

The PostStroke-Manager – An innovative digital and sensor-based concept allowing patient-centered stroke aftercare

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Introduction

During the last decade, acute stroke treatment has improved substantially, resulting in decreased case fatality and better functional outcome. Recently, the focus in stroke management has moved towards reduction of residual neurological deficits and secondary prevention. Further improvements could be hindered by a lack of concepts for stroke aftercare. To overcome this limitation, innovative concepts applying information technology (IT) are needed which take into account the multidisciplinary setting in post-acute stroke care.

Methods

In the project PostStroke-Manager, stroke physicians and IT specialists develop a comprehensive digital approach that focusses on the stroke patient with individual symptoms, risk factors and therapy goals utilizing innovative data usage and integration concepts. To achieve a solution suitable for everyday use, patients, insurances, interest groups, IT infrastructure and care providers are involved in the development process. In a feasibility study, stroke patients will be equipped with mobile sensor technology and a tablet including an application. Furthermore, patients will undergo psychometric assessment addressing outcome parameters such as quality of life and patient empowerment. Two stroke pilots will be implemented to provide support through personal contact.

Results

In the patient application, the acquired data is bundled and integrated. The other parties in stroke aftercare, e.g. stroke pilots, general practitioners and therapists, are connected to the platform with applications for tablets or browsers and – with patients' consent – are given access to relevant data and analyses. The communication of all parties involved is organized via a patient-centered time axis, which documents the patient's path in an interdisciplinary manner. In addition, an adaptive information tool which takes individual conditions into account, provides access to medical and care-related content.

Conclusion

In view of the need for strategies during the naturally complex stroke aftercare, the project PostStroke-Manager has begun to establish an e-health-based solution, combining apps and web applications with sensor technologies and an interdisciplinary communication platform.