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Wegmann
Angela Van Der Salm
Marleen Van Gelder
Catherine Vasilakis-Scaramozza
Shilpa Viswanathan
Scott Vouri
Mai Vu
Shirley Wang, FISPE
Shuang Wang
Sawaeng Watcharathanakij
Janick Weberpals
Michael Webster-Clark
Lisa Weiss
Bjorn Wettermark, FISPE
Richard White
Andrew Wiese
Angel Wong
Chuntao Wu
Lu Hsuan Wu
Yunwen Xu
Jeff Yang
Alfi Yasmina
Wai Ping Yau
Yizhou Ye
Jessica Young
Hongbo Yuan
Xiaomeng (Emma) Yue
Ismaeel Yunusa
Chengchen Zhang
Ting Zhang
Summera Qiheng Zhou
Yanmin Zhu
Lin Zhuo

NEWCOMER TRACK REVIEWERS
Ian Douglas, FISPE, Director
Emily Brouwer
Sascha Dublin

Kristian Filion
Alicia Gilsenan, FISPE
Xavier Kurz

Edward Lai
Daniel Mines
Daniel Morales

Lisa Pont, FISPE
Suzie Seabroke
Katja Taxis, FISPE
Congratulations to Our New Fellows

Kourtney Davis, FISPE
Solomon Iyasu, FISPE
Carol Koro, FISPE
Stephan Lanes, FISPE
Deborah Layton, FISPE

Jennifer Lund, FISPE
Annalisa Rubino, FISPE
Meredith Smith, FISPE
Shirley Wang, FISPE
Björn Wettermark, FISPE
Thank You to Our Sponsors!

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- Oxon epidemiology

**BRONZE**

- Boston Collaborative Drug Surveillance Program
- COHRDATA
- Epi Excellence, LLC
- Harvard Pilgrim Healthcare Institute
- Takeda
- OPTUM

**ACADEMIC SHOWCASE**

- Auburn University Harrison School of Pharmacy
- Brigham and Women's Hospital, Division of Pharmacoepidemiology & Pharmacoeconomics
- London School of Hygiene & Tropical Medicine
- John Hopkins University, Center for Drug Safety and Effectiveness
- McGill University
- University of Massachusetts Medical School, Clinical and Populations Health Research PhD Program
- University of North Carolina at Chapel Hill, Dept of Epidemiology, Gillings School of Public Health
### 2021 Awards

#### Emerging Leader Award

**Christopher Rentsch**

#### Induction of ISPE Fellows

- Kourtney Davis, FISPE
- Solomon Iyasu, FISPE
- Carol Koro, FISPE
- Stephane Lanes, FISPE
- Deborah Layton, FISPE
- Jennifer Lund, FISPE
- Annalisa Rubino, FISPE
- Meredith Smith, FISPE
- Shirley Wang, FISPE
- Bjorn Wettermark, FISPE

#### Andrew McAfee Award

*For the best abstract submitted from a researcher or student living in a developing country*

Comparing the Risk of Venous Thromboembolism in Rheumatoid Arthritis Patients receiving Tofacitinib and TNF Inhibitors in Taiwan

Chin-Yao Shen

#### Best Methods Abstract (Student)

Characterizing Imbalance in the Tails of the Propensity Score Distribution

Bethany DiPret

#### Best Drug Utilization Research Abstract (Student)

Prior Opioid Tolerance Among New Users of Transdermal Fentanyl in Taiwan, 2011-2018

Chih-Wan Lin

#### Stanley A. Edlavitch Award (Student)

Use of Low-Dose Quetiapine and the Risk of Major Adverse Cardiovascular Events

Mikkel Hoejlund

#### ISPE-PDS Roland D. Mann Award

**First Prize**

In Utero Opioid Exposure and Risk of Infection in Childhood: A Multinational Nordic Cohort Study

Milada Mahic | Sonia Hernandez-Diaz | Millie Wood | Helle Kieler
Ingvild Odsbu | Metter Norgarrd | Buket Ozturk | Brian Bateman
Vidar Hjellvik | Svetlana Skurtveit | Marte Handal

#### Honorable Mentions

**Bias in Case-Crossover Studies of Medications Due to Persistent Use: A Simulation Study**

Katsiaryna Bykov | Shirley Wang | Jesper Hallas
Anton Pottegård | Malcom MaClure | Joshua Gagne

**Time-related Biases in Pharmacoepidemiology**

Samy Suissa | Sophie Dell’Aniello

**The Impact of Generic Aromatase Inhibitors on Initiation, Adherence and Persistence Among Women with Breast Cancer: Applying Multi-State Models to Understand the Dynamics of Adherence**

Aaron Winn | Nicole Fergerstrom | Liliana Pezzin
Purushottam Lund | Joan Neuner

**Outcome Misclassification: Impact, Usual Practice in Pharmacoepidemiology Database Studies and an Online Aid to Correct**

Gillian Hall | Stephan Lanes | Kaatj Bollaerts
Xiaofeng Zhou | Germano Ferreira | Rosa Gini

**Gastrointestinal Bleeding Risk with Rivaroxaban vs Aspirin in Atrial Fibrillation: A Multinational Study**

Laura Fanning | Ian Wong | Esther Chan | Xue Li
Pajaree Mongkhon | Kenneth Man | Li Wei | Wai Leung
Peteris Darzins | Simon Bell | Jenni Iiomaki | Wallis Lau
MONDAY, AUGUST 23

8:00 - 10:00 AM  
PLENARY

10:00 - 11:30 AM  
CONCURRENT WORKSHOPS

11:45 AM - 1:30 PM  
CONCURRENT ORAL PRESENTATIONS

1:45 - 3:30 PM  
CONCURRENT ORAL PRESENTATIONS

3:30 - 5:00 PM  
CONCURRENT WORKSHOPS

5:30 - 7:30 PM  
LIGHTNING PRESENTATIONS

8:00 - 9:30 PM  
PLENARY *REPEATED*

TUESDAY, AUGUST 24

8:15 - 10:00 AM  
PLENARY

10:00 - 11:30 AM  
CONCURRENT WORKSHOPS

11:45 AM - 1:15 PM  
CONCURRENT WORKSHOPS

1:45 - 3:30 PM  
CONCURRENT ORAL PRESENTATIONS

3:30 - 4:45 PM  
SPOTLIGHT POSTERS

5:15 - 6:30 PM  
SPOTLIGHT POSTERS

6:00 - 6:30 PM  
CLOSING CEREMONY

WEDNESDAY, AUGUST 25

8:15 - 10:00 AM  
PLENARY

10:00 - 11:30 AM  
CONCURRENT WORKSHOPS

11:45 AM - 1:30 PM  
CONCURRENT ORAL PRESENTATIONS

1:45 - 2:45 PM  
ANNUAL MEMBER MEETING & AWARDS CEREMONY

3:00 - 6:00 PM  
CONCURRENT ORAL PRESENTATIONS

6:00 - 6:30 PM  
CLOSING CEREMONY

8:00 - 9:30 PM  
PLENARY *REPEATED*
MONDAY, AUGUST 23

MONDAY, AUGUST 23

8:00 - 8:30 AM

WELCOME SESSION

Olaf Klungel – President, International Society for Pharmacoepidemiology
Syd Phillips – Chair, ICPE Scientific Program Committee

8:30 - 10:00 AM

PLENARY

Diversity, Equity, and Inclusion in Pharmacoepidemiology – The Role of Caste in Drug Utilization, Safety, and Therapeutic Risk Management

SPEAKERS
Whitney Robinson – University of North Carolina at Chapel Hill
Folakemi Odedina – Mayo Clinic
Macarius Donneyoung – The Ohio State University
John Jackson – Johns Hopkins

10:00 - 11:30 AM

WORKSHOP / CONCURRENT

Outcome Measurements for External Comparator Arms: New Opportunities for Epidemiology Methods Application and Development

PRESENTERS
Joan Largent – IQVIA
Emily Brouwer – Janssen
Cynthia Girman – CERobs Consulting, LLC
Christen Gray – AstraZeneca
Michele Jonsson Funk – University of North Carolina at Chapel Hill
Robert Glynn – Harvard T. H. Chan School of Public Health

CO-AUTHORS
Dimitri Bennett – Takeda
Kueiyu Joshua Lin – Brigham and Women’s Hospital
Daniela Moga – Department of Pharmacy Practice and Science, College of Pharmacy, University of Kentucky
Sabina Nduaguba – University of Florida
Mary Prince Panaccio – Research Outcomes Innovations
Xuerong Wen – University of Rhode Island, College of Pharmacy
Richard Wyss – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, Massachusetts, USA
Hongbo Yuan – Canadian Agency for Drugs and Technologies in Health
Huifeng Yun – Department of Epidemiology, University of Alabama at Birmingham

August 24-28, 2022
COPENHAGEN, DENMARK
10:00 - 11:30 AM
WORKSHOP / CONCURRENT

Polypharmacy: Problems and Solutions for Its Methodologic Challenges in Real-World Data
Methods in Pharmacoepidemiology

PRESENTERS
Amy Justice – US Department of Veterans Affairs
Christopher Rentsch – London School of Hygiene & Tropical Medicine; US Department of Veterans Affairs
Kirsha Gordon – VA CT Healthcare System
Jonathon Romero – Oak Ridge National Laboratory
Jordan Guillot – Université de Bordeaux
Vincent Lo Re – Center for Pharmacoepidemiology Research and Training, Center for Clinical Epidemiology and Biostatistics, Department of Biostatistics, Epidemiology, and Informatics, Perelman School of Medicine, University of Pennsylvania, USA

10:00 - 11:30 AM
WORKSHOP / CONCURRENT

Real World Data in the Era of COVID-19:
The Devil in the Details. An ISPE RWE Task Force/COVID-19 Workgroup Symposium

PRESENTERS
Montse Soriano Gabarro – Bayer AG
Dana Teltsch – Apellis
Mugdha Gokhale – Center for Observational and Real-world Evidence (CORE), Merck Research Laboratories
Paul Petraro – Head, RWE Analytic CoE, Boehringer-Ingelheim
Jeremy Rassen – Aetion, Inc.
Stephan Lanes – HealthCore Inc.
Soko Setoguchi – RWJ Medical School, Center for Pharmacoepidemiology and Treatment Science (PETS), Institute for Health, Health Care Policy and Aging Research
Daniel Prieto-Alhambra – Centre for Statistics in Medicine (CSM), Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDORMS), University of Oxford, UK

11:45 AM - 1:30 PM
ORAL SESSIONS / CONCURRENT

Confusion, Falls, and Fractures
Geriatric Pharmacoepidemiology
Risk of Falls Following the Initiation of Antihypertensives in the Elderly: A Self-Controlled Case Series in the UK

PRESENTING AUTHOR
Annika Jödicke – Pharmaco- and Device Epidemiology, Centre for Statistics in Medicine, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, University of Oxford, UK

CO-AUTHORS
Annika Jödicke – Pharmaco- and Device Epidemiology, Centre for Statistics in Medicine, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, University of Oxford, UK

Geriatric Pharmacoepidemiology
Uncontrolled Pain and Risk for Depression and Behavioral Symptoms in Patients with Dementia

PRESENTING AUTHOR
Yu-Jung Wei – University of Florida College of Pharmacy

CO-AUTHOR
Almut Winterstein – Department of Pharmaceutical Outcomes and Policy and Center for Drug Evaluation and Safety, College of Pharmacy, University of Florida
Program Schedule

Geriatric Pharmacoepidemiology

Use of Medications with Anticholinergic and Sedative Properties and Fall-Related Fractures Among Older Adults

PRESENTING AUTHOR
Shahar Shmuel – Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

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Yvonne Golightly – Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA
Laura Hanson – Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA
Til Stürmer – Department of Epidemiology, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA
Rebecca Naumann – Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA
Danijela Gnjidic – Sydney Pharmacy School, Faculty of Medicine and Health, The University of Sydney, Australia
Jennifer Lund – Department of Epidemiology, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

Geriatric Pharmacoepidemiology

Bisphosphonate Use and Risk of Severe Acute Kidney Injury: A Self-Controlled Case Series in Frail Elderly Patients in the UK

PRESENTING AUTHOR
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Daniel Prieto-Alhambra – Centre for Statistics in Medicine (CSM), Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDORMS), University of Oxford, Oxford, UK

Geriatric Pharmacoepidemiology

Risk of Delirium Associated with Antimuscarinics in Older Adults: A Case-Time-Control Study

PRESENTING AUTHOR
Prasad Nishtala – University of Bath

11:45 AM - 1:30 PM

ORAL SESSIONS / CONCURRENT

COVID-19 Epidemiology: Risk Factors, Drug Exposures, and Outcomes

Disease Epidemiology/Clinical Course

Severe Obesity is a Risk Factor for Mortality in Patients with COVID-19

PRESENTING AUTHOR
Aisling Caffrey – Infectious Diseases Research Program, Providence Veterans Affairs Medical Center, Providence, RI, USA

CO-AUTHORS
Jennifer Liao – Infectious Diseases Research Program, Providence Veterans Affairs Medical Center, Providence, RI, USA
Vrishali Lopes – Infectious Diseases Research Program, Providence Veterans Affairs Medical Center, Providence, RI, USA
Kerry LaPlante – Infectious Diseases Research Program, Providence Veterans Affairs Medical Center, Providence, RI, USA

Geriatric Pharmacoepidemiology

Bisphosphonate Use and Risk of Severe Acute Kidney Injury: A Self-Controlled Case Series in Frail Elderly Patients in the UK

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Daniel Prieto-Alhambra – Centre for Statistics in Medicine (CSM), Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDROMS), University of Oxford, Oxford, UK

Geriatric Pharmacoepidemiology

Risk of Delirium Associated with Antimuscarinics in Older Adults: A Case-Time-Control Study

PRESENTING AUTHOR
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11:45 AM - 1:30 PM

ORAL SESSIONS / CONCURRENT

COVID-19 Epidemiology: Risk Factors, Drug Exposures, and Outcomes

Disease Epidemiology/Clinical Course

Severe Obesity is a Risk Factor for Mortality in Patients with COVID-19

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Vrishali Lopes – Infectious Diseases Research Program, Providence Veterans Affairs Medical Center, Providence, RI, USA
Kerry LaPlante – Infectious Diseases Research Program, Providence Veterans Affairs Medical Center, Providence, RI, USA
Program Schedule

Disease Epidemiology/Clinical Course
Predictors of Critical Care, Mechanical Ventilation, and Mortality Among Hospitalized Patients with COVID-19 in an Electronic Health Record Database

PRESENTING AUTHOR
Andrea Chomistek – Optum

CO-AUTHORS
Caihua Liang – Optum
Michael Doherty – Optum
Robin Clifford – Optum
Rachel Ogilvie – Optum
Robert Gately – Optum
Jennifer Song – Optum
Cheryl Enger – Optum, Boston, MA, USA
Nancy Lin – Health Catalyst
Florence Wang – Optum
John Seeger – Epidemiology, Optum, Boston, MA, USA

Disease Epidemiology/Clinical Course
Utilizing the National COVID Cohort Collaborative (N3C) to Evaluate Risk of Serious Outcomes with COVID-19 Among Chronically Immunosuppressed Persons

PRESENTING AUTHOR
Kathleen Andersen - Johns Hopkins Bloomberg School of Public Health

CO-AUTHORS
Emaan Rashidi – Johns Hopkins Bloomberg School of Public Health
Huijun An – Johns Hopkins University
Hemalkumar Mehta – Johns Hopkins University
Derek Ng – Johns Hopkins Bloomberg School of Public Health
Brian Garibaldi – Johns Hopkins Medicine
Jodi Segal – Johns Hopkins University
G. Caleb Alexander – Johns Hopkins Center for Drug Safety and Effectiveness

Disease Epidemiology/Clinical Course
Incidence and Risk Factors for COVID-Related Urgent Medical Visits Among US Patients Diagnosed With COVID-19 in the Outpatient Setting

PRESENTING AUTHOR
Wenhui Wei – Regeneron Pharmaceuticals, Inc., Tarrytown, NY, USA

CO-AUTHORS
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Gregory Geba – Regeneron Pharmaceuticals, Inc., Tarrytown, NY, USA
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Nancy Lin – Health Catalyst
Florence Wang – Optum
John Seeger – Epidemiology, Optum, Boston, MA, USA
Jessica Jalbert – Regeneron Pharmaceuticals, Inc., Tarrytown, NY, USA

Disease Epidemiology/Clinical Course
Chronic Diseases, Health Conditions and Risk of COVID-19-Related Hospitalization and in-Hospital Mortality During the First Wave of the Epidemic in France: A Cohort Study of 66 Million People

PRESENTING AUTHOR
Laura Semenzato – EPI-PHARE Scientific Interest Group in Epidemiology of Health Products from the French National Agency for the Safety of Medicines and Health Products and the French National Health Insurance

CO-AUTHORS
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Jérôme Drouin – EPI-PHARE Scientific Interest Group in Epidemiology of Health Products from the French National Agency for the Safety of Medicines and Health Products and the French National Health Insurance
François Cuenot – EPI-PHARE Scientific Interest Group in Epidemiology of Health Products from the French National Agency for the Safety of Medicines and Health Products and the French National Health Insurance
Rosemary Dray-Spira – EPI-PHARE, Epidemiology of Health Products (French National Agency for the Safety of Medicines and Health Products [ANSM], and French National Health Insurance [CNAM]), Saint-Denis, France
Alain Weill – French National Health Insurance Fund (Assurance Maladie)
Mahmoud Zureik – EPI-PHARE, Epidemiology of Health Products (French National Agency for the Safety of Medicines and Health Products, and French National Health Insurance)
Program Schedule

MON

Drug Effectiveness

**Convalescent Plasma Therapy and Mortality Among US Veterans Hospitalized with Non-Severe COVID-19: An Observational Analysis Emulating a Target Trial**

**PRESENTING AUTHOR**
Katherine Kurgansky – MAVERIC, VA Boston Healthcare System

**CO-AUTHORS**
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Sarah Keithly – Seattle Epidemiologic Research and Information Center, VA Healthcare System
Arin Madenci – Harvard T.H. Chan School of Public Health
Hanna Gerlovin – MAVERIC, VA Boston Healthcare System
Helen Wellman – MAVERIC, VA Boston Healthcare System
Annie Doubleday – Seattle Epidemiologic Research and Information Center, VA Healthcare System
Eva Thomas – Seattle Epidemiologic Research and Information Center, VA Healthcare System
Yojin Park – MAVERIC, VA Boston Healthcare system
Yuk-Lam Ho – VA Boston Healthcare System
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Kathryn Moore – Seattle Epidemiologic Research and Information Center, VA Healthcare System
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Kalpana Gupta – Veterans Administration Boston Healthcare System
Karen Jeans – Department of Veterans Affairs Office of Research and Development
Molly Kline – Department of Veterans Affairs Office of Research and Development
Rachel Ramoni – Department of Veterans Affairs Office of Research and Development
Grant Huang – Department of Veterans Affairs Office of Research and Development
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David Gagnon – MAVERIC, VA Boston Healthcare System
Miguel Hernán – Departments of Epidemiology and Biostatistics, Harvard T.H. Chan School of Public Health
Nicholas Smith – Seattle Epidemiologic Research and Information Center, Department of Veterans Affairs
J. Michael Gaziano – MAVERIC, VA Boston Healthcare System

11:45 AM - 1:30 PM

**ORAL SESSIONS / CONCURRENT**

**Drug Utilization in Pain and Musculoskeletal Conditions**

Drug Utilization Research

**Utilization of Non-Pharmacologic Pain Therapies Among Primary Care Physicians in the United States: A Cross-Sectional Survey**

**PRESENTING AUTHOR**
James Heyward – Johns Hopkins Center for Drug Safety and Effectiveness

**CO-AUTHORS**
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Matthew Tajanlangit – Johns Hopkins Center for Drug Safety and Effectiveness
Kristin Meek – Johns Hopkins Center for Drug Safety and Effectiveness
Christopher Jones – Centers for Disease Control and Prevention
Andrew Kolodny – Brandeis University
G. Caleb Alexander – Johns Hopkins Center for Drug Safety and Effectiveness

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Molly Kline – Department of Veterans Affairs Office of Research and Development
Rachel Ramoni – Department of Veterans Affairs Office of Research and Development
Grant Huang – Department of Veterans Affairs Office of Research and Development
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Miguel Hernán – Departments of Epidemiology and Biostatistics, Harvard T.H. Chan School of Public Health
Nicholas Smith – Seattle Epidemiologic Research and Information Center, Department of Veterans Affairs
J. Michael Gaziano – MAVERIC, VA Boston Healthcare System

**Prevalence of Osteoporosis and Its Treatment Among Women ≥50 in NHANES: 1999-2018**

**PRESENTING AUTHOR**
Sophie Mayer – Department of Epidemiology, University of North Carolina at Chapel Hill

**CO-AUTHORS**
Leah McGrath – NoviSci, Inc.
Min Kim – Center for Observational Research, Amgen
Michele McDermott – Center for Observational Research, Amgen
M. Alan Brookhart – NoviSci, Inc.
Program Schedule

Drug Utilization Research
Serum Vitamin D Levels and Incident Prescription Opioid Use Among Opioid-Naïve Patients

PRESENTING AUTHOR
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CO-AUTHORS
Zuoyi Zhang – Indiana University School of Medicine, Indianapolis, IN
Yiqing Song – Department of Epidemiology, Richard M. Fairbanks School of Public Health, Indiana University, Indianapolis, IN
Brian Dixon – Department of Epidemiology, IU Fairbanks School of Public Health
Jiali Han – Department of Epidemiology, Richard M. Fairbanks School of Public Health, Indiana University, Indianapolis, IN
Xin Li – Department of Epidemiology, Richard M. Fairbanks School of Public Health, Indiana University, Indianapolis, IN

Biologics/Biosimilars
Discontinuation Rate of Tofacitinib is Similar When Compared to TNF Inhibitors in Rheumatoid Arthritis Patients: Data from A Rheumatoid Arthritis Cohort

PRESENTING AUTHOR
Mohammad Movahedi – Toronto General Hospital Research Institute, University Health Network, Toronto, ON
CO-AUTHORS
Angela Cesta – Toronto General Hospital Research Institute, University Health Network, Toronto, ON
Xiuying Li – Toronto General Hospital Research Institute, University Health Network, Toronto, ON
Edward Keystone – Department of Medicine, University of Toronto, Toronto, ON
Claire Bombardier – Toronto General Hospital Research Institute, University Health Network, Toronto, ON
OBRI Investigators - Toronto General Hospital Research Institute, University Health Network, Toronto, ON

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Program Schedule

MON

Drug Utilization Research
Primary Care Physicians’ Preparedness to Treat Opioid Use Disorder in the United States: A Cross-Sectional Survey

PRESENTING AUTHOR
Kathryn Foti – Johns Hopkins Center for Drug Safety and Effectiveness

CO-AUTHOR
James Heyward – Johns Hopkins Center for Drug Safety and Effectiveness
Matthew Tajanlangit – Johns Hopkins Center for Drug Safety and Effectiveness
Kristin Meek – Johns Hopkins Center for Drug Safety and Effectiveness
Christopher Jones – Centers for Disease Control and Prevention
Andrew Kolodny – Brandeis University
G. Caleb Alexander – Johns Hopkins Center for Drug Safety and Effectiveness

11:45 AM - 1:30 PM

ORAL SESSIONS / CONCURRENT

Heterogeneity in Methods
Methods in Pharmacoepidemiology
A New Method to Estimate the Total Cohort Size for Patient Recruitment in Self-Controlled Case Series Study

PRESENTING AUTHOR
Ling Li – Pfizer, Inc.

CO-AUTHORS
Stephen E. Schachterle – Pfizer, Inc.
Charles Wentworth – Pfizer, Inc.
Heather Rubino – Pfizer, Inc.
Ann Madsen – Pfizer, Inc
Xiaofeng Zhou – Pfizer, Inc.

Methods in Pharmacoepidemiology
Sessa Empirical Estimator (SEE): A Data-Driven Method for Predicting the Duration of Pharmacological Prescriptions in Secondary Data Sources.

