Title: Integrating solutions into systems such as TI, eGK, ePA and ensuring approval as a medical device as well as integration into mainstream care

Name of the healthcare provider: The Diakonisches Werk of the Protestant Church in Baden-Württemberg

Looking for: Integrating solutions into systems such as TI, eGK, ePA and ensuring approval as a medical device as well as integration into standard care.

Challenge Description:

1. Brief introduction to the problem you face.

The telematics infrastructure (TI), which serves to connect all players in the healthcare system, continues to gain momentum and become more complex. In this context, the secure exchange of information across sectors as well as across systems plays a central role. The highest priority here: people's data sovereignty. This means societal and social challenges especially for the welfare sector. A prerequisite for creating a future-proof system is the use of medical standards and terminologies (e.g. HL7 FHIR, SNOWMED CT, LOINC). The HL7 FHIR standard is to be used both in TI 2.0 and within the framework of the Medical Information Objects (MIO) currently being developed by the Association of Statutory Health Insurance Physicians, which are to describe the health data contained in the ePA. The developments must be viewed and incorporated for appropriate connectivity, so that no further proprietary solution is created accordingly.

2. Describe the current solution (if any) and its limitations.

Due to recent legal changes under the DVG, this could be “apps on prescription” from the doctor. However, the approval is very difficult due to the high requirements.

3. Describe what type of solution you are looking for.

We are looking for innovative solutions, e.g. apps on prescription or similar. Health apps that can be approved as a medical device in several (partial) products according to MDR and integrated into standard care via DVG. The burden on patients and healthcare providers (physicians, nurses, or pharmacists) to implement these tools should be minimal.

Target audiences: Patients, physicians, nurses, pharmacists, primary care physicians, physical therapists, etc.
Title: **Online interaction space for communities of patients and their families** as part of an online children’s health ecosystem.

**Name of the healthcare provider:** Children’s University Hospital Latvia

**Looking for:** Digital solutions for family-family; patient-patient; family – PFAC (Patient and Family Advisory council) etc. safe communication inside and outside related groups according to disease, health interests etc. Efficient way to collect info on unmet medical or social needs, escalate common problems, form opinions and facilitate engagement.

**Challenge description**

**Current state**
- Feedback of patients/families indicate the need for environment in which chronic patients, rare disease patients and others can form their own communities, communications forums, converse, and form the content.
- Patient advocacy group are scattered in the universe, having different level of development and operational/support quality.
- No efficient engagement channels with medical community or other stakeholders.
- No efficient way to mobilize engagement in research projects or clinical studies
- Innovators not aware of common problems and required solutions

**Rationale for solution**
The Parent Council of the Children’s Hospital, umbrella organisation of Patients with rare diseases etc. confirm that the involvement of families and the possibility of contacting families with children with the same or similar diagnoses provides significant added value during treatment or living with the disease. Participation in interest groups based on children’s diagnoses will enable family to obtain extended information on medical treatment, provide psychological support and create a higher level of trust for the healthcare institution, which will contribute significantly to the level of engagement and will therefore also improve patients’ clinical outcomes. Exchanging experience among families who are raising a child with same health problems, opportunity to escalate common questions or problems and receive answers/advice from peers or via support channels will present significant added value to patients and their families. Access to online platform remotely from anywhere is particularly important for families with children with severe and/or rare diagnoses. Engagement with interest groups will allow families to not feel alone. Social networking also contributes to psychological resilience and wellbeing, which is particularly important in the families of patients with chronic diseases, where long-term treatment takes place or even in the lifetime of a child. Identified common problems and unmet needs serve as trigger for future innovations or research opportunities
Title: Tools to identify, monitor and optimize patients’ medication adherence

Name of the healthcare provider: University Hospital Centre Sisters of Charity

Looking for: Tools that identify, monitor and optimize medication adherence of patients that are at risk of medication non-adherence, which is practical, easy to implement and use.

Description of the challenge

1. Short introduction about problem you are facing

Due to population ageing, treatments, and chronical nature of diseases a large number of patients with multiple chronic conditions or disabilities requires taking medications. Patients are often required to take several different medications for a long term. Due to that, it is often difficult for patients to adhere to and take medications as prescribed by their physician (at the correct dose, time and route). According to the 2003 World Health Organization (WHO) report on medication adherence, among patients suffering from chronic diseases in developed countries, adherence averages only 50% (1.). Reasons for non-adherence might be on patient-level (e.g. physical or mental condition, forgetfulness, knowledge), the treatment level (e.g. side effects, dosing, multiple medications), and the health system level. Non-adherence results in poor clinical consequences and unnecessarily high costs of health care.

2. Describe the current solution (if there is one) and its limitations

There is a lack of appropriate tools to identify, monitor and optimize patients’ adherence which healthcare workers could provide to their patients. The current solutions are very variable among countries. Unfortunately, often medication adherence is managed only by advice provided by physician, nurse or pharmacist.

3. Describe which kind of solution you are looking for.

We are looking for innovative tool, technology solution (e.g. pillboxes, inhalers, injection pens, tracking devices) or applications for easy identifying, monitoring and optimizing patients’ adherence and feedback to the physician. This tool should be able to identify non-adherent patients, support their adherence, have the possibility to report a suspected adverse reaction, and provide timely online feedback/report to their physician, nurse and/or pharmacist. This tool should empower patients to self-monitor and optimize their medication use. This tool should be affordable, easy to implement and use for a wide population of patients (including patients with physical or neurological difficulties). It should support a wide variety of medications, including but not limited to oral medications, subcutaneous, intramuscular, i.v., inhalation, etc. Patient and healthcare providers (physicians, nurses or pharmacists) effort, time and resources to implement these tools should be minimal.

Target groups: patients, physicians, nurses, pharmacists etc.