

## Good Practice template

- All Good Practices identified by an Interreg Europe project and reported in the progress reports have to be submitted to the Programme.
- In order to submit a practice, you will have to register in the Interreg Europe website. Online submission will be available the first semester of 2017.
- NB: in orange: 2 optional fields. All other fields are compulsory.

| 1. General information   |   |
|--|---|
| <b>Title of the practice</b>                                   | Musiquence – Design, Implementation and Validation of a Customizable Music and Reminiscence Cognitive Stimulation Platform for People with Dementia |
| <b>Does this practice come from an Interreg Europe Project</b> | No  |

In case 'yes' is selected, the following sections appear:

|  |                                  |
|--|----------------------------------|
| <b>Please select the project acronym</b> | Drop down menu with all acronyms |
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| <b>Specific objective</b>        | Music, Reminiscence, Working memory, Serious games, Therapeutic-effect, Game-customization |                              |
| <b>Main institution involved</b> | Universidade Nova de Lisboa- FCT / Universidade da Madeira                                 |                              |
| <b>Location of the practice</b>  | <b>Country</b>   | Portugal                     |
|                                  | <b>NUTS 1</b>  | Autonomous Region of Madeira |
|                                  | <b>NUTS 2</b>  | Autonomous Region of Madeira |
|                                  | <b>NUTS 3</b>  | Autonomous Region of Madeira |

| 2. Detailed description                     |  |
|---|--|
| <b>Detailed information on the practice</b> | <p>[1500 characters] Please provide information on the practice itself. In particular:</p> <ul style="list-style-type: none"> <li>- <i>What is the problem addressed and the context which triggered the introduction of the practice?</i></li> </ul> <p>Dementia is a neurodegenerative disease that affects millions of individuals worldwide and is challenging to diagnose as symptoms may only be perceivable decades later. The condition leads to a gradual loss of memory, learning, orientation, language, and comprehension skills, which compromises activities of daily living. Health-related costs caused by dementia will continue to increase over the next few years; between 2005 and 2009, 34% (from \$315 to \$422 billion worldwide) was observed in treating dementia-related issues. Pharmaceutical approaches have been developed to treat dementia symptoms; unfortunately, the risk of side effects is high. For this reason, nonpharmaceutical methods such as music and reminiscence therapies have gained acceptance as patients with dementia positively respond to such approaches even at later stages of the disease. Nevertheless, further research is needed to understand how music and reminiscence therapy should be used and quantify their impact on individuals with dementia. The development of serious games has gained attention as an alternative approach to stimulating patients. However, the clinical implications that serious games have on individuals with dementia is still unclear.</p> <ul style="list-style-type: none"> <li>- <i>How does the practice reach its objectives, and how it is implemented?</i></li> </ul> <p>After identifying the problems mentioned above, we developed a music and reminiscence-based platform, which has been designed according to the needs of people with dementia and the feedback of healthcare professionals. After developing the platform, we did a longitudinal study to study the therapeutic impact of music and reminiscence in the dementia population. We performed a battery of neuropsychological assessments before and after 14 bi-weekly cognitive stimulation sessions (see <a href="#">poster</a>).</p> |

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|   | <p>- <i>Who are the main stakeholders and beneficiaries of the practice?</i></p> <p>Our primary stakeholders are healthcare professionals, healthcare institutions and people with dementia; for example, we worked with people with dementia and healthcare professionals from different institutions from Madeira Island, such as Casa São João de Deus, Casa Câmara Pestana, Associação Alzheimer Portugal Delegação da Madeira, Centro de Dia da Nazaré and Centro social e paroquial de São Bento da Ribeira Brava.</p>   |
| <b>Resources needed</b>   | We required human resources such as clinical psychologists and healthcare professionals to run experiments.  |
| <b>Timescale (start/end date)</b>   | October 2015 – ongoing   |
| <b>Evidence of success (results achieved)</b>   | The project was developed during the Digital Media PhD program at Universidade Nova de Lisboa – FCT and was completed in 2021. During that period, we published six conference papers and one journal paper. Two more Journal articles are being prepared for future publication. We also published three posters, one oral presentation and one demonstration at Encontro Ciência 2020. In addition, during that time, the project was awarded a Best Demo Award, Best Poster Award, and the Health Innovation Award 2021 in the category PhD/ Research. Also, we had the opportunity to make public talks during events at 9as Jornadas de SMP da CSSJD Funchal and in Seminário Dia do Idoso 2017. Nevertheless, the project is also being used in the BRANT project (PTDC/CCI-COM/30990/2017) with the psychiatric population, which led to a journal submission (under review).   |
| <b>Difficulties encountered/ lessons learned</b>  | The main difficulty found in this project was finding participants with a formalised diagnosis of dementia disease, which limited our inclusion criteria during several scientific interventions.  |
| <b>Potential for learning or transfer</b>   | We developed a novel interactive platform in which healthcare professionals can create music and reminiscence based cognitive activities to stimulate people with dementia. The ability to adapt music and reminiscence-based activities and technology of choice are crucial to reassure therapeutic outcomes for people with dementia. Preliminary suggests that <i>“individually, participants improved or maintained their performance in an average of six cognitive measures out of ten”</i> (see <a href="#">poster</a> ). Also, considering that the platform is compatible with different technologies, we are studying the effects of using full-body interaction on computerised cognitive training using simulations of instrumental activities of daily living with chronic psychiatric patients. Therefore and given the above facts, the potential for learning or transfer to other project partners is quite high. The addressed problem – dementia – is a global challenge on the mental wellbeing of the population and the technology that has been used to develop the platform and scientific evaluations is common and open-source. Translation of the platform can be easily done. |
| <b>Further information</b>  | <a href="https://scholar.google.com/citations?user=XnOi8EUAAA&amp;hl=pt-PT">https://scholar.google.com/citations?user=XnOi8EUAAA&amp;hl=pt-PT</a>  |
| <b>Contact details</b> <i>[Technical: the contact details will be visible only to “Policy Learning Platforms registered members”]</i> |  |
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| <b>Expert opinion</b>   | <i>[500 characters] [Technical: to be filled in by the Policy Learning Platforms experts]</i>  |