

Manchester

Digital Epidemiology

Summer School

An online three half-day course that explores opportunities, challenges and methods for capturing and using a range of digital health data types to support high-quality population health research

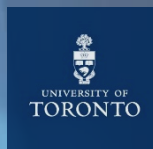
21 – 23 July 2021, Online

For more information and to register, please visit:
www.tinyurl.com/MDESS2021

**CENTRE FOR
EPIDEMIOLOGY
VERSUS
ARTHRITIS**

MANCHESTER
1824

The University of Manchester



Digital Epidemiology Summer School 2021

The Centre for Epidemiology Versus Arthritis has previously run two highly successful face-to-face Manchester Digital Epidemiology Summer Schools, and is planning a revised meeting format for Summer 2021. The three half-day course will a) target an international audience and b) deliver a series of online interactive workshops. Each day will follow the same format of:

- Short lecture to introduce the day's topic (available to watch in advance)
- Parallel practical sessions. Delegates will have the opportunity to choose and join three of the four possible one-hour sessions (limited spaces, delegates will be granted on a first-come-first-serve basis)
- A keynote talk that draws together learning from the day's workshops
- Networking opportunity for all delegates

Programme at glance

- Day 1: Routinely collected health data
- Day 2: Patient-generated data using smartphones
- Day 3: Sensor data and other passively collected data

Who is this course for?

Epidemiologists; Population health researchers; Health data scientists; Health informaticians; Clinicians with an interest in epidemiology and/or data science. Delegates from academic, industry and other backgrounds are welcome.

How much will it cost?

£40 per half-day. Register [here](#).

Deadline for booking: 18 July 2021 (Limited spaces available for each half-day)

More information is available on our [website](#).

Testimonials from our face-to-face course

- *"an innovative course in terms of content"*
- *"a wealth of information into a new and exciting area of epidemiology"*
- *"super friendly people"*
- *"great environment for discussing these topics"*

Day 1: Routinely collected health data (Timetable)



Hosted by: Prof Will Dixon, Dr Meghna Jani, Prof Muhammad Mamdani

EST (Ottawa)				BST (London)
8:10 - 8:30	Welcome to Day 1 and Meet the Delegates (optional)			13:10 - 13:30
8:30 - 8:50	Introduction to electronic health record (EHR) data in observational research Prof Ian Douglas, <i>The London School of Hygiene & Tropical Medicine</i>			13:30 - 13:50
Break				Break
Session 1 9:00 - 10:00	Practical session A Preparing drug exposure data	Practical session B Assessing data quality and handling missing data	Practical session D Trial emulation	Session 1 14:00 - 15:00
Break				Break
Session 2 10:15 - 11:15	Practical session A Preparing drug exposure data	Practical session C Propensity scores and diagnostics	Practical session D Trial emulation	Session 2 15:15 - 16:15
Break				Break
Session 3 11:30 - 12:30		Practical session B Assessing data quality and handling missing data	Practical session C Propensity scores and diagnostics	Session 3 16:30 - 17:30
Break				Break
12:40 - 13:00	Keynote Talk: Applied Artificial Intelligence in Health: From Compute to Care Prof Muhammad Mamdani, <i>University of Toronto/ Vice President - Data Science and Advanced Analytics, Unity Health Toronto</i>			17:40 - 18:00
13:00 - 13:30	Networking opportunity for all delegates (optional)			18:00 - 18:30

Day 2: Patient-generated data using smartphones



Hosted by: Prof Will Dixon, Dr Julie Gandrup, Dr Emily Seto

EST (Ottawa)				BST (London)	
8:10 - 8:30	Welcome to Day 2 and Meet the Delegates (optional)				13:10 - 13:30
8:30 - 8:50	Introduction to patient-generated health data using smartphones Prof Will Dixon, <i>The University of Manchester</i>				13:30 - 13:50
Break				Break	
Session 1 9:00 - 10:00	Practical session A How to work with software partners to set up an mHealth study	Practical session B The ABC of Information Governance	Practical session C How to assess the validity, reliability and responsiveness of new digital measurement instruments?	Session 1 14:00 - 15:00	
Break				Break	
Session 2 10:15 - 11:15	Practical session A How to work with software partners to set up an mHealth study	Practical session B The ABC of Information Governance	Practical session D Analysing daily symptom data	Session 2 15:15 - 16:15	
Break				Break	
Session 3 11:30 - 12:30	Practical session C How to assess the validity, reliability and responsiveness of new digital measurement instruments?		Practical session D Analysing daily symptom data	Session 3 16:30 - 17:30	
Break				Break	
12:40 - 13:00	Keynote Talk: The Potential and Limitations of mHealth Dr Emily Seto, <i>University of Toronto</i>				17:40 - 18:00
13:00 - 13:30	Networking opportunity for all delegates (optional)				18:00 - 18:30