PRESENTING AUTHOR
Maurizio Sessa – Pharmacovigilance Research Center, Department of Drug Design and Pharmacology, University of Copenhagen

Methods in Pharmacoepidemiology
Graphical Representation of an Array of Quantitative Bias Analysis Scenarios for Differential Outcome Misclassification

PRESENTING AUTHOR
J. Bradley Layton – RTI Health Solutions

CO-AUTHORS
Ryan Ziemiecki – RTI Health Solutions
Heather E. Danysh – RTI Health Solutions
Charles Gaber – University of North Carolina at Chapel Hill
Alicia Gilsenan – RTI Health Solutions
Catherine Johannes – RTI Health Solutions

Methods in Pharmacoepidemiology
The Performance of Different Strategies to Manage Confounding in Cardinality Matching for Medical Device Epidemiology: A Simulation Study

PRESENTING AUTHOR
Mike Du – University of Oxford

CO-AUTHORS
Sara Khalid – University of Oxford
Daniel Prieto-Alhambra – Centre for Statistics in Medicine (CSM), Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDROMS), University of Oxford, Oxford, UK
Victoria Strauss – University of Oxford

Methods in Pharmacoepidemiology
Use of Linked Databases for Improved Confounding Control: Considerations for Potential Selection Bias

PRESENTING AUTHOR
Jenny Sun – Harvard Medical School and Harvard Pilgrim Health Care Institute

CO-AUTHOR
Sengwee Toh – Harvard Medical School and Harvard Pilgrim Health Care Institute

Methods in Pharmacoepidemiology
A Systematic Approach Towards Missing Lab Data in Electronic Health Records: A Case Study in Non-Small Cell Lung Cancer and Multiple Myeloma

PRESENTING AUTHOR
Janick Weberpals – Real World Data Collaborations, Personalized Healthcare Data Science, F. Hoffmann-La Roche, Basel, Switzerland
Arjun Sondhi – Flatiron Health, Inc., New York City, NY, USA
Chengsheng Jiang – Flatiron Health, Inc., New York City, NY, USA
Prakirthi Yerram – Flatiron Health, Inc., New York City, NY, USA
Program Schedule

**MON**

Michael Taylor – Real World Data Collaborations, Personalized Healthcare Data Science, Genentech Inc., South San Francisco, CA, USA

Meghna Samant – Flatiron Health, Inc., New York City, NY, USA

PRESENTING AUTHOR

Sarah Cherng – Flatiron Health, Inc., New York City, NY, USA

**11:45 AM - 1:30 PM**

**ORAL SESSIONS / CONCURRENT**

**Pregnancy: Wood for the trees**

Pregnancy and Lactation

**Implication of Maternal Continuous Enrollment on Stillbirth Gestational Age Distributions and Maternal Characteristics in Medicaid Enrollees**

PRESENTING AUTHOR

Thuy Thai – Department of Pharmaceutical Outcomes and Policy and Center for Drug Evaluation and Safety, College of Pharmacy, University of Florida

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Nicole Smolinski – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida

Sabina Nduaguba – University of Florida

Yanmin Zhu – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

Brian Bateman – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

Krista Huybrechts – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

Sonia Hernandez-Diaz – Harvard T.H. Chan School of Public Health

Elizabeth Suarez – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

Cassandra York – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

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Helen Mogun – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

Krista Huybrechts – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

**Pregnancy and Lactation**

**Validating an Optimized Live Birth Gestational Age Algorithm in a Nationwide Medicaid Sample and Quantifying the Misclassification of Exposure due to Estimated Gestational Age**

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Jessica Franklin – Optum

Kathryn Gray – Division of Maternal-Fetal Medicine, Department of Obstetrics and Gynecology, Brigham and Women’s Hospital and Harvard Medical School

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Lockwood Taylor – Center for Drug Evaluation and Research, United States Food and Drug Administration

Rita Ouellet-Hellstrom – Center for Drug Evaluation and Research, United States Food and Drug Administration

Yong Ma – Center for Drug Evaluation and Research, United States Food and Drug Administration

Yandong Qiang – Center for Drug Evaluation and Research, United States Food and Drug Administration

Wei Hua – Center for Drug Evaluation and Research, United States Food and Drug Administration

Krista Huybrechts – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

Pregnancy and Lactation

**Feasibility of Using Healthcare Utilization Data to Identify Neurodevelopmental Disorders for Transgenerational Pharmacoepidemiology**

PRESENTING AUTHOR

Loreen Straub – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

CO-AUTHORS

Brian Bateman – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

Sonia Hernandez-Diaz – Harvard T.H. Chan School of Public Health
Pregnancy and Lactation

Statistical Power for Use of Tree-Based Scan Statistics for Surveillance of Infant Outcomes Following Maternal Perinatal Medication Use

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Jennifer Noble – Department of Population Medicine, Harvard Pilgrim Health Care Institute and Harvard Medical School, Boston, MA, USA
Judith Maro – Department of Population Medicine, Harvard Pilgrim Health Care Institute and Harvard Medical School, Boston, MA, USA

Use of Tree-Based Scan Statistics for Surveillance of Infant Outcomes Following Maternal Perinatal Medication Use: A Propensity Score Matched Case Study

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Judith Maro – Department of Population Medicine, Harvard Pilgrim Health Care Institute and Harvard Medical School, Boston, MA, USA
Program Schedule

Pregnancy and Lactation
Fertility Rates in Women with Psoriasis and Psoriatic Arthritis: A Population-Based Cohort Study

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Matthias Pierce – Centre for Women’s Mental Health, University of Manchester, UK
Elise Kleyn – Centre for Dermatology Research, Manchester Academic Health Science Centre, NIHR Manchester Biomedical Research Centre, Division of Musculoskeletal and Dermatological Sciences, University of Manchester, UK
Christopher Griffiths – Dermatology Centre, Salford Royal NHS Foundation Trust, Manchester Academic Health Science Centre, University of Manchester, UK
Darren Ashcroft – Centre for Pharmacoepidemiology and Drug Safety, Division of Pharmacy and Optometry, School of Health Sciences, University of Manchester, Manchester, UK

1:45 – 3:30 PM
ORAL SESSIONS / CONCURRENT

Opioids: A Globally Trending Topic
Drug Utilization Research
Trends in Long-Term Use of Prescribed Opioids in Norway 2010-2019

PRESENTING AUTHOR
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Svetlana Skurtveit – Department of Mental Disorders, Norwegian Institute of Public Health, Oslo, Norway

Pediatric Pharmacoepidemiology
Filled Prescriptions for Opioids Among Children and Adolescents – A Nationwide Study from 2010 to 2018

PRESENTING AUTHOR
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Olav Fredheim – Norwegian University of Science and Technology
Thomas Clausen – University of Oslo
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Drug Utilization Research
Trends and Outcomes of Serious Complications Associated with Non-Fatal Opioid Overdoses in Ontario, Canada

PRESENTING AUTHOR
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Daniel Werb – Unity Health Toronto
Alexander Caudarella – Unity Health Toronto
Diana Martins – Unity Health Toronto
Flora Matheson – Unity Health Toronto
Tara Gomes – Unity Health Toronto
MON

Drug Utilization Research

Geographic Variation in the Use of Gabapentinoids and Opioids for Pain in a Commercially Insured Population in the United States

PRESENTING AUTHOR
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Matthew Alcusky – Division of Epidemiology, Department of Population and Quantitative Health Services, University of Massachusetts Medical School
Kate Lapane – Division of Epidemiology, Department of Population and Quantitative Health Services, University of Massachusetts Medical School

1:45 - 3:30 PM

ORAL SESSIONS / CONCURRENT

Pregnancy: Pick-n-mix

Pregnancy and Lactation

Prescription Medication Use and Baseline Health Status of Women with Live Birth Deliveries in a National Data Network: The Sentinel Distributed Database Mother-Infant Linkage Table

PRESENTING AUTHOR
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Catherine Corey – Office of Surveillance and Epidemiology, Center for Drug Evaluation and Research, U.S. Food and Drug Administration, Silver Spring, MD, USA

Drug Utilization Research

Trajectories of Pregabalin Use and Their Association with Longitudinal Changes in Opioid and Benzodiazepine Daily Dose

PRESENTING AUTHOR
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Sallie-Anne Pearson – Centre for Big Data Research in Health, University of New South Wales


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Güngör Karakaya – Agence Intermutualiste (IMA), Bruxelles, Belgium
Christine Damase-Michel – Université de Toulouse, UPS, CHU Toulouse, INSERM, CERPOP: SPHERE, CIC 1436, Toulouse
Fatik Kirakoya-Samadoulougou – Centre de Recherche Epidémiologie, Biostatistiques, Recherche Clinique, School of Public Health, Université Libre de Bruxelles (U.L.B.), Bruxelles, Belgium

Drug Utilization Research

Prior Opioid Tolerance Among New Users of Transdermal Fentanyl in Taiwan, 2011-2018

PRESENTING AUTHOR
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CO-AUTHORS
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Wei-I Huang – Taiwan Drug Relief Foundation, Taipei, Taiwan
Pi-Hui Chao – Taiwan Drug Relief Foundation, Taipei, Taiwan
Wen-Wen Chen – Taiwan Drug Relief Foundation, Taipei, Taiwan
Fei-Yuan Hsiao – Graduate Institute of Clinical Pharmacy, National Taiwan University, Taipei, Taiwan
Program Schedule

Pregnancy and Lactation
Effects of Gadolinium-Enhanced MRI Exposure During Pregnancy on Neonatal Intensive Care Unit Admission

PRESENTING AUTHOR
Thuy Thai – Department of Pharmaceutical Outcomes and Policy and Center for Drug Evaluation and Safety, College of Pharmacy, University of Florida

CO-AUTHORS
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Nicole Smolinski – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida
Xi Wang – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida
Leyla Sahin – US Food and Drug Administration
Kate Gelperin – Division of Epidemiology, Office of Pharmacovigilance and Epidemiology, Food and Drug Administration
Steven Bird – Division of Epidemiology, Office of Pharmacovigilance and Epidemiology, Food and Drug Administration
Ira Krefting – Division of Imaging and Radiation Medicine, Office of New Drugs, Food and Drug Administration
Sonja Rasmussen – College of Medicine, University of Florida
Almut Winterstein – Department of Pharmaceutical Outcomes and Policy and Center for Drug Evaluation and Safety, College of Pharmacy, University of Florida

Validating ICD-10 Z3A Codes for Estimating Date of Last Menstrual Period

PRESENTING AUTHOR
Andrea Chomistek – Optum

CO-AUTHORS
Kelesitse Phiri – GlaxoSmithKline
Jenna Calderbank – Optum
Michael Doherty – Optum
Stephanie Chiuve – AbbVie
Brenda Hinman-McIlroy – AbbVie
Michael Snabes – AbbVie, Inc.
John Seeger – Epidemiology, Optum, Boston, MA, USA

COVID-19 Pharmacotherapy During Pregnancy: International Registry of Coronavirus Exposure in Pregnancy (IRCEP)

PRESENTING AUTHOR
Sonia Hernandez-Diaz – Harvard T.H. Chan School of Public Health

CO-AUTHORS
Louisa Smith – Harvard TH Chan School of Public Health
Diego Wyszynski – Pregistry

1:45 - 3:30 PM
ORAL SESSIONS / CONCURRENT

The Aging Heart
Benefit-Risk Assessment, Communication, and Evaluation (BRACE)
Risk of Myocardial Infarction, Stroke or Death in New Users of Intravitreal Aflibercept vs New Users of Intravitreal Ranibizumab: A Nationwide Cohort Study

PRESENTING AUTHOR
Sophie Billioti de Gage – EPI-PHARE, Epidemiology of Health Products (French National Agency for the Safety of Medicines and Health Products, and French National Health Insurance)

CO-AUTHORS
Marion Bertrand – EPI-PHARE, Epidemiology of Health Products (French National Agency for the Safety of Medicines and Health Products, and French National Health Insurance)
Mahmoud Zureik – EPI-PHARE, Epidemiology of Health Products (French National Agency for the Safety of Medicines and Health Products, and French National Health Insurance)
Geriatric Pharmacoepidemiology
Statin Discontinuation and Risk of Cardiovascular Events in Older People: A Population-Based Cohort Study in Denmark

PRESENTING AUTHOR
Wade Thompson – University of Southern Denmark

CO-AUTHORS
Lucas Morin – Inserm CIC 1431, Clinical Investigation Unit, University Hospital of Besançon
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Jacob Andersen – University of Southern Denmark
Martin Ernst – University of Southern Denmark
Jesper Nielsen – University of Southern Denmark
Peter Haastrup – University of Southern Denmark
Morten Schmidt – Aarhus University Hospital
Anton Pottegård – University of Southern Denmark

Geriatric Pharmacoepidemiology
Assessment of Co-Medication Quality in Older Colorectal Cancer Patients at Hospital Discharge After Tumor Surgery and Its Associations with Chemotherapy-Related Adverse Drug Reactions and 5-Year Survival

PRESENTING AUTHOR
Li-Ju Chen – Division of Clinical Epidemiology and Aging Research, German Cancer Research Center (DKFZ)

CO-AUTHOR
Ben Schöttker – Division of Clinical Epidemiology and Aging Research, German Cancer Research Center (DKFZ)

Geriatric Pharmacoepidemiology
Comparative Risk of Cardiac Arrhythmias Associated with Acetylcholinesterase Inhibitor Use

PRESENTING AUTHOR
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John-Michael Gamble – School of Pharmacy, University of Waterloo
David Juurlink – Department of Medicine, University of Toronto
Mhd. Wasem Alsabbagh – School of Pharmacy, University of Waterloo

Methods in Pharmacoepidemiology
A Plasmode Simulation of Covariate Misclassification and Transportability

PRESENTING AUTHOR
Michael Webster-Clark – University of North Carolina at Chapel Hill

CO-AUTHOR
Jessie Edwards – Department of Epidemiology, University of North Carolina at Chapel Hill
Methods in Pharmacoepidemiology
The Effect of the Anticholinergic Properties of Antidepressants on the Incidence of Dementia: A Target Trial Emulation

PRESENTING AUTHOR
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Elena Rivero-Ferrer – RTI Health Solutions
Estel Plana – RTI Health Solutions
Barbra Dickerman – Harvard T.H. Chan School of Public Health
Xabier Garcia de Albeniz – RTI Health Solutions

Methods in Pharmacoepidemiology
Stable Balancing Weights for Unanchored Matching-Adjusted Indirect Comparisons and Targeting External Control Arm Estimands

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Stephen Johnston – Johnson & Johnson

CO-AUTHORS
Harikumaran Dwarakanathan – Mu Sigma
Jason Waggoner – Johnson & Johnson
Michael Schwiers – Johnson & Johnson
Sanjoy Roy – Johnson & Johnson
Paul Coplan – Johnson & Johnson

Methods in Pharmacoepidemiology
Rank-Based Weighting for Balancing on Median Baseline Characteristics in Matching Adjusted Indirect Comparisons (MAIC)

PRESENTING AUTHOR
Shirley Liao – Biogen

CO-AUTHORS
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Angela D Paradis – Biogen
Justin Bohn – Biogen
Changyu Shen – Biogen
Gabrielle Simoneau – Biogen
Fabio Pellegrini – Biogen

1:45 - 3:30 PM

ORAL SESSIONS / CONCURRENT

Vaccines

Vaccines
Evaluation of the Potential Confounding Effect of Shingles on the Risk of Guillain–Barré Syndrome After Vaccination with the Recombinant Zoster Vaccine

PRESENTING AUTHOR
Francois Haguinet – GSK

CO-AUTHORS
Paola Pirrotta – GSK
Vincent Bauchau – GSK
Vaccines

Sensitivity Analysis of Design Choices for Estimating Incidence Rates of Adverse Events of Special Interest in Vaccine Safety

PRESENTING AUTHOR
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CO-AUTHORS
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Gowtham Rao – Janssen Research and Development
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Talita Duartes-Salles – Fundació Institut Universitari per a la recerca a l’Atenció Primària de Salut Jordi Gol i Gurina (IDIAPJGol)
Patrick Ryan – Janssen Research & Development

Vaccines

Effectiveness of Influenza Vaccination in Healthy Children: A Population-Based Investigation

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Program Schedule

MON

Giovanni Corrao – Unit of Biostatistics, Epidemiology and Public Health, Department of Statistics and Quantitative Methods, University of Milano-Bicocca, Milan, Italy

Carlo Giaquinto – Division of Pediatric Infectious Diseases, Department for Woman and Child Health, University of Padua, Padua, Italy

Vaccines
Background Incidence Rates of Adverse Events of Special Interest for COVID-19 Vaccine Monitoring

PRESENTING AUTHOR
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Lei Wang – Aarhus

Elisa Barbieri – Division of Paediatric Infectious Diseases - Department for Woman and Child’s Health - University of Padua

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Olga Paoletti – Agenzia Regionale di Sanità della Toscana

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Daniel Weibel – Department Datascience & Biostatistics, University Medical Center Utrecht

Miriam Sturkenboom – Department Datascience & Biostatistics, University Medical Center Utrecht

Vaccines
Vaccination and Acute Flares in Multiple Sclerosis: A Nationwide Case-Crossover Study Using the French SNDS Health Care Databases

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Philippe Attias – Re-Meds France

Tom Duchemin – Re-Meds France

Lucien Abenhaim – London School of Hygiene & Tropical Medicine

Yola Moride – Faculty of Pharmacy, Université de Montréal, Montreal, QC, Canada

3:30 - 5:00 PM
WORKSHOP / CONCURRENT

COVID-19 Confidential: Enabling Trust In COVID-19 Research with Fit for Purpose Real-World Data

Methods in Pharmacoepidemiology

PRESENTERS
Nicolle Gatto – Aetion, Inc.

Jessica Franklin – Optum

Elizabeth Garry – Aetion, Inc.

David Martin – Moderna

Aloka Chakravarty – Food and Drug Administration

Jeremy Rassen – Aetion, Inc.
Program Schedule

3:30 - 5:00 PM

WORKSHOP / CONCURRENT

Drug Utilization Research in Africa: Challenges and Potential Solutions

PRESENTERS
Maribel Salas – Clinical Safety and Pharmacovigilance, Daiichi Sankyo Inc Basking Ridge, NJ and CCEB/CPeRT, University of Pennsylvania Perelman School of Medicine
Johanita Burger – Medicine Usage in South Africa (MUSA), North-West University
Laura Horne – Clinical Safety and Pharmacovigilance, Daiichi Sankyo Inc Basking Ridge
Johanna Meyer – Division of Public Health Pharmacy and Management, School of Pharmacy, Sefako Makgatho Health Sciences University
Ilse Truter – Nelson Mandela University

3:30 - 5:00 PM

WORKSHOP / CONCURRENT

Triangulating the Truth: State-of-the-Art Sensitivity Analyses for Observational Research Methods in Pharmacoepidemiology

PRESENTERS
Marianne Cunnington – Glaxosmithkline
Ian Douglas – London School of Hygiene & Tropical Medicine
Jeremy Brown – London School of Hygiene and Tropical Medicine
Sonia Hernandez-Diaz – Harvard T.H. Chan School of Public Health
Daina Esposito – Boston University School of Public Health
Wilhelmine Meerhaus – Glaxosmithkline

5:30 - 6:30 PM

LIGHTNING SESSION 1

Disease Epidemiology/Clinical Course

Use of Remdesivir for COVID-19 in the Real World: An Analysis of US Electronic Medical Records

PRESENTING AUTHOR
Julius Asubonteng – Gilead Science, Inc.

CO-AUTHORS
Sara Haredasht – Gilead Science, Inc.
Seth Kuranz – Trinetx, Inc.
Anand Chokkalingam – Gilead Science, Inc.
Disease Epidemiology/Clinical Course

**Patients Tell All: Using a Direct-to-Patient Community Registry to Understand Patient Burden of COVID-19**

**PRESENTING AUTHOR**
Emma Brinkley – IQVIA

**CO-AUTHORS**
Christina Mack – IQVIA
Natalia Petruski-Ivleva – IQVIA
Matthew Reynolds – IQVIA
Alison Bourke – IQVIA
Kalyani Hawaldar – IQVIA
Nancy Dreyer – IQVIA

Methods in Pharmacoepidemiology

**Marginal Structural Models with Latent Class Growth Modeling of Time-varying Treatment**

**CO-AUTHORS**
Awa Diop – Department of Social and Preventive Medicine, Laval University
Denis Talbot – Department of Social and Preventive Medicine, Laval University

**PRESENTING AUTHOR**
Caroline Sirois – Faculty of pharmacy, Laval University

Methods in Pharmacoepidemiology

**Residual Bias and Indirect Covariate Balance in an Applied Comparison of Large-Scale Propensity Score and Cardinality Matching**

**PRESENTING AUTHOR**
Stephen Fortin – Janssen, Research and Development

**CO-AUTHORS**
Stephen Johnston – Johnson & Johnson
Martijn Schuemie – Janssen Research and Development

Methods in Pharmacoepidemiology

**Characterizing Imbalance in the Tails of the Propensity Score Distribution**

**PRESENTING AUTHOR**
Bethany DiPrete – Injury Prevention Research Center, University of North Carolina at Chapel Hill

**CO-AUTHORS**
Cynthia Girman – CERobs Consulting, LLC
Panagiotis Mavros – Janssen Pharmaceutical Companies of J&J
Alexander Breskin – NoviSci Inc.
M. Alan Brookhart – NoviSci, Inc.

Methods in Pharmacoepidemiology

**High-Dimensional Propensity Score Approaches in Stata Using the Hdps Suite of Commands**

**PRESENTING AUTHOR**
John Tazare – London School of Hygiene & Tropical Medicine

**CO-AUTHORS**
Liam Smeeth – London School of Hygiene & Tropical Medicine
Stephen Evans – London School of Hygiene & Tropical Medicine
Ian Douglas – London School of Hygiene & Tropical Medicine
Elizabeth Williamson – London School of Hygiene & Tropical Medicine

Drug Utilization Research

**Patterns of Antibiotic Prescription Among Adult Outpatients in Italy**

**PRESENTING AUTHOR**
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Elena Tragni – Department of Pharmacological and Biomolecular Sciences, Epidemiology and Preventive Pharmacology Service (SEFAP), University of Milan, via Balzaretti 9, 20133, Milan, Italy
Program Schedule

Drug Utilization Research
Determinants of Antimalarial Prescription Patterns Among Health Care Providers in Public Health Facilities in Uasin Gishu County, Kenya

PRESENTING AUTHOR
Henry Amdany – Moi university

CO-AUTHORS
Wendy O’Meara – Moi university
Gabriel kigen – Moi university

Drug Utilization Research
Co-Utilization of Opioids and Non-Benzodiazepine Sedative Hypnotics in U.S. Ambulatory Care Visits, 2006-2016

PRESENTING AUTHOR
Razanne Oueini – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida

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Drug Utilization Research
Early Uptake of New Molecular Entities Approved in 2017 in a Multisite National US Healthcare Data Network

PRESENTING AUTHOR
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Catherine Corey – Office of Surveillance and Epidemiology, Center for Drug Evaluation and Research, U.S. Food and Drug Administration
Michael Nguyen – Office of Surveillance and Epidemiology, Center for Drug Evaluation and Research, U.S. Food and Drug Administration, Silver Spring, MD

Drug Effectiveness
Comparative Effectiveness of Bevacizumab vs Cetuximab in Patients with Metastatic Colorectal Cancer

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Chih-Chien Wu – Division of Colorectal Surgery, Department of Surgery, Kaohsiung Veterans General Hospital
Chien-Chou Su – Institute of Clinical Pharmacy and Pharmaceutical Sciences, College of Medicine, National Cheng Kung University

Drug Effectiveness
Efficacy-Effectiveness Gap for Standard First-Line Treatment of Metastatic Non-Small Cell Lung Cancer Among Patients with Barriers to Care

PRESENTING AUTHOR
Rohit Ojha – JPS Center for Outcomes Research

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Yan Lu – JPS Center for Outcomes Research
Kalyani Narra – JPS Oncology & Infusion Center
Rachel Meadows – JPS Center for Outcomes Research
Aaron Gehr – JPS Center for Outcomes Research
Bassam Ghabach – JPS Oncology & Infusion Center

Drug Effectiveness
Acute Kidney Injury in Patients with Atrial Fibrillation Treated with Rivaroxaban or Warfarin: A Population-Based Study in the United Kingdom

PRESENTING AUTHOR
Antonio González Pérez – Spanish Centre for Pharmacoepidemiologic Research

CO-AUTHORS
Yanina Balabanova – Bayer AG
María Saez – Spanish Centre for Pharmacoepidemiologic Research
Gunnar Brobert – Bayer AB
Luis Alberto García Rodríguez – CEIFE (Centro Espanol de Investigacion Farmacoepidemiologica)
Drug Effectiveness
Long-Acting Insulin Analogs Versus Intermediate-Acting Insulin and the Risk of Major Adverse Cardiovascular Events Among Patients with Type 2 Diabetes in the United Kingdom

**PRESENTING AUTHOR**
Vanessa Brunetti – Department of Epidemiology, Biostatistics and Occupational Health, McGill University, Montreal, Quebec, CA

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Robert Platt – Department of Epidemiology, Biostatistics and Occupational Health, McGill University, Montreal, Quebec, CA
Kristian Filion – Department of Epidemiology, Biostatistics and Occupational Health, McGill University, Montreal, Quebec, CA

6:30 - 7:30 PM

**LIGHTNING SESSION 2**

Drug Utilization Research
Changes in Purchases of Intensive Care Medicines During COVID-19 in Developed vs Developing Countries

**PRESENTING AUTHOR**
Katherine Callaway – University of Pittsburgh School of Medicine

**CO-AUTHORS**
Mina Tadrous – Women’s College Research Institute, Women’s College Hospital
Sandra Kane-Gill – University of Pittsburgh School of Pharmacy
Ian Barbash – University of Pittsburgh School of Medicine, Division of Pulmonary, Allergy and Critical Care Medicine
Katie Suda – University of Pittsburgh School of Medicine

Methods in Pharmacoepidemiology
Collider Bias in COVID-19 Studies: Explaining the Smoking Paradox

**PRESENTING AUTHOR**
Natalia Petruski-Ivleva – IQVIA

**CO-AUTHORS**
Alice Joules – IQVIA
Michael Warner – IQVIA
Patrick Long – IQVIA
Aidan Cooper – IQVIA
Nancy Dreyer – IQVIA

Health Economics/Outcomes Research
The Prevalence of Hyperkalemia and Associated Clinical Characteristics and Outcomes Among Hospitalized COVID-19 Patients

**PRESENTING AUTHOR**
Rena Moon – Premier Applied Sciences, Premier, Inc.

**CO-AUTHORS**
Abiy Agiro – AstraZeneca Payer Evidence
Ning Rosenthal – Premier Applied Sciences, Premier, Inc.
Harold Brown – Premier Applied Sciences, Premier, Inc.
Randall Legg – AstraZeneca Payer Medical
Alpesh Amin – University of California, Irvine

Pharmacovigilance
Off-Label Use of Potential Pharmacological Treatment for COVID-19: An Intensive Pharmacovigilance in Peru

**PRESENTING AUTHOR**
L. Yesenia Rodriguez – ESSALUD

**CO-AUTHORS**
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Enrique Cachay – ESSALUD
Gisela Alva – ESSALUD
Paola Fernández – ESSALUD
Tania Solis – ESSALUD
Liz Veramendi – ESSALUD
Juan Aldave – ESSALUD
Violeta Saromo – ESSALUD

Methods in Pharmacoepidemiology
Identification and Characterization of Fistulizing Crohn’s Disease in EHR Using Structured and Unstructured Data

**PRESENTING AUTHOR**
Carrie Huisingh – Abbvie

**CO-AUTHORS**
Yizhou Ye – AbbVie
Lani Wehrlyn – AbbVie
Methods in Pharmacoepidemiology

Validation of Diagnosis Algorithms for Melanoma and Nonmelanoma Skin Cancer Among Patients with Parkinson’s Disease in the United States Medicare Database

PRESENTING AUTHOR
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CO-AUTHORS
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Mark Gordon – Teva Branded Pharmaceutical Products R&D, Inc.
Brian Calingaert – RTI Health Solutions
Elizabeth Andrews – RTI Health Solutions
James Kaye – RTI Health Solutions
Catherine Johannes – RTI Health Solutions

Methods in Pharmacoepidemiology

An Algorithm to Derive Response and Progression Status Based on International Myeloma Working Group Response Criteria for Patients with Multiple Myeloma in a Real-World Database

PRESENTING AUTHOR
Tao Xu – F. Hoffmann-La Roche
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Tarec Christoffer El-Galaly – F. Hoffmann-La Roche
Khaled Sarsour – Global Head Data Science, Genentech, Inc.
Wan-Jen Hong – Genentech, Inc.
Mellissa Williamson – Genentech

Disease Epidemiology/Clinical Course

Identification of Serostatus in Rheumatoid Arthritis Using ICD-10 Diagnosis Codes

PRESENTING AUTHOR
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CO-AUTHORS
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Kazuki Yoshida – Brigham and Women’s Hospital
Rishi Desai – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, Massachusetts, USA
Joan Landon – Brigham and Women’s Hospital
Seoyoung Kim – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, Massachusetts, USA

Health Economics/Outcomes Research

Cost-Utility of Nivolumab for Treatment of Head and Neck Cancer from a Brazilian Public Health System Perspective

PRESENTING AUTHOR
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CO-AUTHORS
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Rosângela Gomes – Ministry of Health of Brazil
Dalila Gomes – Ministry of Health of Brazil
Joslaine de Nunes – Ministério da Saúde
Ricardo Fernandes – National Institute of Cancer, INCA, Brazil
Ivan Zimmermann – University of Brasilia, UnB

Health Economics/Outcomes Research

SGLT2 inhibitors vs GLP-1 agonists: Comparative Progression of Renal Disease

PRESENTING AUTHOR
Lauren Stevens – Humana Healthcare Research
CO-AUTHORS
Andy Bowe – Humana Healthcare Research
Phil Schwab – Humana Healthcare Research
Michael Tindal – Humana Pharmacy Solutions
Andrea Bloomfield – Humana Pharmacy Solutions

Health Economics/Outcomes Research

Comparison of Medication Adherence Between Initiators of a Multi-Drug Dispensing System and Users of Retail Pharmacy

PRESENTING AUTHOR
Lauren Stevens – Humana Healthcare Research
CO-AUTHORS
Jeffrey Ellis – Humana Healthcare Research
Anita Desai-Naik – Humana Pharmacy Solutions
Lilian Ndehi – Humana Inc.
Andy Bowe – Humana Healthcare Research
Program Schedule

MON

Health Economics/Outcomes Research
Effects of Initiating a Multi-dose Drug Dispensing System on Medication Adherence

PRESENTING AUTHOR
Lauren Stevens – Humana Healthcare Research
CO-AUTHORS
Jeffrey Ellis – Humana Healthcare Research
Anita Desai-Naik – Humana Pharmacy Solutions
Lilian Ndehi – Humana Inc.
Andy Bowe – Humana Healthcare Research

Disease Epidemiology/Clinical Course
Prevalence of Myxoid /Round Cell Liposarcoma (MRCLS) Among Children and Adults in the United States

PRESENTING AUTHOR
Huifen Wang – GlaxoSmithKline
CO-AUTHORS
Lindsey Powers Happ – GlaxoSmithKline
Samantha St. Laurent – GlaxoSmithKline
Charlotte Carroll – GlaxoSmithKline

Disease Epidemiology/Clinical Course
Atopic Eczema Associated Fracture Risk and Oral Corticosteroids: A Population-Based Cohort Study

PRESENTING AUTHOR
Julian Matthewman – London School of Hygiene & Tropical Medicine
CO-AUTHORS
Kathryn Mansfield – London School of Hygiene & Tropical Medicine
Richard Silverwood - Centre for Longitudinal Studies, University College London
Amy Mulick – London School of Hygiene & Tropical Medicine
Daniel Prieto-Alhambra – Centre for Statistics in Medicine (CSM), Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDORMS), University of Oxford, UK
Katherine Lowe – London School of Hygiene & Tropical Medicine
Liam Smeeht – London School of Hygiene & Tropical Medicine
Sinéad Langan – London School of Hygiene & Tropical Medicine

Disease Epidemiology/Clinical Course
Trends in Sexually Transmitted Infections in the United States Ambulatory Care Clinics from 2005 to 2016

PRESENTING AUTHOR
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CO-AUTHORS
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Hyun Jin Song – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida
Wei-Hsuan Lo-Ciganic – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida, Gainesville, Florida, USA
Robert Cook – College of Public Health and Health Professions, University of Florida, Gainesville, FL, USA
Haesuk Park – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida, Gainesville, FL, USA

8:00 - 9:30 PM
PLENARY
Diversity, Equity, and Inclusion in Pharmacoepidemiology – The Role of Caste in Drug Utilization, Safety, and Therapeutic Risk Management

SPEAKERS
Whitney Robinson – University of North Carolina at Chapel Hill
Folakemi Odedina – Mayo Clinic
Macarius Donneyoung – The Ohio State University
John Jackson – Johns Hopkins
Real-World Data for Chronic Diseases

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TUESDAY, AUGUST 24

8:15 - 8:30 AM
WELCOME RECEPTION
Syd Phillips
Chair, ICPE Scientific Program Committee

8:30 - 10:00 AM
PLENARY
Communicating COVID-19 Pharmacoepidemiological Research to Patients: Why is it Important? How Can We Do It? What are the Implications Now and for the Future?

PRESENTING AUTHOR
Meredith Smith – Alexion

CO-AUTHORS
Priya Bahri – European Medicines Agency
Vincent Lo Re – Center for Pharmacoepidemiology Research and Training, Center for Clinical Epidemiology and Biostatistics, Department of Biostatistics, Epidemiology, and Informatics, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA
Francois Houyez – EURORDIS

10:00 - 11:30 AM
WORKSHOP / CONCURRENT
How to Emulate a Target Trial to Study the Effects of Treatments for and During Pregnancy

PRESENTERS
Sonia Hernandez-Diaz – Harvard T.H. Chan School of Public Health
Sonja Swanson – Department of Epidemiology, Erasmus MC
Jennifer Yland – Department of Epidemiology, Boston University School of Public Health
Kristin Palmsten – HealthPartners Institute

10:00 - 11:30 AM
WORKSHOP / CONCURRENT
Lessons for Regulatory Decision-Making from Real-World Data Trial Emulation Results

PRESENTERS
Shirley Wang – Brigham and Women’s Hospital, Harvard Medical School
Sebastian Schneeweiss – Division of Pharmacoepidemiology and Pharmacoconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA
William Crown – Brandeis University
Joseph Ross – Yale University
Peter Arlett – European Medicines Agency
Kenneth Quinto – US Food and Drug Administration
Yoshiaki Uyama – Pharmaceutical Devices and Medicines Agency

10:00 - 11:30 AM
WORKSHOP / CONCURRENT
Methodological Approaches to Evaluating the Safety and Effectiveness of Multi-Dose Coronavirus Disease 2019 (COVID-19) Vaccines Series

PRESENTERS
Hui-Lee Wong – CBER, Center for Biologics Evaluation and Research, U.S. Food and Drug Administration
Xabier Garcia de Albeniz – RTI Health Solutions
Anne Moberly Butler – Washington University in St. Louis
Heather Whitaker – Public Health England
Marc Suchard – University of California, Los Angeles
11:45 AM - 1:15 PM
WORKSHOP / CONCURRENT
A Call for ‘Environmental Pharmacoepidemiology’: Medications, Global and Local Environments, and Health Outcomes
Methods in Pharmacoepidemiology

PRESENTERS
Benjamin Bates – Center for Pharmacoepidemiology and Treatment Science, Rutgers University, New Brunswick, NJ, US
Sean Hennessy – Center for Pharmacoepidemiology Research and Training, Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania, Philadelphia, PA, US
Michelle Bell – School of the Environment, Yale University, New Haven, CT, US
Paul Coplan – Johnson & Johnson
Rachel Nethery – Department of Biostatistics, Harvard T.H. Chan School of Public Health
Soko Setoguchi – RWJ Medical School, Center for Pharmacoepidemiology and Treatment Science (PETS), Institute for Health, Health Care Policy and Aging Research

11:45 AM - 1:15 PM
WORKSHOP / CONCURRENT
Believability of Real-World Evidence (RWE) for Informed Regulatory Decisions
Methods in Pharmacoepidemiology

PRESENTERS
Jacinthe Leclerc – Universite du Quebec a Trois-Rivieres
Kimberly Brodovich – Boehringer Ingelheim
Stephen Chang – FDA
Magdalene Assimon – University of North Carolina School of Medicine
Hisashi Urushihara – Keio University
Cynthia Girman – CERobs Consulting, LLC

11:45 AM - 1:15 PM
WORKSHOP / CONCURRENT
New Frontiers in Computable Phenotyping for Medical Product Safety Evaluation
Methods in Pharmacoepidemiology

PRESENTERS
Rishi Desai – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA
David Carrell – Kaiser Permanente Washington Health Research Institute
Robert Ball – FDA
Katherine Liao – Brigham and Women’s Hospital
Lindsay Collin – Huntsman Cancer Institute, University of Utah, Salt Lake City, UT, USA
Sebastian Schneeweiss – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA

11:45 AM - 1:15 PM
WORKSHOP / CONCURRENT
Using Real-World External Controls to Support Drug Approval: An Interactive Framework Using Oncology Trial and Real-World Data
Methods in Pharmacoepidemiology

PRESENTERS
Laura Hester – Janssen R&D, LLC
Donna Rivera – US Food and Drug Administration
Jennifer Lund – Department of Epidemiology, University of North Carolina at Chapel Hill
Asieh Golozar – Regeneron Pharmaceuticals
Kourtney Davis – Janssen R&D, LLC
John Seeger – Epidemiology, Optum, Boston, MA, USA
Leah Sansbury – GlaxoSmithKline
Program Schedule

1:45 - 3:30 PM

ORAL SESSIONS / CONCURRENT

Pharmacovigilance, Safety End Points, and Potpourri

Rare Disease
The Association Between Bariatric Surgery and Dupuytren Disease: A Cohort Study from Swedish Nationwide Healthcare Registries

PRESENTING AUTHOR
Theresa Burkard – Department of Chemistry and Applied Biosciences, Institute of Pharmaceutical Sciences, ETH Zurich, Zurich, Switzerland

CO-AUTHORS
Jennifer Lane – Centre for Statistics in Medicine, Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences, University of Oxford, Oxford, UK
Dag Holmberg – Upper Gastrointestinal Surgery, Department of Molecular medicine and Surgery, Karolinska Institute, Karolinska University Hospital, Stockholm, Sweden
Andrea Burden – Institute of Pharmaceutical Sciences, Department of Chemistry and Applied Biosciences, ETH Zurich, Zurich, Switzerland
Dominic Furniss – Centre for Statistics in Medicine, Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences, University of Oxford, Oxford, UK

Pediatric Pharmacoepidemiology
Selective Serotonin Reuptake Inhibitors and the Risk of Type 2 Diabetes Mellitus in Youths

PRESENTING AUTHOR
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CO-AUTHORS
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Oriana Hoi Yun Yu – Centre for Clinical Epidemiology, Lady Davis Institute, Jewish General Hospital, Montreal, Québec, CA
Emma Fergusson – Oxford Health NHS Trust, Department of Psychiatry, Oxford University, Oxford, UK
Soham Rej – Department of Psychiatry, McGill University, Montreal, Québec, CA
Laurent Azoulay – Department of Epidemiology, Biostatistics, and Occupational Health, McGill University, Montreal, Québec, CA
Christel Renoux – Department of Epidemiology, Biostatistics, and Occupational Health, McGill University, Montreal, Québec, CA

Pharmacovigilance
Comparing the Risk of Venous Thromboembolism in Rheumatoid Arthritis Patients Receiving Tofacitinib and TNF Inhibitors in Taiwan

PRESENTING AUTHOR
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Edward Chia-Cheng Lai – School of Pharmacy, Institute of Clinical Pharmacy and Pharmaceutical Sciences, College of Medicine, National Cheng Kung University, Tainan 701, Taiwan

Pediatric Pharmacoepidemiology
Risk of Type 2 Diabetes Among Children Initiating Anticonvulsant Mood Stabilizers: Application of a Target Trial Approach

PRESENTING AUTHOR
Jenny Sun – Harvard Medical School and Harvard Pilgrim Health Care Institute

CO-AUTHORS
Jessica Young – University of North Carolina
Aaron Sarvet – Harvard Medical School and Harvard Pilgrim Health Care Institute
Pi-i Debby Lin – Harvard Medical School and Harvard Pilgrim Health Care Institute
Sengwee Toh – Harvard Medical School and Harvard Pilgrim Health Care Institute
Jason Block – Harvard Medical School and Harvard Pilgrim Health Care Institute

Safety End Points
Risk of Diabetic Ketoacidosis with Sodium-Glucose Transporter-2 Inhibitors Compared to Dipeptidyl Peptidase-4 (DPP4) Inhibitors and Sulfonylureas in Patients with Type 2 Diabetes

PRESENTING AUTHOR
Dawwas Dawwas – University of Pennsylvania

CO-AUTHOR
Charles Leonard – Center for Pharmacoepidemiology Research and Training, Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania, Philadelphia, PA, US

James Lewis – University of Pennsylvania
Program Schedule

Disease Epidemiology/Clinical Course

Comparable COVID-19 Outcomes with Current Use of GLP-1 Receptor Agonists, DPP-4 Inhibitors or SGLT-2 Inhibitors Among Patients with Diabetes Who Tested Positive for SARS-Cov-2

PRESENTING AUTHOR
Simone Bastrup Israelsen – Center of Research and Disruption of Infectious Diseases, Department of Infectious Diseases, Copenhagen University Hospital, Amager and Hvidovre, Hvidovre, Denmark
CO-AUTHOR
Anton Pottegård – University of Southern Denmark
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Sten Madsbad – Department of Endocrinology, Copenhagen University Hospital, Amager and Hvidovre, Hvidovre, Denmark
Reimar Thomsen – Department of Clinical Epidemiology, Aarhus University, Aarhus, Denmark
Thomas Benfield – Center of Research and Disruption of Infectious Diseases, Department of Infectious Diseases, Copenhagen University Hospital, Amager and Hvidovre, Hvidovre, Denmark

1:45 - 3:30 PM

ORAL SESSIONS / CONCURRENT

Thinning the Blood: The Role of Anticoagulation and COVID-19

Drug Utilization Research

Heterogeneity and Temporal Variation in the Management of COVID-19: A Multinational Drug Utilisation Study Including 274,719 Hospitalised Patients from The United States of America, China, Spain, and South Korea

PRESENTING AUTHORS
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Li Liu – Nanfang Hospital, Southern Medical University, Guangzhou, China
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Carlos Areia – Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford, UK
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Paula Casajust – Real-World Evidence, Trial Form Support, Barcelona, Spain
Dalia Dawoud – National Institute for Health and Care Excellence (NICE), London, UK
Asieh Golozar – Regeneron Pharmaceuticals
Jitendra Jonnagaddala – School of Public Health and Community Medicine, UNSW Sydney
Paras Mehta – College of Medicine, The University of Arizona, Tucson, AZ, USA
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Daniel Morales – Division of Population Health and Genomics, University of Dundee, UK
Fredrik Nyberg – School of Public Health and Community Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden
Jose Posada – Stanford University School of Medicine, Stanford, California, USA
Martina Recalde – Fundació Institut Universitari per a la recerca a l’Atenció Primària de Salut Jordi Gol i Guina (IDiAPJGol), Barcelona, Spain
Elena Roel – Fundació Institut Universitari per a la recerca a l’Atenció Primària de Salut Jordi Gol i Guina (IDiAPJGol), Barcelona, Spain
Karishma Shah – Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences, University of Oxford, Botnar Research Centre, Windmill Road, Oxford, OX3 7LD, UK
Nigam Shah – Stanford University School of Medicine, Stanford, California, USA
Lisa Schilling – Data Science to Patient Value Program, University of Colorado Anschutz Medical Campus, Aurora, CO, USA
Vignesh Subbian – College of Engineering, The University of Arizona, Tucson, AZ, USA
David Vizcaya – Bayer Pharmaceuticals, Sant Joan Despi, Spain
Lin Zhang – School of Population Medicine and Public Health, Chinese Academy of Medical Sciences and Peking Union Medical College
Ying Zhang – DHC Technologies Co. Ltd, Beijing, China
Hong Zhu – Nanfang Hospital, Southern Medical University, Guangzhou, China
Seng Chan You – Department of Preventive Medicine and Public Health, Yonsei University College of Medicine, Seoul, Korea
Peter Rijnbeek – Department of Medical Informatics, Erasmus University Medical Center, Rotterdam, The Netherlands
Program Schedule

Drug Utilization Research

**Real World Use of Anticoagulation Among Hospitalized Patients With COVID-19 in the United States**

**PRESENTING AUTHOR**
Benjamin Bates – Center for Pharmacoepidemiology and Treatment Science, Rutgers University, New Brunswick, NJ, USA

**CO-AUTHORS**
Eileen Lee – Rutgers
Nathaniel Kuhrt – Rutgers, New Jersey Medical School
Chang Xu – Rutgers University, School of Public Health, Department of Biostatistics and Epidemiology
Soko Setoguchi – RWJ Medical School, Center for Pharmacoepidemiology and Treatment Science (PETS), Institute for Health, Health Care Policy and Aging Research

Drug Effectiveness

**Safety and Effectiveness of Prophylactic Anticoagulation for Prevention of COVID-19 Mortality: A Nationwide Cohort Study of Hospitalised Patients in the US**

**PRESENTING AUTHOR**
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**Anticoagulants and All-Cause Mortality Among Hospitalized COVID-19 Patients**

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Program Schedule

Drug Utilization Research
Use of Cardiovascular and Antidiabetic Drugs During COVID19 Epidemic in France

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Drug Utilization Research
Substantial Heterogeneity in the Management of Hospitalized Patient with COVID-19

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1:45 - 3:30 PM

ORAL SESSIONS / CONCURRENT

Two Hearts Beat as One: Evidence for Cardiovascular Safety From Real World Data and Clinical Trials

Health Economics/Outcomes Research
Comparative Risk of Hospitalization for Heart Failure Among Patients with Xanthine Oxidase Inhibitors and Uricosuric Agents

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Safety End Points
Cardiovascular Risk in Users of Mirabegron Relative to Users of Antimuscarinic Treatments for Overactive Bladder: Findings from a Non-interventional, Real-World Data Safety Study

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Ingvild Odsbu – Department of Mental Disorders, Norwegian Institute of Public Health, Oslo, Norway
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Use of Low-dose Quetiapine and the Risk of Major Adverse Cardiovascular Events

Presenting Author
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Safety End Points
Use of Low-dose Quetiapine and the Risk of Major Adverse Cardiovascular Events

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Christoph Correll – Department of Psychiatry, The Zucker Hillside Hospital

Jesper Hallas – University of Southern Denmark, Odense, Denmark
TUE

Program Schedule

Benefit-Risk Assessment, Communication, and Evaluation (BRACE)

Jak Inhibitors and the Risk of Cardiovascular and Venous Thromboembolism Events Among Patients with Rheumatoid Arthritis: A Network Meta-Analysis of Clinical Trials

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Drug Utilization Research

Non-Adherence and Non-Persistence with Direct Oral Anticoagulants Increases the Risk of Stroke: Assessment in Three European Databases

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Ron Herings – PHARMO Institute for Drug Outcomes Research, Utrecht, Netherlands

1:45 - 3:30 PM

ORAL SESSIONS / CONCURRENT

Validation and Algorithms: Getting the Present and Future Right

Methods in Pharmacoepidemiology

Validity of Electronic Health Records-Based Measures for COVID-19 Hospitalization and Severe Outcomes

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Jan Van Marter – Kaiser Permanente Northwest, Center for Health Research

PRESENTING AUTHOR
Sascha Dublin – Kaiser Permanente Washington Health Research Institute
Methods in Pharmacoepidemiology

Death Documentation Lag in COVID-19 Electronic Health Record (EHR) Suggests Caution in Near-Real-Time Analysis

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Junjie Ma – Center for Observational Research, Amgen, Inc.
John Page – Center for Observational Research, Amgen, Inc.
J. Michael Sprafka – Center for Observational Research, Amgen, Inc.
Jie Zhang – Center for Observational Research, Amgen, Inc.

Informatics

Shifting the Traditional Model of Analysing Downloaded Electronic Health Records to the Novel Open-Source Analytics Opensafely Platform

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Seb Bacon – University of Oxford
William Hulme – University of Oxford
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Helen Curtis – University of Oxford
Amir Mehrkar – University of Oxford
David Evans – University of Oxford
Peter Inglesby – University of Oxford
Jonathan Cockburn – The Phoenix Partnership
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Rosalind Eggo – London School of Hygiene and Tropical Medicine
Ian Douglas – London School of Hygiene and Tropical Medicine
Stephen Evans – London School of Hygiene and Tropical Medicine
Liam Smeeth – London School of Hygiene and Tropical Medicine
Ben Goldacre – University of Oxford

Methods in Pharmacoepidemiology

Use of an EHR to Inform a Claims-Based Algorithm to Categorize Inpatient COVID-19 Severity

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Tamar Lasky – US Food and Drug Administration
Aloka Chakravarty – Food and Drug Administration
Sandy Leonard – HealthVerity
Sarah Vititoe – Aetion, Inc
Jeremy Rassen – Aetion, Inc
Nicolle Gatto – Aetion, Inc

Methods in Pharmacoepidemiology

Categorization of COVID-19 Severity to Determine Mortality Risk

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Tamar Lasky – US Food and Drug Administration
Sandy Leonard – HealthVerity
Sarah Vititoe– Aetion, Inc
Nicolle Gatto – Aetion, Inc
Program Schedule

Disease Epidemiology/Clinical Course
Development and Validation of an Algorithm to Estimate the Risk of Severe Complications of COVID-19 to Prioritise Vaccination

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1:45 - 3:30 PM

**ORAL SESSIONS / CONCURRENT**

**You Gave the Kids What?**
International Use, Policies, and Outcomes in Pediatric Pharmacoepidemiology

Presenting Author
Matthew Beier – Rutgers, Robert Wood Johnson Medical School

Co-authors
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Jason Roy – Rutgers University, Department of Biostatistics and Epidemiology
Avinash Gabbeta – St. Christopher's Hospital for Children
Brian Strom – Rutgers Biomedical And Health Sciences, Rutgers University
Martin Blaser – Center for Advanced Biotechnology and Medicine, Rutgers University
Daniel Horton – Rutgers University

**Early Life Antibiotic Exposure and Incident Chronic Diseases in Childhood**

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Martin Blaser – Center for Advanced Biotechnology and Medicine, Rutgers University
Daniel Horton – Rutgers University

**Pediatric Pharmacoepidemiology**

**Prescribed Medicine Use in a Nationwide Sample of Australian Children: Extent of Off-Label Use**

Presenting Author
Andrea Schaffer – Centre for Big Data Research in Health, UNSW Sydney

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**Prescribed Medicine Use in a Nationwide Sample of Australian Children: Extent of Off-Label Use**

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Nicholas Buckley – Biomedical Informatics and Digital Health, University of Sydney
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**Antibiotic Prescribing in Children Aged 0–6 Years in Germany: Assessing Regional Variations and Potential Explanations Based on Claims Data**

Presenting Author
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Ulrike Haug – Leibniz-Institut für Präventionsforschung und Epidemiologie, Bremen, Germany

**General Practitioner Prescribing Trends Among Pediatric Patients in the United Kingdom: 1998-2018**

Presenting Author
Reem Masarwa – McGill University

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Drug Utilization Research
**Visualizing Inappropriate Antibiotic Use Following Otitis Media in Children in the United States**

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YinJiao Ma – Washington University in St. Louis
Anne Mobley Butler – Washington University in St. Louis

Pediatric Pharmacoepidemiology
**Impact of Drug-Related Regulations on Codeine Use Among Children in Taiwan: A Nationwide Interrupted Time Series Analysis from 2005 to 2018**

**PRESENTING AUTHOR**
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**6:45 - 7:45 PM**

**LIGHTNING SESSION 3**

Benefit-Risk Assessment, Communication, and Evaluation (BRACE)
**Gender Differences in Valproic Acid Use for Approved Indications in the United States (2017-2018) – An Opportunity for Risk Mitigation?**

**PRESENTING AUTHOR**
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Benefit-Risk Assessment, Communication, and Evaluation (BRACE)
**Missingness in Real World Data Submitted for Regulatory Decision-Making: Eastern Cooperative Oncology Group Performance Status Case Study**

**CO-AUTHORS**
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Benefit-Risk Assessment, Communication, and Evaluation (BRACE)
**Association of Statin Use with Dry Eye Disease**

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Disease Epidemiology/Clinical Course
**Birth Prevalence of Phenylalanine Hydroxylase Deficiency: A Systematic Literature Review and Meta-analysis**

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Manel Pladevall-Vila – RTI Health Solutions
Sarah Landis – BioMarin (UK) Limited
**Program Schedule**

**Methods in Pharmacoepidemiology**

A New Analytic Tool for Interrupted Times Series Analysis to Assess the impact of FDA Regulatory Actions

**PRESENTING AUTHOR**
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Use of Last Clinical Activity Date in Overall Survival Analysis with Real World Data

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Melanie Huntley – Genentech, Inc.  
Anne-Marie Meyer – F. Hoffmann-La Roche Ltd.  
Michael Taylor – Real World Data Collaborations, Personalized Healthcare Data Science, Genentech Inc., South San Francisco, CA, USA

Distinguishing Death from Disenrollment in Claims Data Using a Readily Implemented Machine Learning Algorithm

**PRESENTING AUTHOR**
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Methods in Pharmacoepidemiology

Development and Validation of Case-Finding Algorithms to Identify Prosthetic Joint Infections After Total Knee Arthroplasty

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Program Schedule

Drug Utilization Research

Analytical Enhancements in Kentucky’s Drug Overdose Mortality Surveillance: Rapid Monitoring of Trends and Decedents’ Recent Controlled Substance Prescription History

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Pediatric Pharmacoepidemiology

Pediatric Off-Label Antipsychotic Use for Attention-Deficit/Hyperactivity Disorder: A Time-to-Event Analysis

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Roderick Rose – University of Maryland Baltimore, School of Social Work

Pediatric Pharmacoepidemiology

Antibiotics Overprescribing Patterns in Pediatric Primary Care in Italy: Findings from 2012-2018

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Drug Utilization Research

Measuring Mental Health Prescribing Safety Indicators in UK Primary Care

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Richard Keers – Centre for Pharmacoepidemiology and Drug Safety, Division of Pharmacy and Optometry, School of Health Sciences, University of Manchester, Manchester, UK
Informatics
Temporal Effect in Real-World-Evidence for Randomized-Clinical-Trials

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Katherine Liao – Brigham and Women’s Hospital
Thany Seyok – Brigham and Women’s Hospital
Kumar Dahal – Brigham and Women’s Hospital
Qianyu Yuan – Harvard T.H. Chan School of Public Health
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Claire Fox – Merck & Co., Inc.
Thomas Jemielita – Merck & Co., Inc.
Tianxi Cai – Harvard T.H.Chan School of Public Health

Safety End Points
The Risk of Melanoma with Rasagiline Compared with Other Antiparkinsonian Medications: A Retrospective Cohort Study in the United States Medicare Database

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Sigal Kaplan – Teva Pharmaceuticals Ltd
Mark Gordon – Teva Branded Pharmaceutical Products R&D, Inc.
Elizabeth Andrews – RTI Health Solutions

Biologics/Biosimilars
Risk of Major Cardiovascular Event in Jak Inhibitor Treated Patients: Analysis of a National Claim Database

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8:00 - 9:30 PM
PLENARY
Communicating COVID-19 Pharmacoepidemiological Research to Patients: Why is it Important? How Can We Do It? What are the Implications Now and for the Future? Benefit-Risk Assessment, Communication, and Evaluation (BRACE)

PRESENTING AUTHOR
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Vincent Lo Re – Center for Pharmacoepidemiology Research and Training, Center for Clinical Epidemiology and Biostatistics, Department of Biostatistics, Epidemiology, and Informatics, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania, USA
Francois Houyez – EURORDIS
## Program Schedule

**WEDNESDAY, AUGUST 25**

### 8:15 - 8:30 AM

**WELCOME RECEPTION**

Syd Phillips  
Chair, ICPE Scientific Program Committee

### 8:30 - 10:00 AM

**PLENARY**

**COVID-19 Vaccines: Timely Global Real-World Evidence**

**Vaccines**  
**MODERATOR**  
J. Bradley Layton – RTI Health Solutions  
**SPEAKERS**  
Miriam Sturkenboom – Department Datascience & Biostatistics, University Medical Center Utrecht  
Steven Anderson – FDA/CBER  
Carla Talarico  
Robert Chen – Brighton Collaboration

### 10:00 - 11:30 AM

**WORKSHOP / CONCURRENT**

**Product Surveillance and Signal Management: Now is the Time for Methodologist Engagement!**  
**Medical Devices**

**PRESENTERS**  
Mary Beth Ritchey – Med Tech Epi  
Danica Marinac-Dabic – FDA/CDRH  
Theodore Lystig – Medtronic  
Paul Coplan – Johnson & Johnson

**WORKSHOP / CONCURRENT**

**Pediatric Infection with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV 2) and Potential Health Consequences (Submitted on Behalf of the ISPE RWE COVID-19 Workgroup)**  
**Disease Epidemiology/Clinical Course**

**PRESENTERS**  
Ann McMahon – Office of Pediatric Therapeutics, Food and Drug Administration  
Susan Coffin – Children’s Hospital of Philadelphia  
David Kimberlin – University of Alabama at Birmingham  
Montse Soriano Gabarro – Bayer AG  
Jonathan Davis – Tufts University Children’s Hospital

**WORKSHOP / CONCURRENT**

**Product Surveillance and Signal Management: Now is the Time for Methodologist Engagement!**  
**Medical Devices**

**PRESENTERS**  
Mary Beth Ritchey – Med Tech Epi  
Danica Marinac-Dabic – FDA/CDRH  
Theodore Lystig – Medtronic  
Paul Coplan – Johnson & Johnson

**WORKSHOP / CONCURRENT**

**RWE Blueprints: Decoding SPACE, SPIFD, Start-RWE, and Other Tools Promoting Principled Pharmacoepidemiology**  
**Methods in Pharmacoepidemiology**

**PRESENTERS**  
Elizabeth Garry – Aetion, Inc  
Nicolle Gatto – Aetion, Inc  
Shirley Wang – Brigham and Women’s Hospital, Harvard Medical School  
Ulka Campbell – Pfizer

**WORKSHOP / CONCURRENT**

**Selection Matters: Addressing Biases in Linked Clinico-Genomic Data Sets**  
**Methods in Pharmacoepidemiology**

**PRESENTERS**  
Katherine Panageas – Memorial Sloan Kettering Cancer Center  
Kenneth Kehl – Dana-Farber Cancer Institute, Harvard Medical Center  
Devin Incerti – Genentech  
Til Stürmer – Department of Epidemiology, University of North Carolina at Chapel Hill
Program Schedule

WED Program Schedule

10:00 - 11:30 AM

WORKSHOP / CONCURRENT

Strategies for the Use of Real-World Data to Conduct COVID-19-Related Pharmacoepidemiology

Methods in Pharmacoepidemiology

PRESENTERS

Vincent Lo Re - Center for Pharmacoepidemiology Research and Training, Center for Clinical Epidemiology and Biostatistics, Department of Biostatistics, Epidemiology, and Informatics, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA
Noelle Cocoros – Harvard Pilgrim Health Care Institute
Candace Fuller – Harvard Pilgrim Health Care Institute
Wei Hua – Center for Drug Evaluation and Research, United States Food and Drug Administration
Silvia Perez-Vilar – Office of Surveillance and Epidemiology, Center for Drug Evaluation and Research, US Food and Drug Administration

11:45 AM - 1:30 PM

ORAL SESSIONS / CONCURRENT

Brains or Bytes? In Search of Patterns

Medical Devices

Leveraging Artificial Intelligence (AI) Technologies for Automated Identification of Total Knee Arthroplasty (TKA) Devices in Electronic Health Records

CO-AUTHORS

Elham Sagheb – Mayo Clinic
Shi Yan – Mayo Clinic
Taghi Ramazanian – Mayo Clinic
Sunyang Fu – Mayo Clinic
Ahmad Tafti – University of Southern Maine
Sungahn Sohn – Mayo Clinic

PRESENTING AUTHOR

Hilal Maradit Kremers – Mayo Clinic

Rare Disease

Prediction Algorithm for Identifying Patients with Fabry or Pompe Disease in Electronic Health Records

CO-AUTHORS

Ella Jansen – PHARMO Institute for Drug Outcomes Research, Utrecht, Netherlands
Lars Verkleij – INSZO Instituut voor Zorgoptimalisatie
Rich Colbaugh – Volv Global SA
Kristin Glass – Volv Global SA

Christopher Rudolf – Volv Global SA
Ron Herings – PHARMO Institute for Drug Outcomes Research, Utrecht, Netherlands

Methods in Pharmacoepidemiology

The Impact of Longitudinal Data-Completeness of Electronic Health Record (EHR) Data on Prognostic Risk Score Misclassification

PRESENTING AUTHOR

Yinzhu Jin – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA

CO-AUTHORS

Sebastian Schneeweiss – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA
Dave Merola – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School
Kueiyu Joshua Lin – Brigham and Women’s Hospital

Methods in Pharmacoepidemiology

Identifying Active Pregnancies Using ICD-10 Z3A Codes vs Completed Pregnancies Using Outcomes

PRESENTING AUTHOR

Monica Bertoia – Optum

CO-AUTHORS

Li Zhou – Optum
Michael Doherty – Optum
Florence Wang – Optum
John Seeger – Epidemiology, Optum, Boston, MA, USA

Methods in Pharmacoepidemiology

Improving Methods of Identifying Anaphylaxis for Medical Product Safety Surveillance Using Natural Language Processing and Machine Learning

PRESENTING AUTHOR

David Carrell – Kaiser Permanente Washington Health Research Institute

CO-AUTHORS

Susan Gruber – Putnam Data Sciences
James Floyd – University of Washington Department of Epidemiology, Seattle, WA, USA
Maralyssa Bann – University of Washington
Kara Cushing-Haugen – Kaiser Permanente Washington Health Research Institute
Ron Johnson – Kaiser Permanente Washington Health Research Institute
Program Schedule

Vina Graham – Kaiser Permanente Washington Health Research Institute

David Cronkite – Kaiser Permanente Washington Health Research Institute

Brian Hazelhurst – Kaiser Permanente Northwest

Andrew Felcher – Kaiser Permanente Northwest

Cosmin Bejan – Vanderbilt University Medical Center

Adee Kennedy – Harvard Pilgrim Health Care Institute

Mayura Shinde – Department of Population Medicine, Harvard Medical School and Harvard Pilgrim Health Care Institute

Sara Karami – US Food and Drug Administration

Yong Ma – Center for Drug Evaluation and Research, United States Food and Drug Administration

Danijela Stojanovic – Office of Surveillance and Epidemiology, Center for Drug Evaluation and Research, US Food and Drug Administration, Silver Spring, MD, USA

Yueqin Zhao – Office of Biostatistics, Center for Drug Evaluation and Research, FDA, Silver Spring, MD, USA

Robert Ball – FDA

Jennifer Nelson – Kaiser Permanente Washington Health Research Institute

Methods in Pharmacoepidemiology

**Validation of an Algorithm to Identify Hormonal Contraceptive Exposure in a Large Integrated Health Care Delivery System Database**

**PRESENTING AUTHOR**

Mary Anne Armstrong – Division of Research, Kaiser Permanente

**CO-AUTHORS**

Malini Chandra – Division of Research, Kaiser Permanente

Darios Getahun – Research and Evaluation, Kaiser Permanente Southern California

Michael Fassett – Kaiser Permanente Southern California

Jiaxiao Shi – Research and Evaluation, Kaiser Permanente Southern California

Amy Alabaster – Division of Research, Kaiser Permanente

Fagen Xie – Research and Evaluation, Kaiser Permanente Southern California

Vicki Chiu – Research and Evaluation, Kaiser Permanente Southern California

Theresa Im – Research and Evaluation, Kaiser Permanente Southern California

Federica Pisa – Medical Affairs & Pharmacovigilance, Bayer AG

Tina Raine-Bennett – Division of Research, Kaiser Permanente

**11:45 AM - 1:30 PM**

**ORAL SESSIONS / CONCURRENT**

COVID-19 Potpourri: Vaccines, Long Haulers, and the NFL

Vaccines

**Descriptive Epidemiology of Adverse Events of Special Interest for COVID-19 Vaccines Across 7 Countries and 4 Continents: A Multinational Network Cohort Study**

**PRESENTING AUTHOR**

Xintong Li – Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences, University of Oxford, Oxford, UK

**CO-AUTHORS**

Anna Ostropolets – Department of Biomedical Informatics, Columbia University Irving Medical Center

Rupa Makadia – Janssen Research and Development

Azza Shoaiib – Janssen Research and Development

Gowtham Rao – Janssen Research and Development

Anthony Sena – Janssen Research and Development

Martijn Schuemie – Janssen Research and Development

Eugenia Martinez-Hernandez – Neuroimmunology Unit, Neurology Department, Hospital Clinic of Barcelona

Sergio Fernández-Bertolín – Fundació Institut Universitari per a la Recerca a l’Atenció Primària de Salut Jordi Gili i Gurina (IDIAP JGol)

Talita Duartes-Salles – Fundació Institut Universitari per a la Recerca a l’Atenció Primària de Salut Jordi Gili i Gurina (IDIAP JGol)

Patrick Ryan – Janssen Research & Development

George Hripcsak – Department of Biomedical Informatics, Columbia University Irving Medical Center

Daniel Prieto-Alhambra – Centre for Statistics in Medicine (CSM), Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDROMS), University of Oxford, Oxford, UK

ACPE 2021
October 13-15, 2021
Seoul, Korea

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Medical Devices

Population Testing for COVID-19: Can a Rapid Antigen Test Rule Out Infection?

PRESENTING AUTHOR
Christina Mack – IQVIA

CO-AUTHORS
Michael Osterholm – Center for Infectious Disease Research and Policy, University of Minnesota, Minneapolis, Minnesota, USA
Erin Wasserman – IQVIA
Natalia Petruski-Ivleva – IQVIA
Deverick Anderson – Duke Center for Antimicrobial Stewardship and Infection Prevention, Duke University School of Medicine, Durham, NC, USA
Emily Myers – National Football League, New York City, NY, USA
Navdeep Singh – Eden Medical Center, Castro Valley, CA, USA
Patti Walton – Williamson Medical Center, Franklin, TN, USA
Gary Solomon – National Football League, New York, NY, USA
Christopher Hostler – Duke Center for Antimicrobial Stewardship and Infection Prevention, Duke University School of Medicine, Durham, NC, USA

Pharmacovigilance

Impact of COVID-19 Social Distance Restrictions on Hospital Encounters Due to Injury by Poisoning or Toxicity of Medications or Non-Medicinal Substances

PRESENTING AUTHOR
Qoua Her – Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

CO-AUTHORS
Jessica Young – University of North Carolina
Til Stürmer – Department of Epidemiology, University of North Carolina at Chapel Hill, NC, USA
Michele Jonsson Funk – University of North Carolina at Chapel Hill, NC, USA

Innovation has the power to save lives. By using the potential of science, we grow our knowledge and unlock new treatments. At Bayer, we are excited to be contributing to better health care that is safe, sustainable, and always accessible.

Science for a better life
Program Schedule

### Disease Epidemiology/Clinical Course

**Persistence of COVID-19 Symptoms 90 Days Post-Acute Infection: Insights from a Community-Based Registry**

**PRESENTING AUTHOR**
Matthew Reynolds – IQVIA

**CO-AUTHORS**
Nancy Dreyer – IQVIA
Lisa Albert – IQVIA
Emma Brinkley – IQVIA
Damir Mohamed – IQVIA
Christina Mack – IQVIA

---

**Drug Utilization Research**

**COVID-19 in Children: Treatment Patterns in the Real-World Hospital Setting**

**PRESENTING AUTHOR**
Lawrence Rasouliyan – OMNY Health

**CO-AUTHORS**
Vikas Kumar – OMNY Health
Stacey Long – OMNY Health
Mitesh Rao – OMNY Health

### Drug Utilization Research

**Use of Hydroxychloroquine, Remdesivir, and Dexamethasone Among Adults Hospitalized with COVID-19 in the United States: Results from the National COVID Cohort Collaborative (N3C)**

**PRESENTING AUTHOR**
Hemalkumar Mehta – Johns Hopkins University

**CO-AUTHORS**
Huijun An – Johns Hopkins University
Kathleen Andersen – Johns Hopkins Bloomberg School of Public Health
Omar Mansour – Monumental Analytics, Baltimore, MD, USA
Vithal Madhira – Palila Software, Reno, NV, USA
Emaan Rashidi – Johns Hopkins Bloomberg School of Public Health
Benjamin Bates – Center for Pharmacoepidemiology and Treatment Science, Rutgers University, New Brunswick, N.J, USA
Soko Setoguchi – RWJ Medical School, Center for Pharmacoepidemiology and Treatment Science (PETS), Institute for Health, Health Care Policy and Aging Research

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### Disease Epidemiology/Clinical Course

**Impact of Non-Alcoholic Steatohepatitis (NASH) Case Definition on Population Characteristics Identified in a US Claims Database**

**PRESENTING AUTHOR**
Kerrin Gallagher – HealthCore

**CO-AUTHORS**
Daina Esposito – Boston University School of Public Health
Aziza A. Jamal-Allial – HealthCore, Inc.
Simo Du – HealthCore, Inc.
Yuval Patel – Duke University
Mindie Nguyen – Stanford University
Erik Ness – Intercept Pharmaceuticals
Thomas Capozza – Intercept Pharmaceuticals, Inc.
Lina Titievsky – Intercept Pharmaceuticals

---

### Disease Epidemiology/Clinical Course

**The Effect of Epidural Steroid Injections on Fracture Risk Among Medicare Patients**

**PRESENTING AUTHOR**
Huifeng Yun – Department of Epidemiology, University of Alabama at Birmingham

**CO-AUTHORS**
Ye Liu – University of Alabama at Birmingham
Jeffrey Curtis – University of Alabama at Birmingham
Kenneth Saag – Division of Clinical Immunology and Rheumatology
Katherine Haseltine – HSS hospital
Emily Stein – HSS hospital
Program Schedule

Medical Devices
Persistence of Anticoagulation After Receiving Transcatheter Left Atrial Appendage Occlusion vs Oral Anticoagulants for Stroke Prevention in Atrial Fibrillation

PRESENTING AUTHOR
Kueiyu Joshua Lin – Brigham and Women’s Hospital

CO-AUTHORS
Daniel Singer – Department of Medicine, Massachusetts General Hospital, Harvard Medical School
Sushama Kattinakere Sreedhara – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School
Krista Huybrechts – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Sebastian Schneeweiss – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA

Methods in Pharmacoepidemiology
Longitudinal Adherence Trajectories to Biologic Disease Modifying Anti-Rheumatic Drugs in Tuscany, Italy

PRESENTING AUTHOR
Sabrina Giometto – Unit of Medical Statistics, Department of Clinical and Experimental Medicine, University of Pisa

CO-AUTHORS
Irma Convertino – Unit of Pharmacology and Pharmacovigilance, Department of Clinical and Experimental Medicine, University of Pisa
Marco Tuccori – Unit of Pharmacology and Pharmacovigilance, Department of Clinical and Experimental Medicine, University of Pisa; Unit of Adverse Drug Reactions Monitoring, University Hospital of Pisa, Pisa, Italy
Rosa Gini – Agenzia regionale di sanità della Toscana, Osservatorio di epidemiologia, Firenze, Italy
Massimiliano Cazzato – Unit of Rheumatology, University Hospital of Pisa, Pisa, Italy
Giulia Valdiserra – Unit of Pharmacology and Pharmacovigilance, Department of Clinical and Experimental Medicine, University of Pisa
Emiliano Cappello – Unit of Pharmacology and Pharmacovigilance, Department of Clinical and Experimental Medicine, University of Pisa
Sara Ferraro – Unit of Pharmacology and Pharmacovigilance, Department of Clinical and Experimental Medicine, University of Pisa
Silvia Tillati – Unit of Medical Statistics, Department of Clinical and Experimental Medicine, University of Pisa, Pisa, Italy
Marco Fornili – Unit of Medical Statistics, Department of Clinical and Experimental Medicine, University of Pisa

Disease Epidemiology/Clinical Course
Incidence Rates of Select Outcomes Among Patients With Non-Alcoholic Steatohepatitis (NASH) and Evidence of Fibrosis and Cirrhosis

PRESENTING AUTHOR
Monica Bertoia – Optum

CO-AUTHORS
Erik Ness – Intercept Pharmaceuticals
Thomas Capozza – Intercept Pharmaceuticals, Inc.
John Seeger – Epidemiology, Optum, Boston, MA, USA

Disease Epidemiology/Clinical Course
Hyperthyroidism and Breast Cancer Recurrence and Mortality: A Danish Population-based Cohort Study

PRESENTING AUTHOR
Rikke Noergaard Pedersen – Department of Clinical Epidemiology, Aarhus University

CO-AUTHORS
Line Libergreen – Department of Clinical Epidemiology, Aarhus University
Anders Kjaersgaard – Department of Clinical Epidemiology, Aarhus University Hospital
Deirdre Cronin-Fenton – Department of Clinical Epidemiology, Aarhus University Hospital, Aarhus, Denmark
Program Schedule

11:45 AM - 1:30 PM

ORAL SESSIONS / CONCURRENT

Impact of Disparities and Stigma on Drug Access and Utilization

Drug Utilization Research
Disparities in Hepatitis C Treatment in the Era of Direct-Acting Antivirals Among Arizona Medicaid Beneficiaries

PRESENTING AUTHOR
Hyun Jin Song – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida

CO-AUTHORS
Ching-Yuan Chang – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida
Xinyi Jiang – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida
Debbie Wilson – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida
Wei-Hsuan Lo-Ciganic – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida, Gainesville, FL, USA
Haesuk Park – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida, Gainesville, FL, USA

---

Drug Utilization Research
Sources of Racial/Ethnic Disparities in Antidepressant Treatment: Analysis of the Medical Expenditure Panel Survey Data

PRESENTING AUTHOR
Macarius Donneyong – The Ohio State University

CO-AUTHOR
Teng-Jen Chang – The Ohio State University

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Drug Utilization Research
Do Medicare Part D Low-Income Subsidies Narrow Disparities in Orally-Administered Antimyeloma Therapy Initiation?

PRESENTING AUTHOR
Shelley Jazowski – University of North Carolina at Chapel Hill

CO-AUTHORS
Cleo Samuel-Ryals – University of North Carolina at Chapel Hill
William Wood – University of North Carolina at Chapel Hill
Leah Zullig – Duke University School of Medicine
Justin Trogdon – University of North Carolina at Chapel Hill
Stacie Dusetzina – Vanderbilt University School of Medicine

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Health Economics/Outcomes Research
Impact of Race, Ethnicity, and Sex on Treatment of Non-Valvular Atrial Fibrillation

PRESENTING AUTHOR
Rahul Khanna – Johnson & Johnson, Medical Device Epidemiology and Real-World Data Sciences

CO-AUTHORS
Larry Jackson, II – Duke University Medical Center
Diane Francis – Johnson & Johnson Medical Devices, Health Economics and Market Access
Sonia Maccioni – Johnson & Johnson Medical Devices, Health Economics and Market Access
Vincent Thomas – Biosense Webster
Jennifer Wood – Johnson & Johnson, Medical Device Epidemiology and Real-World Data Sciences
Guy Cafri – Johnson & Johnson, Medical Device Epidemiology and Real-World Data Sciences
Charlene Wong – Johnson & Johnson, Medical Device Epidemiology and Real-World Data Sciences
Jonathan Piccini – Duke University Medical Center
Daniel Friedman – Yale School of Medicine

PRESENTER
Neloufar Rahai – Johnson & Johnson, Medical Device Epidemiology and Real-World Data Sciences

---

Drug Utilization Research
The Impact of Sex on The Quality of Medication Treatment in Patients with Type 2 Diabetes

PRESENTING AUTHOR
Martina Ambroz – Department of Clinical Pharmacy and Pharmacology, University of Groningen, University Medical Center Groningen, Groningen, Netherlands

CO-AUTHOR
Marit Geelink – Department of Clinical Pharmacy and Pharmacology, University of Groningen, University Medical Center Groningen, Groningen, Netherlands

PRESENTER
Kirsten Smits – Department of Dentistry - Quality and Safety of Oral Healthcare, Radboud University Medical Center, Radboud Institute for Health Sciences, Nijmegen, Netherlands

PRESENTER
Sieta de Vries – University of Groningen, University Medical Center Groningen, Department of Clinical Pharmacy and Pharmacology, Netherlands

PRESENTER
Petra Denig – University Medical Center Groningen
Drug Utilization Research
Changes in Buprenorphine Utilization During the COVID-19 Pandemic in the US

PRESENTING AUTHOR
Lindsey Hammerslag – Institute for Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Kentucky

CO-AUTHORS
Svetla Slavova – Department of Biostatistics, College of Public Health, University of Kentucky
Jeffery Talbert – Institute for Biomedical Informatics, College of Medicine, University of Kentucky
Sharon Walsh – College of Medicine, University of Kentucky
Michelle Lofwall – College of Medicine, University of Kentucky
Patricia Freeman – Department of Pharmacy Practice and Science, College of Pharmacy, University of Kentucky

11:45 AM - 1:30 PM
ORAL SESSIONS / CONCURRENT

Look Who’s Talking Now: Capturing Patient and Provider Perspectives in Health Data

Health Economics/Outcomes Research
Participant Engagement and Adherence in an Arthritis Power Real-World Study to Capture Smartwatch and Patient-Reported Outcome Data Among Rheumatoid Arthritis Patients

PRESENTING AUTHOR
Jeffrey Curtis – University of Alabama at Birmingham

CO-AUTHORS
Benjamin Nowell – Global Healthy Living Foundation
Cassie Clinton – Division of Clinical Immunology and Rheumatology, University of Alabama at Birmingham
Fenglong Xie – University of Alabama at Birmingham
Jessica Boles – Global Healthy Living Foundation
Laura Stratford – Global Healthy Living Foundation
Shilpa Venkatchalam – Global Healthy Living Foundation
Justin Owensby – University of Alabama at Birmingham
D. Curtis – Global Healthy Foundation
K. Gavigan – Global Healthy Foundation
I. Lipkovich – Eli Lilly and Company Indianapolis, IN
S.K. Nolot – Eli Lilly and Company Indianapolis, IN
V.S. Haynes – Eli Lilly and Company Indianapolis, IN

Ranitidine and Other Histamine2-Receptor Antagonists – A Rapid Response Drug Utilisation Study Using Electronic Health Care Data from Six European Countries

PRESENTING AUTHOR
Katia Verhamme – Department of Medical Informatics, Erasmus University Medical Center, Rotterdam, Netherlands

CO-AUTHORS
Maria de Ridder – Department of Medical Informatics, Erasmus University Medical Center, Rotterdam
Christian Reich – IQVIA, Real World Solutions
Talita Duartes-Salles – Fundació Institut Universitari per a la Recerca a l’Atenció Primària de Salut Jordi Gol i Gurina (IDIAPJGol)
Tom Seinen – Department of Medical Informatics, Erasmus University Medical Center, Rotterdam
Peter Rijnbeek – Department of Medical Informatics, Erasmus University Medical Center, Rotterdam, Netherlands

Health Economics/Outcomes Research

PRESENTING AUTHOR
Donna Rivera – US Food and Drug Administration

CO-AUTHORS
Henry Henk – Optum Labs
Elizabeth Garrett-Mayer – ASCO
Mark Walker – ConcertAI
Joseph Wagner – IQVIA
Emily Valice – Kaiser Permanente
Connor Sweetnam – Syapse
Elad Sharon – National Cancer Institute
Lori Sakoda – Kaiser Permanente
Nicholas Robert – Ontada
Ruth Pe Benito – Tempus
Yanina Natanzon – ConcertAI
Larry Kushi – Kaiser Permanente
Monika Izano – Syapse
Rebecca Honnold – Tempus
Eric Hansen – COTA
Janet Espiritu – Ontada
Lindsey Enewold – National Cancer Institute
Jennifer Christian – IQVIA
Suanna Bruinooge – American Society of Clinical Oncology
Marley Boyd – Ontada
Program Schedule

Andrew Belli – COTA
Laura Lasiter – Friends of Cancer Research
Jeff Allen – Friends of Cancer Research

Health Economics/Outcomes Research
Cost-Effectiveness of Systematic Treatments for Metastatic Castration-Sensitive Prostate Cancer: An Economic Evaluation Based on Network Meta-Analysis

PRESENTING AUTHOR
Lin Wang – Department of Epidemiology, Johns Hopkins University Bloomberg School of Public Health
CO-AUTHORS
Jeromie Ballreich – Department of Health Policy and Management, Johns Hopkins University Bloomberg School of Public Health
Hwanhee Hong – Duke Clinical Research Institute, Duke University
G. Caleb Alexander – Johns Hopkins Center for Drug Safety and Effectiveness
Channing Paller – The Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University School of Medicine

Health Economics/Outcomes Research
Telemedicine Use Among U.S. Patients with Cancer During the COVID-19 Pandemic

PRESENTING AUTHOR
Lu Chen – Genentech, Inc.
CO-AUTHORS
Carlos Flores Avile – Genesis Research
Palak Kundu – Genentech, Inc.
Aaron Cohen – Flatiron Health
Amy Webster – Flatiron Health
Rebecca Rohrer – Flatiron Health
Michael Taylor – Real World Data Collaborations, Personalized Healthcare Data Science, Genentech Inc., South San Francisco, CA, USA

Drug Effectiveness
Physician and Patient Reported Effectiveness Outcomes are similar in Tofacitinib and TNF Inhibitors in Rheumatoid Arthritis Patients: Data from a Rheumatoid Arthritis Registry in Canada

PRESENTING AUTHOR
Mohammad Movahedi – Toronto General Hospital Research Institute, University Health Network, Toronto, ON
CO-AUTHORS
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Edward Keystone – Department of Medicine, University of Toronto, Toronto, ON
Claire Bombardier – Toronto General Hospital Research Institute, University Health Network, Toronto, ON
OBRI Investigators – Toronto General Hospital Research Institute, University Health Network, Toronto, ON

ORAL SESSIONS / CONCURRENT
Pregnancy: Beyond Opioids
Pregnancy and Lactation
First Trimester Exposure to Buprenorphine Compared to Methadone for Treatment of Opioid Use Disorders and the Risk of Congenital Malformations

PRESENTING AUTHOR
Elizabeth Suarez – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
CO-AUTHORS
Krista Huybrechts – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Sonia Hernandez-Diaz – Harvard T.H. Chan School of Public Health
Loreen Straub – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Yanmin Zhu – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Helen Mogun – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Brian Bateman – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Pregnancy and Lactation
Characteristics of Initial Postpartum Opioid Prescribing and Risks of Serious Opioid-Related Events After Cesarean Delivery

PRESENTING AUTHOR
Andrew Wiese – Vanderbilt University Medical Center

CO-AUTHORS
Sarah Osmundson – Vanderbilt University Medical Center
Edward Mitchel, Jr. – Vanderbilt University Medical Center
Margaret Adgent – Vanderbilt University Medical Center
Sharon Phillips – Vanderbilt University Medical Center
Stephan Patrick – Vanderbilt University School of Medicine
Andrew Spieker – Vanderbilt University Medical Center
Carlos Grijalva – Vanderbilt University Medical Center

Pregnancy and Lactation
Prescription Opioid Type and the Risk of Neonatal Opioid Withdrawal Syndrome

PRESENTING AUTHOR
Daina Esposito – Boston University School of Public Health

CO-AUTHORS
Brian Bateman – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Martha Werler – Boston University School of Public Health
Loreen Straub – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Helen Mogun – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Sonia Hernandez-Diaz – Harvard T.H. Chan School of Public Health

Pregnancy and Lactation
Benzodiazepine Use in the First Trimester and Risk of Congenital Malformations: A Nationwide Cohort Study in South Korea

PRESENTING AUTHOR
Yunha Noh – School of Pharmacy, Sungkyunkwan University

CO-AUTHORS
Hyesung Lee – School of Pharmacy, Sungkyunkwan University
Ahhyung Choi – School of Pharmacy, Sungkyunkwan University
Dong-Sook Kim – Department of Research, Health Insurance Review & Assessment Service
Ju-Young Shin – School of Pharmacy, Sungkyunkwan University

