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1. introduction

1.1. main interests

We started by proposing and establishing a new unit located at Chronic Diseases Research Center (CEDOC), NOVA Medical School (NMS) of Lisbon – EpiDoC Unit, Epidemiology of Chronic Diseases (http://cedoc.unl.pt/epidocunit/), which constitutes the adequate framework to support the activities related with this “Chair”. The activities were developed with the human and financial resources managed through the Unit, by the team members and associated collaborations.

EpiDoC Unit is an epidemiology, clinical and outcomes research unit aiming at providing scientific information of excellence, gathering health and diseases issues and covering clinical, social, economic and human aspects of chronic non-communicable diseases. The research unit has also experience in developing, testing and applying innovative forms of measuring health condition and conducting interventional studies through new information and communication technologies (ICT) such as online platforms, apps and interactive TV, using patient oriented strategies.

This Unit has expertise in surveys, chronic disease registries, observational studies and management of large databases including demographic, life habits, clinical, pharmacological, socio-economic, labor, quality of life, imaging, genetics and laboratorial data. We have been made long term investment in a population based longitudinal cohort with imaging and blood samples.

EpiDoC is also committed to help patients and vulnerable population groups to improve their health, namely in health promotion of elderly. We are pioneer on promoting educational and training strategies using information and communications technology (internet, apps and smart TV tools).

Our aim is to contribute to patient empowerment, to reduce inequities in health and to provide evidence for public health policies targeting elderly people.

In this context, we work in close collaboration with CEDOC’s basic and translational research units and with pharmacoeconomics and health economics researchers at ENSP, Centro Médico Universitário de Lisboa’s (CMUL) affiliated hospitals and primary care centers and other schools like Faculdade de Ciências e Tecnologia, Instituto de Higiene e Medicina Tropical and Instituto de Tecnologia Química e Biológica.

The main activities of the joint unit of NOVA Medical School and National School of Public Health, EpiDoC Unit, are:
➢ Research:

- Clinical investigation of chronic non-communicable diseases;
- Design, implementation and development of epidemiological and clinical studies (observational and interventional);
- Support of internal and external researchers to carry out research projects;
- Creation and validation of technological tools for collecting data, intervention and health promotion;
- Empowerment of vulnerable population groups (i.e. the elderly, the chronically ill) to improve their health;
- Development and support of EpiDoC cohort, with wide dissemination and communication of health data that it generates and its impact on health policies.

➢ Training and educational activities:

- Education and training in epidemiology and clinical research: this unit allows researchers (fellows, trainees, pre- and post-graduate students, doctoral and postdoctoral students, etc.) to access database information and facilities including education and training in clinical research, epidemiology and cohort study design; dataset cleaning, analysis and interpretation.
- The Chair is responsible for teaching undergraduate medical students at NMS and post-graduate students at NMS and ENSP in fields of Epidemiology and Clinical Research in established courses and by creating new ones. The Unit endorses mentorship, regular seminars, scientific courses and hands-on workshops to assure high quality research training.

Teaching and training strategies, using information and communication technologies (ICT, internet, online information, applications for smartphones and smart TV) for easy access and distribution, namely teaching programs and promotion of healthy life styles broadcasted on national TV, to the general population and special vulnerable groups;

➢ Services to the scientific community:

EpiDoC gives assistance with the preparation and development of research designs: conceptualize the research problem, develop protocols, study design selection, study setting, exposure definition and measurement, outcome definition and measurement, covariate and data sources selection, study size and power calculations. We can cover large, diverse, defined populations selected for a disease, condition or procedure; to capture complete clinical information about this population over time, including longitudinal information on clinical care, changes in clinical characteristics and conditions, and assessment of clinical care services and outcomes in health.

➢ Clinical Research Communication and Diffusion:
The “Chair” and EpiDoC Unit are fully committed in sharing and giving open access to all generated knowledge and advancements. Main results are announced in academic health-related publications and websites, as well as in specialized peer-review journals. Our results have been and will be published in scientific journals from different research fields such as epidemiology, health economy, public health and medicine. Other dissemination activities include a website, flyers, as well as the organization of different events and conferences.

