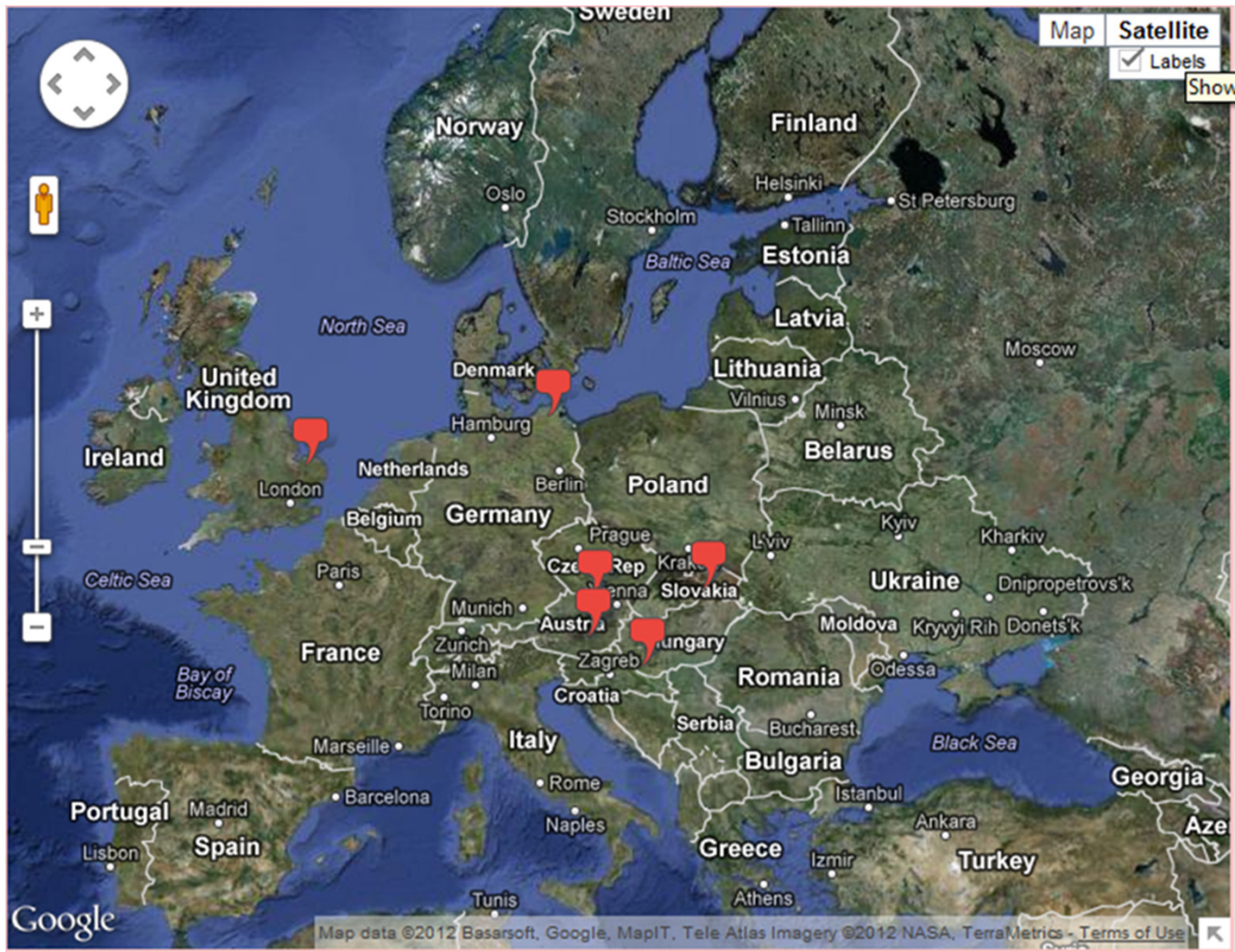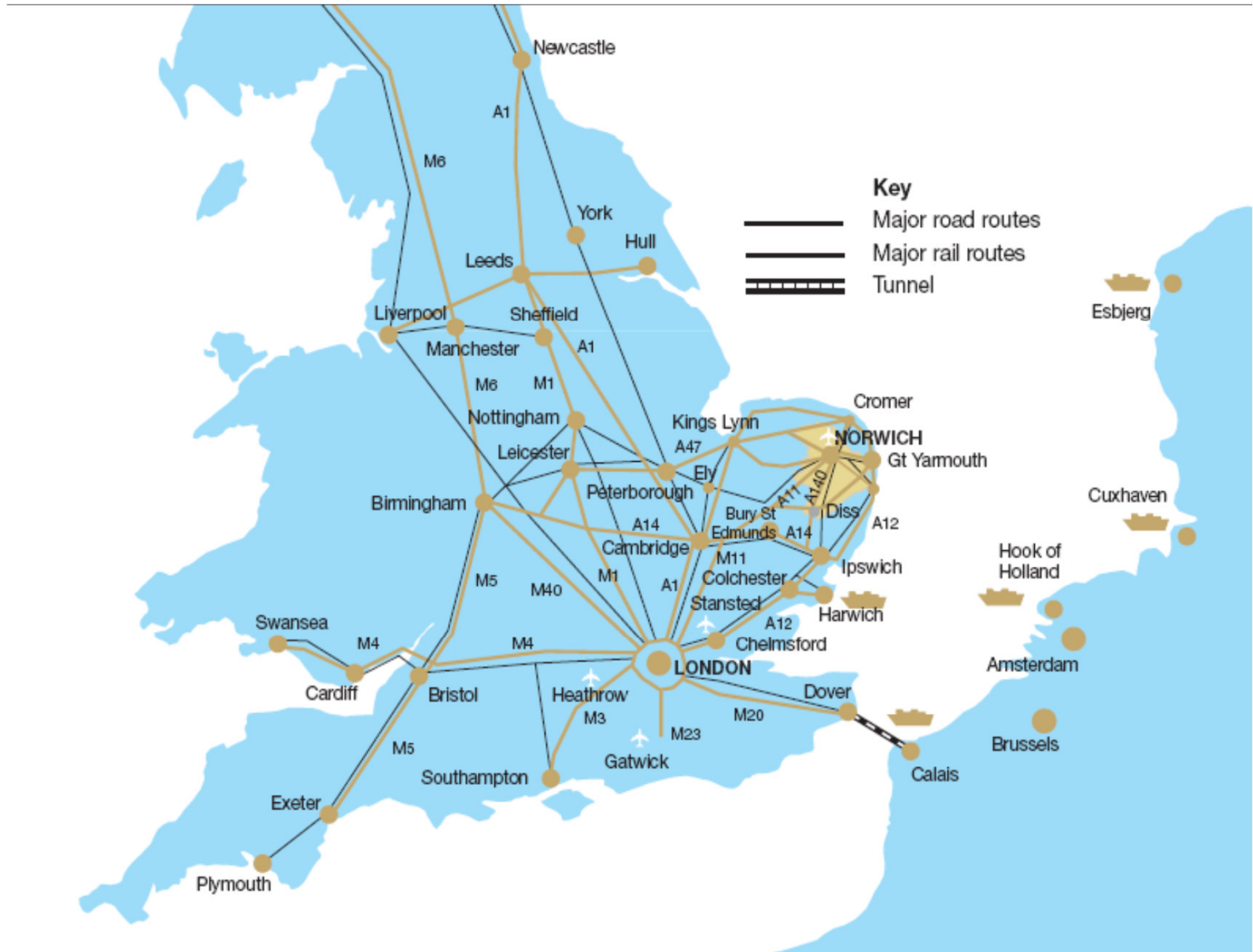# Development and structure of the 'Research Methodology and Epidemiology' Modules within the Master of Migration Health (MMH) programme

