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- R: Document, report (excluding the periodic and final reports)
- DEM: Demonstrator, pilot, prototype, plan designs
- DEC: Websites, patents filing, press & media actions, videos, etc.

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- PU: Public, fully open, e.g. web
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Summary

The eHealth tool MyIBDCoach app has been adapted to include various questionnaires to monitor psychosocial and lifestyle factors. In the beginning of January 2024, most questionnaires have already been implemented into MyIBDCoach and are being used in patient care. The only questionnaire that could not be implemented due to technical issues is Food Frequency Questionnaire (FFQ) which will be made available via link.

1 Introduction

MyIBDCoach is an existing eHealth tool to monitor and register disease activity, psychosocial and lifestyle factors and quality metrics to improve care and QoL in IBD patients. This app was developed and validated and is currently being used for patients with IBD in 23 hospitals in the Netherlands. In this project we want to extend this app with additional questionnaires that will be integrated within MyIBDCoach to monitor a broad range of lifestyle factors. Patients most frequently ask questions about the diet. However, there are no automated dietary analyses and advice tools, yet. Therefore, we included a Food-Related Quality of Life questionnaire (FR-QoL) measuring the impact of diet on their QoL within MyIBDCoach. Patients with a lower FR-QoL will be granted access to an automated extensive FFQ. Besides tools on other lifestyle factors will be included as well.

2 Description of Activities

2.1 Intended activities

The UMCG aimed to employ and extend the existing eHealth tool MyIBDCoach to monitor and register disease activity, psychosocial and lifestyle factors and quality metrics in IBD patients. For this purpose, the following additional questionnaires were intended to be integrated within the app:

- **Food Frequency Questionnaire** (FFQ) to screen for habitual dietary intake;
- the Malnutrition Universal Screening Tool (**MUST**) and the more sensitive Patient-Generated Subjective Global Assessment Short Form (**PG-SGA-SF**);
- the **Food-related QoL (FR-QoL**) which measures the dietary impact on the patient's QoL;
- International Physical Activity Questionnaire Short Form (**IPAQ-SF**) for habitual physical activity;
- Psychological factors (stress, anxiety, depression), life events and social support will be assessed using the mental health scale of the 36-Item Short Form Health Survey (**SF-36**)), the Hospital Anxiety and Depression Scale (**HADS**) and the Structured Clinical Interview for DSM-5 (**SCID-5**);
- Sleep duration and sleep quality are assessed by the Karolinska Sleepiness scale and chronotype sleep assessment by the Munich ChronoType Questionnaire (**MCTQ**);
- For the assessment of fatigue, The Functional Assessment of Chronic Illness Therapy – Fatigue (**FACITF**) is used. IT is a 40-item measure that assesses self-reported fatigue and its impact upon daily activities and function.

All of this would be applied to the consecutive IBD outpatients.