➢ Networking and Collaborations:

EpiDoC Unit relies on distinguished researchers and recognized professionals as well as on national and international collaborations, from the most diverse scientific and technological areas (medicine, psychology, nutrition, engineering, innovation, management, computer science, statistics, etc.) as well as with outstanding scientific institutions and technology companies, medical scientific societies, pharmaceutical companies and other private and public health institutions (NOVA Medical School, Escola Nacional de Saúde Pública, CATOLICA Lisbon School of Business and Economics, Instituto de Saúde Pública da Universidade do Porto, Sociedade Portuguesa de Reumatologia, Liga Portuguesa Contra as Doenças Reumáticas, Direção-Geral da Saúde, Administração Central dos Serviços de Saúde, NTNU – Trondheim, Norway, University of Stavanger – Stavanger, Norway, Harvard Medical School – Boston, USA, Microsoft Portugal, Innowave etc.). These collaborations bring together a wealth of experience in research, product development and scientific validation, chronic disease registries, observational studies and management of large databases (including a wide range of data: demographic, lifestyle, clinical, pharmacological, socio-economic, labor, quality of life and laboratory data). It is also highlighted by the evidence given in the conduction of health intervention studies through the new information and communication technologies.

1.2. team

<table>
<thead>
<tr>
<th>Helena Canhão</th>
<th>PI</th>
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</thead>
<tbody>
<tr>
<td>Jaime Cunha Branco</td>
<td>Co-PI</td>
</tr>
<tr>
<td>Ana Rodrigues</td>
<td>Scientific head</td>
</tr>
<tr>
<td>Sara Simões Dias</td>
<td>Senior statistician</td>
</tr>
<tr>
<td>Rute Dinis de Sousa</td>
<td>Unit manager</td>
</tr>
<tr>
<td>Maria João Gregório</td>
<td>Researcher</td>
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<tr>
<td>Mónica Eusebio</td>
<td>Junior statistician</td>
</tr>
<tr>
<td>Ricardo Morganho</td>
<td>Research assistant</td>
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<tr>
<td>Pedro Silva</td>
<td>Research assistant</td>
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<tr>
<td>Mónica Fernandes</td>
<td>Research assistant</td>
</tr>
<tr>
<td>Marta Ribeiro</td>
<td>Research assistant</td>
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</tbody>
</table>


2. major achievements

2016 was very relevant for EpiDoC Unit since it was finally settled in NMS and gained its place in the scope of clinical research in CEDOC, with national visibility.

Project Saúde.Come – Promoting Food Security was successfully concluded (achieving 100% of goals and outputs and executing 93% of the budget).

Other significant numbers are 27 published papers and 4 submitted (average of 2.6 paper/month); 13 oral presentations; 42 references in the national media; and finally, 1 PhD thesis concluded, 2 ongoing and 3 master theses ongoing.

3. activity report

3.1. teaching

3.1.1. Courses and classes


3) CU Methods of Clinical Research (optional) – pre-graduated medical students NMS. 2016/2017

4) CU Epidemiology – Post graduated Course of Specialization in Hospital Administration. 2016/2017
CU Methods of Investigation in Public Health – Post graduated Health Public Doctors.
2016/2017
Participations in classes and seminars in different CU and Courses – NMS and ENSP.

3.1.2. Post-graduated students

- PhD Thesis

Nélia Gouveia (MSc), NMS concluded
Ana Rodrigues (MD), FMUL – “Linking wnt pathway with bone mineralization, mechanical properties and fracture risk in osteoporosis”
Pedro Laires (MSc) – Health economics, FMUL, scheduled – “The impact of rheumatic diseases on early retirement”.

- Master Thesis

Frederico Baptista, Physiotherapist, is developing his master on “Evaluation of effectiveness of the lifestyle modification program in the physical fitness of the elderly”, using the intervention pilot study with elderly (WP3_idosos).
Inês Babo, Nutritionist, is developing her master on “Validation study of the PREDIMED questionnaire for the Portuguese population”.
Rute Dinis de Sousa, Psychologist, is developing her master on anxiety and depression in the Portuguese older adults, using EpiDoC 2 cohort.

- Advanced Training

Aleksandra Blazica, for 1 month. She was particularly involved in WP3_elderly data on perceptions and expectations towards technology intervention in health.
Mariana Trindade, for 3 months. She participated in the medical appointments of elderly participants for WP3_elderly.

