

# BRIDGING HEALTH AND SOCIAL CARE WITH THE CITIZENS – THE CASE OF EIT HEALTH PROJECT “HEALIQS4CITIES” AND “PRAÇA VIDA+”, IN PORTUGAL

BEBIANA SÁ-MOURA<sup>1</sup>, PATRÍCIA COUCEIRO<sup>1</sup>, LUÍS CATARINO<sup>2</sup>, DIANA GUARDADO<sup>3</sup>, MAJA DE BRITO<sup>1,4</sup>, BÁRBARA GOMES, RUI TAVARES<sup>5,6</sup>, JOÃO RAMALHO-SANTOS<sup>6,7</sup>, ANA M. TEIXEIRA<sup>2</sup>, LUÍS RAMA<sup>2</sup>, FLÁVIO REIS<sup>1</sup>, ANABELA MOTA-PINTO<sup>1</sup>, MANUEL VERÍSSIMO<sup>1</sup>, CARLOS GONÇALVES<sup>2</sup>, ANTÓNIO CUNHA<sup>3</sup>, JOÃO O. MALVA<sup>1</sup>

## Abstract

The global burden of population ageing imposes the need of innovative care models and good practices to ensure the sustainability of health and social care support, as well as optimal quality of life of the citizens. Science and technology-based innovation is required to be cross-fertilized with co-creation strategies, involving different stakeholders and the citizens. Health literacy is a crucial component of this challenge, including instruments focused on better training of formal and informal caregivers and citizen’s empowerment towards healthy lifestyles.

In the present paper, we highlight the implementation of two EIT Health projects, HeaLIQs4cities and CARE Campus, and one event, Praça Vida+, as good examples of the interdisciplinary approach to develop innovative good practices, science outreach and innovative ICT-based training schemes for care providers. Moreover, we identify the European Innovation Partnership on Active and Healthy Ageing Reference Sites and the Reference Site Collaborative Network as quadruple helix-based ecosystems ideally positioned to inspire other European regions and their decision makers for large adoption of innovative practices and change management across Europe.

**Key words:** EIT health, reference sites, care, empowerment.

## The burden of ageing and the pressure on care system: moving from reactive management to disease prevention

The world’s population is ageing rapidly and, in fact, between 2015 and 2030 it is expected that the population aged 60 or over will grow 56 per cent, to over 1.4 billion people (1). All countries in Europe are experiencing this phenomena and Portugal faces a particular challenging situation. In 2016, the total age dependency ratio was 53.6% and is predicted to become the highest in Europe, in 2070, with 89.7% (2).

Growth in the numbers and proportion of older persons can be expected to have a profound economic and social impact. The decrease in birth rates associated with the increased survival at older ages leads to a shrinking working population (2). This phenomena creates a big gap concerning the working population, that pays taxes and contributes to health and pension systems, and the inactive, including retired, population that requires more healthcare and pension support. Even though people are nowadays living longer, they are not necessarily

living healthier and in fact the number of people living with chronic disease has increased in many countries (3). In developed countries, more than 50% of older adults suffer from three or more chronic diseases and dealing with these conditions, and their consequences, including polypharmacy (3), poses important challenges to health care systems.

The treatment of chronic conditions causes a dramatic increase in healthcare expenditure and is one of the major reasons for the drain of resources in healthcare systems. To help minimize those healthcare costs, efforts must be made to keep people healthy in their old age. Our current healthcare systems are focused on providing effective and efficient solutions to the management of chronic disease but it is of the utmost importance that we privilege the necessary shift from the curative to a more preventive care.

## Reference Sites as quadruple helix-based ecosystems

With the objective of increasing the average healthy lifespan of EU citizens by 2 years by the

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1. Coimbra Institute for Clinical and Biomedical Research (iCBR), Faculty of Medicine, University of Coimbra, Coimbra, Portugal.

2. Research Center for Sport and Physical Activity, Faculty of Sport Sciences and Physical Education, University of Coimbra, Portugal

3. Laboratory of Automatics and Systems, Pedro Nunes Institute, Coimbra, Portugal.

4. Cicely Saunders Institute of Palliative Care, Policy & Rehabilitation, King’s College London, UK.

5. PhD Program in Experimental Biology and Biomedicine (PDBEB), Institute for Interdisciplinary Research (IIIUC), University of Coimbra, Coimbra, Portugal.

6. CNC- Center for Neuroscience and Cell Biology, University of Coimbra, Coimbra, Portugal.

7. Department of Life Sciences, University of Coimbra, Coimbra, Portugal

Corresponding to: João O. Malva, Coimbra Institute for Clinical and Biomedical Research (iCBR), Faculty of Medicine, University of Coimbra, Azinhaga de Santa Comba, 3000-548 Coimbra, Portugal, [jomalva@fmed.uc.pt](mailto:jomalva@fmed.uc.pt) 00351 239480200

year 2020, the European Commission launched in 2011, the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA) (4, 5). The EIP on AHA focuses on the promotion of active and healthy ageing and pursues a triple win for Europe, namely: improving older citizens' health and wellbeing, supporting efficiency and sustainability of health systems, and enhancing EU economic growth and competitiveness. The EIP on AHA has its foundations on two main pillars: Action Groups and Reference Sites (6, 7). EIP on AHA partners are organized in six action groups that are committed to work on specific topics related to active and healthy ageing sharing knowledge, good practices and identifying possible gaps towards optimal health and wellbeing of citizens. The Reference Site status has been granted to 74 cities, regions, integrated hospitals and care organizations that are excellent examples on the creation, implementation and scaling up of innovative and holistic practices and solutions for active and healthy ageing. This recognition highlights the successful integration of Academia, Industry, Government and the end-user Communities: the quadruple helix. In 2017, the Reference Site Collaborative Network (RSCN) has been launched with the objective of promoting synergies and collaborative work between the Reference Sites (6). Reference Sites develop, implement and replicate good practices supporting healthy living and active ageing and act as drivers of the implementation of EU policies, including the "Blueprint for Digital Transformation on Health and Care in an Ageing Society" and "Boosting Innovation on Active and Healthy Ageing in the Digital Single Market".

### EIT Health knowledge Innovation Community

In 2014, the European Institute of Innovation & Technology (EIT) created a Knowledge and Innovation Community (KIC), the EIT Health, dedicated to tackling the demographic challenge

caused by population ageing. EIT Health drives business creation by stimulating entrepreneurship and by funding innovative initiatives, projects and solutions to promote healthy living and active ageing; improving healthcare systems and contributing to a health sustainable economy. This consortium includes more than 140 partners from academia, business, healthcare providers and municipalities that span throughout 14 different countries across Europe; organized in six regional clusters, co-location centers, and a ring of peripheral innovative regions, the Innostars (6, 8).

### The HeaLIQs4cities project: enabling the citizen to adopt better lifestyles

The Healthy Lifestyle Innovation Quarters for Cities and Citizens (HeaLIQs4cities) is an EIT Health collaborative project between the University Medical Center Groningen, Instituto Pedro Nunes and the University of Coimbra. HeaLIQs4cities has as primordial objective the promotion of healthy lifestyles, enabling the interaction between citizens, local academia, SMEs and government at Lifestyle Innovation Quarters (LIQs). The project included two LIQs, occurring in regions/cities commissioned as Reference Sites for Active and Healthy Ageing, namely the Healthy Living Room in Groningen (Netherlands) and the Praça Vida+ in Coimbra (Portugal). With the objective of potentiating the visibility of both events and maximizing citizen's engagement, both Praça Vida+ and the Healthy Living Room have been planned to take place during big sports events: the European Universities Games 2018 (EUSA) in Coimbra and Healthy Ageing Week in Groningen, respectively. In 2019, the LIQs concept of Praça Vida+ and Healthy Living Room will be shaped to a mobile unit to approach populations living in more deprived areas, including neighborhoods in the periphery of urban areas and isolated populations in rural municipalities.

### The innovative interdisciplinary approach of Praça Vida+

Within Portugal, the demographic changes are particularly striking in the Centre Region where due to the continued increase in life expectancy, migration and decreasing birth rates, it displays one of the highest ageing indexes in Europe (2). Therefore, initiatives that will engage, empower and educate citizens towards healthy lifestyles are particularly welcome. The Praça Vida+ took place



Figure 1: The estimated visitors of Praça Vida+ approached 5000 people and near 300 citizens tested the Healthy Lifestyle Evaluation Toolkit, at Praça Vida+ in Coimbra (20th-22nd July 2018). Time lapse movie "building Praça Vida+" <https://youtu.be/QJjC6PyAPCM>; "video highlight about Praça Vida+" <https://youtu.be/ciNYMtc6NTQ>. Photo credits, Sleeklab ([www.sleeklab.com](http://www.sleeklab.com)).

between the 20th and 22nd of July, 2018, at Alma Shopping, in Coimbra. At Praça Vida+, citizens were invited to visit 4 different areas: the Healthy Lifestyle Assessment Area, the Health Literacy Area, the Technology and Wellbeing Area and the Praça Vida+ stage.

At the Healthy Lifestyle Assessment Area, near 300 citizens participated in a healthy lifestyle assessment and received personalized advice to adhere to healthier behaviors. A multidisciplinary team of specialists from the University of Coimbra and the Instituto Pedro Nunes developed the methodology to identify the parameters included in this assessment, assembled the questionnaire and selected the necessary technological instruments to automatically extract data (Healthy Lifestyle Assessment Toolkit). This multiparameter evaluation toolkit included 8 different dimensions, including: anthropometric measures, health/disease, physical activity and exercise, social cohesion, wellbeing and functional independency, nutrition, mental health, smoking, drinking and drug use and sleep. This standardized instrument received a very good acceptance from the citizens and can be used across Europe. Therefore, in 2019, the concept of the Praça Vida+ will be replicated in another Reference Site, in Andaluc a, in Spain, and will be introduced to the RSCN to create synergies towards the wide replication of this initiative.

On the Praça Vida+ stage, the citizens were able to participate in open debates and round tables on different topics related to health and wellbeing, namely: social cohesion, nutrition, chronic disease, physical exercise and dementia. Throughout the event, hot topics were discussed, namely vaccination, medication for cholesterol, polypharmacy and wellbeing. Three big areas for the future of medicine were identified: the importance of self-care, telemedicine and the value of data from clinical settings.

With the objective of increasing public visibility of R&D in Healthy Living and Active Ageing, several startups were invited to showcase their technologies and products at the Technology and Wellbeing Area. The citizens tested their products and engaged in co-creation processes. Furthermore, in the Health Literacy Area several stands provided health literacy products and information on local programs, European projects, consortia and other entities in the areas of health, exercise, wellbeing and active and healthy ageing.



*Figure 2: Visual communication inspired by the Healthy Lifestyle Assessment Toolkit. Left panel: we are shaped by our dietary habits; take care of your shape...feel good with your body; Do not smoke... Central panel: never use drugs; do not drink excess alcohol; sleep well...ensure adequate duration and quality of sleeping periods. Right panel: train your brain; train your body; train your social network. Illustration, Rui Tavares.*

### Replication and scaling up good practices to support healthy living and active ageing: the role of Reference Sites and the Reference Site Collaborative Network (RSCN)

Recently the EIT has established the Regional Innovation Scheme (RIS) with the objective of stimulating the innovation capacity of moderate performing regions or countries and allowing their citizens access to innovative solutions and initiatives in active and healthy ageing.

In that context, Porto4Ageing, an EIP on AHA Reference site, will replicate the concept of Praça Vida+, in November 2018, in Porto, Portugal.

HeaLIQs4cities is a holistic project based on the quadruple helix concept resulting from a close collaboration between EIT Health partners and EIP on AHA Reference sites. With the objective of enabling synergies between these two different EU active and healthy ageing initiatives, in 2019, HeaLIQs4cities will team up with CARE Campus, and organize a joint workshop with all 74 EIP on AHA Reference sites. These initiatives will leverage partnerships between Reference Sites and contribute to the creation of new innovative solutions for the elderly that in the long run will enable more citizens to live healthy, active and independent lives and improve healthcare systems across Europe.

### RSCN and Praça Vida+ as catalysts of EIT Health CARE Career's Training

The concept supporting events like Praça Vida+ stands on interdisciplinary science outreach and citizens empowerment. The need

to change from curative to preventive health management enforces the role of citizens, families and both formal and informal caregivers to better understand health and disease, and to support adoption of healthy habits and better management of chronic diseases. Health literacy for caregiving may be considered a priority due to the expected burden of ageing societies; imposing new models for care management at home, reducing hospitalizations and functional dependence.

The present paper has the objective of contributing to the scaling up of good practices supporting healthy living and active ageing and highlights the role of regional networks, including the EIP on AHA Reference Sites and the RSCN, as relevant boosters of dissemination and adoption on innovation into caregiving. In this context, projects like HeaLIQs4cities and CARE Campus, and events like Praça Vida+ create the synergies to engage different stakeholders, including citizens and caregivers, and create dissemination channels to deliver distance learning offers for training care providers. Good examples of this strategy include the University of Coimbra distance-learning course on Active and Healthy Ageing for Care Providers (7th edition) (6) and EIT Health CARE Campus MOOCs, to be launched in late 2018.

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#### Conflict of Interest

The authors declare no conflict of interest.

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