Presenters:

Dr Gibson D'Cruz and Dr Carys Horne

Newcastle

A1

M6

York

Hull

Leeds

Liverpool

Sheffield

Manchester

A1

M6    M1

Nottingham

Leicester

Birmingham

Kings Lynn

A47

Ely

Peterborough

A14

Cambridge

A14

Bury St
Edmunds

M11

M1

A1

M5    M40

Swansea

M4

Cardiff

Bristol

M4

Heathrow

M3

M5

Gatwick

Southampton

Exeter

Plymouth

Cromer

NORWICH

Gt Yarmouth

A11

A140

Diss

A12

Ipswich

Colchester

Stansted

A12    Harwich

Chelmsford

LONDON

Dover

M20

Calais

Esbjerg

Cuxhaven

Hook of
Holland

Amsterdam

Brussels

**Key**

Major road routes

Major rail routes

Tunnel

# UEA and Norwich Research Park

# Schools in the Faculty of Medicine and Health

# Modules in the programme

**The structure of the modules within the overall programme:**

- ***M1: epidemiology and research methodology (P1 as leading partner)***

- M2: environmental medicine and occupational health (P1 as leading partner)

- M3: economic / health economic impact of migration (P1 as leading partner)

- M4: organization and systems management (P2 as leading partner)

- M5: clinical and public health assessment (P3 as leading partner)

- M6: social and behavioural aspects of migration including multicultural, multi-religious aspects and their health / mental health impact (P5 as leading partner)

# *M1: Epidemiology and research methodology*

## Module aims and outcomes:

To enable students to extend and integrate knowledge and application of research methodology and epidemiology within the field of Migrant Health.

