth HL, Karlstad Ø, Leinonen MK, Pazzagli L, Zoega H, Cohen JM. *Diabetes Care* (2023); 46(8):1556-1564. <https://pubmed.ncbi.nlm.nih.gov/37343541/>

**Association of glucagon-like peptide-1 receptor agonists with serious liver events: a Scandinavian cohort study.** Engström A, Wintzell V, Melbye M, Svanström H, Eliasson B, Gudbjörnsdóttir S, Hveem K, Jonasson C, Hviid A, Ueda P, Pasternak B. *Hepatology* (2023) <https://pubmed.ncbi.nlm.nih.gov/38085855/>

**Use of DPP4 inhibitors and GLP-1 receptor agonists and risk of intestinal obstruction: Scandinavian cohort study.** Ueda P, Wintzell V, Melbye M, Eliasson B, Söderling J, Gudbjörnsdóttir S, Hveem K, Jonasson C, Svanström H, Hviid A, Pasternak B. *Clin Gastroenterol Hepatol* (2023) <https://pubmed.ncbi.nlm.nih.gov/37716613/>

**Prenatal opioid exposure and risk of asthma in childhood: a population-based study from Denmark, Norway, and Sweden.** Odsbu I, Handal M, Hjellvik V, Hernandez-Diaz S, Kieler H, Nørgaard M, Skurtveit S, Esen BÖ, Mahic M. *Front Pharmacol* 2023;14:1056192. <https://pubmed.ncbi.nlm.nih.gov/37214456/>

**Prenatal exposure to pregabalin, birth outcomes and neurodevelopment - a population-based cohort study in four Nordic countries.** Dudukina E, Szépligeti SK, Karlsson P, Asomaning K, Daltveit AK, Hakkarainen K, Hoti F, Kieler H, Lunde A, Odsbu I, Rantanen M, Reutfors J, Saarelainen L, Ehrenstein V, Toft G. *Drug Saf* 2023. <https://pubmed.ncbi.nlm.nih.gov/37099261/>

**Utilization of antidepressants, anxiolytics, and hypnotics during the COVID-19 pandemic in Scandinavia.** Tiger M, Wesselhoeft R, Karlsson P, Handal M, Bliddal M, Cesta CE, Skurtveit S, Reutfors J. *J Affect Disord* 2023;323:292-298. <https://pubmed.ncbi.nlm.nih.gov/36442654/>

**Methodology of the brodalumab assessment of hazards: a multicentre observational safety (BRAHMS) study.** Reilev M, Jensen PB, Ranch LS, Egeberg A, Furu K, Gembert K, Hagg D, Haug U, Karlstad Ø, Reutfors J, Schäfer W, Schwartz S, Smits E, Holthius E, Herings R, Trifirò G, Kirchmayer U, Rosa AC, Belleudi V, Gini R, Støvring H, Hallas J. **BMJ Open** 2023 Feb;13(2):e066057. <https://pubmed.ncbi.nlm.nih.gov/36725094/>

**Association of In Utero Antipsychotic Medication Exposure With Risk of Congenital Malformations in Nordic Countries and the US.** Huybrechts KF, Straub L, Karlsson P, Pazzagli L, Furu K, Gissler M, Hernandez-Diaz S, Nørgaard M, Zoega H, Bateman BT, Cesta CE, Cohen JM, Leinonen MK, Reutfors J, Selmer RM, Suarez EA, Ulrichsen SP, Kieler H. **JAMA Psychiatry** 2023 Feb;80(2):156-166. <https://pubmed.ncbi.nlm.nih.gov/36477338/>

**Atomoxetine in Early Pregnancy and the Prevalence of Major Congenital Malformations: A Multinational Study.** Bröms G, Hernandez-Diaz S, Huybrechts KF, Bateman BT, Kristiansen EB, Einarsdóttir K, Engeland A, Furu K, Gissler M, Karlsson P, Klungsøyr K, Lahesmaa-Korpinen AM, Mogun H, Nørgaard M, Reutfors J, Sørensen HT, Zoega H, Kieler H. **J Clin Psychiatry** 2023 Jan;84(1). <https://pubmed.ncbi.nlm.nih.gov/36652686/>

**Prevalence trends and individual patterns of ADHD medication use in pregnancy in Norway and Sweden, 2010-2019.** Cohen JM, Srinivas C, Furu K, Cesta CE, Reutfors J, Karlstad Ø. **Eur J Clin Pharmacol** 2023 Jan;79(1):173-180 <https://pubmed.ncbi.nlm.nih.gov/36445458/>

**Use of benzodiazepines and benzodiazepine-related drugs in the Nordic countries between 2000 and 2020** Højlund M, Gudmundsson LS, Andersen JH, Saastamoinen LK, Zoega H, Skurtveit SO, Wastesson JW, Hallas J, Pottegård A. **Basic Clin Pharmacol Toxicol** 2023;132(1):60-70. <https://pubmed.ncbi.nlm.nih.gov/36314353/>

**Sodium-glucose co-transporter 2 inhibitor treatment and risk of atrial fibrillation: Scandinavian cohort study** Engström A, Wintzell V, Melbye M, Hviid A, Eliasson B, Gudbjörnsdóttir S, Hveem K, Jonasson C, Svanström H, Pasternak B, Ueda P. **Diabetes Care** 2023 1;46(2):351-360. <https://pubmed.ncbi.nlm.nih.gov/36508322/>