Pregnancy and Lactation
Comparative Safety of In-Utero Exposure to Buprenorphine Combined with Naloxone vs Buprenorphine Monoproduction with Respect to Congenital Malformations

PRESENTING AUTHOR
Loreen Straub – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

CO-AUTHORS
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Sonia Hernandez-Diaz – Harvard T.H. Chan School of Public Health
Elizabeth Suarez – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Yanmin Zhu – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Helen Mogun – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Brian Bateman – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

Pregnancy and Lactation
Prenatal Analgesic Opioid Exposure and Risk of ADHD in Childhood

PRESENTING AUTHOR
Johanne Naper Tønnes – Department of Pharmacy, Faculty of Mathematics and Natural Sciences, University of Oslo, Oslo, Norway

CO-AUTHORS
Angela Lupattelli – Department of Pharmacy, Faculty of Mathematics and Natural Sciences, University of Oslo, Oslo, Norway
Marte Handal – Department of Mental Disorders, Norwegian Institute of Public Health, Oslo, Norway
Svetlana Skurtveit – Department of Mental Disorders, Norwegian Institute of Public Health, Oslo, Norway
Eivind Ystrom – Department of Mental Disorders, Norwegian Institute of Public Health, Oslo, Norway
Hedvig Nordeng – PharmacoEpidemiology and Drug Safety Research Group, Department of Pharmacy, and PharmaTox Strategic Initiative, Faculty of Mathematics and Natural Sciences, University of Oslo
Program Schedule

1:45 - 2:45 PM

ANNUAL MEETING OF ISPE MEMBERS & 2021 AWARDS CEREMONY

- Call to Order; President's Report | Olaf Klungel, FISPE – President
- Financial Report | Wei Zhou, FISPE – Vice-President/Finance
- Strategic Plan 2020-2024 update | Vincent Lo Re, FISPE – Chair, Strategic Planning Committee
- New Business
- Awards Ceremony
- ISPE Board Transition

RETIRING OFFICERS & DIRECTORS

Almut Winterstein, FISPE – Immediate Past President
Pia Caduff – Director
Vera Ehrenstein – Director
Chieko Ishiguro – Director
Malcolm Maclure – Director
Darren Toh, FISPE – Director

INSTALLATION OF NEW DIRECTORS

Jennifer Lund, FISPE – Academic (Americas)
Daniel Prieto-Alhambra, FISPE – Academic (Europe/Africa)
Hongbo Yuan – Government/Regulator (Americas)
Yoshiaki Uyama – Government/Regulator (Asia/Pacific)
Stine Hasling Mogensen – Government/Regulator (Europe/Africa)

INSTALLATION OF 2021-2022 OFFICERS

Vincent Lo Re, FISPE – President
Tobias Gerhard, FISPE – President-elect
Olaf Klungel, FISPE – Immediate Past President
Wei Zhou, FISPE – Vice-President/Finance
Caitlin Knox – Vice President/Finance-elect

Call to Order; President's Report | Olaf Klungel, FISPE – President

Financial Report | Wei Zhou, FISPE – Vice-President/Finance

Strategic Plan 2020-2024 update | Vincent Lo Re, FISPE – Chair, Strategic Planning Committee

New Business

Awards Ceremony

ISPE Board Transition

Leaver in European Pass Data Collection Studies in All Major Therapy Areas, Including Orphan Diseases and Pregnancy

- 100% record of PRAC-approved PASS studies, including cost-efficient hybrid designs
- Successful removal of unnecessary regulatory burdens
- New approach to hybrid pregnancy safety studies: approved by EMA
- Risk minimization studies: presentation to EMA, publications and novel hybrid design

Leader in European Single and Multi-Country Database and Registry Studies

- New method for competing risk - Lancet 2015, with global media coverage
- Simulation for residual confounding in cohort study - Lancet 2021, with global media coverage

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**ORAL SESSIONS / CONCURRENT**

**From Patient to Policy Impact: Benefit-Risk Assessment, Communication, and Evaluation (BRACE) SIG**

**Impact of FDA’s Regulatory Actions on the Quality of REMS Survey Methodology Protocols (2007-2020)**

**PRESENTING AUTHOR**
Samuel Ewusie – ORISE Fellow, Division of Risk Management, FDA

**CO-AUTHORS**
Janifer Quick – Division of Risk Management, FDA
Elaine Morrato – Parkinson School of Public Health, Loyola University Chicago
Gita Toyserkani – Division of Risk Management, FDA

**Drug Utilization Research**


**PRESENTING AUTHOR**
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Marie De Bruin – Division of Pharmacoepidemiology and Clinical Pharmacology, Utrecht Institute for Pharmaceutical Sciences, Utrecht University
Elizabeth Roughead – Clinical and Health Sciences, University of South Australia
Joel Lexchin – Faculty of Health, York University
Anna Kemp-Casey – Clinical and Health Sciences, University of South Australia
Lorri Puil – Department of Anesthesiology, Pharmacology & Therapeutics, University of British Columbia
Ingrid Sketris – College of Pharmacy, Dalhousie University
Dee Mangin, (MBChB (Otago), DPH (Otago), FRNZCPG (NZ)), Department of Family Medicine, McMaster University
Christine Hallgreen – Copenhagen Centre for Regulatory Science, Department of Pharmacy, Faculty of Health and Medical Sciences, University of Copenhagen
Sallie-Anne Pearson – Centre for Big Data Research in Health, University of New South Wales
Ruth Lopert – Department of Health Policy and Management, George Washington University

**Benefit-Risk Assessment, Communication, and Evaluation (BRACE)**

**Preferences Concerning Drug Safety Communication of Hospital-Based Specialist in the Netherlands**

**PRESENTING AUTHOR**
Esther de Vries – University of Groningen, University Medical Center Groningen, Department Clinical Pharmacy and Pharmacology, Groningen, Netherlands

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Petra Denig – University Medical Center Groningen
Peter Mol – University of Groningen, University Medical Center Groningen, Department of Clinical Pharmacy and Pharmacology, Netherlands

**Benefit-Risk Assessment, Communication, and Evaluation (BRACE)**

**Regulatory Approval of Phentermine/Topiramate for Obesity Management and Off-Label Use of Topiramate: A Fairytale for Drug Repurposing and a Maze for Risk Mitigation**

**PRESENTING AUTHOR**
Amir Sarayani – Department of Pharmaceutical Outcomes and Policy, University of Florida

**CO-AUTHORS**
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Christian Hampp – US Food and Drug Administration
Joshua Brown – Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida
Almut Winterstein – Department of Pharmaceutical Outcomes and Policy and Center for Drug Evaluation and Safety, College of Pharmacy, University of Florida
Program Schedule

**Benefit-Risk Assessment, Communication, and Evaluation (BRACE)**
**What Matters to Patients When Considering Treatments for Prevention of Rheumatoid Arthritis: A Preference Study in the United Kingdom, Germany, and Romania**

**PRESENTING AUTHOR**
Rachael DiSantostefano – Janssen R&D, LLC

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Matthias Englbrecht – Freelance Data Scientist, Eckental, Germany
Christine Radawski – Eli Lilly and Company
Karim Raza – Institute of Inflammation and Ageing, College of Medical and Dental Sciences, University of Birmingham, Birmingham, UK
Jorien veldwijk – School of Health Policy & Management, Erasmus University Rotterdam, Rotterdam, Netherlands

**3:00 - 4:30 PM**

**ORAL SESSIONS / CONCURRENT**

**MedTech Globetrotting – Assisting Medical Devises Effects in the Real World**

**Medical Devices**
**The Association Between Bariatric Surgery and Carpal Tunnel Syndrome: A Cohort Study from Swedish Nationwide Healthcare Registries**

**CO-AUTHORS**
Jennifer Lane – Centre for Statistics in Medicine, Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences, University of Oxford, Oxford, UK
Dag Holmberg – Upper Gastrointestinal Surgery, Department of Molecular medicine and Surgery, Karolinska Institute, Karolinska University Hospital, Stockholm, Sweden
Andrea Burden – Institute of Pharmaceutical Sciences, Department of Chemistry and Applied Biosciences, ETH Zurich, Zurich, Switzerland
Dominic Furniss – Centre for Statistics in Medicine, Nuffield Department of Orthopaedics, Rheumatology, and Musculoskeletal Sciences, University of Oxford, Oxford, UK

**PRESENTING AUTHOR**
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**Medical Devices**
**Comparison of 10- and 15-Year Outcomes of Bioprosthetic and Mechanical Aortic Valve Replacement in Patients Aged Under 65 Years: Australian Study Using Linked Data for 4,704 Patients**

**PRESENTING AUTHOR**
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Art Sedrakyan – Weill Cornell Medicine
Medical Devices

Sex-Differences in Risk of Early Revision After Primary Total Knee Arthroplasty

PRESENTING AUTHOR
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CO-AUTHORS
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Danica Marinac-Dabic – FDA/CDRH
Xinyan Zheng – Weill Cornell Medicine
Jialin Mao – Weill Cornell Medicine
Amanda Chen – Weill Cornell Medicine
Vincent Devlin – US Food and Drug Administration
Raquel Peat – US Food and Drug Administration
Art Sedrakyan – Weill Cornell Medicine

Medical Devices

The Association Between Bariatric Surgery and Cataract: A Cohort Study from Swedish Nationwide Healthcare Registries

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Andrea M. Burden, PhD - Institute of Pharmaceutical Sciences, Department of Chemistry and Applied Biosciences, ETH Zurich, Zurich, Switzerland

Medical Devices

Comparative Patient Characteristics of Transcatheter Left Atrial Appendage Occlusion vs Oral Anticoagulants for Stroke Prevention in Atrial Fibrillation

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Krista Huybrechts – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Sebastian Schneeweiss – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA
Program Schedule

Pregnancy and Lactation

The Comparative Safety of Antiseizure Medication Polytherapy vs Valproate in Pregnancy and Risk of Major Congenital Malformations

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Jacqueline Cohen – Norwegian Institute of Public Health

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Lars Kjerpeseth – Norwegian Institute of Public Health
Loreen Straub – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Maarit Leinonen – Finnish Institute for Health and Welfare
Marte-Helene Bjørk – Bergen Epilepsy Research Group, Department of Clinical Medicine, University of Bergen
Mette Nørgaard – Department of Clinical Epidemiology, University of Aarhus
Mika Gissler – Finnish Institute for Health and Welfare
Sinna Ulrichsen – Department of Clinical Epidemiology, University of Aarhus
Sonia Hernandez-Diaz – Harvard T.H. Chan School of Public Health
Torbjörn Tomson – Department of Clinical Neuroscience, Karolinska Institutet
Kari Furu – Norwegian Institute of Public Health

Pregnancy and Lactation

Antidepressant Use During Pregnancy and the Risk of Neurodevelopmental Disorders in Children

PRESENTING AUTHOR
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Helen Mogun – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Krista Huybrechts – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

Pregnancy and Lactation

The Impact of In-Utero Antipsychotic Drug Exposure on Congenital Malformations: An International Cohort Study

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Helle Kieler – Centre for Pharmacoepidemiology, Karolinska Institutet
Pregnancy and Lactation
The Impact of In-Utero Antipsychotic Exposure on Neurodevelopmental Disorders in Children

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Krista Huybrechts – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics

3:00 - 4:30 PM
Presentation Time: 4:30 PM - 6:00 PM

ORAL SESSIONS / CONCURRENT
Application of Pharmacoepidemiologic Study Designs for Research Across the Cancer Continuum

Safety End Points
Proton Pump Inhibitors and Risk of Gastric Cancer: A Population-based Cohort Study

PRESENTING AUTHOR
Devin Abrahami – McGill University

CO-AUTHORS
Emily McDonald – Division of Internal Medicine, Department of Medicine, McGill University Health Centre, Montreal, CA
Mireille Schnitzer – Faculté de Pharmacie, University of Montreal
Alan Barkun – McGill University Health Centre
Sanny Suissa – Departments of Epidemiology and Biostatistics, Faculty of Medicine, McGill University, Montreal, CA
Laurent Azoulay – Department of Epidemiology, Biostatistics, and Occupational Health, McGill University, Montreal, Québec, CA

Drug Effectiveness
Efficacy and Safety of Treatments for Nonmetastatic Castration-Resistant Prostate Cancer: A Matching-Adjusted Indirect Comparison and Network Meta-Analysis

PRESENTING AUTHOR
Lin Wang – Department of Epidemiology, Johns Hopkins University Bloomberg School of Public Health

CO-AUTHORS
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Hwanhee Hong – Duke Clinical Research Institute, Duke University
Otis Brawley – The Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University School of Medicine
G. Caleb Alexander – Johns Hopkins Center for Drug Safety and Effectiveness

Safety End Points
Comparative Safety of Conjugated Estrogens/Bazedoxifene (CE/BZA) vs Estrogen/Progestin Combination Hormone Therapy (EP): A Multi-Database Cohort Study

PRESENTING AUTHOR
Sarah Hoffman – HealthCore, Inc.

CO-AUTHORS
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Kimberly Daniels – Safety & Epidemiology, HealthCore, Inc.
Ryan Seals – Optum
Najat JZiyadeh – Optum
Florence Wang – Optum
Dingwei Dai – CVS Health Clinical Trial Services (fka Healthagen)
Cheryl McMahnill-Walraven – CVS Health Clinical Trial Services (formerly known as Healthagen), an affiliate of Aetna
Patty Shuminski – CVS Health Clinical Trial Services (fka Healthagen)
Vera Frajzyngier – Boehringer Ingelheim
Xiaofeng Zhou – Pfizer, Inc.
Rongjun Shen – Pfizer, Inc.
Nicole Fournakis – Research Operations, HealthCore, Inc.
Daniel Beachler – Safety & Epidemiology, HealthCore, Inc.
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Program Schedule

Methods in Pharmacoepidemiology
Risk of Malignancies in Newly Treated Patients with Disease-Modifying Drugs for Multiple Sclerosis: Assessment According to Cohort and Nested-Case Control Approaches

PRESENTING AUTHOR
Pauline Bosco-Lévy – Bordeaux PharmacoEpi, INSERM CIC1401, Université de BORDEAUX

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Meritxell Sabidó – Global Epidemiology, Merck KGaA Darmstadt, Germany
Pauline Diez – Bordeaux PharmacoEpi, INSERM CIC1401, Université de BORDEAUX
Clémentine Lacueille – Bordeaux PharmacoEpi, INSERM CIC1401, Université de BORDEAUX
Régis Lassalle – Bordeaux PharmacoEpi, INSERM CIC1401, Université de BORDEAUX
Caroline Foch – Merck KGaA Darmstadt, Germany
Cécile Droz-Perroteau – Univ. Bordeaux, INSERM CIC-P 1401, Bordeaux PharmacoEpi, 33000 Bordeaux, France

Safety End Points
Vitamin K Antagonists and Risk of Myelodysplastic Syndrome: A Nationwide Cohort Study in Atrial Fibrillation Patients

PRESENTING AUTHOR
Anke Neumann – EPI-PHARE, Epidemiology of Health Products (French National Agency for the Safety of Medicines and Health Products, and French National Health Insurance)

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Mahmoud Zureik – EPI-PHARE, Epidemiology of Health Products (French National Agency for the Safety of Medicines and Health Products, and French National Health Insurance)

Safety End Points
Use of Proton Pump Inhibitors and Risk of Pancreatic Adenocarcinoma: A Case-Control Study Based on the French National Health Data System (SNDS)

PRESENTING AUTHOR
Marion Lassalle – EPI-PHARE, Epidemiology of Health Products (French National Agency for the Safety of Medicines and Health Products [ANSM], and French National Health Insurance [CNAM]), Saint-Denis, France

4:30 - 6:00 PM
ORAL SESSIONS / CONCURRENT

Just How Well Does it Work in Real Life?
Drug Effectiveness
Calibrating Real-World Evidence Studies Against Randomized Trials: Treatment Effectiveness of Infliximab in Inflammatory Bowel Disease

PRESENTING AUTHOR
Julien Kirchgesner – Sorbonne Université, INSERM, Institut Pierre Louis d’Épidémiologie et de Santé Publique, Paris, France

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Sebastian Schneeweiss – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA
Program Schedule

Drug Effectiveness
**Shorter Drug Holiday After 3 or More Years of Risedronate vs Alendronate is Important to Maintain Osteoporotic Fracture Protection**

**PRESENTING AUTHOR**
Kaleen Hayes – University of Toronto Dalla Lana School of Public Health, Toronto, Ontario, CA

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David Juurlink – Department of Medicine, University of Toronto, Toronto, Ontario, CA
Suzanne Cadarette – Leslie Dan Faculty of Pharmacy, University of Toronto, Toronto, Ontario, CA

Drug Effectiveness
**Cardiovascular Effectiveness of SGLT-2 Inhibitors vs Metformin as First-Line Treatment for Type 2 Diabetes**

**PRESENTING AUTHOR**
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Robert Glynn – Harvard T. H. Chan School of Public Health
Elisabetta Patorno – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School

Drug Effectiveness
**Effect of SGLT-2 Inhibitors on eGFR in Type 2 Diabetes with Different Baseline Renal Functions: A Multi-Center Study**

**PRESENTING AUTHOR**
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Baiju Shah – Department of Medicine, University of Toronto
Jasjeet Minhas-Sandhu – School of Public Health, University of Alberta
Mhd. Waseem Alsabbagh – School of Pharmacy, University of Waterloo
John-Michael Gamble – School of Pharmacy, University of Waterloo
4:30 - 6:00 PM

**ORAL SESSIONS / CONCURRENT**

**Pregnancy: Diabetes and a Surprise**

Pregnancy and Lactation

**Characteristics and Outcomes of Pregnancies in Women with Heart Failure: A Retrospective Cohort Study in the Sentinel System**

**PRESENTING AUTHOR**

Yan Li – Office of Surveillance and Epidemiology, Center for Drug Evaluation and Research, U.S. Food and Drug Administration

**CO-AUTHORS**

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Catherine Corey – Office of Surveillance and Epidemiology, Center for Drug Evaluation and Research, U.S. Food and Drug Administration

Joy Kolonoski – Department of Population Medicine, Harvard Medical School and Harvard Pilgrim Health Care Institute

Mayura Shinde – Department of Population Medicine, Harvard Medical School and Harvard Pilgrim Health Care Institute

**Pregnancy and Lactation**

**Metformin and Risk of Adverse Pregnancy Outcomes Among Pregnant Women with Gestation Diabetes in the United Kingdom: A Population-Based Cohort Study**

**PRESENTING AUTHOR**

Ya-Hui Yu – McGill University

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Kristian Filion – Department of Epidemiology, Biostatistics and Occupational Health, McGill University, Montreal, Quebec, CA

**Pregnancy and Lactation**

**The Role of Propensity Score Matching in Claims-Based Studies for Achieving Comparability in Hba1c Levels Between Treatments in Pregnant Women with Type 2 Diabetes**

**PRESENTING AUTHOR**

Carolyn Cesta – Karolinska Institutet

**CO-AUTHORS**

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Ellen Seely – Harvard Medical School

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**Pregnancy and Lactation**

**Balance of Unmeasured Covariates After Propensity Score Matching Based on Measurable Covariates in Perinatal Pharmacoepidemiologic Studies**

**PRESENTING AUTHOR**

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Yong Ma – Center for Drug Evaluation and Research, United States Food and Drug Administration

Wei Hua – Center for Drug Evaluation and Research, United States Food and Drug Administration

Krista Huybrechts – Brigham and Women’s Hospital, Division of Pharmacoepidemiology and Pharmacoeconomics
Program Schedule

4:30 - 6:00 PM
ORAL SESSIONS / CONCURRENT

PS I love you, XXII
Methods in Pharmacoepidemiology
Evaluating When Effect Estimates Change After Propensity Score Trimming Because of Differing Effect Measure Modifier Distributions

PRESENTING AUTHOR
Michael Webster-Clark – University of North Carolina at Chapel Hill
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Jennifer Lund – Department of Epidemiology, University of North Carolina at Chapel Hill
Robert Glynn – Harvard T. H. Chan School of Public Health
Til Stürmer – Department of Epidemiology, University of North Carolina at Chapel Hill
Alan Kinlaw – UNC Eshelman School of Pharmacy

Methods in Pharmacoepidemiology
Optimization-Based Stable Balancing Weights vs Generalized Boosted Modeling for Propensity Score Weighting

PRESENTING AUTHOR
Stephen Johnston – Johnson & Johnson
CO-AUTHORS
Luo Li – Johnson & Johnson
Harikumaran Dwarakanathan – Mu Sigma
David Wei – Johnson & Johnson
Pragya Rai – Johnson & Johnson
Paul Coplan – Johnson & Johnson

Methods in Pharmacoepidemiology
Controlling for Differential Regression to the Mean Using Summary Measures of Pre-Treatment Laboratory Values in Propensity Scores

PRESENTING AUTHOR
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CO-AUTHORS
Leah McGrath – NoviSci, Inc.
Alexander Breskin – NoviSci Inc.
Ying Yu – NoviSci, Inc.
M. Alan Brookhart – NoviSci, Inc.
Program Schedule

Medical Devices
An Evaluation of Direct and Propensity Score Matching vs Propensity Score Stratification for Confounding Adjustment in Primary Total Hip Arthroplasty

PRESENTING AUTHOR
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Juan Daccach – Johnson & Johnson
Prerna Kothari – Mu-Sigma
Jill Ruppenkamp – Johnson & Johnson
Paul Coplan – Johnson & Johnson
Chantal Holy – Johnson & Johnson

Methods in Pharmacoepidemiology
Disease Risk Score as Alternative to Propensity Score Under Multiple Confounders and High Prevalence of Outcome: A Simulation Study Motivated by the Emergence of Multiple Repurposed Medicines During the COVID-19 Pandemic

PRESENTING AUTHOR
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Daniel Prieto-Alhambra – Centre for Statistics in Medicine (CSM), Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDROMS), University of Oxford, Oxford, UK

Methods in Pharmacoepidemiology
Cardinality Matching vs Propensity Score Matching in Multiple Sclerosis

PRESENTING AUTHOR
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Bora Youn – Biogen
Fabio Pellegrini – Biogen
Changyu Shen – Biogen
Carl de Moor – Biogen

6:00 - 6:30 PM
CLOSING CEREMONY

SPEAKERS
Syd Phillips – Chair, ICPE Scientific Program Committee
Anton Pottegård – University of Southern Denmark
Jesper Hallas – University of Southern Denmark

8:00 - 9:30 PM
PLENARY

COVID-19 Vaccines: Timely Global Real-World Evidence

Vaccines

MODERATOR
J. Bradley Layton – RTI Health Solutions

SPEAKERS
Miriam Sturkenboom – Department Datascience & Biostatistics, University Medical Center Utrecht
Steven Anderson – FDA/CBER
Carla Talarico – Moderna
Robert Chen – Brighton Collaboration
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WORKSHOP
Benefit-Risk Assessment, Communication, and Evaluation (BRACE)
Big Data in Health and Bioethics: A Call for a Comprehensive, Multi-Disciplinary, ISPE Position

PRESENTERS
Xavier Kurz – European Medicines Agency
Edward Bortnichak – Merck & Co., Inc.
Solomon Iyasu – Merck & Co. Inc.
Patrick Ryan – Janssen Research & Development
Ameet Sarpatwari – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School

AUTHOR
Peter Arlett – European Medicines Agency

Methods in Pharmacoepidemiology
Outcome Measurements for External Comparator Arms: New Opportunities for Epidemiology Methods Application and Development

PRESENTERS
Joan Largent – IQVIA
Emily Brouwer – Janssen
Cynthia Girman – CERobs Consulting, LLC
Christen Gray – AstraZeneca
Michele Jonsson Funk – University of North Carolina at Chapel Hill
Robert Glynn – Harvard T. H. Chan School of Public Health

CO-AUTHORS
Dimitri Bennett – Takeda
Kueiyu Joshua Lin – Brigham and Women’s Hospital
Daniela Moga – Department of Pharmacy Practice and Science, College of Pharmacy, University of Kentucky
Sabina Nduaguba – University of Florida
Mary Prince Panaccio – Research Outcomes Innovations
Xuerong Wen – University of Rhode Island, College of Pharmacy

Richard Wyss – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA
Hongbo Yuan – Canadian Agency for Drugs and Technologies in Health
Huifeng Yun – Department of Epidemiology, University of Alabama at Birmingham

Methods in Pharmacoepidemiology
Polypharmacy: Problems and Solutions for its Methodologic Challenges in Real-World Data

PRESENTERS
Amy Justice – US Department of Veterans Affairs
Christopher Rentsch – London School of Hygiene & Tropical Medicine; US Department of Veterans Affairs
Kirsha Gordon – VA CT Healthcare System
Jonathon Romero – Oak Ridge National Laboratory
Jordan Guillot – Université de Bordeaux

Vincent Lo Re – Center for Pharmacoepidemiology Research and Training, Center for Clinical Epidemiology and Biostatistics, Department of Biostatistics, Epidemiology, and Informatics, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA

Disease Epidemiology/Clinical Course

PRESENTERS
Montse Soriano Gabarro – Bayer AG
Dana Teltsch – Apellis
Mugdha Gokhale – Center for Observational and Real-world Evidence (CORE), Merck Research Laboratories
Paul Petraro – Head, RWE Analytic CoE, Boehringer-Ingelheim
Jeremy Rassen – Aetion, Inc.
Stephan Lanes – HealthCore Inc
Soko Setoguchi – RWJ Medical School, Center for Pharmacoepidemiology and Treatment Science (PETS), Institute for Health, Health Care Policy and Aging Research
Daniel Prieto-Alhambra – Centre for Statistics in Medicine (CSM), Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDROMS), University of Oxford, Oxford, UK
WORKSHOP
Methods in Pharmacoepidemiology
COVID-19 Confidential: Enabling Trust in COVID-19 Research with Fit for Purpose Real-World Data

PRESENTERS
Nicolle Gatto – Aetion, Inc.
Jessica Franklin – Optum
Elizabeth Garry – Aetion, Inc.
David Martin – Moderna
Aloka Chakravarty – Food and Drug Administration
Jeremy Rassen – Aetion, Inc.