# *Epidemiology and research methodology*

- **Credit value**: 15 ECTS

- **Teaching methods**: Lectures, Seminars and E-learning

- **Overall contact hours**: 150hrs

# *Epidemiology and research methodology*

## Indicative content

# Research Methodology

- **Introduction to Research Methodology (1ECTS/ 10 Contact hours)**
  - Introduction and overview of the philosophical basis of research
  - Introduction to Migration Health Research
  - Introduction and overview of  key methodologies and designs
  - Selecting and justifying a relevant design
  - The research process: Formulating and justifying a research problem
  - Topic selection: sources and techniques for generating topics, planning and literature review
  - Ethics and research design in the context of migration

# Quantitative and Qualitative Research Methodologies (6ECTS/60ConHrs)

- – **Qualitative Research: philosophy, epistemology and its role in healthcare research**
- – **Qualitative Research: types and designs**
- – **Qualitative Research: data, data collection and establishing trustworthiness**
- – **Qualitative Research: approaches to analysis**
- – **Practical Bayesian Design and Analysis in Clinical Studies**
- – **Observational and Analytical Research Methods**

# Quantitative and Qualitative Research Methodologies (6ECTS/60ConHrs)

- Advanced, Factor and Cluster Analysis of Survey Data
- Regression Analysis
- Research Methods for Randomized Controlled Trials
- Statistical and Methodological Issues in Randomized Clinical Trials
- Advanced Linear Models for Health Data
- Mixed Methods Research Designs for Health Services and Policy Research, Cases
- Discussions in the fields of experimental, quasi-experimental, survey, ethnography designs

# Epidemiology

- **Introduction to Epidemiology, and General Epidemiology (2ECTS/20 Contact hours)**

  - ❑ A historical overview of epidemiology development.
  - ❑ Introduction and overview of epidemiological principles and concepts to include prevalence, incidence, burden of disease.
  - ❑ Overview of descriptive epidemiology, case reports, prevalence surveys, data sources.
  - ❑ Sub disciplines of epidemiology to include public health epidemiology, infectious disease epidemiology, social epidemiology, environmental epidemiology, occupational epidemiology and clinical epidemiology.

# Determinants of health and disease (2ECTS/20ConHrs)

- Epidemiology of selected health concerns related to genetics, environment, social, economic, occupational and behavioral factors.
- Basic principles of a public health approach to the health of migrants to include population health
- Disparities in health status among migrants and indigenous population
- Migration process and impact on migrant health
- Access to healthcare, barriers for migrants, health inequities
- Most at Risk group of Migrants
- Ethical, ethnic and religious aspects

# Epidemiology of communicable and non-communicable diseases: disease patterns of country of origin and host country   (4ECTS/40ConHrs)

- Defining infections, diseases and population

- Epidemiology of selected diseases

- Observational and Interventional studies

- Associations, relative vs. attributable risk, case control studies.

- Statistics in public health and epidemiology (definitions and tools, prevalence/ incidence, rates and ratios, concept of exposure)

- Random sampling error, confidence intervals,

- Selection bias,

## Epidemiology of communicable and non-communicable diseases: disease patterns of country of origin and host country   (4ECTS/40ConHrs)

- Confounding factors
- Outbreaks epidemics, clusters endemics
- Surveillance methods in infectious diseases
- Disease prevention in public health
- Ways and modes of transmission of infective agents
- Principles of diagnostic, therapeutic, sanitary and preventive measures
- Traditional and molecular laboratory methods in epidemiology of infectious diseases
- Geographical epidemiology (morbidity profile of native vs. homing countries/geographical regions

# Methods of assessment

- 1. Research proposal

- 2. The design of a community based epidemiological study

# Dissemination and progress

- D'Cruz, G. and Horne, C. (2012) *Developing a European Masters level programme in Migrant Health:  Opportunities, challenges and innovations in curriculum development.* The 1Xth European Conference of Nurse Educators with the RCN Forum International Conference. 3-5 October 2012. Cardiff.

- Piloting the module at UEA, Norwich

# Thank you for listening