

A MULTIDISCIPLINARY APPROACH TO DESIGN INNOVATIVE TECHNOLOGY SUPPORTED REHABILITATION SERVICES

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INTRODUCTION

The growing financial pressures in health care and the epidemiological shifts in pathologies (e.g. from acute to chronic diseases due to aging) account for a trend of shifting part of the rehabilitation care towards the patients homes.

A promising approach is the application of information and communication technologies for the exchange of medical information and expertise in the delivery of tele-rehabilitation services to patients.

User acceptance of tele-rehabilitation services is one of the essential barriers for implementation (Broens et al., 2007). To 'support' acceptance, the current study focused on developing a technology supported rehabilitation concept by means of a participatory design approach starting with identifying conventional care (see Figure 1).

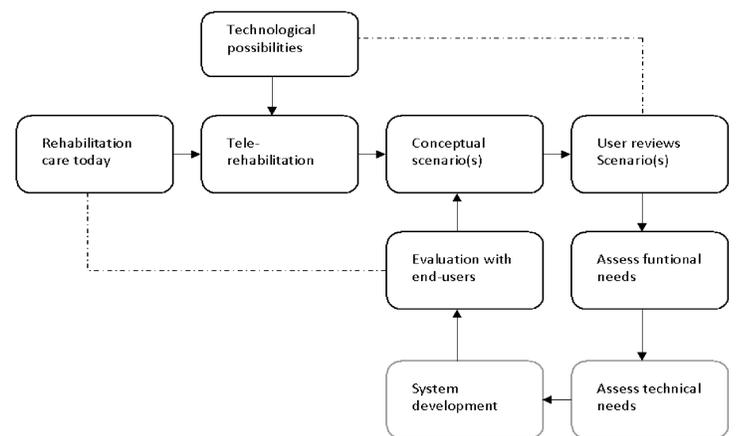


Figure 1 Iterative participatory design approach tele-rehabilitation.

HOW TO OVERCOME THE TELE-REHABILITATION ACCEPTANCE BARRIER?

From a participatory design approach, professionals and patients are actively involved in specifying their needs at each stage of the design process but difficult because of the knowledge gap between the contextual expertise of medical professionals and patients, and that of the design team (Figure 2). Scenarios, e.g. individual patient storylines, serve as a communication tool.

TABLE 1

Staged approach in the composition of a tele-rehabilitation scenario with multidisciplinary stakeholders

NEEDS ELICITATION PROCESS			
	PREPARATORY PHASE	COLLABORATION PHASE	RESULTS PHASE
AIM	<ul style="list-style-type: none"> Identify main end-users (patients and professionals) Understand pathology Understanding working practices in conventional rehabilitation care Identify technological possibilities Identify technological constraints, threats 	<ul style="list-style-type: none"> Establish multidisciplinary commitment Establish common understanding of tele-rehabilitation to be developed 	<ul style="list-style-type: none"> Concrete description of who is doing what with the tele-rehabilitation service for which purpose
METHODS	<ul style="list-style-type: none"> Literature study on rehabilitation Inspection of available clinical working protocols Questionnaires In-depth interviews 	<ul style="list-style-type: none"> Multidisciplinary workshop: <ul style="list-style-type: none"> - Intra-disciplinary sessions - Inter-disciplinary sessions - Plenary sessions 	<ul style="list-style-type: none"> Scenario composition Scenario validation
APPROACH TO METHOD	<ul style="list-style-type: none"> Meeting with representatives from each main user group Provides individual views from a range of users on conventional rehabilitation and tele-rehabilitation care 	<ul style="list-style-type: none"> Bring together group of clinicians / patients and designers to discuss about tele-rehabilitation to be developed Facilitate mutual communication and understanding 	<ul style="list-style-type: none"> Scenarios provide common language between clinicians and designers on service to be developed Scenarios concretize the common view on the tele-rehabilitation service to be developed

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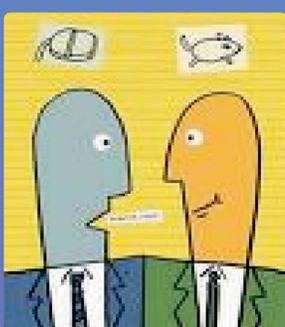


Figure 2 Knowledge gap (and risk of miscommunication) between expertise of professionals and patients and that of the design team (source: google)

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