

AQRDATE PROGRAM APPLIED TO DAILY LIFE ACTIVITIES FOR PATIENTS WITH BRAIN DAMAGE.

Susana A. Ortega¹, Mónica M. Ramos¹, Elisa P. Agudo¹, Javier Gomez²
Germán Montoro² Pablo Haya², Carlos G. Alted¹

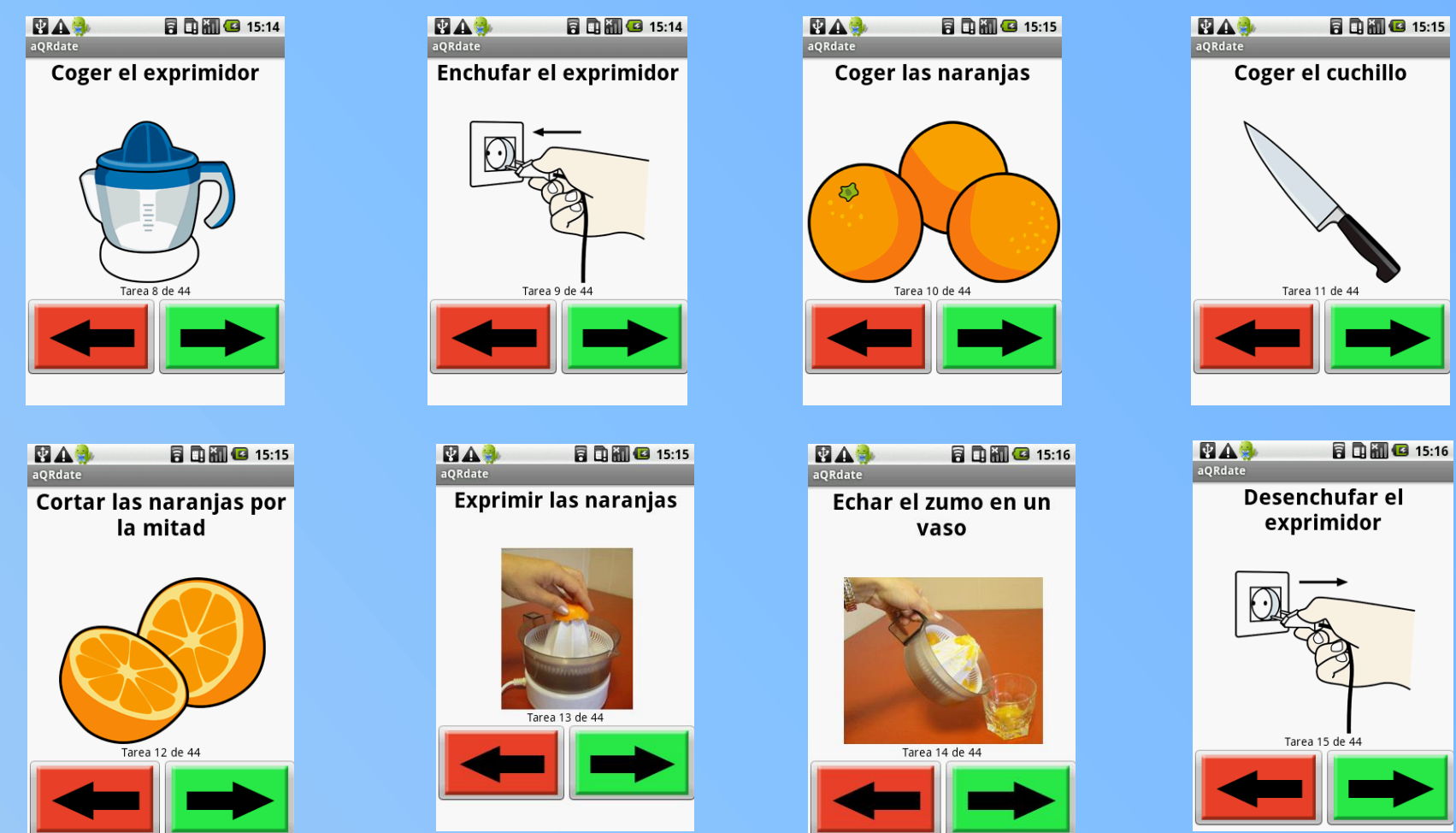
¹ *Reference State Centre of Attention for Brain Damage (CEADAC).*