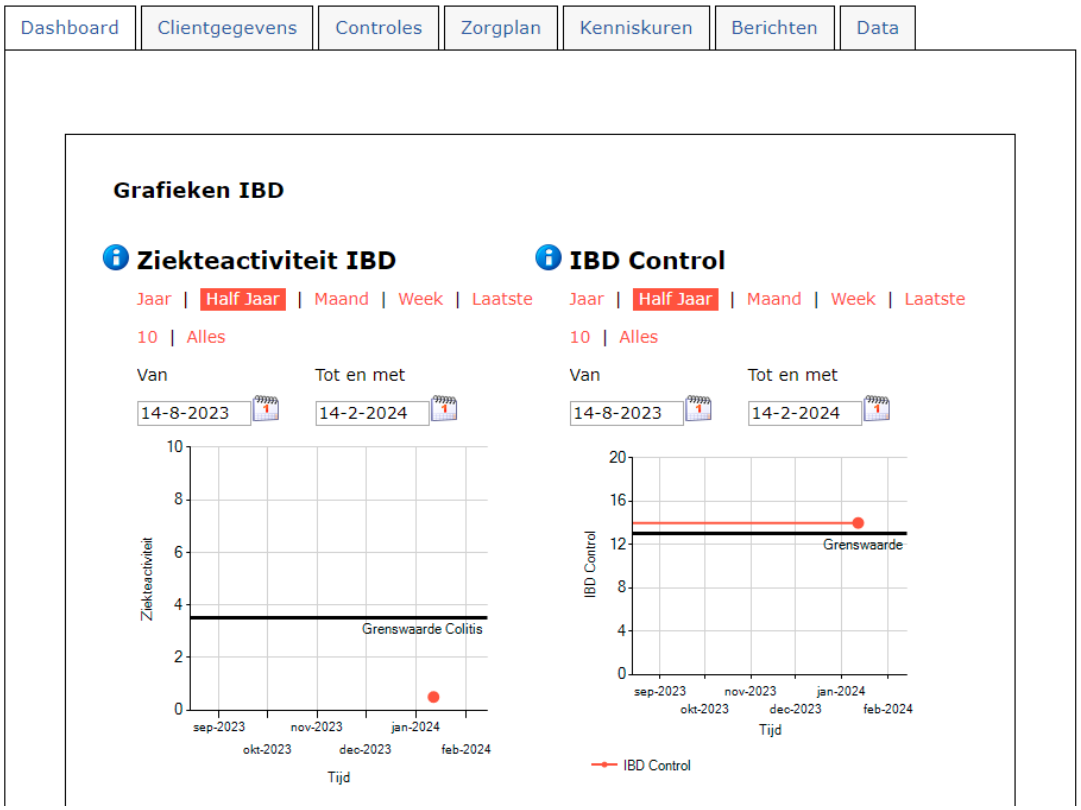
2.2 Adaptations and progress of activities

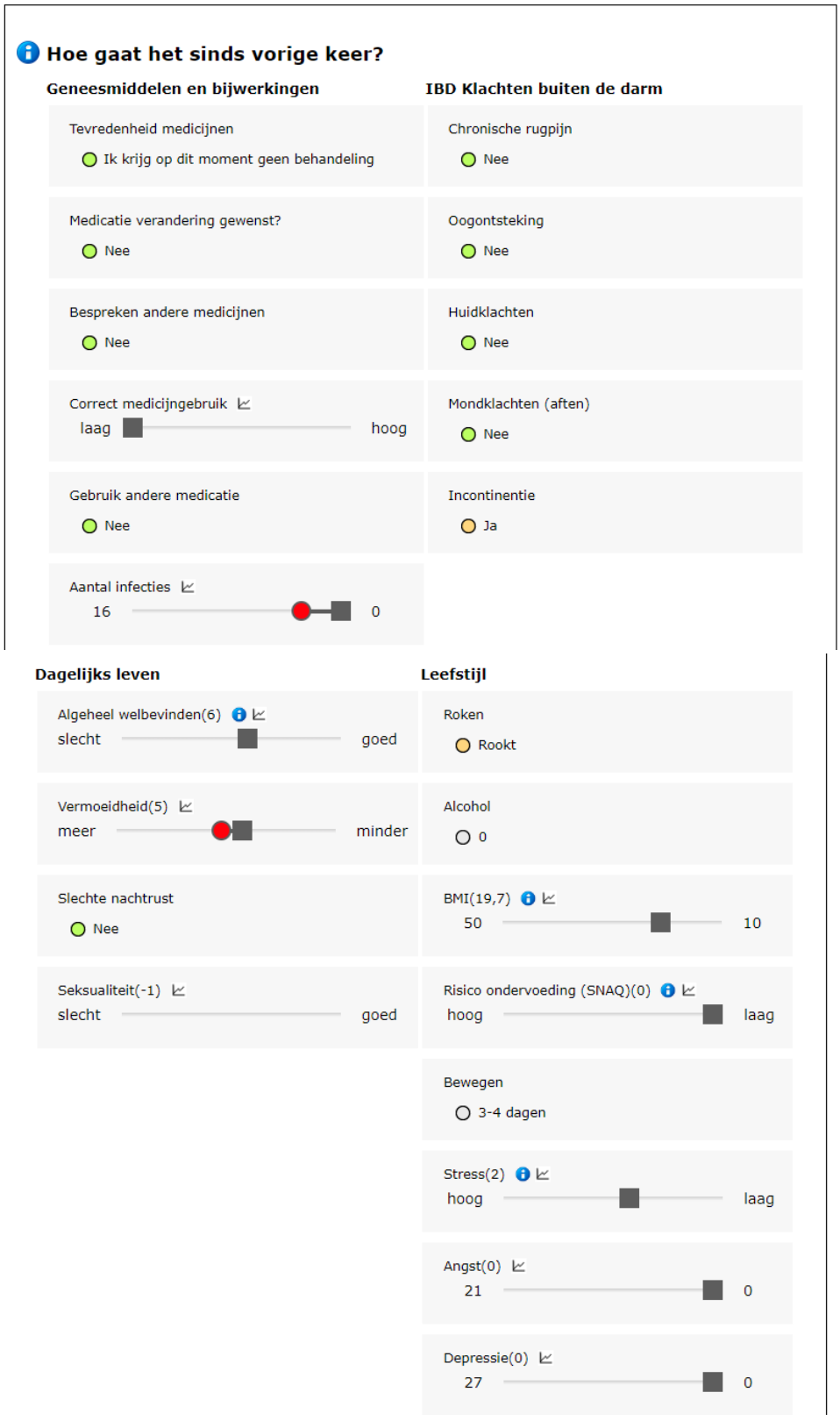
The MyIBDCoach foundation already implemented several lifestyle factors within MyIBDCoach. However, after national discussions, it has been decided that some validated generic PROMIS (Patient-

