

## POSTER ABSTRACT

# Socio-economic revitalisation of sparsely populated areas through clinical telecare using health 4.0 approach

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**Background:** The regions of south-west Europe are demographically ageing and their inland rural areas are becoming increasingly depopulated, leading to their disappearance. Examples of these territories with low population density are the regions of Castilla y León (Spain), Beira Baixa (Portugal) and Pays Basque (France). The COVID has highlighted the lack of health and care for people in these rural areas, especially the elderly and dependent people. On the other hand, the difficulty of finding market niches in which to develop sustainable economic activity leads young people and highly qualified professionals to leave for the cities, further weakening the rural hinterland in the regions of south-west Europe.

**Approach:** The common challenge and need of these inland rural areas are to revitalise their economic and social fabric, promoting employment opportunities that solve social challenges from the perspective of innovation, combining social needs with development opportunities. This research work seeks to cover the need to provide specialised health care and physical and neurological rehabilitation services (especially for dependent and elderly people), by means of technological tools that make it possible to offer tele-assistance and tele-rehabilitation services, which will also help to create qualified employment and fix new populations that will boost the rural economy. This research focuses on implementing digital health solutions such as tele-assistance and tele-rehabilitation services. By leveraging advanced technologies, the aim is to provide specialized health care and rehabilitation services to elderly and dependent individuals in rural areas. These digital solutions will be integrated into the existing healthcare infrastructure to enhance accessibility and quality of care.

**Results:** The objective has a clear strategic orientation towards strengthening social cohesion and territorial and demographic balance through social innovation and endogenous development. The implementation of digital health solutions improves health outcomes for rural populations by providing continuous and specialized care. It also creates new employment opportunities in the tech and healthcare sectors, contributing to the economic revitalization of these regions. The strategic use of digital tools will strengthen social cohesion and promote a balanced demographic distribution.

**Implications:** The challenges and needs to be covered are clear: to respond to the depopulation and ageing of inland rural areas by establishing a new population with social and health care

training, to prevent elderly and dependent people from having to migrate to urban areas to access advanced clinical services, and to develop sustainable production systems based on tele-assistance and tele-rehabilitation technologies, responding to social needs that are not sufficiently covered in the field of social and health care services. Adopting digital health solutions will address the critical need for accessible healthcare in rural areas, reducing the necessity for elderly and dependent individuals to migrate to urban centres for advanced clinical services. It will also foster the development of sustainable production systems based on tele-assistance and tele-rehabilitation technologies, ensuring that social and health care services are adequately provided. This approach will ultimately lead to a more resilient and self-sufficient rural community.