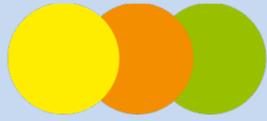


Data Download Portal for The Maastricht Study Project

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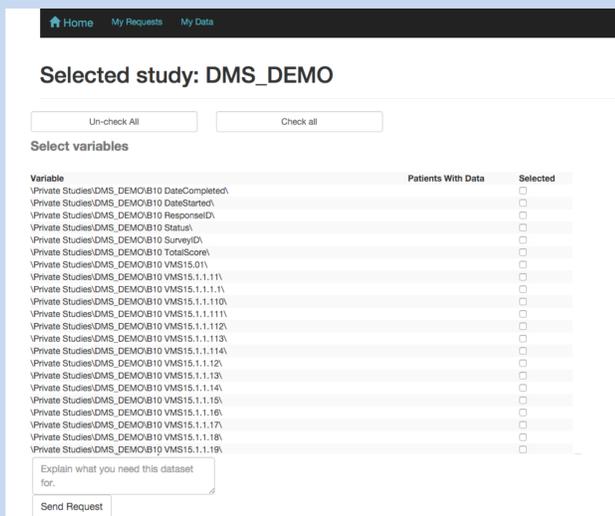
This work was financially supported by CTMM TraIT (grant 05T-401)



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STUDIE

Introduction

The Maastricht Study (TMS) is a multidisciplinary, prospective cohort study, carried out in the Maastricht region of the Netherlands. Its goal is to improve the insight into the causes and consequences of chronic diseases, with focus on Type 2 Diabetes Mellitus (T2DM) and its complications. More specifically: to elucidate what genetic, lifestyle, metabolic, and cardiovascular factors are involved in or can predict the development or progression of T2DM, its complications, and other chronic diseases, including the metabolic syndrome, and cardiovascular, respiratory, neurological and musculoskeletal diseases. The study started on November 1st, 2010 and data from several thousands of patients have been collected, including biobanking data (blood, urine and exhaled air samples), data from questionnaires (lifestyle, food frequency, socio-economic factors, etc.), imaging data (US, ECG, MRI, etc.), blood pressure data, data from physical examinations and many more.



Data Download Portal for Transmart

As part of the IT infrastructure of TMS, a data warehouse platform is being set up in a CTMM Translational Research IT (TraIT) project. In this project, tranSMART has been chosen as the data integration platform, in which the processed data from TMS is stored. To allow researchers to request access to this valuable dataset, CTMM TraIT has developed a data request and download portal on top of the tranSMART platform. After receiving an account for the DMS download portal, researchers can view study summary statistics and can place a request including, amongst others, the variables of interest and the research question for which they plan to use this data. Placed requests will be judged by a data access committee and on approval the data will be downloaded from tranSMART and prepared as a download for the researcher.



(OAuth2 authentication)

REST-api

Data-Portal Backend



REST-api

AngularJS Frontend



Implementation

The Data Portal for handling request procedure and downloading the data is also a showcase of using RESTful API in tranSMART. This functionality allows for easier integration of custom web and desktop applications with tranSMART. The application follows the typical architecture for a new tranSMART-integrated app: it connects via OAuth to the tranSMART RESTful API and presents the data in a rich AngularJs Frontend.

Participants

TraIT is a Dutch public/private partnership between 30 partners: University Medical Centers, several other public institutions, charities, and companies:

