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**Unearthing the potential of smart health care applications – a digital
transformation**

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Abstract

The ongoing computerisation of all parts of human life is continuously raising the chance for a more pleasant and healthy life. This is especially true for all matters around health care, which has proven to be a prime field for the application of artificial intelligence, smart systems and innovative concepts to support and partially replace diagnostic workflows and care oriented tasks. Especially IT applications have the great potential to turn medicine into a smarter place. What previously were island solution applications are turning, under the influence of agile development and flexible IT tools, into powerful frameworks, which enable through rapid prototyping an equally rapid transition of applications from one health domain into another.

Patients with immunodeficiency are affected by an increased likelihood of infection. Especially long-term infections and chronic inflammations are common. The treatment with immunoglobulins has proven effective in the treatment of the disease. However, the therapy requires a very high, patient-side, obligatory documentation. Medications, side effects and symptoms must be reported continuously, which can be eased telemedical solutions. For this purpose, we devised a smart and smartphone-based application to allow patients to document their course of therapy. With approval of the patient, the therapy data of the app can be sent digitally to a cloud server and treating physicians have access to analytical data to facilitate a more informed, synchronized and thus smarter treatment. As such, the solution is a prime example for the new flexibility of smart IT frameworks in the health care sector and highlights the new level of best practices in this critical field of application.

Keywords: *smart health, cloud solutions, intelligent systems*

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