

Contract number: **2012 12 13**

Proposal title: **Economics of Chronic Diseases**

Acronym: **EConDA**

Starting date: **15/04/2013**

Duration of the project: **30 months**

Reporting period: **15/04/2013 – 14/07/2014**

Main partner: **UK Health Forum – UKHF (formally National Heart Forum)**

Project lead: **Paul Lincoln, UKHF**

Project co-ordinator: **Laura Webber, UKHF (formally Tim Marsh)**

Number of associated partners: **8 (including UKHF as lead partner)**

Total amount of the project: **EUR 1,325,669.98**

EC Cofinancing: **EUR 791,466.37**

Prefinancing payment: **EUR 316,586.54**

Final payment: **EUR 474,879.83**

## 1.1. Executive Summary

The Economics of Chronic Diseases project (referred to as 'EConDA') directly supports the Commission Health Programme and the EU approach to the challenge of chronic diseases which requires an integrated response focusing on risk factors

([http://ec.europa.eu/health/major\\_chronic\\_diseases/docs/reflection\\_process\\_cd\\_en.pdf](http://ec.europa.eu/health/major_chronic_diseases/docs/reflection_process_cd_en.pdf)).

Four major chronic disease demonstration models will be developed for eight EU countries (Bulgaria, Greece, Finland, Lithuania, The Netherlands, Poland, Portugal, UK). These models are for coronary heart disease (CHD), type 2 diabetes (T2DM), chronic obstructive pulmonary disease (COPD), and chronic kidney disease (CKD).

The project has been progressing well and has met each deliverable and outcome indicator to date. A website has been launched, a protocol paper has been accepted for publication (*BMC Public Health, May 2014*) and the project was exhibited at the European Congress on Obesity in Sofia in May, 2014. While the collection of data has been problematic, this is an ongoing process since we are aware that new data are becoming available. The models can easily accommodate these new data. Similarly, data on the cost of interventions, especially upstream interventions will be informed through data provided by local contacts and collaborating partners.

Tim Marsh left the UK Health Forum during this period.

## 2.1 General Objective of the project

The general objectives of this project are to:

- Aid EU member states to develop, select, and implement more cost-effective policies to improve chronic disease prevention
- Reduce health inequalities in chronic disease prevalence

In the current financial climate of austerity, there is a necessity for public health interventions to be proven to be cost effective. How we measure and communicate cost-effectiveness is open to much debate. Is there one method which fits all circumstances? Or do we need a suite of methods for different types of interventions and different stakeholders? The use of modelling to predict future health outcomes of public health interventions is gaining increasing cogency. Trials are too expensive, take too long and are often subject to too many confounding variables. Using micro-simulation methods enables policy makers to test various interventions and outcomes.

The EConDA project will contribute to better informing policy making and provide direction, e.g. consensus on methodology, and developing a model that can be used to provide integrated approaches to address cost-effectiveness in linked avoidable chronic disease prevention. Although many interventions will aim to reduce population-wide premature death and disability from chronic diseases, the project will identify effective and cost-effective interventions targeted at population groups that are most affected by chronic diseases. In doing so, this project will aim to reduce inequalities in health.

The project will contribute to increasing the knowledge base for reducing a) early death and disease from chronic diseases; b) early death and disease from chronic diseases in the population groups most affected i.e. reducing inequalities in health; c) reducing the wider externalities, i.e. the economic costs and losses from chronic diseases.

The project will begin to develop the tools to enable policy makers to address these questions.

## 2.2. Specific objectives of the project

Number	Title	Indicator	WP
1	Achieve consensus among key international organizations on methodology for measuring cost-effectiveness of interventions to prevent, screen and treat chronic diseases.	Report on the review of literature, report on consensus meeting	4
2	Develop an epidemiological disease model.	Data collection Working disease models	5
3	Develop a demonstration model for integrated approaches to address cost-effectiveness of various interventions for chronic disease prevention.	Data collection of cost data Working models with interventions	6
4	Implementation of the model in specific countries.	Working model implemented in 7 countries	6
5	Validation of the model	Validation against other models	7
6	Publish and disseminate an evaluation of the study.	Scientific articles	2

## 2.3 Specific deliverables of the project

D	Title	Relevant Milestone	M planned	M received	Comments e.g. any delay	Public (Y/N)
1	Review of cost-effectiveness methods and evidence for the chronic disease prevention	Draft review based on the literature review for circulation to partners	6	6		Y, on website
2	Development of a disease model		20	N/A		
3	Consensus on criteria that will allow standardisation and comparisons of cost-effective studies	Seek consensus on the best methodology for measuring cost-effectiveness of chronic disease interventions.	8	9	Consensus meeting took place in month 8 and final report of this meeting complete in month 9 - enabling time or delegates to comment on the final report	Y, on website
4	Develop a cost-effectiveness simulation model	Gather cost-effectiveness data	24	N/A	Ongoing collection of cost data.	
5	Validation of the model		28	N/A		
6	Project leaflet	Write project leaflet	6	6		Y, on website
7	Final Evaluation report	Baseline evaluation report	6	6		Y, on website
		Annual evaluation report	12	12		Y, on website
8	Interim and final technical and financial reports.	Year one technical and financial reports submitted	14	14	The annual reports will be submitted in September 2014	Y, on website once submitted
9	Dissemination (website, papers, conference)	Website	30	6		Y
		Protocol paper, BMC public health	30	9		Y, on website
10	Final project report and layman's final project report.		30	N/A		

### 3.1. Overview of activities for the period covered in the report

**Please summarise any problem encountered during this period and action taken to deal with these problems (one page).**

The main challenge has been to collect the necessary data required, in particular incidence and survival data.

