

improve the DPA level, but the benefits obtained decline after 1-2 years⁴. **Purpose** In order to maintain DPA in COPD patients after rehabilitation, we developed a mobile phone application⁵. It measures DPA as steps per day, measured by the accelerometer of the smartphone, and shows the information to the patient via the display of the mobile phone. A physiotherapist can monitor the patient via a secure website, on which DPA measurements are visible for all patients. Here DPA goals can be adjusted and text messages sent. This presentation focuses on the development of the mobile phone application (app). **Method** A list of requirements for the app was created by the research group, keeping the main research purpose in mind. An algorithm was written that measures steps by looking at sinus movements. Preliminary testing was performed by carrying the smartphone with the app for 3 days in combination with a validated accelerometer (*Figure 1*, T=1). Subsequently adjustments were made and testing was repeated. Results have been discussed in an interactive workshop. Development of the app was iterative (SCRUM methodology⁶). Subsequently, three pilot studies were performed to test the mobile phone application for usability, user friendliness, and reliability, and were assessed with questionnaires. The application was tested with students and COPD patients, who wore the phone in their pocket. Pilot studies 1, 2, and 3 (*Figure 1*, T=1, T=2, and T=3, respectively) lasted for a week (n=10 students), 3 days (n=3), and 3 weeks (n=7), respectively. Feedback was collected in an interactive workshop. Subjects also wore a validated accelerometer (Sensewear) during the period of the study in order to compare these data with the DPA measurements of the mobile phone application. Mix methods have been employed for quantitative and qualitative data analysis in SPSS. **Results & Discussion** The findings from the interactive workshop indicated that the design for description of the data needed to be explored. It also provided insight in the feedback to be given in text to persuade users to be physically active and which type of widgets motivate users to increase their physical activity. The application was found to be useful and easy to learn.

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A. NEVEN, T. BELLEMANS, D. JANSSENS, G. WETS. **Application to support elderly while taking public transport services.** *Gerontechnology* 2014; 13(2):88-89; doi:10.4017/gt.2014.13.02.150.00

Purpose On-demand responsive transport (DRT) services are frequently offered in the context of door-to-door transportation of the elderly with their social participation as the ultimate goal. In Flanders, however, the supply of accessible transportation is fragmented. There are many different types of transportation provided, but many of these are especially expensive. Therefore, we aimed to support the elderly in using regular public transport (PT) services through coaching sessions and personalized monitoring during their trips. We also aimed to meet the specific transportation requests of elderly that cannot be met by using the regular PT network, in order to provide a wide inclusive mobility system in Flanders. **Method** In order to monitor elderly during their PT trips, the smartphone application 'Viamigo' was developed (in cooperation with Thomas More). This app allows the registration of newly learned PT routes by means of their GPS coordinates. The routes can be monitored from a distance by a coach (e.g. family member or care giver), who can receive a signal when the user gets too far from

the planned route. Based on the registered GPS coordinates, we can monitor the travel patterns of the elderly and pinpoint locations that cause the most problems for them. If no accessible PT is available (e.g. because they are not area-wide covering), we worked out the methodology of a 'Mobility Center Adapted Transport', which integrates this fixed PT transport network with door-to-door services. In such a case, the elderly can go to this center with their specific transport request, and this mobility center will assign the person to the most adequate transport provider, based on the client's specific profile and a number of associated criteria.

Results & Discussion Viamigo is being tested in a number of care facilities by 20 users. Preliminary results show that the independence of the users greatly increases, which contributes to a higher quality of life. Compared to the use of specialized transport, the possibility of making use of the regular PT network is much more affordable for the government. The implementation of the mobility centers showed positive results, mainly because elderly could know make use of more different transport service providers that they didn't know of before. Currently, a more effective scaling method is being developed to assign a person's transport request to a suitable transport provider, which would be based on personal as well as situational factors, and is necessary as budgets for (adapted) mobility services are limited.

Keywords: housing & daily activities, creating enriched environments for ageing adults

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