

## **COPLINTHO: USER PERSPECTIVES AND TECHNOLOGICAL DESIGN IN HOMECARE**

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**BACKGROUND:** The use of Information and Communication Technology is increasing in healthcare. The growing pressure on inpatient settings to reduce lengths of stay, chronic diseases, cultural expectations and policy endorsement to give people the right to live at home as long as possible, create openings for telehomecare applications. However, the technological development seems not always to be adapted to the particular demands of the homecare setting. The Coplintho platform, developed within the Flemish institute for broadband applications (IBBT) tries to integrate technological design with a better understanding of the needs and user perspectives in the homecare setting.

**OBJECTIVES:** The Coplintho project aims at designing, developing and testing ICT-tools to support and enhance the care process of patients in their home environment. A better understanding of user-related aspects should influence the technological development, design and implementation.

**METHODS AND RESULTS:** A preliminary study on clinical and care characteristics of potential patient groups in homecare, set the scope of the project. Based on this study a list of inclusion criteria was developed to select two patient groups / pathologies for the Coplintho pilot: diabetes and multiple sclerosis. It was anticipated that technology at home could offer an added value for these two patient groups.

Subsequently, user needs, financial and juridical constraints of offering homecare and stakeholders' interests are being mapped in more detail by means of: (1) a literature research and document analysis, and (2) open interviews with key informants. Moreover, a lot of attention has been paid to the "mind-setting" of the Coplintho project team, as it emerged that a clear delineation of the projects' technological and user objectives was necessary. A semi-structured questionnaire for all Coplintho partners listed the "visions and expectations" about the platform on short, middle and longer term. To support the "mind-setting" within the project, "use cases" incorporating user needs are written. These use cases facilitate the choice for and refinement of the services and applications. Based on these use cases following ICT-supported services are identified: (1) an audio and video communication tool, (2) a web-based tool describing pathology-related information, (3) a telemonitoring tool (glycemia), (4) an audio logbook, and (5) functionalities for secured administrative data.

Based on this first step, formal evaluation criteria are set, corresponding with the objectives of the project. These criteria are important to collect relevant data for the user evaluation process. The perspectives of different stakeholders (patients, general practitioners, nurses, head nurses and centralists) are the core of the user evaluation, and form an important basis for feedback and to eventually reconsider the use and design of the platform.

**CONCLUSIONS:** ICT-development in healthcare, and in particular in homecare, needs to consider the particularities of the user context. The field of homecare is not to be compared with other ICT consumer fields. The intertwining effect of technology and social contexts is of utmost importance for the design, development and implementation of these technologies. Therefore, a particular methodological approach to understand the user perspective and the particularities of the sector needs particular attention. A clear design of pre-assessment and clear evaluation criteria is expected to improve the acceptance and use of home care technology.

**Key words:** user needs assessment, evaluation research, telehomecare applications