Data collection will continue into next year to ensure the most up to date data are collected. Where data are not available, decisions will be made about the use of proxy data. Country profile sheets have been constructed to capture more data currently inaccessible to us and to validate those data collected. These sheets have been sent to the relevant partners for dissemination to contacts.

If subcontracting has been carried out, please explain any procurement procedures that were implemented (½ page)

So far subcontracting has been:

1. Work package 2 – procurement of the website design

The procedure involved:

- Development and agreement of a specification with the EConDA team as part of steering meeting 1.
- The UKHF obtained quotes from relevant how many suppliers.
- Agreeing most cost effective bid.
- Writing a contract in line with UKHF terms and conditions of employment.
- Two meetings with the selected web developer took place.
- The website was launched on time in Month 6.

### 3.2. Technical implementation of the project

#### Activities undertaken

The EConDA project is administered by the UK Health Forum (UKHF).

WP2: European Society of Cardiology

WP3: Health Equalities Group

WP4: European Heart Network

WP5: UK Health Forum

WP6: University of Gröningen

A kick-off meeting, two steering meetings and a teleconference have been held so far (see appendix 1 for project plan, agendas and minutes). This involved participation by each partner.

All reports and deliverables have been reviewed by the project team (e.g. website, leaflet, reviews) and key decisions were discussed and made. For example, we discussed and agreed the questions needed to steer the consensus meeting and the interventions we want to test in each of the models.

#### Internal communication

The project coordinator communicates directly with Work Package leads and other members of the team on an ongoing basis and through their participation in relevant work package meetings and workshops.

Each associated partner has received and signed a cooperation agreement between them and the project lead, UKHF outlining the general and specific tasks that they should deliver (see appendix 2 for an example).

There were three teleconferences with European Heart Network (WP 4) during the planning stages of the consensus meeting and report writing).

#### Problems encountered and resolved

The main problem was ensuring that partners understood and completed the relevant administration (e.g. timesheets, expenses). This was addressed through steering meetings, regular electronic communication and where necessary follow-up discussions with partners and coordinator. We opened a question with our EC project lead Guy D'Argent regarding the longstanding contractual relationship the UKHF have with their programmer and the section from which he is funded in the contract. It was agreed that an amendment to the contract should be instigated to regularise procurement of the programmer details to contractor. An amendment will also be necessary to change the lead applicant from Tim Marsh to Laura Webber since Tim Marsh has now left the UKHF. In addition the 'National Heart Forum' has changed its name to the 'UK Health Forum'.

#### Plans for the next period

- Steering meetings 3 and 4 (October 2014 and March 2015)
- Teleconference in July 2014 to regroup, ensure that the project is on track and to identify and resolve any problems
- Above mentioned amendments to the contract

## WP2: Dissemination strategy

### Activities undertaken

A number of dissemination activities have taken place:

- Project leaflet produced and disseminated to all partners (appendix 3)
- Project website established (econdaproject.eu)
- Protocol paper published in BMC Public Health (appendix 4)
- An outline of the project has been submitted in Lithuanian to the Lithuanian Journal of public health (<http://www.hi.lt/cat/1>) to comment on the utility of modelling in Lithuania (appendix 5)
- Spreadsheet of events and conferences initiated that partners will attend that will aid dissemination. This is shared on one drive so that (appendix 6)
- Application to exhibit EConDA at the European Congress on Obesity in Sofia, May 2014 was submitted, accepted and carried out (appendix 7)

### Problems encountered and resolved

No problems with this WP have occurred to date.

### Activities planned for the next period

- Drafting of papers
- Begin to plan EConDA conference
- Keeping website and spreadsheet of events up to date
- Submitting abstracts for publication and dissemination at conferences based on spreadsheet of events

## WP3: Evaluation of the project

### Activities undertaken

- A baseline evaluation report
- Annual evaluation report

These are presented in appendix 8.

### Problems encountered and resolved

There was some delay in getting baseline questionnaires back from partners, largely because the milestone fell over the summer period when many people were on leave. This was resolved for the annual report deliverable by giving plenty of time to complete the survey and attaching a deadline.