Day 3: Sensor data and other passively collected data



Hosted by: Prof John Mcbeth, Dr Alexander Oldroyd

EST (Ottawa)				BST (London)	
8:10 - 8:30	Welcome to Day 3 and Meet the Delegates (optional)				13:10 - 13:30
8:30 - 8:50	Introduction to patient-generated sensor data Prof John McBeth, <i>The University of Manchester</i>				13:30 - 13:50
Break				Break	
Session 1 9:00 - 10:00	Practical session A Using gait pattern data to stratify dementia subtypes	Practical session B Choosing data streams/ sampling frequencies/ summary metrics for sensor data	Practical session C What's in a smartwatch to getting insight: example of HR data	Session 1 14:00 - 15:00	
Break				Break	
Session 2 10:15 - 11:15	Practical session A Using gait pattern data to stratify dementia subtypes	Practical session C What's in a smartwatch to getting insight: example of HR data	Practical session D Sensor data and digital outcomes	Session 2 15:15 - 16:15	
Break				Break	
Session 3 11:30 - 12:30	Practical session B Choosing data streams/ sampling frequencies/ summary metrics for sensor data		Practical session D Sensor data and digital outcomes	Session 3 16:30 - 17:30	
Break				Break	
12:40 - 13:00	Keynote Talk: Where next for wearables in epidemiological research? Prof Aiden Doherty, <i>University of Oxford/Lead of Health Data Research UK</i>				17:40 - 18:00
13:00 - 13:30	Networking opportunity for all delegates (optional)				18:00 - 18:30

Practical Sessions and Speakers

Delegates will have the opportunity to choose and join three of the four possible one-hour practical sessions:

Day 1: Routinely collected health data

Practical session A Preparing drug exposure data	Dr Meghna Jani, Prof Goran Nenadic, Dr David Selby, Belay Yimer <i>The University of Manchester</i>
Practical session B Assessing data quality and handling missing data	Dr Jamie Sergeant, Dr Alexander Pate <i>The University of Manchester</i>
Practical session C Propensity scores and diagnostics	Dr Mark Lunt, <i>The University of Manchester;</i> Dr Emily Granger <i>The London School of Hygiene & Tropical Medicine</i>
Practical session D Trial emulation	Dr Christopher Rentsch, Dr Kevin Wing <i>The London School of Hygiene & Tropical Medicine</i>

Day 2: Patient-generated data using smartphones

Practical session A How to work with software partners to set up an mHealth study	Charlotte Stockton-Powdrell, Matthew Machin <i>The University of Manchester</i> Sophie Dunne, Maham Idrees <i>uMotif</i>
Practical session B The ABC of Information Governance	Dr Elaine Mackey, Rachel Heron <i>The University of Manchester</i>
Practical session C How to assess the validity, reliability and responsiveness of new digital measurement instruments?	Syed Mustafa Ali, Dr Sabine Van Der Veer <i>The University of Manchester</i>
Practical session D Analysing daily symptom data	Dr Julie Gandrup, Dr Alexander Oldroyd, Dr David Selby, <i>The University of Manchester</i>

Day 3: Sensor data and other passively collected data

Practical session A

Using gait pattern data to stratify dementia subtypes

Dr Riona McArdle, Dr Rana Rehman

The University of Newcastle

Practical session B

Choosing data streams/ sampling frequencies/ summary metrics for sensor data

Dr Anna Beukenhorst

Harvard University

Practical session C

What's in a smartwatch to getting insight: example of HR data

Justin Phillips

Google

Practical session D

Sensor data and digital outcomes

Ashley Polhemus, *University of Zurich*