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## THE WOUND APP – A CITIZEN TOOL

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## THE WOUND APP – A CITIZEN TOOL

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### **Aim:**

The aim of the HealthD360 project was to create better health for the citizens with diabetic foot ulcers by focusing on patient reported- and 24/7 data.

More specifically the project aimed for improving the empowerment of the citizen in the progress of having a diabetic foot ulcer and ultimately minimize numbers of infections and the delays between contact with healthcare professionals at clinics or at home.

### **Method**

The Wound App (SårApp in Danish) has been developed as a part of the Danish HealthD360 project ([www.healthd360.dk](http://www.healthd360.dk)). The Wound App is for the citizen, co-designed and tested by citizens in collaboration with healthcare professionals, relatives, companies and researchers (figure 1). The citizen can register a wound and report the wound size, pain, infection/inflammation and wound fluid on a daily or weekly basis. Pictures of the ulcer are taken by the patient or healthcare professionals. The progress of the wound healing is visualized together with self-registered and collected data within the app (figure 2). A data plugin collects numbers of steps, activity and other data from Apple Health and Google Fit. Data from municipalities and national registers are included as well in the data analysis of the project.

### **Results:**

The WoundApp helped patients to regularly register their diabetic foot ulcer and its development, and the progress was visualized for the patients.

The level of pain and inflammation were positive correlated with the wound area, and the patients were generally more active in middle of the day and during the summer month and less active during weekends (figure 3). Interesting results were also observed for heart rate variability.

**Conclusion:**

The benefits of using the WoundApp need to be clear for patients, and engagement and involvement of health care personnel is critical to ensuring continued patient use of the app. The study indicated that the WoundApp increase compliance, empowerment, and knowledge among citizens. Challenges and barriers were identified, and an optimized WoundApp version will be tested in a decentralized clinical trial as a next step.



Figure 1: The Wound App.

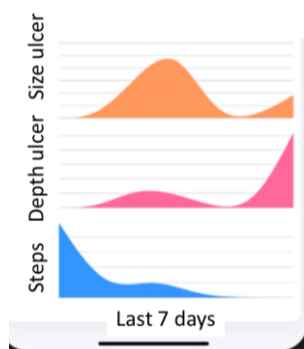
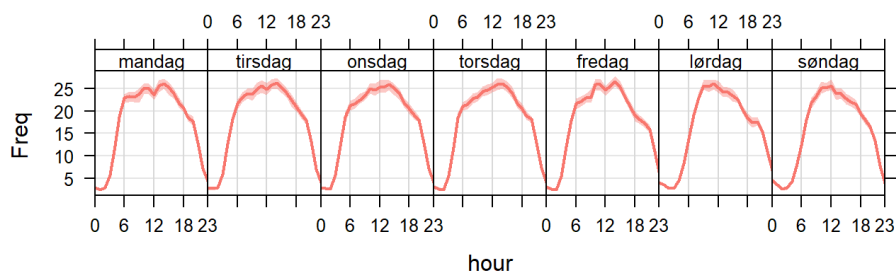
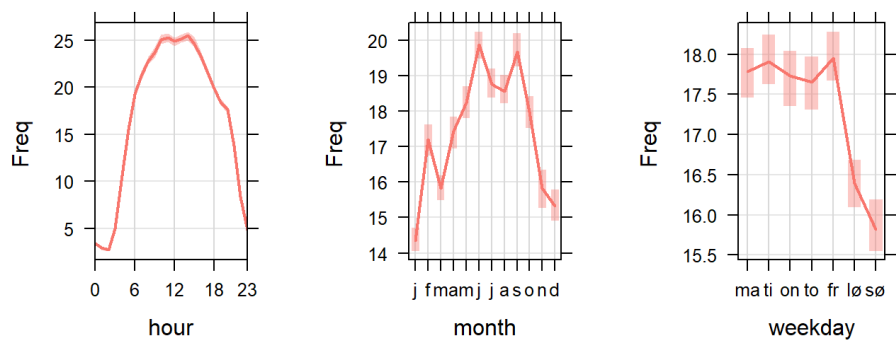


Figure 2: Visualization of ulcer size and number of steps within the Wound App.



Number of observations (steps)



mean and 95% confidence interval in mean

Figure 3. Correlation of activity (steps) during the day, week and month.

Kommenterede [TRT1]: @thor-bjørn vil du evt lave en figur med engelsk tekst og ændre rækkefølgen på de tre nederste figurer således month er sidst

Speaker: Trine Rolighed Thomsen, trt@teknologisk.dk

Prefer oral presentation

Category: e-Health

No conflict of interest