Drug Utilization Research
Drug Utilization Research in Africa: Challenges and Potential Solutions

PRESENTERS
Maribel Salas – Clinical Safety and Pharmacovigilance, Daiichi Sankyo Inc Basking Ridge, NJ and CCEB/CPerRT, University of Pennsylvania Perelman School of Medicine
Johanita Burger – Medicine Usage in South Africa (MUSA), North-West University
Laura Horne – Clinical Safety and Pharmacovigilance, Daiichi Sankyo Inc Basking Ridge
Johanna Meyer – Division of Public Health Pharmacy and Management, School of Pharmacy, Sefako Makgatho Health Sciences University
Ilse Truter – Nelson Mandela University

Methods in Pharmacoepidemiology
Triangulating the Truth: State-of-the-Art Sensitivity Analyses for Observational Research

PRESENTERS
Marianne Cunnington – Glaxosmithkline
Ian Douglas – London School of Hygiene & Tropical Medicine
Jeremy Brown – London School of Hygiene and Tropical Medicine
Sonia Hernandez-Diaz – Harvard T.H. Chan School of Public Health
Daina Esposito – Boston University School of Public Health
Wilhelmine Meerhaus – Glaxosmithkline
WORKSHOP

Informatics
From the Individual Through the Health System and Back: The Interdisciplinary Promise and Challenges of Digital Epidemiology for Improved Outcomes (An ISPE Digital Epidemiology SIG Endorsed Symposium)

PRESENTERS
Lisa Weiss – Health Information Technology Lab
Heidi Dohse – Tour de Heart
Dana Teltsch – Apellis
Nancy Dreyer – IQVIA
John Cai – Merck
Helga Gardarsdottir – Division of Pharmacoepidemiology and Clinical Pharmacology, Utrecht Institute for Pharmaceutical Sciences, Utrecht University

Pregnancy and Lactation
How to Emulate a Target Trial to Study the Effects of Treatments for and During Pregnancy

PRESENTERS
Sonia Hernandez-Diaz – Harvard T.H. Chan School of Public Health
Sonja Swanson – Department of Epidemiology, Erasmus MC
Jennifer Yland – Department of Epidemiology, Boston University School of Public Health
Kristin Palmsten – HealthPartners Institute

Drug Effectiveness
Lessons for Regulatory Decision-Making from Real-World Data Trial Emulation Results

PRESENTERS
Shirley Wang – Brigham and Women’s Hospital, Harvard Medical School
Sebastian Schneeweiss – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA
William Crown – Brandeis University
Joseph Ross – Yale University
Peter Arlett – European Medicines Agency
Kenneth Quinto – US Food and Drug Administration
Yoshiaki Uyama – Pharmaceutical Devices and Medicines Agency

Vaccines
Methodological Approaches to Evaluating the Safety and Effectiveness of Multi-Dose Coronavirus Disease 2019 (COVID-19) Vaccines Series

PRESENTERS
Hui-Lee Wong – CBER, Center for Biologics Evaluation and Research, U.S. Food and Drug Administration
Xabier Garcia de Albeniz – RTI Health Solutions
Anne MobleyButler – Washington University in St. Louis
Heather Whitaker – Public Health England
Marc Suchard – University of California, Los Angeles

WORKSHOP

Methods in Pharmacoepidemiology
A Call for ‘Environmental Pharmacoepidemiology’: Medications, Global and Local Environments, and Health Outcomes

PRESENTERS
Benjamin Bates – Rutgers Robert Wood Johnson Medical School
Sean Hennessy – Center for Pharmacoepidemiology Research and Training, Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania, Philadelphia, PA, USA
Michelle Bell – School of the Environment, Yale University, New Haven, CT, USA
Paul Coplan – Johnson & Johnson
Rachel Nethery – Department of Biostatistics, Harvard T.H. Chan School of Public Health
Soko Setoguchi – RWJ Medical School, Center for Pharmacoepidemiology and Treatment Science (PETS), Institute for Health, Health Care Policy and Aging Research

Methods in Pharmacoepidemiology
Believability of Real-World Evidence (RWE) for Informed Regulatory Decisions

PRESENTERS
Jacinthe Leclerc – Universite du Quebec a Trois-Rivieres
Kimberly Brodovicz – Boehringer Ingelheim
Stephen Chang – FDA
Magdalene Assimon – University of North Carolina School of Medicine
Hisashi Urushihara – Keio Univesity
Cynthia Girman – CERobs Consulting, LLC
Methods in Pharmacoepidemiology

New Frontiers in Computable Phenotyping for Medical Product Safety Evaluation

PRESENTERS
Rishi Desai – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA
David Carrell – Kaiser Permanente Washington Health Research Institute
Robert Ball – FDA
Katherine Liao – Brigham and Women’s Hospital
Lindsay Collin – Huntsman Cancer Institute, University of Utah, Salt Lake City, UT, USA
Sebastian Schneeweiss – Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA

Methods in Pharmacoepidemiology

Using Real-World External Controls to Support Drug Approval: An Interactive Framework Using Oncology Trial and Real-World Data

PRESENTERS
Laura Hester – Janssen R&D, LLC
Donna Rivera – US Food & Drug Administration
Jennifer Lund – Department of Epidemiology, University of North Carolina at Chapel Hill
Asieh Golozar – Regeneron Pharmaceuticals
Kourtney Davis – Janssen R&D, LLC
John Seeger – Optum Epidemiology
Leah Sansbury – GlaxoSmithKline

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**Symposia/Workshops**

**WORKSHOP**

**Disease Epidemiology/Clinical Course**

**Pediatric Infection with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV 2) and Potential Health Consequences (Submitted on behalf of the ISPE RWE COVID-19 Workgroup)**

**PRESENTERS**

- Katherine Panageas – Memorial Sloan Kettering Cancer Center
- Kenneth Kehl – Dana-Farber Cancer Institute, Harvard Medical Center
- Devin Incerti – Genentech
- Til Stürmer – Department of Epidemiology, University of North Carolina at Chapel Hill

**Methods in Pharmacoepidemiology**

**Strategies for the Use of Real-World Data to Conduct COVID-19-Related Pharmacoepidemiology**

**PRESENTERS**

- Vincent Lo Re – Center for Pharmacoepidemiology Research and Training, Center for Clinical Epidemiology and Biostatistics, Department of Biostatistics, Epidemiology, and Informatics, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA
- Noelle Cocoros – Harvard Pilgrim Health Care Institute
- Candace Fuller – Harvard Pilgrim Health Care Institute
- Wei Hua – Center for Drug Evaluation and Research, United States Food and Drug Administration
- Silvia Perez-Vilar – Office of Surveillance and Epidemiology, Center for Drug Evaluation and Research, US Food and Drug Administration

**Medical Devices**

**Product Surveillance and Signal Management: Now is the Time for Methodologist Engagement!**

**PRESENTERS**

- Mary Beth Ritchey – Med Tech Epi
- Danica Marinac-Dabic – FDA/CDRH
- Theodore Lystig – Medtronic
- Paul Coplan – Johnson & Johnson

**Methods in Pharmacoepidemiology**

**RWE Blueprints: Decoding SPACE, SPIFD, Start-RWE, and Other Tools Promoting Principled Pharmacoepidemiology**

**PRESENTERS**

- Elizabeth Garry – Aetion, Inc.
- Nicolle Gatto – Aetion, Inc.
- Shirley Wang – Brigham and Women’s Hospital, Harvard Medical School
- Ulka Campbell – Pfizer, Inc.

**Methods in Pharmacoepidemiology**

**Selection Matters: Addressing Biases in Linked**
Oral Presentations

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Samuel Ewusie1 | Janifer Quick2 | Elaine Morrato3
Gita Toyserkani2
1ORISE Fellow, Division of Risk Management, FDA; 2Division of Risk Management, FDA; 3Parkinson School of Public Health, Loyola University Chicago

Jak Inhibitors and the Risk of Cardiovascular and Venous Thromboembolism Events Among Patients with Rheumatoid Arthritis: A Network Meta-analysis of Clinical Trials
Carlos Alves1 | Ana Penedones2 | Diogo Mendes2
Francisco Batel Marques3
1University of Coimbra, School of Pharmacy; 2UFC – Coimbra Regional Pharmacovigilance Unit, CHAD – Centre for Health Technology Assessment and Drug Research, AIBILI; 3Faculty of Pharmacy, University of Coimbra

Preferences Concerning Drug Safety Communication of Hospital-Based Specialist in the Netherlands
Esther de Vries1 | Elisabeth Bakker1 | Petra Denig2
Peter Moi2
1University of Groningen, University Medical Center Groningen, Department Clinical Pharmacy and Pharmacology, Groningen, the Netherlands; 2University Medical Center Groningen; 3University of Groningen, University Medical Center Groningen, Department of Clinical Pharmacy and Pharmacology, The Netherlands

Regulatory Approval of Phentermine/topiramate for Obesity Management and Off-label Use of Topiramate: A Fairytale for Drug Repurposing and a Maze for Risk Mitigation
Amir Sarayani1 | William T. Donahoo2 Christian Hampp3
Joshua D Brown4 | Almut G Winterstein5
1University of Florida Department of Pharmaceutical Outcomes and Policy; 2College of Medicine, University of Florida; 3US Food and Drug Administration; 4Department of Pharmaceutical Outcomes and Policy, College of Pharmacy, University of Florida; 5Department of Pharmaceutical Outcomes and Policy and Center for Drug Evaluation and Safety, College of Pharmacy, University of Florida

Risk of Myocardial Infarction, Stroke or Death in New Users of Intravitreal Aflibercept vs New Users of Intravitreal Ranibizumab: A Nationwide Cohort Study
Sophie Billioti de Gage1 | Marion Bertrand2
Mahmoud Zureik2
1French National Agency for Medicines and Health Products Safety; 2EPI-PHARE, Epidemiology of Health Products (French National Agency for the Safety of Medicines and Health Products, and French National Health Insurance)

What Matters to Patients When Considering Treatments for Prevention of Rheumatoid Arthritis: A Preference Study in the United Kingdom, Germany, and Romania
Rachael DiSantostefano1 | Marie Falahée2
Gwenda Simons2 | Matthias Englbrecht3
Christine Radawski4 | Karim Raza5 | Jorien veldwijk6
1Johnson & Johnson; 2Institute of Inflammation and Ageing, College of Medical and Dental Sciences, University of Birmingham, Birmingham, UK; 3Freelance Data Scientist, Eckental, Germany; 4Eli Lilly and Company; 5School of Health Policy & Management, Erasmus University Rotterdam, Rotterdam, The Netherlands

BIOLOGICS / BIOSIMILARS

Discontinuation Rate of Tofacitinib is Similar When Compared to TNF Inhibitors in Rheumatoid Arthritis Patients: Data from a Rheumatoid Arthritis Cohort
Mohammad Movahedi1 | Angela Cesta2 | Xiuying Li3; Edward Keystone3; Claire Bombardier2; OBRI Investigators4
1University Health Network (Toronto); 2Toronto General Hospital Research Institute, University Health Network, Toronto, ON; 3Department of Medicine, University of Toronto, Toronto, ON; 4Toronto General Hospital Research Institute, University Health Network, Toronto, ON

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Chronic Diseases, Health Conditions and Risk of COVID-19-related Hospitalization and In-hospital Mortality During the First Wave of the Epidemic in France: A Cohort Study of 66 Million People
Mahmoud Zureik1 | Laura Semenzato2 | Jeremy Botton2
Jérôme Drouin2 | François Cuenot2 | Rosemary Dray-Spira3
Alain Weill4
1EPI-PHARE, Epidemiology of Health Products (French National Agency for the Safety of Medicines and Health Products, and French National Health Insurance); 2EPI-PHARE Scientific Interest Group in Epidemiology of Health Products from the French National Agency for the Safety of Medicines and Health Products and the French National Health Insurance; 3EPI-PHARE, Epidemiology of Health Products (French National Agency for the Safety of Medicines and Health Products [ANSM], and French National Health Insurance [CNAM]), Saint-Denis, France; 4French National Health Insurance Fund (Assurance Maladie)

Comparable COVID-19 Outcomes with Current Use of GLP-1 Receptor Agonists, DPP-4 Inhibitors or SGLT-2 Inhibitors Among Patients with Diabetes Who Tested Positive for sars-cov-2
Simone Bastrup-Israelsen1 | Anton Pottegård2
Håkon Sandholdt1 | Sten Madsbad3 | Reimar Thomsen4
Thomas Benfield5
1Center of Research and Disruption of Infectious Diseases, Department of Infectious Diseases, Copenhagen University Hospital, Aarhus and Hvidovre, Hvidovre, Denmark; 2University of Southern Denmark; 3Department of Endocrinology, Copenhagen University Hospital, Amager and Hvidovre, Hvidovre, Denmark; 4Department of Clinical Epidemiology - Aarhus University; 5Department of Clinical Epidemiology, Aarhus University Hospital, Aarhus, Denmark

Development and Validation of an Algorithm to Estimate the Risk of Severe Complications of COVID-19 to Prioritise Vaccination
Ron M.C. Herings1 | Karin Swart1 | Bernard van der Zeijst2
Amber van der Heijden3 | Koos van der Velden4
Eric Hiddink5 | Martijn Heymans6 | Reinier Herings7
Hein van Hout8 | Joline Beulens9 | Giel Nijpels3
Petra Elders3
1PHARMO Institute; 2Department of Medical Microbiology, Leiden University Medical Center, Leiden, the Netherlands; 3Department of General Practice, Amsterdam UMC – Vrije Universiteit, Amsterdam Public Health, Amsterdam, the Netherlands; 4Department of Primary and Community Care, Academic Collaborative Center AMPHL Integrated Health Policy, Radboud University Medical Center, Nijmegen, the Netherlands; 5Stichting Health Base, Houten, the Netherlands; 6Department of Epidemiology & Data Science, Amsterdam UMC – Vrije Universiteit, Amsterdam Public Health, Amsterdam Cardiovascular Sciences, Amsterdam, the Netherlands; 7Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht, Utrecht, the Netherlands

Hyperthyroidism and Breast Cancer Recurrence and Mortality: A Danish Population-based Cohort Study
Line Libergreen1 | Rikke Noergaard Pedersen2
Anders Kjærgaard3 | Deirdre Cronin-Fenton4
1Department of Clinical Epidemiology - Aarhus University; 2Department of Clinical Epidemiology, Aarhus University Hospital; 3Department of Clinical Epidemiology - Aarhus University Hospital; 4Department of Clinical Epidemiology, Aarhus University Hospital, Aarhus, Denmark

Impact of Non-alcoholic Steatohepatitis (NASH) Case Definition on Population Characteristics Identified in a US Claims Database
Kerrin Gallagher1 | Daina B Esposito2 | Aziza Jamal-Allial1
Simo Du3 | Yuval Patel4 | Mindie Nguyen5 | Erik Ness6
Thomas Capozza7 | Lina Titievsky6
1HealthCore, Inc.; 2Boston University School of Public Health; 3HealthCore; 4Duke University; 5Stanford University; 6Intercept Pharmaceuticals; 7Intercept Pharmaceuticals, Inc.

Incidence and Risk Factors for COVID-related Urgent Medical Visits Among US Patients Diagnosed with COVID-19 in the Outpatient Setting
Wenhui Wei1 | Scott Mellis1 | Gregory P Gaba1
Sumathi Sivapalasingam1 | Jessica Jelbert1
1Regeneron Pharmaceuticals, Inc., Tarrytown, NY; 2Regeneron Pharmaceuticals

Incidence Rates of Select Outcomes Among Patients with Non-alcoholic Steatohepatitis (NASH) and Evidence of Fibrosis and Cirrhosis
Monica Bertola1 | Erik Ness2 | Thomas Capozza3
Lina Titievsky2 | John D Seeger1
1Optum Epidemiology; 2Intercept Pharmaceuticals; 3Intercept Pharmaceuticals, Inc.

Persistence of COVID-19 Symptoms 90 Days Post-acute Infection: Insights from a Community-based Registry
Matthew Reynolds1; Nancy A. Dreyer; Lisa Albert1; Emma Brinkley2; Damir Mohamed1; Christina Mack2
1IQVIA; 2IQVIA

Severe Obesity Is a Risk Factor for Mortality in Patients with COVID-19
Aisling Caffrey1 | Jennifer Liao2 | Vrishali Lopes3
Kerry LaPlante3
1University of Rhode Island College of Pharmacy; 2Department of Veterans Affairs; 3Infectious Diseases Research Program, Providence Veterans Affairs Medical Center, Providence, RI, United States
The Effect of Epidural Steroid Injections on Fracture Risk Among Medicare Patients
Huiyun1 | Ye Liu2 | Kenneth Saag3 | Katherine Haseltine4 | Emily Stein4 | Jeffrey Curtis5
1Department of Epidemiology, University of Alabama at Birmingham; 2University of Alabama at Birmingham; 3Division of Clinical Immunology and Rheumatology; 4HSS hospital; 5University of Alabama Birmingham

Utilizing the National COVID Cohort Collaborative (N3C) to Evaluate Risk of Serious Outcomes with COVID-19 Among Chronically Immunosuppressed Persons
Kaye Andersen1 | Emaan S Rashid1 | Huiyun An3 | Hemal Kumar B Mehta4 | Derek Ng2 | Brian Garibaldi5 | Jodi Segal6
1Division of Clinical Epidemiology, Johns Hopkins Bloomberg School of Public Health; 2Pfizer Inc; 3Optum, Boston, MA, USA; 4Health Catalyst; 5Optum; 6Optum; 7Pfizer Inc; 8Optum; 9Optum, Boston, MA, USA

Predictors of Critical Care, Mechanical Ventilation, and Mortality Among Hospitalized Patients with COVID-19 in an Electronic Health Record Database
Andrea Chomistek1 | Caihua Liang2 | Michael Doherty3 | Robin Clifford3 | Rachel Ogilvie1 | Robert Gately3 | Jennifer Song3
Cheryl Enger1 | Nancy Lin2 | Florence Wang3 | John Seeger1
1Optum Epidemiology; 2Pfizer Inc; 3Optum; 4Optum, Boston, MA, USA; 5Health Catalyst

Anticoagulants and All-Cause Mortality Among Hospitalized COVID-19 Patients
Caihua Liang1 | Li Zhou2 | Michael Doherty2 | Robert Gately3 | Rachel Ogilvie3 | Andrea Chomistek3
Florence Wang2 | John D Seeger3 | Jessica Franklin2
1Pfizer Inc; 2Optum; 3Optum Epidemiology

Calibrating Real-world Evidence Studies Against Randomized Trials: Treatment Effectiveness of Infliximab in Inflammatory Bowel Disease
Julien Kirchgesner1 | Rishi J Desai2 | Maria Schneeweiss3 | Laurent Beaugerie1 | Seoyoung Kim3
Sebastian Schneeweiss5
1Sorbonne Université, INSERM, Institut Pierre Louis d’Epidémiologie et de Santé Publique, Paris, France; 2Harvard Medical School/ Brigham & Women’s Hospital; 3BWH Div of Pharmacoepidemiology and Pharmacoeconomics; 4Sorbonne Université, INSERM, Institut Pierre Louis d’Epidémiologie et de Santé Publique, AP-HP, Hôpital Saint-Antoine, Department of gastroenterology, Paris, France; 5Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, Massachusetts, USA

Cardiovascular Effectiveness of SGLT-2 Inhibitors vs Metformin as First-line Treatment for Type 2 Diabetes
Hojin Shin1 | Sebastian Schneeweiss2 | Robert Glynn3
Elisabetta Patorno4
1Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School; 2Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School; 3Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, Massachusetts, USA; 4Harvard T. H. Chan School of Public Health

Comparative Effectiveness of Empagliflozin in Reducing Total Cardiovascular Events in the Empagliflozin Comparative Effectiveness and Safety (EMPRISE) Study
Rishi Desai1 | Robert Glynn2 | Brendan Everett3
Sebastian Schneeweiss4 | Deborah Wexler5
Anouk Derauz Luyet6 | Olga Vedin6 | Kimberly Brodovicz6
Ajinkya Pawar7 | Elisabetta Patorno8
1Harvard Medical School/Brigham & Women’s Hospital; 2Harvard T. H. Chan School of Public Health; 3Brigham and Women’s Hospital; 4Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, Massachusetts, USA; 5Boehringer-Ingelheim; 6Boehringer Ingelheim International GmbH; 7Sanoﬁ; 8Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School

DISEASE EPIDEMIOLOGY / CLINICAL COURSE
Convalescent Plasma Therapy and Mortality Among US Veterans Hospitalized with Non-severe COVID-19: An Observational Analysis Emulating a Target Trial
Katherine Kurgansky1 | Kelly Cho2 | Sarah Keithly3
Arin L Madenci4 | Hanna Gerlovin5 | Helen Wellman6 Annie Doubleday7 | Eva Thomas7 | Yojin Park8 | Yuk-Lam Ho7
Jonathan Sugimoto3 | Kathryn Moore3 | Alexander Peterson3
Constance Hoag9 | Kalpana Gupta9 Karen Jeans9 | Molly Klete9
Rachel Ramoni9 | Grant Huang9 | Juan Casas9 David Gagnon9
Miguel Hernán10 | Nicholas Smith11 | J. Michael Gazzino10
1Massachusetts Veterans Epidemiology Research and Information Center, VA Boston Healthcare System; 2MAVERIC, VA Boston Healthcare System; 3Seattle Epidemiologic Research and Information Center; 4VA Healthcare System; 5Harvard T.H. Chan School of Public Health; 6MAVERIC; VA Boston Healthcare System; 7MAVERIC; VA Boston Healthcare System; 8MAVERIC; VA Boston Healthcare System; 9VA Boston Healthcare System; 10Veterans Administration Boston Healthcare System; 11Department of Veterans Affairs Office of Research and Development; 12Departments of Epidemiology and Biostatistics, Harvard T.H. Chan School of Public Health; 13Seattle Epidemiologic Research and Information Center, Department of Veterans Affairs

Effect of SGLT-2 Inhibitors on EGFR in Type 2 Diabetes with Different Baseline Renal Functions: A Multi-center Study
Fang-Ju Lin1 | Chi-Chuan Wang2 | Chien-Ning Hsu3
Chen-Yi Yang3 | Chih-Yuan Wang4 | Huang-Tz Ou4
1National Taiwan University Hospital; 2National Taiwan University; 3Department of Pharmacy, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung, Taiwan; 4Institute of Clinical Pharmacy and Pharmaceutical Sciences, College of Medicine, National Cheng Kung University, Tainan, Taiwan; 5College of Medicine, National Taiwan University, Taipei, Taiwan

Efficacy and Safety of Treatments for Nonmetastatic Castration-resistant Prostate Cancer: A Matching-adjusted Indirect Comparison and Network Meta-analysis
Lin Wang1 | Channing Paller2 | Hwanhee Hong3
Otis Brawley2 | G. Caleb Alexander4
1Department of Epidemiology, Johns Hopkins University Bloomberg School of Public Health; 2The Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University School of Medicine; 3Duke Clinical Research Institute, Duke University; 4Johns Hopkins Center for Drug Safety and Effectiveness

Initiation of Sodium-glucose Co-transporter 2 Inhibitors and Progression of Renal Disease Among Patients with Type 2 Diabetes: A Population-based Cohort Study
Wajd Alkabban1 | Arsene Zongo2 | Dean Eurch3
Baiju Shah4 | Jasjeet Minhas-Sandhu3
Mhd. Wamal Alsabbagh1 | John-Michael Gamble1
1School of Pharmacy, University of Waterloo; 2Faculty of Pharmacy, Université Laval; 3School of Public Health, University of Alberta; 4Department of Medicine, University of Toronto

Physician and Patient Reported Effectiveness Outcomes Are Similar in Tofacitinib and TNF Inhibitors in Rheumatoid Arthritis Patients: Data from a Rheumatoid Arthritis Registry in Canada
Mohammad Movahedi1 | Angela Cesta2 | Xiuying Li2
Edward Keystone3 | Claire Bombardier2 | OBRI Investigators4
1University Health Network (Toronto); 2Toronto General Hospital Research Institute, University Health Network, Toronto, ON; 3Department of Medicine, University of Toronto, Toronto, ON; 4Toronto General Hospital Research Institute, University Health Network, Toronto, ON

Oral Presentations

Safety and Effectiveness of Prophylactic Anticoagulation for Prevention of COVID-19 Mortality: A Nationwide Cohort Study of Hospitalised Patients in the US
Christopher Rentsch1 | Joshua Beckman2
Laurie Tomlinson1 | Waldell Gellad3 | Charles Alcorn3
Farah Kidwai-Khan4 | Melissa Skanderson6 | Evan Brittain2
Joseph King5 | Yuk-Lam Ho6 | Svetlana Eden9
Suman Kundu10 | Michael Lann11 | Robert A Grevey11
P. Michael Ho8 | Paul Heidenreich11 | Daniel Jacobson12
Ian Douglas3 | Janet Tate6 | Stephen Evans5 | David Atkins6
Amy Justice13 | Matthew Freiberg14
1London School of Hygiene and Tropical Medicine; 2Vanderbilt University Medical Center and Vanderbilt Translational and Clinical Cardiovascular Research Center; 3London School of Hygiene & Tropical Medicine; 4Division of General Internal Medicine, Department of Medicine, University of Pittsburgh; 5University of Pittsburgh; 6US Department of Veterans Affairs; 7Yale School of Medicine; 8VA Boston Healthcare System; 9Vanderbilt University School of Medicine; 10Vanderbilt University Medical Center; 11Stanford University School of Medicine; 12Oak Ridge National Laboratory; 13VA Connecticut Healthcare System West Haven; 14Vanderbilt University Medical Center; US Department of Veterans Affairs

Shorter Drug Holiday After 3 or More Years of Risedronate vs Alendronate Is Important to Maintain Osteoporotic Fracture Protection
Kaley Hayes | Kevin Brown1 | Angela Cheung3
David Juurlink1 | Suzanne Cadarette4
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Changes in Buprenorphine Utilization During the COVID-19 Pandemic in the US
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**DRUG UTILIZATION RESEARCH**

**COVID-19 in Children: Treatment Patterns in the Real-world Hospital Setting**
Lawrence Rasouliyan¹ | Vikas Kumar² | Stacey Long²
Mitesh Rao²
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**Disparities in Hepatitis C Treatment in the Era of Direct-acting Antivirals Among Arizona Medicaid Beneficiaries**
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**Do Medicare Part D Low-income Subsidies Narrow Disparities in Orally-administered Antimyeloma Therapy Initiation?**
Shelley Jazowski¹ | Cleo Samuel-Ryals¹ | William Wood¹
Leah Zullig² | Justin Trogdon¹ | Stacie Dusetzina³
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**Geographic Variation in the Use of Gabapentinoids and Opioids for Pain in a Commercially Insured Population in the United States**
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**Oral Presentations**

**Drug Utilization Research**

Heterogeneity and Temporal Variation in the Management of COVID-19: A Multinational Drug Utilisation Study Including 274,719 Hospitalised Patients From, the United States of America, China, Spain, and South Korea

Albert Prats-Uribé1 | Anthony Sena2 | Lana Yin Hui Lai3

Waheed-Ul-Rahman Ahmed4 | Heba Alghoul5 | Osaib Alser6

Thamir Alshammar7 | Carlos Areia8 | William Carter9

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**Influence of Drug Safety Advisories on Drug Utilization: An International Interrupted Time Series and Meta-analysis Study**

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Marie De Bruin3 | Elizabeth Roughead4 | Joel Lexchin5

Anna Kemp-Casey5 | Lorri Puil1 | Ingrid Sketris6

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**Non-adherence and Non-persistence with Direct Oral Anticoagulants Increases the Risk of Stroke: Assessment in Three European Databases**

Emily Holthuis1 | Elisabeth Smits2 | Dominik Beier3

Dirk Enders1 | Rosa Gini1 | Claudia Bartolini1

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Prevalence of Osteoporosis and Its Treatment Among Women ≥50 in NHANES: 1999-2018
Sophie Mayer1 | Leah McGrath2 | Min Kim3
Michele McDermott3 | M. Alan Brookhart4
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Primary Care Physicians’ Preparedness to Treat Opioid Use Disorder in the United States: A Cross-sectional Survey
Kathryn Foti1 | James Heyward1 | Matthew Tajanlangit2
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Prior Opioid Tolerance Among New Users of Transdermal Fentanyl in Taiwan, 2011-2018
Chih-Wan Lin1 | Yu-Chun Chiu2 | Wei-i Huang2
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Ranitidine and Other histamine2-receptor Antagonists – A Rapid Response Drug Utilisation Study Using Electronic Health Care Data from Six European Countries
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Real World Use of Anticoagulation Among Hospitalized Patients with COVID-19 in the United States
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Serum Vitamin D Levels and Incident Prescription Opioid Use Among Opioid-Naïve Patients
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Sources of Racial/ethnic Disparities in Antidepressant Treatment: Analysis of the Medical Expenditure Panel Survey Data
Macarius Donneyong | Teng-Jen Chang
The Ohio State University

