

DiaGame: Serious and personalized game for selfmanagement of diabetes

Gepubliceerd: 05-02-2021 Laatste bijgewerkt: 18-08-2022

Patient gathered health data will be collected to optimize a personalized diabetesgame, which we hypothesize will improve self management

Ethische beoordeling	Positief advies
Status	Werving nog niet gestart
Type aandoening	-
Onderzoekstype	Observationeel onderzoek, zonder invasieve metingen

Samenvatting

ID

NL-OMON25562

Bron

NTR

Verkorte titel

Diagame

Aandoening

Diabetes mellitus

Ondersteuning

Primaire sponsor: Prof dr H. Haak

Overige ondersteuning: NWO

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

To collect patient gathered health data (PGHD) that is needed for the development of SugarVita. This includes glucose levels from patients with diabetes and information regarding different factors (physical activity, nutrition, medication and mental state) that can influence

those levels. Also the HbA1c, C peptide and HOMA-IR index will be used as a clinical measure of glycemic control and insulin resistance and will be used as an outcome measure to determine the effect of playing SugarVita.

Toelichting onderzoek

Achtergrond van het onderzoek

The DiaGame project applies the sciences of data learning and biomedical simulations to an existing serious diabetes gaming platform (SugarVita). We aim to make the current SugarVita, a data-driven, personalized serious game that empowers individuals with diabetes to manage the disease they are facing. In order to personalize the game, we will integrate our expertise on processing of personal data collected from health-related smartphone apps into our game platform. The information that this approach will be used to personalize the simulation that drives the game. Together, this will allow the use of patient-gathered health data to make the diabetes game a realistic representation of the condition of the gamer. This allows the gamer to play SugarVita-P4 using personal settings for improved educational value, since typically for diabetes, knowledge and skill are the key to effectively self-manage their condition. We will provide support for the notion that playing SugarVita-P4 creates reward and motivation and is therefore more effective.

We are already integrating the development of the game and the encompassing academic (data-processing and simulation) activities into the daily practice in diabetes care. Because of this, we generate the capacity to employ a lean development process that iteratively uses in-game observations to improve the approach to data-to-information-to-education flow. Collectively, DiaGame can change the approach to diabetes care by using data sciences in support of a data-driven personal diabetes game. Ultimately, this will improve the quality of life for patients and lighten the socio-economic and medical burden that diabetes has.

SugarVita aims to give people with diabetes more control over their chronic condition. Self-care is now seen as the primary approach to diabetes, which is a complex task, with many facets, where training and education are crucial. However, a "dry" explanation does not work for everyone.

Doel van het onderzoek

Patient gathered health data will be collected to optimize a personalized diabetes game, which we hypothesize will improve self management

Onderzoeksopzet

2 visits (V 2 will be two weeks after visit 1)

Onderzoeksproduct en/of interventie

Registration of daily life by continu glucose monitoring with a Freestyle Libre Pro sensor (Abbott) and exercise, nutrition, medication and mental status by Gamebus app and smartwatch

Contactpersonen

Publiek

Maxima Medical Center
Pleun Wouters- van Poppel

0408886300

Wetenschappelijk

Maxima Medical Center
Pleun Wouters- van Poppel

0408886300

Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

- Informed consent obtained before trial related activities
- 20 patients with type 1 diabetes mellitus and BMI < 30
- 200 patients with type 2 diabetes mellitus
- Age above 18 years
- Patient's language skills are sufficient for participation
- Subject has a smartphone and is willing to install the needed apps on it.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

- Pregnancy of breastfeeding women
- Scheduled scan or MRI at time of wearing freestyle libre pro sensor
- Malignancy excepted basal and squamous cell skin cancer

Onderzoeksopzet

Opzet

Type:	Observationeel onderzoek, zonder invasieve metingen
Onderzoeksmodel:	Anders
Toewijzing:	N.v.t. / één studie arm
Blinding:	Enkelblind
Controle:	N.v.t. / onbekend

Deelname

Nederland	
Status:	Werving nog niet gestart
(Verwachte) startdatum:	01-03-2021
Aantal proefpersonen:	220
Type:	Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Ja

Ethische beoordeling

Positief advies	
Datum:	05-02-2021
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL9290
Ander register	METC Maxima Medical Centre : N20.010

Resultaten