Future proofing of health care is one of the biggest challenges of the 21st century. The costs keep rising and the pressure on the health care system gets bigger due to the aging population and amount of patients with a chronic disease. Because of their network of patients, well functioning infrastructure, the knowledge and possibilities to translate ideas to creative innovations, The University Medical Centers (UMCs) play an important role in the search for sustainable solutions. For effective collaboration of the eight Dutch UMCs to enhance the work on the healthcare challenges, the minister of Health, Welfare and Sport (HWS), decided to found the Citrinefund for the period 2014 – 2018. The fund holds 25 million Euros and the Netherlands Federation of UMCs (NFU) is responsible for the execution of this fund. The NFU and HWS appointed five program themes that should be focused on for now. They also emphasize the importance of collaboration between all kinds of health care parties in order to succeed towards a sustainable healthcare system. The fifth program ‘eHealth’ focuses on the creation of synergy in the fragmented eHealth landscape. By performing 32 Evidence Based Projects, the eight Dutch UMCs strive to have always and everywhere your health care data available and to create a digital health environment that enables the patient to manage his health condition.

In 2014 the ministry of HWS started the first Academic eHealth collaboration in the Netherlands. In collaboration with the NFU they chose 5 program themes. ZonMw monitors the Citrinefund. End 2014 the first program resulted in a successful funding. Mid 2015 the programs oncology networks, do or leave it and direction for quality started.

1. Background

Future proofing of health care is one of the biggest challenges of the 21st century. The costs keep rising and the pressure on the health care system gets bigger due to the aging population and amount of patients with a chronic disease. Because of their network of patients, well functioning infrastructure, the knowledge and possibilities to translate ideas to creative innovations, The University Medical Centers (UMCs) play an important role in the search for sustainable solutions. For effective collaboration of the eight Dutch UMCs to enhance the work on the healthcare challenges, the minister of Health, Welfare and Sport (HWS), decided to found the Citrinefund for the period 2014 – 2018. The fund holds 25 million Euros and the Netherlands Federation of UMCs (NFU) is responsible for the execution of this fund. The NFU and HWS appointed five program themes that should be focused on for now. They also emphasize the importance of collaboration between all kinds of health care parties in order to succeed towards a sustainable healthcare system. The fifth program ‘eHealth’ focuses on the creation of synergy in the fragmented eHealth landscape. By performing 32 Evidence Based Projects, the eight Dutch UMCs strive to have always and everywhere your health care data available and to create a digital health environment that enables the patient to manage his health condition.

In 2014 the ministry of HWS started the first Academic eHealth collaboration in the Netherlands. In collaboration with the NFU they chose 5 program themes. ZonMw monitors the Citrinefund. End 2014 the first program resulted in a successful funding. Mid 2015 the programs oncology networks, do or leave it and direction for quality started.

2. Deliverables

A framework for regional collaboration in favor of effective implementation of eHealth
Models that can strengthen the empowerment of the patient
A developed multidisciplinary infrastructure to stimulate development of digital health
Development, evaluation and implementation of eHealth instruments in collaboration with companies and start-ups
A blueprint of education on behalf of health care competences and skills of health care professionals

To develop an online education module on medication registration process in order to gain knowledge about how the patient portal can be used within the medication verification process.
Fig. 1 Timeline Citrinefund

3. Program Design

The fifth program, program eHealth, will run during the period June 2016 - December 2018. There will be a mid-term evaluation end 2017 and an end evaluation end 2018.

4. Highlighted Projects

Wireless Vitals
Background When patients are recovering of complicated surgery they are at higher risk of developing complications once returned home. Aim of this project To investigate which ‘medical-grade’ wearables can be used to monitor post-operative patient safety at home.

MyHeart Counts
Background Apple’s ResearchKit is developed to collected research data via a smart phone. Aim of this project To develop a Dutch Toolkit to enable Dutch researchers to use ResearchKit. In order to have this Toolkit the MyHeart Counts app will be translated to the Dutch situation.

Develop your own eHealth app
Background Due to the rise of eHealth, the role of the health care professionals is changing. In the present health education there is no attention how the handle this change. Aim of this project To develop an online education module which educates health care students about the development and evaluation of eHealth apps.

Integrate the patient portal in the process of medication verification
Background It is possible to register and share routine medication with a health care professional through the patient portal. The safety of this medication registration process is unknown. Aim of this project To gain knowledge about how the patient portal can be used within the medication verification process.

5. Program Evaluation

In June 2016 the selection of the 32 projects started. Each UMC has to perform 4 projects within different pre-selected themes. The projects need to be written down in a pre-designed SMART (fig. 3) format document with an explicit planning (fig. 4).

The clearly defined background, aim(s), research question(s), and methods in the SMART format, together with the explicit planning, enable the steering group to review the projects during the mid-evaluation Dec. 2017 and end-evaluation Dec. 2018.

The researcher of this NFU eHealth program will focus on how the projects succeed to achieve the in section 2. mentioned deliverables.

About ZonMw

ZonMw stands for innovation: we enable others to develop new (scientific) knowledge. And we do everything we can to ensure that this new knowledge is used in policy and health care practice.

If we are living longer lives, how will we stay healthy? How should we respond to the increased prevalence of such diseases as depression, obesity and dementia? Will we have enough health care workers? And how will we keep health care affordable?

Research and innovation help to answer these kinds of questions. In the Netherlands, ZonMw has a central role in this area as national funding organisation. Our activities cover the entire spectrum from basic research to the implementation of new treatments, disease prevention, and health care improvements. In everything we do we link research, practice, policy, education and training – and we provide opportunities for patients and clients to participate in projects.

About the NFU

The Netherlands Federation of University Medical Centers (Nederlandse Federatie van Universitair Medische Centra) (NFU) represents the eight cooperating UMCs in the Netherlands, as an advocate for and employer of 65,000 people. The NFU was founded in 2004 as a spin-off from the University Hospitals Association (Vereniging Academische Ziekenhuizen) (VAZ), which was established in 1989. The objective has remained the same: to ensure that agencies that decide healthcare issues in the Netherlands take into account the special role of the academic hospitals (in the past) and the UMCs (presently).