3.2. research

3.2.1. Projects
1) Saúde.Come – Promoting Food Security (Helena Canhão et al) – funded by EEA Grants
2) Subchondral bone markers as predictors of knee osteoarthritis progression and treatment response - the BiOA Project. (Alexandre Sepriano et al) – ongoing.
3) CoReumaPt_Osteoporose (mulheres com 65 anos de idade): CTOPRA – development and validation of a new imageology method to predict osteoporotic fractures (Ana Rodrigues, et al) funded by Research grant SPR/Pfizer
4) The socioeconomic burden of low back pain in the Portuguese population: an epidemiological population-based study (Nélia Gouveia et al)
6) Anxiety, depression and quality of health-related life: a comparative study of individuals with and without self-reported rheumatic disease (Sónia Gonçalves et al) – ongoing.
7) Influence of the mtDNA haplogroups in the progression of osteoarthritis in different geographic populations (Francisco Javier Blanco et al) – ongoing.
8) Regional variation and determinants of vitamin D status in Portugal (José Pereira da Silva et al) – ongoing.
9) Relationship between serum vitamin D and oral health in the elderly (Artur Miler, José Pereira da Silva, et al) – ongoing.
10) The patient innovation process and drivers of adoption: the case for improving solution availability (Leid Zejnilovic, Pedro Oliveira et al)
11) Performance of rheumatoid arthritis disease activity instruments in distinct populations - a comparative study upon METEOR (Helena Canhão et al) – ongoing – funded by METEOR
12) Vitamin D, sun exposure, dairy consumption, bone mineral density and fracture occurrence in Portugal and its regions (Cátia Duarte et al) – ongoing.
13) Psychological conditions in the adherence and impact of a multicomponent intervention for older adults with osteoarthritis (Natália Duarte et al) – ongoing.
14) Risk of fragility fractures and falls in the Portuguese diabetic population (Sofia Furtado et al) – ongoing – funded by Research grant SPR
15) Assessing pain management of non-inflammatory rheumatic diseases: osteoarthritis, fibromyalgia and low back pain (Helena Canhão et al) – ongoing – funded by Research grant SPR
16) ReumaHEART - a Portuguese population based study (Vital Domingues et al) – ongoing – funded by Research grant SPR and Research grant SPR/Pfizer (4.700€)
17) Impact of different Community-Based interventions in a range of very different European countries (Giuseppe Liotta et al) – ongoing.
18) The impact of a lifestyle changing program through an interactive TV application on the muscle strength of food-insecure elderly: A quasi experimental study design (Frederico Baptista et al) – ongoing
19) Anxiety and depression in Portuguese elderly – determinants and impacts (Rute de Sousa et al) – ongoing – funded by Research grant SPR
20) Improvement osteoporosis treatment adhesion and reduction of falls using ICTs- the Healthy Bone TV app program (Ana Rodrigues et al) – ongoing – funded by Research grant SPR/Pfizer

21) PAASPORT – Prevalence, patient characteristics and patient’s quality of life – understanding the impact associated to psoriatic arthritis and ankylosing spondylitis in Portugal (Helena Canhão et al) – ongoing – funded by Novartis

3.2.2. Books

In preparation “Viver com saúde – depois dos 60 anos”.

3.2.3. Papers


28) Dietary patterns and its association with socioeconomic factors, lifestyles behaviours and health status in Portugal: results from EpiDoC cohort_ submitted to Public Health Nutrition

29) Home-based intervention program to reduce food insecurity in elderly using a TV app – the study protocol of the randomized controlled trial Saúde.Come Senior_submitted to JMIR Research Protocols

30) Family meals and disordered eating in adolescence: The mediating role of depression and diet_submitted to Child: Care, Health & Development - Account Created in Manuscript Central

31) How does parents’ perception of food insecurity impacts on adolescents’ nutritional status, diet, and psychological wellbeing?_submitted to Child: Care, Health & Development

3.2.4. Posters

1) “Dietary patterns and its association with socioeconomic factors, lifestyles behaviours and health status in Portugal: results from EpiDoC cohort” at XXXIV Reunião Científica da SEE and XI Congresso da APE – Seville, Spain, 14th September 2016

2) “The use of analgesic and other pain relief drugs to manage chronic low back pain – results from a national survey”

3) “Years of working life lost caused by osteoarthritis in Portugal – Analysis from the EpiReumaPt study”

4) “Self-reported rheumatic diseases and early retirement in Portugal – Analysis from the EpiReumaPt study”
5) “A clinical study to examine thresholds of joint space width and joint space area for identification of knee osteoarthritis”

6) “Regional analysis of indirect costs of early retirement due to rheumatic diseases in Portugal – results from the EpiReumaPt study”

7) “Costs of early retirement caused by rheumatic diseases in Portugal – analysis from the EpiReumatPt study”

8) “The burden of spondyloarthritis – PAASPORT a population-based study”

9) “EpiDoC cohort: a Portuguese based cohort.”