Reported Outcomes Measurement Information System) instruments will be used for monitoring health care outcomes. This led to the following adjustments in the implementation of questionnaires in MyIBDCoach:

- The Malnutrition Universal Screening Tool (MUST) and the Patient-Generated Subjective Global Assessment Short Form (PG-SGA-SF) are replaced by the Short Nutritional Assessment Questionnaire (SNAQ);
- International Physical Activity Questionnaire Short Form (IPAQ-SF) for habitual physical activity is replaced by alternating questions on PROMIS physical function SF8B and questions about the Dutch exercise standard;
- the 36-Item Short Form Health Survey (SF-36) is integrated in several PROMIS questionnaires;
- the Hospital Anxiety and Depression Scale (HADS) is replaced by PROMIS Anxiety SF4a and PROMIS Depression SF4a;
- For measuring sleep duration and sleep quality, the Munich ChronoType Questionnaire (MCTQ) was replaced by night's sleep disease burden questions;
- For assessment of fatigue, the Functional Assessment of Chronic Illness Therapy – Fatigue (FACITF) was replaced by PROMISE chronic fatigue

All of these instruments are now implemented within the MyIBDCoach app (see screenshots of the dashboard).





The Structured Clinical Interview for DSM-5 (**SCID-5**) will not be implemented as a separate instrument because PROMIS tools for mental health is already covering this.

The FFQ could not yet be integrated into MyIBDCoach due to problems with software development. Therefore, it has been decided that this instrument will be made available for patients through a link that can be found in MyIBDCoach.

3 Results and conclusion

A significant set of instruments of lifestyle factors have now been implemented in MyIBDCoach and, since the beginning of 2024, they are being used in clinical practice and applied to all consecutive participating patients. Now we are able to successfully monitor the effect of lifestyle factors on disease course of IBD. The Short Nutritional Assessment Questionnaire (SNAQ) measures malnutrition, PROMIS physical function SF8B and questions about the Dutch exercise standard will measure physical function and activity. Overall QoL is measured by several subparts of PROMISE instruments, as PROMIS Anxiety SF4a and PROMIS Depression SF4a are measuring level of anxiety and depression. Simple questions on night's sleep disease burden questions are integrated and fatigue is measured by PROMIS chronic fatigue. Implementation of the FFQ is not yet feasible and has been made available to patients through a link in the application.