Substantial Heterogeneity in the Management of Hospitalized Patient with COVID-19
Aisling Caffrey1 | Jennifer Liao2 | Vrishali Lopes3
Kerry LaPlante3
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The Impact of Sex on the Quality of Medication Treatment in Patients with Type 2 Diabetes
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Sieta de Vries3 | Petra Denig3
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Trajectories of Pregabalin Use and Their Association with Longitudinal Changes in Opioid and Benzodiazepine Daily Dose
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Trends and Outcomes of Serious Complications Associated with Non-fatal Opioid Overdoses in Ontario, Canada
Sophie Kitchen1 | Daniel McCormack2 | Daniel Werb1
Alexander Caudarella1 | Diana Martins1 | Flora Matheson1
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Trends in Long-term Use of Prescribed Opioids in Norway 2010-2019
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Svetlana Skurtveit4
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Use of Cardiovascular and Antidiabetic Drugs During COVID19 Epidemic in France
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Utilization of Non-pharmacologic Pain Therapies Among Primary Care Physicians in the United States: A Cross-sectional Survey
James Heyward1 | Kathryn Foti | Matthew Tajanlangit2
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Visualizing Inappropriate Antibiotic Use Following Otitis Media in Children in the United States
Leah McGrath1 | Jason Newland2 | John Sahrmann2
YinJiao Ma3 | Anne Mobley M Butler3
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Assessment of Co-medication Quality in Older Colorectal Cancer Patients at Hospital Discharge After Tumor Surgery and Its Associations with Chemotherapy-related Adverse Drug Reactions and 5-year Survival
Li-Ju Chen | Ben Schöttker
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Bisphosphonate Use and Risk of Severe Acute Kidney Injury: A Self-controlled Case Series in Frail Elderly Patients in the UK
Tetsuro Oda1 | Annika Jodicke2 | Danielle Robinson3
Antonella Delmestri4 | Ruth Keogh1
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Comparative Risk of Cardiac Arrhythmias Associated with Acetylcholinesterase Inhibitor Use
Yichang Huang1 | John-Michael Gamble2
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Risk of Cardiotoxicity Associated with Fluoropyrimidine-based Chemotherapy Among Older Colorectal Cancer Patients: A New User Cohort Study
Chao Li1 | Chiahung Chou1 | Surachat Ngorsuraches1
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1Auburn University; 2Indiana University

Risk of Delirium Associated with Antimuscarinics in Older Adults: A Case-time-control Study
Prasad Nishtala
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Risk of Falls Following the Initiation of Antihypertensives in the Elderly: A Self-controlled Case Series in the UK
Annika Jodicke1 | Eng Hooi (Cheryl) Tan1
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Statin Discontinuation and Risk of Cardiovascular Events in Older People: A Population-based Cohort Study in Denmark
Wade Thompson1 | Lucas Morin2 | Dorte Ejg Jarbøl3
Jacob Andersen1 | Martin Ernst1 | Jesper Nielsen1
Peter Haastrup1 | Morten Schmidt3 | Anton Pottegård1
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Uncontrolled Pain and Risk for Depression and Behavioral Symptoms in Patients with Dementia
Yu-Jung "Jenny" Wei1 | Almut Winterstein2
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Use of Medications with Anticholinergic and Sedative Properties and Fall-related Fractures Among Older Adults
Shahar Shmuel1 | Virginia Pate2 | Marc Pepin3
Janine Bailey2 | Yvonne Golightly2 | Laura Hanson4
Til Stürmer5 | Rebecca Naumann2 | Danijela Gnjidic6
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HEALTH ECONOMICS/OUTCOME RESEARCH

Comparative Risk of Hospitalization for Heart Failure Among Patients with Xanthine Oxidase Inhibitors and Uricosuric Agents
Fang-Ju Lin¹ | Yu-Hsin Wang² | Chien-Ning Hsu³
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Cost-effectiveness of Systematic Treatments for Metastatic Castration-sensitive Prostate Cancer: An Economic Evaluation Based on Network Meta-analysis
Lin Wang¹ | Jeromie Ballreich² | Hwanhee Hong³
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Impact of Race, Ethnicity, and Sex on Treatment of Non-valvular Atrial Fibrillation
Larry Jackson¹ | Diane Francis² | Sonia Maccioni²
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Participant Engagement and Adherence in an Arthritispower Real-world Study to Capture Smartwatch and Patient-reported Outcome Data Among Rheumatoid Arthritis Patients
Jeffrey Curtis¹ | Benjamin Nowell² | Cassie Clinton³
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Telemedicine Use Among U.S. Patients with Cancer During the COVID-19 Pandemic
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Shifting the Traditional Model of Analysing Downloaded Electronic Health Records to the Novel Open-source Analytics OpenSafely Platform
Angel Wong¹ | Brian MacKenna² | Caroline Morton² | Anna Schultze | Alex Walker² | Krishnan Bhaskaran¹
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MEDICAL DEVICES

An Evaluation of Direct and Propensity Score Matching vs Propensity Score Stratification for Confounding Adjustment in Primary Total Hip Arthroplasty
Abhishek Chitnis¹ | Jack Mantel² | Juan Daccach³
Preerna Kothari⁴ | Jill Ruppenkamp³ | Paul Coplan³
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Comparative Patient Characteristics of Transcatheter Left Atrial Appendage Occlusion vs Oral Anticoagulants for Stroke Prevention in Atrial Fibrillation
Joshua Lin | Daniel Singer¹ | Sushama Kattinakere Sreedhara² | Krishna F Huybrechts³
Sebastian Schneeweiss⁴
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Comparison of 10- and 15-year Outcomes of Bioprosthetic and Mechanical Aortic Valve Replacement in Patients Aged Under 65 Years: Australian Study Using Linked Data for 4,704 Patients
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Leveraging Artificial Intelligence (AI) Technologies for Automated Identification of Total Knee Arthroplasty (TKA) Devices in Electronic Health Records
Elham Sagheb¹ | Shi Yan¹ | Taghi Ramazanian¹ | Sunyang Fu¹
Ahmad Tafti² | Sungwhan Sohn¹ | Hilal Maradit Kremers³
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Persistence of Anticoagulation After Receiving Transcatheter Left Atrial Appendage Occlusion vs Oral Anticoagulants for Stroke Prevention in Atrial Fibrillation
Joshua Lin | Daniel Singer¹ | Sushama Kattinakere Sreedhara² | Krishna F Huybrechts³
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Population Testing for COVID-19: Can a Rapid Antigen Test Rule out Infection?
Christina Mack¹ | Michael Osterholm³ | Erin Wasserman³
Natalia Petruski-Ivieva³ | Deverick J Anderson⁴
Emily Myers⁵ | Navdeep Singh⁶ | Patti Walton⁷
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Real-world Epidemiologic and Genetic Evidence Synthesis Reveals the Sex-dependent Role of GNAS Snps in Hip Arthroplasty Related Periprosthetic Osteolysis
Wei-Lun Alterovitz¹ | Lam Phuc Vinh Nguyen¹
John Dougherty¹ | Elaine Thompson¹ | Hussien Ezzeldin¹
Luis Santana-Quintero¹ | Konstantinos Karagiannis¹
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Sex-differences in Risk of Early Revision After Primary Total Knee Arthroplasty
Suvekshya Aryal¹ | Per-Henrik Randsborg²
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Amanda Chen¹ | Vincent Devlin⁵ | Raquel Peat⁵
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The Association Between Bariatric Surgery and Carpal Tunnel Syndrome: A Cohort Study from Swedish Nationwide Healthcare Registries
Jennifer Lane¹ | Dag Holmberg² | Andrea Burden³
Dominic Furniss¹ | Theresa Burkard⁴
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The Association Between Bariatric Surgery and Cataract: A Cohort Study from Swedish Nationwide Healthcare Registries
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METHODS IN PHARMACOEPIDEMIOLOGY

A New Method to Estimate the Total Cohort Size for Patient Recruitment in self-controlled Case Series Study
Ling Li1 | Stephen Schachterle2 | Charles Wentworth3
Heather Rubino2 | Ann Madsen2 | Xiaofeng Zhou2
1HealthCore, Inc.; 2Pfizer Inc; 3Pfizer Inc.

A Plasmode Simulation of Covariate Misclassification and Transportability
Michael Andrew Webster-Clark1 | Jessie K Edwards2
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A Systematic Approach Towards Missing Lab Data in Electronic Health Records: A Case Study in Non-small Cell Lung Cancer and Multiple Myeloma
Janick Georg Weberpals1 | Arjun Sondhi2
Chengsheng Jiang2 | Prakirthi Yerram2 | Michael Taylor3
Megha Samant1 | Sarah T Cherng2
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Cardinality Matching vs Propensity Score Matching in Multiple Sclerosis
Nicholas Belviso | Gabrielle Simoneau | Bora Youn
Fabio Pellegrini | Changyu Shen | Carl de Moor
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Categorization of COVID-19 Severity to Determine Mortality Risk
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Controlling for Differential Regression to the Mean Using Summary Measures of Pre-treatment Laboratory Values in Propensity Scores
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Ying Yu4 | M. Alan Brookhart4
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Death Documentation Lag in COVID-19 Electronic Health Record (EHR) Suggests Caution in Near-real-time Analysis
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Carolyn Brown1 | Alvan Cheng2 | Kimberly Roehl2
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Disease Risk Score as Alternative to Propensity Score Under Multiple Confounders and High Prevalence of Outcome: A Simulation Study Motivated by the Emergence of Multiple Repurposed Medicines During the COVID-19 Pandemic
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Evaluating When Effect Estimates Change After Propensity Score Trimming Because of Differing Effect Measure Modifier Distributions
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Graphical Representation of an Array of Quantitative Bias Analysis Scenarios for Differential Outcome Misclassification

J Bradley Layton¹ | Ryan Ziemiecki¹ | Heather Danysh¹
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Identifying Active Pregnancies Using ICD-10 Z3A Codes vs Completed Pregnancies Using Outcomes

Monica Bertola³ | Li Zhou⁴ | Michael Doherty⁵
Florence Wang⁶ | John Seeger⁷
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Improving Methods of Identifying Anaphylaxis for Medical Product Safety Surveillance Using Natural Language Processing and Machine Learning

David Carrell¹ | Susan Gruber¹ | James Floyd⁸
Maralyssa Bann¹ | Kara Cushing-Haugen¹ | Ron Johnson¹
Vina Graham¹ | David Cronkite¹ | Brian Hazlehurst⁸
Andrew Felcher¹ | Cosmin Bejan⁹ | Adee Kennedy⁹
Mayura Shinde⁸ | Sara Karmi⁸ | Yong Ma¹⁰
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Longitudinal Adherence Trajectories to Biologic Disease Modifying Anti-rheumatic Drugs in Tuscany, Italy

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Rosa Gini³ | Massimiliano Cazzato¹ | Giulia Valdiserra⁴
Emiliano Cappello⁵ | Sara Ferraro⁶ | Silvia Tillati⁷
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Linear Mixed Model and Multistate Markov Model to Compare Changes in Clinical Measurements over Time. a Blood Pressure Example

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Optimization-based Stable Balancing Weights vs Generalized Boosted Modeling for Propensity Score Weighting

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Rank-based Weighting for Balancing on Median Baseline Characteristics in Matching Adjusted Indirect Comparisons (MAIC)

Shirley Liao | Carl de Moor | Angela D Paradis | Justin Bohn
Changyu Shen | Gabrielle Simonneau | Fabio Pellegrini
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Risk of Malignancies in Newly Treated Patients with Disease-modifying Drugs for Multiple Sclerosis: Assessment According to Cohort and Nested-case Control Approaches

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Sessa Empirical Estimator (SEE): A Data-driven Method for Predicting the Duration of Pharmacological Prescriptions in Secondary Data Sources
Maurizio Sessa
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Stable Balancing Weights for Unanchored Matching-adjusted Indirect Comparisons and Targeting External Control Arm Estimands
Stephen Johnston¹ | Harikumaran Dwarakanathan²
Jason Waggoner¹ | Michael Schwiers¹ | Sanjoy Roy¹
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The Effect of the Anticholinergic Properties of Antidepressants on the Incidence of Dementia: A Target Trial Emulation
Joan Forns¹ | Jaume Aguado¹ | Elena Rivero-Ferrer¹
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Use of an EHR to Inform a Claims-based Algorithm to Categorize Inpatient COVID-19 Severity
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Use of Linked Databases for Improved Confounding Control: Considerations for Potential Selection Bias
Jenny Sun¹ | Senghee Toh²
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Using Randomized Trial Data to Estimate Effects of Complex Treatment Regimens in Real-world Patients
Michael Andrew Webster-Clark¹ | Jennifer Lund³
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Validation of an Algorithm to Identify Hormonal Contraceptive Exposure in a Large Integrated Health Care Delivery System Database
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Validity of Electronic Health Records-based Measures for COVID-19 Hospitalization and Severe Outcomes
Sharon Fuller¹ | Kathy Gleason² | Rod Walker¹
Stephen Fortmann¹ | Ladia Albertson-Junks¹
J. David Powers² | Mi Lee³ | James Floyd⁴
Lisa Temposky¹ | Susan Shortreed¹ | Elizabeth Bayliss³
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Oral Presentations

**Pediatrics**

**Antibiotic Prescribing in Children Aged 0-6 Years in Germany: Assessing Regional Variations and Potential Explanations Based on Claims Data**  
Oliver Scholle | Marieke Asendorf | Christoph Buck  
Susan Grill | Oliver Riedel | Ulrike Haug  
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**Early Life Antibiotic Exposure and Incident Chronic Diseases in Childhood**  
Matthew Beier | Soko Setoguchi | Tobias Gerhard  
Jason Roy | Avinash Gabbeta | Brian Strom  
Martin Blaser | Daniel Horton  
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5St. Christopher's Hospital for Children;  
6Rutgers Biomedical And Health Sciences, Rutgers University;  
7Center for Advanced Biotechnology and Medicine, Rutgers University;  
8Rutgers University

**Filled Prescriptions for Opioids Among Children and Adolescents – a Nationwide Study from 2010 to 2018**  
Aleksi Hamina | Marte Handal | Olav Fredheim  
Thomas Clausen | Li-Chia Chen | Svetlana Skurtveit  
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2Norwegian Institute of Public Health;  
3Norwegian University of Science and Technology;  
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5Department of Mental Disorders, Norwegian Institute of Public Health, Oslo, Norway

**General Practitioner Prescribing Trends Among Pediatric Patients in the United Kingdom: 1998-2018**  
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Kristian Filion  
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3Department of Epidemiology, Biostatistics and Occupational Health, McGill University, Montreal, Quebec, Canada

**Impact of Drug-related Regulations on Codeine Use Among Children in Taiwan: A Nationwide Interrupted Time Series Analysis from 2005 to 2018**  
Chih-Wan Lin | Yu-Jie Huang | Wei-I Huang  
Pi-Hui Chao | Wen-Wen Chen | Fei-Yuan Hsiao  
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3Graduate Institute of Clinical Pharmacy, National Taiwan University, Taipei, Taiwan

**Prescribed Medicine Use in a Nationwide Sample of Australian Children: Extent of Off-label Use**  
Andrea Schaffer | Natasha Nassar | Claudia Bruno  
Nicholas Buckley | Rose Cairns | Melissa Litchfield  
Simon Paget | Helga Zoega | Sallie-Anne Pearson  
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**Risk of Type 2 Diabetes Among Children Initiating Anticonvulsant Mood Stabilizers: Application of a Target Trial Approach**  
Jenny Sun | Jessica Young | Aaron Sarvet  
Pi-i Debby Lin | Sengwee Toh | Jason Block  
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2Harvard Medical School and Harvard Pilgrim Health Care Institute

**Selective Serotonin Reuptake Inhibitors and the Risk of Type 2 Diabetes Mellitus in Youths**  
Thi Xuan Dai Cao | Christopher Filliter  
François Montastrauc | Oriana Hoi Yun Yu  
Emma Fergusson | Soham Rej | Laurent Azoulay  
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Science is resilient. It can overcome diseases, create cures, and yes, even beat pandemics. It has the methodology and the rigor to withstand even the most arduous scrutiny. It keeps asking questions and until there’s a breakthrough, it isn’t done. That’s why, when the world needs answers, we turn to science. Because in the end

**SCIENCE WILL WIN.**
**Oral Presentations**

**PHARMACOVIGILANCE**

Comparing the Risk of Venous Thromboembolism in Rheumatoid Arthritis Patients Receiving Tofacitinib and TNF Inhibitors in Taiwan
Chin-Yao Shen | Tzu-Chi Liao | Edward Chia-Cheng Lai
School of Pharmacy, Institute of Clinical Pharmacy and Pharmaceutical Sciences, College of Medicine, National Cheng Kung University, Tainan 701, Taiwan

Impact of COVID-19 Social Distance Restrictions on Hospital Encounters Due to Injury by Poisoning or Toxicity of Medications or Non-medicinal Substances
Qoua Her¹ | Jessica Young² | Til Stürmer³
Michele Jonsson Funk⁴
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**PREGNANCY AND LACTATION**

Antidepressant Use During Pregnancy and the Risk of Neurodevelopmental Disorders in Children
Elizabeth Suarez¹ | Brian Bateman²
Sonia Hernandez-Diaz³ | Loreen Straub⁴ | Yanmin Zhu⁴
Helen Mogun² | Krista Huybrechts²
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Characteristics and Outcomes of Pregnancies in Women with Heart Failure: A Retrospective Cohort Study in the Sentinel System
Yan Li¹ | Austin Cosgrove² | Efe Eworuke³
Catherine Corey⁴ | Joy Kolonoski⁵ | Mayura Shinde⁴
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Balance of Unmeasured Covariates After Propensity Score Matching Based on Measurable Covariates in Perinatal Pharmacoepidemiologic Studies
Yanmin Zhu¹ | Thuy Thai² | Sonia Hernandez-Diaz³
Brian Bateman⁴ | Loreen Straub¹ | Kathryn Gray⁶
Almut Winterstein⁴ | Lockwood Taylor⁹
Rita Ouellet-Hellstrom⁴ | Yong Ma⁷ | Yandong Qiang⁶
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Characteristics of Initial Postpartum Opioid Prescribing and Risks of Serious Opioid-related Events After Cesarean Delivery
Andrew Wiese¹ | Sarah Osmundson¹ | Edward Mitchell¹
Margaret Adgent¹ | Sharon Phillips¹ | Stephen Patrick²
Andrew Speker¹ | Carlos Grijalva¹
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Benzodiazepine Use in the First Trimester and Risk of Congenital Malformations: A Nationwide Cohort Study in South Korea
Yunha Noh⁷ | Hyesung Lee³ | Ahhyung Choi³
Dong-Sook Kim³ | Ju-Young Shin⁵
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Comparative Safety of In-utero Exposure to Buprenorphine Combined with Naloxone vs Buprenorphine Monoprodut with Respect to Congenital Malformations
Loreen Straub¹ | Krista Huybrechts²
Sonia Hernandez-Diaz³ | Elizabeth Suarez⁴ | Yanmin Zhu¹
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Oral Presentations

PREGNANCY AND LACTATION

COVID-19 Pharmacotherapy During Pregnancy: International Registry of Coronavirus Exposure in Pregnancy (IRCEP)
Sonia Hernandez-Diaz1 | Louisa Smith2 | Diego Wyszynski3
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Development and Validation of ICD-10 Claims-based Algorithms for Pregnancy and Infant Outcomes
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Michael Doherty2 | Stephanie Chiuve4
Brenda Hinman-Mcllroy4 | Michael Snabes5
John Seeger1
1Optum Epidemiology; 2GlaxoSmithKline; 3Optum; 4AbbVie; 5AbbVie, Inc

Effects of Gadolinium-enhanced MRI Exposure During Pregnancy on Neonatal Intensive Care Unit Admission
Thuy Thai1 | Sabina Nduaguba2 | Nicole Smolinski3
Xi Wang4 | Leyla Sahin5 | Kate Gelperin6 | Steven Bird6
Ira Krefting7 | Sonja Rasmussen8 | Almut Winterstein1
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Fertility Rates in Women with Psoriasis and Psoriatic Arthritis: A Population-based Cohort Study
Teng-Chou Chen1 | Ireny Iskandar2 | Rosa Parisi3
Matthias Pierce4 | Elise Kleyn5 | Christopher Griffiths6
Darren Ashcroft7
1The University of Manchester; 2Centre for Occupational and Environmental Health, Division of Population Health, Health Services Research and Primary Care, School of Health Sciences, Faculty of Biology, Medicine and Health, University of Manchester; 3Division of Informatics, Imaging and Data Sciences, Manchester Academic Health Sciences Centre, School of Health Sciences, Faculty of Biology, Medicine and Health, University of Manchester; 4Centre for Women’s Mental Health, University of Manchester; 5Centre for Dermatology Research, Manchester Academic Health Science Centre, NIHR Manchester Biomedical Research Centre, Division of Musculoskeletal and Dermatological Sciences, University of Manchester; 6Dermatology Centre, Salford Royal NHS Foundation Trust, Manchester Academic Health Science Centre, University of Manchester; 7Centre for Pharmacoepidemiology and Drug Safety, Division of Pharmacy and Optometry, School of Health Sciences, University of Manchester, Manchester, UK

Feasibility of Using Healthcare Utilization Data to Identify Neurodevelopmental Disorders for Transgenerational Pharmacoepidemiology
Loreen Straub1 | Brian Bateman2 | Sonia Hernandez-Diaz3
Elizabeth Suarez4 | Cassandra York5 | Yanmin Zhu1
Helen Mogun2 | Krista Huybrechts4
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First Trimester Exposure to Buprenorphine Compared to Methadone for Treatment of Opioid Use Disorders and the Risk of Congenital Malformations
Elizabeth Suarez1 | Krista Huybrechts2
Sonia Hernandez-Diaz3 | Loreen Straub4 | Yanmin Zhu4
Helen Mogun2 | Brian Bateman2
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Implication of Maternal Continuous Enrollment on Stillbirth Gestational Age Distributions and Maternal Characteristics in Medicaid Enrollees
Thuy Thai1 | Sonja Rasmusen2 | Nicole Smolinski3 Sabina Nduaguba4 | Yanmin Zhu5 | Brian Bateman6
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Oral Presentations

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Oral Presentations

PREGNANCY AND LACTATION

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Prenatal Antiseizure Medication Exposure and Risk of Autism and Intellectual Disability. SCAN-AED: A Nordic Cohort Study
Marte-Helene Bjørk1 | Helga Zoega2 | Maarit Leinonen3
Jacqueline Cohen4 | Julie Dreier5 | Kari Furu4
Nils Erik Gilhus1 | Mika Gissler3 | Óskar Hálfdánarson6
Jannicke Igland7 | Yuelian Sun8 | Torbjörn Tomson3
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Metformin and Risk of Adverse Pregnancy Outcomes Among Pregnant Women with Gestation Diabetes in the United Kingdom: A Population-based Cohort Study
Ya-Hui Yu1 | Robert Platt2 | Oriana Hoi Yun Yu3
Kristian Filion2
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Prescription Medication Use and Baseline Health Status of Women with Live Birth Deliveries in a National Data Network: The Sentinel Distributed Database Mother-infant Linkage Table
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Metformin vs Insulin in Early Pregnancy and Risk of Congenital Malformations
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Prescription Opioid Type and the Risk of Neonatal Opioid Withdrawal Syndrome
Daina Esposito1 | Brian Bateman2 | Martha Werler1
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Samantha Parker1 | Krista Huybrechts3
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Prenatal Analgesic Opioid Exposure and Risk of ADHD in Childhood
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Proton Pump Inhibitors in Pregnancy and Risk of Preeclampsia: A Nationwide Cohort Study of 1.9 Million Pregnancies
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Stress Intolerant Perception in Women with Postpartum Depression: A Systematic Review
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PREGNANCY AND LACTATION

Statistical Power for Use of Tree-based Scan Statistics for Surveillance of Infant Outcomes Following Maternal Perinatal Medication Use
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The Comparative Safety of Antiseizure Medication Polytherapy vs Valproate in Pregnancy and Risk of Major Congenital Malformations
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The Impact of In-utero Antipsychotic Drug Exposure on Congenital Malformations: An International Cohort Study
Krista Huybrechts1 | Loreen Straub2 | Pär Karlsson3 | Laura Pazzagli4 | Sonia Hernandez-Diaz5 | Jacqueline Cohen6 | Brian Bateman7 | Randi M Selmer7 | Elizabeth Suarez8 | Kari Furu9 | Mette Nørgaard9 | Mika Gissler10 | Maarit Leinonen10 | Helga Zoega11 | Helle Kiefer12

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The Impact of In-utero Antipsychotic Exposure on Neurodevelopmental Disorders in Children
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The Role of Propensity Score Matching in Claims-based Studies for Achieving Comparability in hba1c Levels Between Treatments in Pregnant Women with Type 2 Diabetes
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Use of Tree-based Scan Statistics for Surveillance of Infant Outcomes Following Maternal Perinatal Medication Use: A Propensity Score Matched Case Study
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Validating an Optimized Live Birth Gestational Age Algorithm in a Nationwide Medicaid Sample and Quantifying the Misclassification of Exposure Due to Estimated Gestational Age
Yanmin Zhu1 | Thuy Thai2 | Brian Bateman3
Sonia Hernandez-Diaz4 | Loreen Straub1 | Jessica Franklin5
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Validity of ICD-10 Z3A Codes for Estimating Date of Last Menstrual Period
Andrea Chomistek1 | Kelesitse Phiri2 | Jenna Calderbank3
Michael Doherty3 | Stephanie Chiuve4
Brenda Hinman-McIlroy1 | Michael Snabes5 | John Seeger1
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RARE DISEASE

Prediction Algorithm for Identifying Patients with Fabry or Pompe Disease in Electronic Health Records
Ella Jansen1 | Lars Verkleij2 | Rich Colbaugh3
Kristin Glass3 | Christopher Rudolf4 | Ron Herings1
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The Association Between Bariatric Surgery and Dupuytren Disease: A Cohort Study from Swedish Nationwide Healthcare Registries
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Andrea Burden1 | Dominic Furniss2
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SAFETY END POINTS

Cardiovascular Risk in Users of Mirabegron Relative to Users of Antimuscarinic Treatments for Overactive Bladder: Findings from a Non-interventional, Real-world Data Safety Study

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Andrea Margulis⁴ | Brandon Suehs⁵ | Alejandro Arana⁶
Cheryl Enger¹ | Libby Horter³ | Ingvid Odsbu⁷
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Comparative Safety of Conjugated Estrogens/ bazedoxifene (CE/BZA) vs Estrogen/progestin Combination Hormone Therapy (EP): A Multi-database Cohort Study

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Proton Pump Inhibitors and Risk of Gastric Cancer: A Population-based Cohort Study

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Risk of Diabetic Ketoacidosis with Sodium-glucose transporter-2 Inhibitors Compared to Dipeptidyl peptidase-4 (DPP4) Inhibitors and Sulfonylureas in Patients with Type 2 Diabetes

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Use of Low-dose Quetiapine and the Risk of Major Adverse Cardiovascular Events

