EuroDurg Summerschool 24-27 August 2026, Groningen, The Netherlands

Programme, including faculty, content descriptions and complimentary Drug Utilisation Research symposium on 28th August

Monday 24th August

13.30-15.00: Welcome & introduction to DUR by Katja Taxis, Ria Benko & Irina Cazacu

After an introduction of faculty, participants and course aims, an overview will be presented of Drug Utilisation Research (DUR) questions that can be answered with various approaches and data. Quantitative and qualitative research methods as well as primary and secondary drug utilisation data will be presented, so that participants will be able to see the value of the variety of approaches in DUR.

15.30-17.00: Designs, methods and statistics in DUR by Monique Elseviers & Tanja Muller

In this interactive session, considerations for DUR designs and methods will be discussed. This includes designs and analyses focusing on explaining DU events, such as, initiation, add-on, switching or discontinuation of medication. Attention will be paid to dealing with bias in cross-sectional and cohort studies. Next, designs for experimental DUR will be discussed to get a better understanding of the value of pragmatic trials, cluster-randomised trials, before-after studies and interrupted time series analyses. This is essential for evaluating any intervention, including training or tools to stimulate appropriate drug use or strategies to implement new pharmaceutical care services.

17.15-18.00: Project discussion lead by Indrė Trečiokienė (supported by other members of the EuroDURG committee)

In small groups, participants are asked to present research ideas or projects to be discussed further at the end of each day. Monday: problem/question & aim; Tuesday: selection of data source/collection method; Wednesday: selection of design; Thursday: presentation of final choices with strengths/limitations.

Tuesday 25th August

9.00-10.30: Developing and evaluating complex interventions in DUR by Katja Taxis & Liset van Dijk (discussant: Sean MacBride-Stewart)

This seminar includes two lectures with exercises and examples to understand approaches contributing to medication optimisation interventions that can be sustainably implemented in practice. The first lecture provides an overview of the steps in developing and evaluating interventions, making use of the Medical Research Council guidance and presenting examples of mixed-methods approaches. The second addresses how to integrate implementation aspects early in the process of development and evaluation of interventions.

11.00-12.30: Patient-reported outcomes in DUR by Sieta de Vries & Katja Taxis (discussants: Irina Cazacu, Irene Kretchy)

This workshop will make participants understand the concept and relevance of patient-reported outcomes (PRO) in DUR and make them aware of key aspects when using a PRO. Challenges related to validity, data quality and patient burden will be discussed, and opportunities for enhancing the quality and impact of PROs will be addressed. Through a group exercise, participants will learn how to create a study including a PRO, and learn skills for applying PROs in their own work.

13.30-15.00: Co-creation methods in DUR by Liset van Dijk & Sander Borgsteede (discussant: Ria Benko)

In this workshop, the moderators will share their experiences with co-creation in health research and explore with the participants what is it means to move from seeing people as research objects to engaging them as research partners. Participants will learn to recognise the importance of co-creation throughout the entire research cycle. Through exercises they will strengthen their ability to collaborate with stakeholders. The roles of patients, professionals and payers in shaping research methods and outcomes will be discussed. Participants will learn to weigh advantages and disadvantages of working methods, such as co-design workshops, design thinking, expert panels and citizen counsels, and apply them to create richer, more relevant research.

15.30-17.00: eHealth and AI in medication management by Job van Boven & Patricia van den Bemt (discussant: Sean MacBride-Stewart)

This workshop will give insight in data that can be digitally monitored and stored to be used for supporting medication management and data-informed decision making. Short introductions on the pros and cons of (1) existing digital tools for monitoring drug use and (2) AI models used in medication management will be presented. For each introduction, a case study is presented with which participants can gain hands on experience on applying the concepts in small groups. The results from this groupwork will be presented and evaluated with all participants, zooming in on potential benefits and pitfalls.

17.15-18.00: Project discussion lead by Indre Treciokienne (supported by other members of the EuroDURG committee) -> See Monday

19.00-21.00: Dinner at the Market (Groningen)

Wednesday 26th August

9.00-10.30: Health Technology Assessment and its connection to DUR by Talitha Feenstra & Thea van Asselt

This seminar will provide participants with knowledge on methods applied in health technology assessment (HTA) and understanding of its role in drug decision making. A first lecture will cover basic concepts of HTA, including the value flower, assessment and appraisal, cost-effectiveness and budgetary impact. This will be followed by a lecture on the role of HTA throughout the life cycle of a medicine, introducing early HTA, HTA to inform coverage decisions, and HTA in drug re-evaluations. Next, a case study will be presented and participants are asked to consider what type of drug utilisation studies could be performed to inform various parts of the value flower.

