

The Design of a Smartbrush Oral Health Installation for Aged Care Centres in Australia

Authors : Lukasz Grzegorz Broda, Taiwo Oseni, Andrew Stranieri, Rodrigo Marino, Ronelle Welton, Mark Yates

Abstract : The oral health of residents in aged care centres in Australia is poor, contributing to infections, hospital admissions, and increased suffering. Although the use of electric toothbrushes has been deployed in many centres, smartbrushes that record and transmit information about brushing patterns and duration are not routinely deployed. Yet, the use of smartbrushes for aged care residents promises better oral care. Thus, a study aimed at investigating the appropriateness and suitability of a smartbrush for aged care residents is currently underway. Due to the peculiarity of the aged care setting, the incorporation of smartbrushes into residents' care does require careful planning and design considerations. This paper describes an initial design process undertaken through the use of an actor to understand the important elements to be incorporated whilst installing a smartbrush for use in aged care settings. The design covers the configuration settings of the brush and app, including ergonomic factors related to brush and smartphone placement. A design science approach led to an installation redesign and a revised protocol for the planned study, the ultimate aim being to design installations to enhance perceived usefulness, ease of use, and attitudes towards the incorporation of smartbrushes for improving oral health care for aged care residents.

Keywords : smartbrush, applied computing, life and medical sciences, health informatics

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