### Activities planned for the next period

- Annual evaluation report April 2015
- Final evaluation report October 2015



WP4: Reaching a consensus on the methodology for measuring cost-effectiveness of interventions

Activities undertaken

- Literature review of cost-effectiveness of interventions to prevent, screen and treat four chronic diseases (coronary heart disease, type 2 diabetes, chronic obstructive pulmonary disease and chronic kidney disease): '*Cost-effectiveness of interventions to prevent, screen and treat chronic diseases: A review*'. Appendix 9
- Qualitative study with expert health economists to determine the best methods for measuring cost-effectiveness: '*Qualitative analysis – expert testimony on the best methods measuring cost-effectiveness of chronic diseases. UKHF team*'. Appendix 10
- Consensus meeting with experts
- A report of the consensus meeting – see appendix 11.

Problems encountered and resolved

- No problems with this WP were identified.

Activities planned for the next period

- WP4 is now complete, possible publication of the reviews will be discussed with partners
- The reports from this WP will be used to inform model development in WP5 and 6.
- The qualitative study will be written up and submitted for publication.

WP5: Developing a model in eight countries (Bulgaria, Finland, Greece, Lithuania, Netherlands, Portugal, Poland and UK).

#### Activities undertaken

- Data collection of disease incidence, prevalence, mortality, survival data of each of the four diseases of interest (coronary heart disease, type 2 diabetes, chronic obstructive pulmonary disease and chronic kidney disease) in each of the 8 Member States (Bulgaria, Greece, Finland, Lithuania, The Netherlands, Portugal, Poland, UK) has been carried out. Data availability is presented in appendix 12.
- Conceptualisation of the disease models, see appendix 13.
- Extension of the disease model with a nephrology arm, including the necessary background data (PREVEND database), was performed in collaboration with partners from the University of Gröningen.
- Coding of the core disease model.

#### Problems encountered and resolved

- There are some data limitations: Disease incidence data for Bulgaria and Greece in particular have not been obtained. A meeting was held in Bulgaria, at the National Center of Public Health and Analyses, May 2014, to discuss data availability and collaboration and a meeting held in Lisbon with INSA to better determine cost-effectiveness data, interventions and use of proxy data.
- The EConDA team will work together to develop a network of contacts beyond those already contacted to extract useful data from unpublished or grey literature. Country profile sheets have been sent to a wider network (appendix 14).
- Chronic kidney disease data are not available for Greece, Bulgaria and Finland so proxy data will be used.
- We are awaiting new data from Portugal which is national data due to be released in September.

#### Activities planned for the next period

- Further refining of disease model concepts with relevant partners.
- Continue coding, testing and refining of the disease models with input from partners.
- Preliminary results presented at the October 2014 and March 2015 steering meetings with partners.
- Preparation of abstracts for conferences and papers for publication.
- Make decisions about which proxy data to use.

## WP6: Development of a cost-effectiveness model

### Activities undertaken

- Discussing and deciding which interventions to be tested. A list of these is presented in appendix 15. Comments from the WHO and EC have been received, we are awaiting comments on these from the OECD.
- Collection of cost data for interventions – progress so far is presented in appendix 16.
- Developed assumptions for modelling sugar-sweetened beverage tax in the UK.

### Problems encountered and resolved

- It has been difficult to obtain specific costs of interventions, especially for upstream interventions and for some countries. A meeting and workshop held at INSA and meetings between UKHF and RUG have taken place to discuss the ways forward. Country profile sheets (appendix 14) outlining the data needs and gaps have been sent to partners and country contacts to gather additional data.

### Activities planned for the next period

- Assumptions made in the costing of interventions will be shared with collaborating partners for review and comment.
- Sharing of the above with other relevant experts for comment and review (i.e. are the assumptions valid and plausible?).
- Coding and testing of the economic model by the end of year 2.
- Testing of interventions within the models.

## WP 7: Validation of the models

### Activities undertaken

- This WP is yet to commence.
- Some qualitative validation of the interventions being modelled has been sought from the OECD, WHO and EC.

### Problems encountered and resolved

- None so far.

### Activities planned for the next period

- Sensitivity analysis of models.
- Validation against other models.
- Qualitative validations of results with expert epidemiologists.

## List of appendices

Appendix 1: Project plan, agendas and minutes from each steering meeting.

Appendix 2: Example cooperation agreement.

Appendix 3: Project leaflet.

Appendix 4: Protocol paper.

Appendix 5: Concept note on EConDA sent to the Journal of Public Health, Lithuania.

Appendix 6: Spreadsheet of events and conferences to aid dissemination.

Appendix 7: EConDA exhibition posters at ECO.

Appendix 8: Baseline evaluation report and annual report.

Appendix 9: Literature Review: Cost-effectiveness of interventions to prevent, screen and treat chronic diseases: A review' for WP4.

Appendix 10: Qualitative analysis – expert testimony on the best methods measuring cost-effectiveness of chronic diseases, for WP4.

Appendix 11: Report of the consensus meeting, WP4.

Appendix 12: Data availability.

Appendix 13: Draft conceptualisation of the disease models.

Appendix 14. Country profile sheets.

Appendix 15. Interventions to be tested in EConDA.

Appendix 16. Collection of cost data