3.2.5. Communications and seminars

1) “Is TV really a devil?” Ageing well with technology – at AAL Forum 2016, in St Gallen, Switzerland, 27th September 2016 (seminar)

2) “Promoting healthy lifestyles and literacy in health using ICTs” at Health Promotion Research – an International Forum in Trondheim, Norway, 28th September 2016 (seminar)

3) "Dietary patterns and its association with socioeconomic factors, lifestyles behaviours and health status in Portugal: results from EpiDoC cohort" at Health
Promotion Research – an International Forum in Trondheim, Norway 29th September 2016 (oral communication)

4) “Intervention program on diet and physical activity to reduce food-insecurity in elderly – a study protocol” at Advancing Food Insecurity Research in Toronto, Canada 17th November 2016 (oral communication)

5) “Segurança alimentar: experiência e realidade portuguesa” at 2º Seminário Internacional de Segurança Alimentar e Nutricional in Brasília, Brazil, 28th September 2016 (oral communication)

6) Festival das Leguminosas; Educational and motivational tool for the promotion of healthy lifestyles in the elderly; 16th October 2016; Lisbon

7) Health Innovation Day, Microsoft; Telemedicina e monitorização remota de doentes; 23rd November 2016; Lisbon (oral communication)

8) Challenges in the Management of patients with multi-morbidities, School of Pharmacy of the University of Lisbon; 21st November 2016; Lisbon (oral communication)

9) Partilhar a inovação, Ministério defesa nacional; Inovação em alimentação e saúde; 4th November 2016; Lisbon (oral communication)

10) III Jornadas Científicas NOVAsände – NMS | CMUL | ENSP; 16th September 2016; Lisbon (oral communication)

11) Reunião Anual, Ordem dos Médicos; Estudos longitudinais de seguimento; 28th October 2016; Coimbra (oral communication)

12) Defesa Roadshow; Partilhar Inovação; 3rd October 2016; Lisbon (oral communication)

3.2.6. Prizes and awards

Prémio Grünenthal Dor
Prémio Dr. Assunção Teixeira
3.3. Other activities

3.3.1. Calls

1) Assunção Teixeira 2016
2) Bial 2016
3) H2020 - BONES
4) BPI 2016
5) H2020 - Co-creation 2016
6) European health award 2016
7) Janssen 2016
8) Pfizer 2016
9) MSD 2016
10) P2020 - SPLIT
11) EVERIS 2016

4. In the media

- Quem consome mais carne e pouca fruta revela mais sintomas
- Grupo de investigadores desenvolve aplicação televisiva para idosos

- Jornal da Uma
- Um quinto das famílias em insegurança alimentar
- Discurso Direto
- Idosos mexem-se pouco, comem mal, fumam e bebem

- Cerca de 20% dos portugueses não têm acesso a uma alimentação saudável
- Estudo revela que idosos portugueses têm pouca qualidade de vida
- Dois em cada três idosos em Portugal são sedentários

- Cerca de 20% da população portuguesa está em situação de insegurança alimentar
Uma em cada cinco famílias sem alimentação saudável por razões económicas.

Uma em cada cinco famílias portuguesas em insegurança alimentar.

Idosos portugueses são os mais sedentários e com piores hábitos alimentares.

Portugueses com medo de não ter o que comer.

Noticiário das 07h00 - mins: 2,45'-5,02'

ANTENA 1 – Enrevista Direto

Famílias sem acesso a uma alimentação saudável.

Um quarto dos portugueses com mais de 60 anos vive sozinho e com pouca qualidade de vida.

Um quinto das famílias não tem acesso a uma alimentação saudável.

Uma em cada cinco famílias sem acesso ou com medo de não ter acesso a comida saudável.

DOS TERÇOS DOS IDOSOS EM PORTUGAL SÃO SEDENTÁRIOS.

Um quinto das famílias não tem acesso a uma alimentação saudável.

Uma em cada cinco famílias portuguesas em insegurança alimentar - estudo.

Dois terços dos idosos em Portugal são sedentários.

Uma em cada cinco famílias portuguesas estão em insegurança alimentar.

Dois terços dos idosos em Portugal são sedentários/a>.

Um quinto das famílias não tem acesso a uma alimentação saudável.

Diário de Notícias

Saúde.come: Uma vida saudável depois dos 60 anos.

VF Comunicação
Idosos com mais de 65 anos têm em média três doenças crónicas.

Viver com Saúde depois dos 60 anos.

Dois terços dos idosos em Portugal são sedentários.

Investigação: Dois terços dos idosos em Portugal são sedentários.

Saúde.come lança manual para uma vida saudável depois dos 60 anos.

Dois terços dos idosos em Portugal são sedentários.

Idosos têm «estilo de vida menos saudável».

VIVER COM SAÚDE NA IDADE SÊNIOR.