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Use of Proton Pump Inhibitors and Risk of Pancreatic Adenocarcinoma: A Case-control Study Based on the French National Health Data System (SNDS)

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Vitamin K Antagonists and Risk of Myelodysplastic Syndrome: A Nationwide Cohort Study in Atrial Fibrillation Patients

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Evaluation of the Potential Confounding Effect of Shingles on the Risk of Guillain-barré Syndrome After Vaccination with the Recombinant Zoster Vaccine
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**POTPOURRI**

**Approach to Falsify Calendar Time Instrumental Variable Assumptions in Estimating Treatment Effects**
Phyo Htoo | Michelle Jonsson Funk | Mugdha Gokhale
Gang Fang | John Buse | Til Stürmer
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**Ethnic Differences in COVID-19 Infection, Hospitalisation, and Mortality: An Opensafely Analysis of 17 Million Adults in England**
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William Hulme | Anna Schultz | Brian MacKenna
Rosalind Eggo | Krishnan Bhaskaran | Angel Wong
Elizabeth Williamson | Harriet Forbes | Kevin Wing
Helen McDonald | Chris Bates | Seb Bacon | Alex Walker
David Evans | Peter Inglesby | Amir Mehrkar
Helen Curtis | Nicholas DeVito | Richard Croker
Henry Drysdale | Jonathan Cockburn | John Parry
Frank Hester | Sam Harper | Ian Douglas
Laurie Tomlinson | Stephen Evans | Richard Grieve
David Harrison | Kathy Rowan | Kamlesh Khunti
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**Multi-depth, Iterative Causal Forest for Subgroup Identification**
Tiansheng Wang | Michael Kosorok | Alexander Keil
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**Nondifferential Treatment Misclassification Biases Toward the Null? Not a Safe Bet**
Rachael Ross | Michele Jonsson Funk | I-Hsuan Su
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**Predictors of Severe COVID-19 Outcome in Patients with Rheumatoid Arthritis**
Sara Burns | Tiffany Siu Woodworth | Justin Manjourides
Zeynep Icten
1 Panalgo; 2 Northeastern University

**Risk of Fall-related Injury Associated with Concomitant Use of Prescription Opioids and Gabapentinoids Among Older Adults with Chronic Noncancer Pain**
Cheng Chen | Almut G Winterstein
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Improving Accuracy for Prospective Pregnancy Registry Enrollment Targets
Veley K, Covington D, Pozin P, Buus R, Okala S

Methodologic Challenges and Considerations for the Collection of Dietary Intake Data in Real-World Populations
Brett NR, Bassel M, Hong M, Margolis MK

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Yinxi Yu¹ | Vatinee Bunya² | Brian VanderBeek²
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Gender Differences in Valproic Acid Use for Approved Indications in the United States (2017-2018) – an Opportunity for Risk Mitigation?
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Risk of Major Cardiovascular Event in Jak Inhibitor Treated Patients: Analysis of a National Claim Database
Amandine Gouverneur | Jérôme Avouac¹ | Clément Prati² | Jean-Luc Cracowski³ | Thierry Schaeverbeke⁴
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Missingness in Real World Data Submitted for Regulatory Decision-Making: Eastern Cooperative Oncology Group Performance Status Case Study
Cherise Wong¹ | Caitlin Knox¹ | Wenzhen Ge¹ | Ning Wu¹
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BIOLOGICS / BIOSIMILARS

Risk of Major Cardiovascular Event in Jak Inhibitor Treated Patients: Analysis of a National Claim Database
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Atopic Eczema Associated Fracture Risk and Oral Corticosteroids: A Population-Based Cohort Study
Julian Matthewman¹ | Kathryn Mansfield¹
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Birth Prevalence of Phenylalanine Hydroxylase Deficiency: A Systematic Literature Review and Meta-Analysis
Kimberly Alexander¹ | Andrea Margulis² | Pamela Foreman¹
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Manel Pladevall-Vila³ | Sarah Landis³
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Lauren Bylsma¹ | Carrie Nielson² | Jon Fryzek³
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Comparing Outcomes in Trial-Eligible vs Real-World COVID-19 Patients: The Case of Invasive Mechanical Ventilation
Ashley Martinez¹ | Silvia Perez-Vilar³ | Mayura Shinde³
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DISEASE EPIDEMIOLOGY/CLINICAL COURSE

Identification of Serostatus in Rheumatoid Arthritis Using ICD-10 Diagnosis Codes
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Outpatient-Identified COVID-19 and Subsequent Hospitalized Thrombotic Events
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Maria Kempner4 | Joy Kolonoski5 | Sarah Dutcher1
Brian Kit1
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Patients Tell All: Using a Direct-to-Patient Community Registry to Understand Patient Burden of COVID-19
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Matthew Reynolds1 | Alison Bourke1 | Kalyani Hawaldar1
Nancy Dreyer1
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Prevalence of Myxoid/Round Cell Liposarcoma (MRCLs) Among Children and Adults in the United States
Huifen Wang1 | Lindsey Powers Happ2
Samantha St. Laurens1 | Charlotte Carroll2
1Huifen Wang; 2GlaxoSmithKline

Trends in Sexually Transmitted Infections in the United States Ambulatory Care Clinics from 2005-2016
Ikenna Unigwe1 | Seonkyeong Yang2 | Hyunjin Song3
Wei-Hsuan Lo-Ciganic4 | Robert Cook5 | Haesuk Park6
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Use of Remdesivir for COVID-19 in the Real World: An Analysis of US Electronic Medical Records
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Anand Chokkalingam1
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DRUG EFFECTIVENESS

Acute Kidney Injury in Patients with Atrial Fibrillation Treated with Rivaroxaban or Warfarin: A Population-Based Study in the United Kingdom
Antonio González Pérez1 | Yanina Balabanova2
María Saez1 | Gunnar Brobert3 | Luis Garcia Rodriguez
1Spanish Centre for Pharmacoepidemiological Research; 2Bayer AG; 3Bayer AB

Comparative Effectiveness of Bevacizumab vs Cetuximab in Patients with Metastatic Colorectal Cancer
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Efficacy-Effectiveness Gap for Standard First-Line Treatment of Metastatic Non-Small Cell Lung Cancer Among Patients with Barriers to Care
Rohit Ojha1 | Yan Lu1 | Kalyani Narra2 | Rachel Meadows1
Aaron Gehr1 | Bassam Ghabach2
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Long-Acting Insulin Analogs vs Intermediate-Acting Insulin and the Risk of Major Adverse Cardiovascular Events Among Patients with Type 2 Diabetes in the United Kingdom
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Kristian Filion3
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**DRUG UTILIZATION RESEARCH**

Analytical Enhancements in Kentucky’s Drug Overdose Mortality Surveillance: Rapid Monitoring of Trends and Decedents’ Recent Controlled Substance Prescription History

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Jana McAninch⁴ | Alex Secora⁴ | Candice Collins⁴
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Changes in Purchases of Intensive Care Medicines During COVID-19 in Developed vs Developing Countries

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Sandra Kane-Gill³ | Ian Barbash⁴ | Katie Suda⁵

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Co-Utilization of Opioids and Non-Benzodiazepine Sedative Hypnotics in U.S. Ambulatory Care Visits, 2006-2016

Razanne Oueini | Juan Hincapie-Castillo | Scott Vouri

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Determinants of Antimalarial Prescription Patterns Among Health Care Providers in Public Health Facilities in Uasin Gishu County, Kenya.

Henry Amdany | Wendy O’Meara | Gabriel Kigen

Moi University

Early Uptake of New Molecular Entities Approved in 2017 in a Multisite National US Healthcare Data Network

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Measuring Mental Health Prescribing Safety Indicators in Uk Primary Care

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Alison Wright² | Darren Ashcroft² | Anthony Avery³
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Patterns of Antibiotic Prescription Among Adult Outpatients in Italy

Federica Galimberti | Elena Olmastroni | Francesco Casizzi
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Comparison of Medication Adherence Between Initiators of a Multi-drug Dispensing System & Users of Retail Pharmacy
Lauren Stevens¹ | Jeffrey Ellis¹ | Anita Desai-Naik²
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Cost-Utility of Nivolumab for Treatment of Head and Neck Cancer from a Brazilian Public Health System Perspective.
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Effects of Initiating a Multi-dose Drug Dispensing System on Medication Adherence
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SGLT2 Inhibitors vs GLP-1 Agonists: Comparative Progression of Renal Disease
Lauren Stevens¹ | Andy Bowe¹ | Phil Schwab¹
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The Prevalence of Hyperkalemia and Associated Clinical Characteristics and Outcomes Among Hospitalized COVID-19 Patients
Rena Moon¹ | Abiy Agiro² | Ning Rosenthal¹
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Temporal Effect in Real-World-Evidence for Randomized-Clinical-Trials
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METHODS IN PHARMACOEPIDEMIOLOGY

A New Analytic Tool for Interrupted Times Series Analysis to Assess the impact of FDA Regulatory Actions
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Andrew Petrone1 | Fang Zhang1 | Catherine Corey3
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An Algorithm to Derive Response and Progression Status Based on International Myeloma Working Group Response Criteria for Patients with Multiple Myeloma in a Real-World Database
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Khaled Sarsour2 | Wan-Jen Hong3 | Melissa Williamson2
1F. Hoffmann-La Roche; 2Genentech; 3Genentech Inc

Characterizing Imbalance in the Tails of the Propensity Score Distribution
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Alexander Breskin4 | M. Alan Brookhart5
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Collider Bias in COVID-19 Studies: Explaining the Smoking Paradox
Alice Joules | Natalia Petruski-Ivleva | Michael Warner
Patrick Long | Aidan Cooper | Nancy Dreyer
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Development and Validation of Case-Finding Algorithms to Identify Prosthetic Joint Infections after Total Knee Arthroplasty
Erica Weinstein1 | Alisa Stephens-Shields2 | Bogadi Loabile1
Tiffany Yuh1 | Randi Silibovsky1 | Charles Nelson3
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Distinguishing Death from Disenrollment in Claims Data using a Readily Implemented Machine Learning Algorithm
Jessica Young1 | Frank Yoon2 | Nabarun Dasgupta3
Debra E Irwin1 | Kenneth Pack2 | Toska Cooper4
Shalu Shiv2 | Sarah Bloemers3 | Anne Chen4
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High-Dimensional Propensity Score Approaches in Stata using the HdpS Suite of Commands
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Ian Douglas1 | Elizabeth Williamson2
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Identification and Characterization of Fistulizing Crohn’s Disease in Ehr using Structured and Unstructured Data
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Marginal Structural Models with Latent Class Growth Modeling of Time-varying Treatment
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METHODS IN PHARMACOEPIEMIOLOGY

Residual Bias and Indirect Covariate Balance in an Applied Comparison of Large-Scale Propensity Score and Cardinality Matching
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Use of Last Clinical Activity Date in Overall Survival Analysis with Real World Data
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Validation of Diagnosis Algorithms for Melanoma and Nonmelanoma Skin Cancer Among Patients with Parkinson's Disease in the United States Medicare Database
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Brian Calingaert1 | Elizabeth Andrews1 | James Kaye1
Catherine Johannes1
1RTI Health Solutions; 2Teva Pharmaceutical Industries Ltd; 3Teva Branded Pharmaceutical Products R&D, Inc.

PEDIATRICS

Antibiotics Overprescribing Patterns in Pediatric Primary Care in Italy: Findings from 2012-2018
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Pediatric Off-Label Antipsychotic Use for Attention-Deficit/Hyperactivity Disorder: A Time-to-Event Analysis
Haeyoung Lee1 | Susan dosReis1 | Chengchen Zhang1 | Roderick Rose2
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PHARMACOVIGILANCE

Off-Label use of Potential Pharmacological Treatment for COVID-19: An Intensive Pharmacovigilance in Peru
L. Yesenia Rodriguez | Héctor Garavito | Enrique Cachay | Gisela Alva | Paola Fernández | Tania Solis | Liz Veramendi | Juan Aldave | Violeta Saromo
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SAFETY END POINTS

The Risk of Melanoma with Rasagiline Compared with other Antiparkinsonian Medications: A Retrospective Cohort Study in the United States Medicare Database
Catherine Johannes1 | Catherine Saltus1 | James Kaye1 | Brian Calingaert1 | Sigal Kaplan2 | Mark Gordon3
Elizabeth Andrews3
1RTI Health Solutions; 2Teva Pharmaceutical Industries Ltd; 3Teva Branded Pharmaceutical Products R&D, Inc.
A Decision Aid to Drive Adherence to Controller Treatments in Mild Asthma: A Rapid-Cycle Design Study
Myriam Gagne | Jeffrey Lam Shin Cheung | Andrew Kouri
Louis-Philippe Boulet | J. Mark FitzGerald | Allan Grill
Paul O’Byrne | Samir Gupta
Canada

Complications Associated with the use of Enzyme-Inducing and Non-Enzyme–Inducing Antiepileptic Drugs in the Japanese Population: A Retrospective Cohort Study
Jingwei Gao | Tomotsugu Seki | Kiyohide Usami
Akio Ikeda | Di Fan | Koji Kawakami
Japan

Efficacy and Safety of Isoniazid Preventive Therapy (IPT) in People Living with HIV: A Systematic Review and Meta-Analysis
J. Jaya Laxmi | Christy Thomas | Krishna Undela
India

Knowledge and Practices Towards COVID-19 During its Outbreak: A Multinational Cross-Sectional Study
Abdallah Naser | Eman Zmaily Dahmash | Hassan Alwafi
Hamad Alyami | Zahra Khalil Alsairafi | Ahmed Al Rajeh
Yosra Alhartani | Fawaz Mohammad Turkistani
Fadi Hassanin
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Psychological Interventions for Depression and Anxiety in Diabetes Mellitus Patients: Overview of Systematic Review and Meta-Analysis
Reginaldo Franquez | Isabela Souza | Cristiane de Cassia Bergamaschi Motta
Brazil

Parents’ Practices of Paracetamol use for Child Fever Management and use of Patient Information Leaflets
Aljoharah Algabbani | Kerrie Wiley | Nada Alowedi
Omar Albalawi | Amani Alqahtani
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Characterization of Real-World Data Sources to Support Observational Studies of Biologics, Including Biosimilars in Oncology
Ryan Seals | Catherine Lockhart | Nancy Lin
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Disruptions in Rheumatology Care and the Rise of Telehealth in Response to the COVID19 Pandemic in a Community Practice-Based Network
Jeffrey Curtis | Michael George | Maria Danila
Daniel Watrous | Jeffrey Alper | Fenglong Xie
Benjamin Nowell | Joel Kallich | Cassie Clinton
Kenneth Saag | Shanmugapriya Reddy
United States

Evaluation the Pattern of Treatment in Inflammatory Bowel Disease: Before and After Approved Policy on Biologicals
Nai-Yu Chen | Chiao-Hsiung Chuang | Yea-Huei Kao Yang
Yu-Ching Chang | Ching-Lan Cheng
Taiwan

Factors Predictive of Treatment Success of Novel Disease-Modifying Anti-Rheumatic Drugs (DMARDs) in Patients with Inflammatory Arthritis
Jetty Overbeek | Ron Herings | Hein Bernelot Moens
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PD-1 Immune Checkpoint Inhibitors and Serious Immune-Related Adverse Events
Yeon-Hee Baek | Eun Joo Kang | Soojung Hong
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Penetration Rate of Anti-Tnf Biosimilars in Hospitals in France: 5 Years Status
Quentin Mathieu Jarrion | Thierry Trenque | Brahim Azzouz
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Prescribing Patterns of Lipegfilgrastim in EU: A Retrospective Study
Sigal Kaplan | Dana Ilic Bogojevic | Carolyn Rainville
Nicholas Gross
Israel

The Association Between Trajectories of use of Systemic Agents and Depression in Patients with Psoriasis: A Sequence and Cluster Analysis
Raymond Milan | Lelorie | Marie-Josée Brouilette
Anne Holbrook | Ivan Litvinov | Elham Rahme
Canada

Use of Ranitidine with Potential Ndma Impurities and Risk of Cancer: A Nationwide Propensity Score-Matched Cohort Study
Kyung-In Joung | Jeong-Eun Hwang | In-Sun Oh
Ju-Young Shin
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Users of Biologics for Crohn’s Disease and Ulcerative Colitis in the Netherlands
Hilda de Jong | Jetty Overbeek | Elisabeth Smits
Ella Jansen | Fernie Penning- van Beest | Alun Passey
Francesca Galea | Riika Nissinen | J N. Barthelmes
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Validation Test for Algorithms to Identify Rheumatoid Arthritis Patients in the Tuscan Healthcare Administrative Databases
Irma Convertino | Massimiliano Cazzato | Sabrina Giometto
Rosa Gini | Ersilia Lucenteforte | Giulia Valdiserra
Emilio Cappello | Sara Ferraro | Silvia Tillati
Marco Fornili | Claudia Bartolini | Olga Paoletti
Valentina Lorenzoni Leopoldo Trieste | Matteo Giuseppe Turchetti | Michele Cristofano | Corrado Blandizzi
Marta Mosca | Marco Tuccori
Italy
A Descriptive Retrospective Cohort Study to Evaluate the Incidence of Severe COVID 19 Outcomes Among SARS-CoV-2 Infected Patients in the United States
Heather Rubino | Stephen Schachterle | Ling Li
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United States

A New United States Database for Pharmacoepidemiology Studies in Type 2 Diabetes Mellitus: the IMEDS Distributed Database
Ting-Ying Huang | Carla Rodriguez-Watson
Tontong Wang | R. Calhoun | James Marshall
Jillian Burk | Young Hee Nam | Aaron Mendelsohn
Margaret Adgent | Aziza Jamal-Allial | Robert Greenlee
Vinit Nair | Pamala Pawloski
Cheryl McMahill-Walraven | Jeffrey Brown
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A Systematic Literature Review of the Epidemiology, Health-Related Quality of Life and Economic Burden, Including Disease Pathways and Treatment Patterns of Relapsed/Refractory Classical Hodgkin Lymphoma
Gautam Singh | Monika Raut | Rebekah Borse
Xiaoqin Yang | Immaculata Hiscock | Sheetal Sharma
Nameeta Pilkhwal
United States

An Updated Structured Review of the Epidemiology, Guidelines, and Real-World Treatment Patterns for Relapsed/Refractory Primary Mediastinal Large B-Cell Lymphoma
Jitender Takyar | Raut, Immaculata Hiscock
Rebekah Borse | Sheetal Sharma | Arju Dhawan
India

Antibiotic Resistance Pattern and Treatment Outcomes Among Empyema Thoracis Patients: A Cross-Sectional Study
Muhammad Atif | Mehwish Naseem | Saba Mukhtar
Sajjad Sarwar
Pakistan

Anti-Osteoporosis Treatment After a Major Osteoporotic Fracture is Often Lacking
Karin Swart-Polinder | Louise Lemmens
Robbert Schuijbroek | Fernie Penning-van Beest
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Association of Ondansetron Use and Subsequent Acute Kidney Injury in Critical Care
Matthew Gray | Priyanka Priyanka | Sandra Kane-Gill
John Kellum
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Beneficial Effect of Mild Drug-Induced Liver Injury for Patients with Tuberculosis Undergoing First-Line Anti-Tuberculosis Therapy
Chen Qin | Tianchi Yang | Yang Che | Jifang Zhou
Chen xiao | Feng Jiang
China

Characteristics of Asymptomatic Heart Failure Patients with Reduced Ejection Fraction in a Large US-Based Real-World Cohort
Allison Bryant | Tom Brecht | Mike Behling
Kathryn Starzyk | Gary Curhan
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Characteristics of Patients with Idiopathic Pulmonary Fibrosis (Ipf) Initiating Nintedanib or Pirfenidone Treatment Compared with Untreated Patients in the US
Laura Wallace | Aimee Near | Chakkarin Burudpakdee
Nadine Hartmann
Germany

Characterizing “Long-COVID” Using Real World Data: Post-Discharge Clinical Course Among Patients Initially Hospitalized for COVID-19
Elizabeth Eldridge | Edward Corbett | Jason Jones
Sadiqa Mahmood | Nancy Lin
United States

Chronic Obstructive Pulmonary Disease and Drug-Resistant Pseudomonas in Patients Hospitalized with Community-Acquired Bacterial Pneumonia
Adeniyi Idigo | J. Michael Wells | Matthew Brown
Howard Wiener | Russell Griffin | Gary Cutter
Sadeep Shrestha | Rachael Lee
United States

Clinical Characteristics and Biomarkers of SARS-CoV-2 Infection in Patients Treated with Remdesivir in Hospital – A Population Based Cohort Study
Xiaofeng Zhou | Rongjun Shen | Kathy Liu
Mary Lynn Baniecki | Holly Soares | Ann Madsen
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Clinical Characteristics of Pediatric Patients Hospitalized with COVID-19 in an Electronic Health Record Database
Andrea Chomistek | Michael Doherty
Robert Gately | Rachel Ogilvie | Caihua Liang
John Seeger | Florence Wang
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Comorbidities Associated with Insomnia Stratified by Age and Sex
Wenjun Zhong | Xinyue Liu | Katrina Mott
Edward Bortnichak | Kai-Li Liaw | Zaina Qureshi
*United States*

Comparison of 21-Year Sex-Specific Fracture Incidence Rates Between Type 1 and Type 2 Diabetics and Non-Diabetics in Denmark (1997 – 2017)
Annika Kvist | Mohamad Nasser | Andrea Burden
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*Switzerland*

Comparison of Rheumatic Patients across Body Mass Index Categories
Enriqueta Vallejo-Yague | Theresa Burkard
Burkhard Moeller | Axel Finckh | Andrea Burden
*Switzerland*

Coronavirus Disease 2019 in Saudi Arabia: A Nationwide Epidemiological Characterization Study
Khalidah Alenzi | Tahani Alanazi | Najah Alenzi
Ali Altebainawi | Thamir Alshammari
*Saudi Arabia*

COVID-19 Symptom Severity Among Smokers: Insights from a Direct-To-Community Registry
Nancy Dreyer | Natalia Petruski-Ivleva | Lisa Albert
Emma Brinkley | Christina Mack FISPE | Matthew Reynolds
*United States*

Depression and Anxiety in Patients with Cancer: Prevalence and Risk Factors: A Cross-Sectional Study
Abdallah Naser | Anas Nawfal Hameed | Nour Mustafa
Hassan Alwafi | Eman Zmaily Dahmash | Hamad Alyami
Haya Khalil
*Jordan*

Designing Epidemiological Studies to Estimate the Incidence of Thrombosis in Patients with Antiphospholipid Syndrome with History of Recurrent Thrombotic Events
Chuntao Wu | Wei Jiang | Nathalie Goletiani | Deepak Jain
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Determinants of COVID-19 Self-Protection Behaviors of Thai People: A Cross-Sectional Survey
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Development and Validation of a Prediction Model for Mortality in Patients with Hip Fracture: Population-Based Cohort Study
Thomas Hjelholt | Søren Johnsen
Peter Brynningsen | Jakob Knudsen
Daniel Prieto-Alhambra | Alma Pedersen
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Diabetes Medication Use is Associated with Higher Grade and Increased Probability of Muscle-Invasive Tumour Disease in Patients with Urothelial Carcinoma
Janine Faessen, Dennis Oerlemans | Marc de Jong
Jetty Overbeek | Pauline Vissers | Katja Aben
Maryska Janssen-Heijnen | Joop van den bergh
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Disease Prevalence, Comorbidities, and Medication Utilization Among Patients with Opioid Use Disorder in the US
Brittany Roy | Jianheng Li | Cathy Lally | Ankitaben Shah
Gary Bloomgren | Made Wenten
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Early Parkinson’s Disease: Association of Baseline Fatigue, Pain and Sleep Disorders with Disease Progression
Denise Oleske | Cindy Zadikoff | Eric Cohen
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E-Core - Setting Up a European Network for Real World COVID-19 Studies
Alexandra Pacurariu | Sonya Patel | Daniel Prieto-Alhambra
Peter Rijnbeek | Sam Salek | Talita Duartes-Salles
Hanne van Ballegooijen | Christian Reich | Ines Reinecke
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Epidemiology of Coexisting Obesity and Heart Failure with Preserved Ejection Fraction in the United States
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Epidemiology of COVID-19 in Adults with Asthma
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Epidemiology of COVID-19 in Adults with Chronic Obstructive Pulmonary Disease
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Epidemiology of COVID-19 in Adults with Diabetes Mellitus
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Epidemiology of COVID-19 in Children
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Epidemiology of Interstitial Lung Disease in Medically Treated US Population
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Estimates of Malnutrition Associated with Chronic Kidney Disease Globally and its Contrast with India: A Systematic Review and Meta-Analysis
Ishfaq Rashid | Pramil Tiwari | Sanjay Cruz
Shivani Jaswal
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Examining the Evolving Pandemic: Trends in COVID-19 Severity for Hospitalized COVID-19 Patients Over Time
Sarah Vititoe | Andrew Weckstein | Aloka Chakravarty
Marie Bradley | Tamar Lasky | Nicolle Gatto
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From Contact Coverage to Effective Coverage of Community Care for Patients with Severe Mental Disorders: A Real-World Investigation from Italy
Matteo Monzio Compagnoni | Giovanni Corrao
Angelo Barbato | Barbara D’Avanzo | Teresa Di Fiandra
Lucia Ferrara | Andrea Gaddini | Alessio Saponaro
Salvatore Scondotto | Valeria Tozzi | Flavia Carle
Simona Carbone | Dan Chisholm | Antonio Lora
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Incidence and Outcomes of Mature B-cell NHL in the US Pediatric Population, 2000-2017
Yangyang Liu | Mary Heckler | Annie McNeill
Justin Wahlstrom | Lori Styles | Alex Mutebi | Huiling Yang
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Incidence Rates (IR) and IR Ratios of Alzheimer’s Disease in Patients with Cataract Compared to the General Population: Analyses Using the Clinical Practice Research Datalink (CPRD)
Claudia Becker | Laura Eggenschwiler | Susan Jick
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Lessons from a Post-Authorisation Study of Rivaroxaban Use and Potential Adverse Outcomes in Routine Practice in Four Countries
Ron Herings | Elisabeth Smits | Karin Swart-Polinder
Ana Ruigomez | Tania Schink | Annemarie Voss
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Charlotte Früchtenicht | Yanling Jin, Janis Allen
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### Handling with Vaccine Type Missing Data in a Dynamic Cohort to Assess the Link Between Time-Varying Vaccination and an Autoimmune Disease
Belen Castillo Cano | Marc Comas-Cufí
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Joyce Pak | Jennifer Lund | Alexander Keil
Daniel Westreich | Til Stürmer | David Wohl | Claire Farel
M. Bradley Drummond | Michael Webster-Clark
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### Identification of a Diagnostically Complex Condition, Polycystic Ovarian Syndrome, in a Population-Based Cohort Using Electronic Health Record Data
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David Cronkite | Ann Kelley | Kelly Hansen | Jan Hilpert
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*United States*

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Mat Soukup | Clara Kim | Taehyun Jung
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Monica Bertoia | John Seeger | Erik Ness
Thomas Capozza | Lina Titievsky
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Chris Delcher | Brian Pence | Shabbar Ranapurwala
*United States*

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Kate Saunders | Heather Litman | Jamie Geier
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Christa Titus | Eswaran Maheswari | Viswam Subeesh
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