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POSTER ABSTRACT

IA model for the creation of automatic and personalized health literacy plans for home care services and protocol for its validation

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Maitane García-López[1], Irene Joga Fuentefria[1], Javier Pérez Asenjo[1], Sandra López Martin[1], Egoitz Arruti[1,2]

1: Ubikare, Erandio, Bizkaia, Spain
2: Mondragon Unibertsitatea, Mondragon, Gipuzkoa, Spain

Background: Health Literacy (HL) is considered a social determinant of health with a direct and significant impact on health-related quality of life, especially in groups of elderly, polymedicated or chronically ill persons. According to the WHO, HL implies achieving a level of knowledge, personal skills and confidence that allows the adoption of measures to improve health through a change in lifestyle. It is a concept that combines elements of health and education. HL is the result of health education. In fact, a poor understanding of health recommendations or instructions is related to poor disease self-management and limited use of preventive resources. Furthermore, a low level of HL translates into an increase in (a) avoidable hospitalizations, (b) healthcare costs and (c) mortality rates. Artificial intelligence (AI) can help create personalized HL plans for each patient automatically. Moreover, thanks to digital education platforms these plans can be delivered and monitored remotely and digitally, reducing the resource of professional hours. The application of AI in health literacy is especially interesting in home health services, where the resources of professionals are scarce and care falls mainly on the family and the patient him/herself.

Aim: The aim of this study is to develop an IA model for the creation of automatic and personalized HL plans for home care settings that can be consumed by families through a digital tool. The protocol for validation of the HL plans created by the model is also presented.

Method: At the beginning, (1) a comprehensive geriatric assessment is performed that identifies the needs and capabilities of the care ecosystem (patient-caregiver) in a model of comprehensive person-centered care in the home care setting. (2) After analysis of the data collected in the assessment using validated diagnostic algorithms the IA model automatically generates an individualized training itinerary HL plan adapted to each user profile. (3) Using nursing indicators defined in the NNN taxonomy (NANDA, NOC, NIC) we measure at the beginning and at the end of the HL plan: (a) the knowledge acquired; (b) the change in behavior/behavior and (c) objective results of the health status.

Main Results: We present an AI model for automated and scalable HL plan creation for home care settings. This model has the potential to improve the HL of the 65+ population (chronicity, complexity, multi-pathology, dependency, frailty, pre-frailty or autonomy) and their informal caregiving ecosystem (non-professional caregivers) in the home setting, especially if long-term

care is present. The learning programs created for the HL plan were carried out under a rigorous protocol based on criteria of accessibility and scientific evidence.

Conclusions: Thanks to the protocol, it will be possible to validate the impact of the HL plans created by the IA model on both the patient and the caregiver. The IA model is currently in the process of validation but shows promising results in reducing the time spent on direct intervention by professionals and improving the population's accessibility to HL plans thanks to the IA model.