² *Autonomous University of Madrid, Spain.*

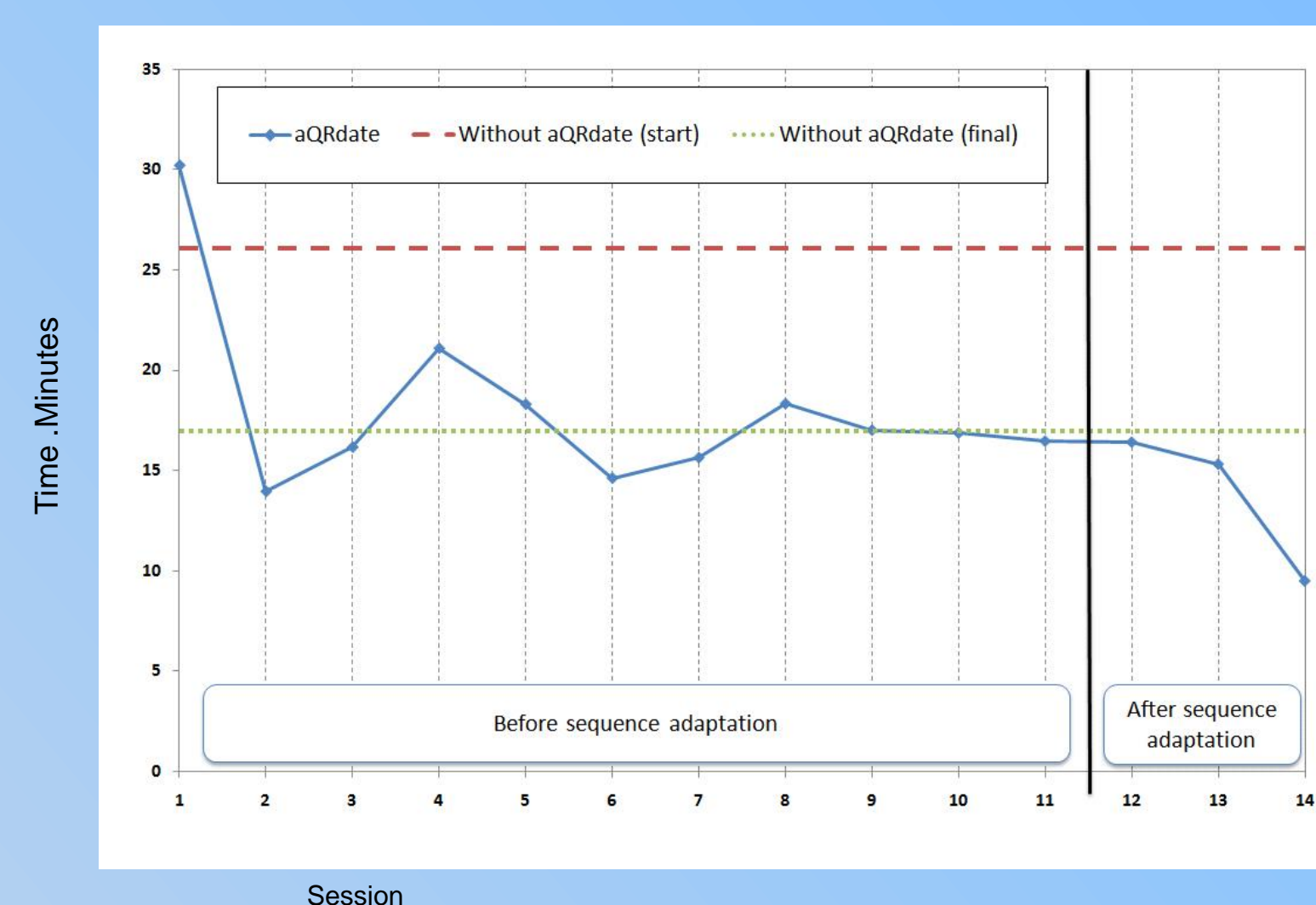
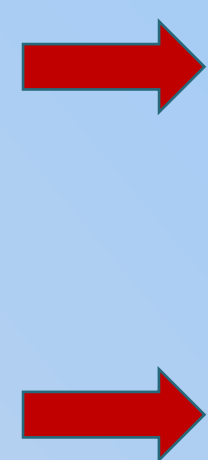
INTRODUCTION : The project aims to develop a system based on mobile devices for helping people with acquired brain damage on the developing of the Daily Life Activities (DLA). Alterations in brain function prevents them from autonomously performing their everyday activities. The project has been developed by an interdisciplinary team of physician, occupational therapists and engineers.



MATERIAL AND METHODS We combine the 2D barcodes with smartphones. These tags are used to associate task specific information with objects or places, so users can receive visual instructions to complete the task reading the tag with a smartphone. The mobile phones which have a camera are prepared to read information included in the tags. The tasks selected are: preparing orange juice and a cup of coffee, making two toasts and spread jam and butter on them. These tasks were subdivided into subtasks which will be sequentially showing in the phone screen.



RESULTS Once the task is completed, the system will automatically notify the researchers data related to the user's task such as the duration, elapsed time between one task and the next, knowing whether the user needed or not notifications for continuing with the task, etc



CONCLUSIONS AND RECOMMENDATIONS

The preliminary results are encouraging, since from the information sent periodically by the family, we deduce that the device's functionality is proper for its use at home and that it is helpful enough for incrementing the functional capability of the patient. We hope that the development of this system will let us to increase the number of tasks included on it

ACKNOWLEDGEMENTS

We want to thank the collaboration of the patients, and their families, who helped on the development of this project. This research has been partially funded by Ministerio de Ciencia e Innovación (ASIES project, TIN2010-17344)

BIBLIOGRAPHY

Gomez J, Montoro G, Haya, PA, Alamán X. *Using 2D Codes for Creating Ubiquitous User Interfaces for Ambient Intelligence Environments*. 1st International Workshop on Human-Centric Interfaces for Ambient Intelligence. (HCIAMl 2010) (Intelligent Environments'10), Monash University (Sunway Campus), Kuala Lumpur, Malaysia; July 18. 2010
FEDACE Federación Española de Daño Cerebral. <http://www.fedace.org/web/dano.php>.
E-Mail: cgonzaaltd@imerso.es