

# The Learning Health System in Europe

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The Learning Health System in Europe Conference  
24-25 September 2015, Brussels

# Aims of the meeting

- To share best practice in EU and US projects relevant to the LHS
- To consider next steps in developing a LHS at European level, including the role of the European Institute for Innovation through Health Data.
- To disseminate work and make contacts.

# Programme

- Keynotes
- Sustainability and business development
- Knowledge management and data standards
- Data privacy and security
- Knowledge translation and decision support
- Facilitating clinical trials
- Big data and clinical – research data integration
- The European Institute for Innovation through Health Data

# [www.transformproject.eu](http://www.transformproject.eu)

- €7.5M EU Framework 7 Project
- March 2010-Nov 2015
- Funded under the Patient Safety Work program of FP7
  - To support decision making
  - To support clinical trials
  - As part of a ‘Rapid Learning Healthcare System’

# 21 Partners from 10 Member States



University of London



UNIVERSITY OF BIRMINGHAM



University of Crete



Institut national de la santé et de la recherche médicale



# Aims of TRANSFoRm

- To develop methods, models, services, validated architectures and demonstrations to support the learning health system, specifically:
  - Epidemiological research using primary care records, including genotype-phenotype studies and other record linkages
  - Research workflow embedded in the EHR
  - Decision support for diagnosis

# Use case 1: Type 2 Diabetes

- **Research Question:** In type 2 diabetic patients, are selected single nucleotide polymorphisms (SNPs) associated with variations in drug response to oral antidiabetic drugs (Sulfonylurea)?
- **Design:** Case-control study
- **Data:** primary care databases (phenotype data) pre-linked to genomic databases (genetic risk factors) – data federation

## Use case 2: Gastro-oesophageal reflux disease (GORD)

- **Research Question:** What gives the best symptom relief and improvement in QoL: continuous or on demand PPI use?
- **Design:** Randomised Controlled Trial (RCT)
- **Data:** Collection through eHR & web based questionnaire – eCRF AND mobile PROMS
- **Provenance and security**



# Use case 3: Diagnostic Decision Support

- Alerting v prompting (assisting v correcting) in chest pain, abdominal pain and shortness of breath
  - Clinical Prediction rule web service (with underlying ontology)
  - Prototype DSS integrated with InPS EHR system