11.00-12.30: Supervised machine learning in DUR prediction models by Sumaira Mubarik & Eelko Hak

This hands-on workshop introduces supervised machine learning in drug utilisation research, with a focus on decision trees for predicting adverse drug reactions (ADRs). Participants will gain a basic understanding of machine learning concepts and classification methods before applying them to a practical case. Working in small groups, they will explore patient data to identify potential predictors of ADRs, manually construct decision trees to classify outcomes (ADR vs no ADR), and use their models to make predictions on new cases. The workshop combines brief theoretical input with interactive group activities and concludes with a discussion on key insights, challenges, and the potential role of machine learning in future drug utilisation research.

13.30-15.15: Sightseeing Groningen

Participants and faculty can discover a bit of the history of Groningen on foot. You will visit the Prinsenhof – an oasis of peace in the city centre - and one of the old guesthouses where disadvantaged people were housed.

15.30-17.00: Sustainable medication use and opportunities for DUR by Frank Klont, Katja Taxis & Ana Tomas Petrovic

This workshop begins with highlighting the need to reduce drug emissions, the relevance of environmental and pharmacological factors, and the relevance of prioritisation in guiding interventions. Small group assignments will focus on methods to use drug utilisation data to monitor environmental impact of medication, and on designing practical intervention strategies to improve sustainable medication use and reduce environmental impact of medication within pharmacy practice.

17.15-18.00: Project discussion lead by Indre Treciokienne (supported by other members of the EuroDURG committee) -> See Monday

Thursday 27th August

9.00-10.30: Diversity in real-world data and DUR by Priya Vart, Sieta de Vries (discussant: Irene Kretchy)

This workshop will address the importance of including diversity in drug utilisation research and discuss the relevance of various diversity domains. The strengths and limitations of real-world data (RWD) sources for studying medication use in specific populations will be discussed, with a particular focus on older adults. Participants will work on examples to learn about the interplay between patient characteristics, such as age, frailty, sex and life phase, in drug utilisation research.

11.00-12.30: Measuring adherence and persistence patterns by Petra Denig & Eelko Hak (discussant: Björn Wettermark)

This workshop will start with an interactive presentation on how to define adherence and persistence using prescription or dispensing databases. Participants will learn how to define definitions and time windows to identify initiation, add-on, switching or discontinuation of medication at substance and class level. Using an example of patients initiating lipid-lowering medication, they will explore the impact of different definitions on measuring adherence or persistence.

13.30-15.00: Measuring prescribing cascades by Annemariek Driessen & Veerle van Hulten (discussant: Petra Denig)

In this workshop, participants will first learn about the scope and impact of prescribing cascades in clinical practice. Next, various longitudinal analyses to measure prescribing cascades will be discussed, acknowledging their strengths and limitations. Participants will learn in more detail how to conduct prescription sequence symmetry analysis (PSSA) to identify potential prescribing cascades in prescription or dispensing databases. Also, they will practice in calculating measures of incidence, prevalence, excess risk and number needed to harm in a PSSA study.

15.30-17.00 Project presentations by participants -> See Monday

17.00-17.15: Concluding remarks by Ria Benko & Katja Taxis

17.15-18.00: Social drinks at Brewery Martinus

Friday 28th August – Drug Utilisation Research Symposium

All participants will receive a complimentary ticket to attend the International Drug Utilisation Research Symposium, held on Friday at the UMCG in Groningen (*no lunch included*).

10.00-10.30: Walk-in with coffee (Fonteinpatio, UMCG)

10.30-11.00: **Tony Avery,** professor Primary Health Care, University of Nottingham, National Clinical Director for Prescribing, NHS England, UK
Topic: **Prescribing safety indicators**

11.00-11.30: **Lisa McCarthy**, assoc. professor Clinical Pharmacy & Health Services Research, University of Toronto, Canada
Topic: **Deprescribing in action**

11.30-12.00: **Trudy van der Weijden**, professor Implementation of Clinical Practice Guidelines, Family Medicine, Maastricht University
Topic: **Involving patients in therapeutic decisions**