

Instruction Manual



Treatment Optimiser

Variant: Asthma Optimiser | Version 1.0

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UDI-DI: 4270001023551

Instruction for Use-version 1.1 / 2024-05

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Contact / Manufacturer



LOTHAR MEDTEC GmbH Magdalene-Schoch-Str. 5 97074 Wuerzburg, Germany Tel.: +49 931 6193816-0 E-mail: info@lothar-medtec.de

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Caution

Federal law restricts this device to sale by or on the order of a physician.

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or deceased persons is therefore purely coincidental and not intended.

This document is available electronically at: https://www.lothar-medtec.de/instructions-for-use/

In case you want to receive a paper-based version please send your request to the manufacturer as indicated above. The paper-based version will be transmitted to you within 7 working days.

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1 The Treatment Optimiser and the Asthma Optimiser

The Treatment Optimiser is a medical device (software as a medical device; class IIa) consisting of a cloud-based software. It is a tool intended to quickly identify patients with a diagnosed respiratory disease who may benefit from a specialist review. The product provides a set of forms to collect information about a patient's current health status related to a respiratory disease. This information is analyzed according to recognized guidelines (e.g., GINA) and aggregated.

The **Asthma Optimiser is the first variant** of the medical device treatment optimizer.

2 Indications for Use

Indications: Diagnosed asthma.

Contraindications: There are no contraindications.

3 Intended Purpose

Intended Purpose

The Treatment Optimiser is used to collect information about a patient's current health status related to a prediagnosed respiratory disease. The product then uses this information to provide decision support for general practitioners and their staff whether a patient would benefit from a specialist review. The Treatment Optimiser is used by general practitioners and their staff in the doctor's office. The Treatment Optimiser decision support is based on recognized guidelines for respiratory disease management.

Intended user group

General practitioner and their staff

Intended patient population

The system is suitable for patients age 12 and older.

4 Pictograms and Safety Instructions in the Instruction Manual

Following the **ANSI** (American National Standards Institute) recommendations for safety instructions, the following pictograms have been used in this instruction manual:

Danger level	Definition	
Danger Danger indicates an imminently hazardous situation which, if not avoided, could result in extremely serious injury word is reserved for extreme situations.		
Warning warning indicates a potentially hazardous situation which, if not avoided, could result in extremely serious injury or death.		
Caution	CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. Also used to indicate unsafe procedures.	

Additional pictograms shown in the instruction manual and/or in the user interface:

[]i	Observe the instruction manual and accompanying documents.
MD	Medical device symbol
	Indicates that caution is necessary when operating the device or control close to where the symbol is placed, or that the current situation needs operator awareness or operator action in order to avoid undesirable conse-
Attention	Important operating instructions and useful information. No information that warns of a dangerous or critical situation.
Note	Tips, info, and operating instructions.

Attention: Please also observe the safety and operating instructions in section 16.

5 Reporting of incidents and serious incident

- Incident shall be reported to the manufacturer as outlined at the very end of this Instruction for Use
- Serious incident shall be reported to the manufacturer and the competent authority

6 Data protection

For data protection please refer to the Data Privacy Policy available on the landing page of the Treatment Optimiser (e.g., www.asthma-optimiser.com)

7 Security information



Do not share your password with others in order to reduce risk of unauthorized access

Note

To ensure that the software is not used in areas not listed the access is restricted and automatically detected e.g. in case a VPN tool is used the access may be jeopardized.

8 Declaration of Conformity

LOTHAR MEDTEC declares that the product described herein has been designed and manufactured in accordance with the following specifications and standards: Medical Device Regulation 2017/745.

This device, which complies with class IIa for continuous operation according to Annex IX of the Regulation is realized under a Quality Management System complying with the requirements according to EN ISO 13485:2016. medical devices - quality management systems - requirements for regulatory purposes.

9 Practical Hints

Before initial operation, you should make yourself familiar with safe handling of the medical application and with the examination procedure.

10 Residual Risks



______ Modifications to the product endanger product safety and lead to the loss of the operating license! LOTHAR MEDTEC assumes no liability for modifications

11 Minimum Requirements

To use the Treatment Optimiser, you need computer system with internet access and a current common browser software application. The internet connectivity requires availability and bandwidth typical for medical care.

Internet access to the URL of the Treatment Optimiser must not be blocked or otherwise restricted by the configuration of the local IT infrastructure.

12 Access to the Software

Access to the Treatment Optimiser is restricted, credentials can be received from an administrator.

13 Product Information and Settings

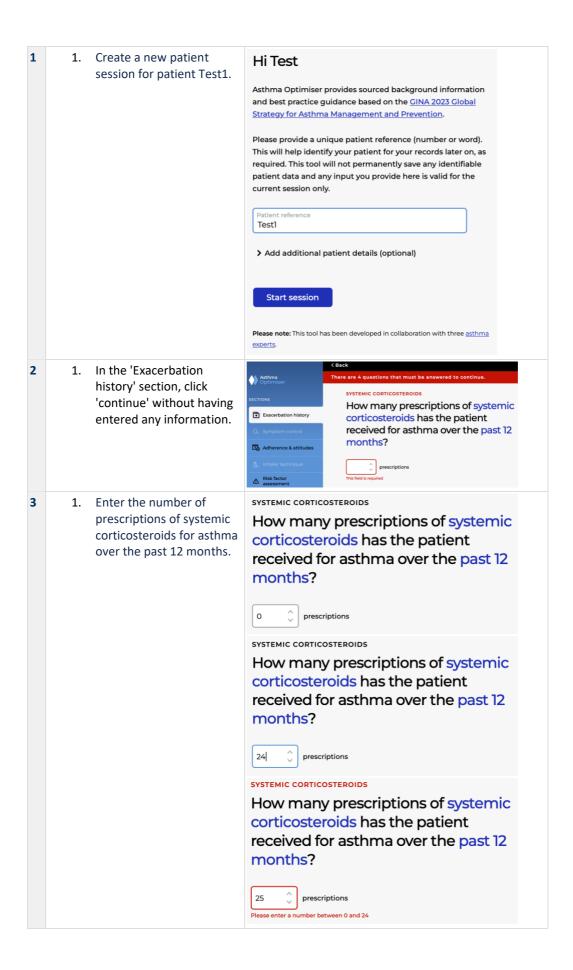
The product information (Unique Device Identifier (UDI), product and software version, manufacturer's contact etc.) and settings page (settings and profile details) are accessible after logging into the application.

14 Operating Instructions

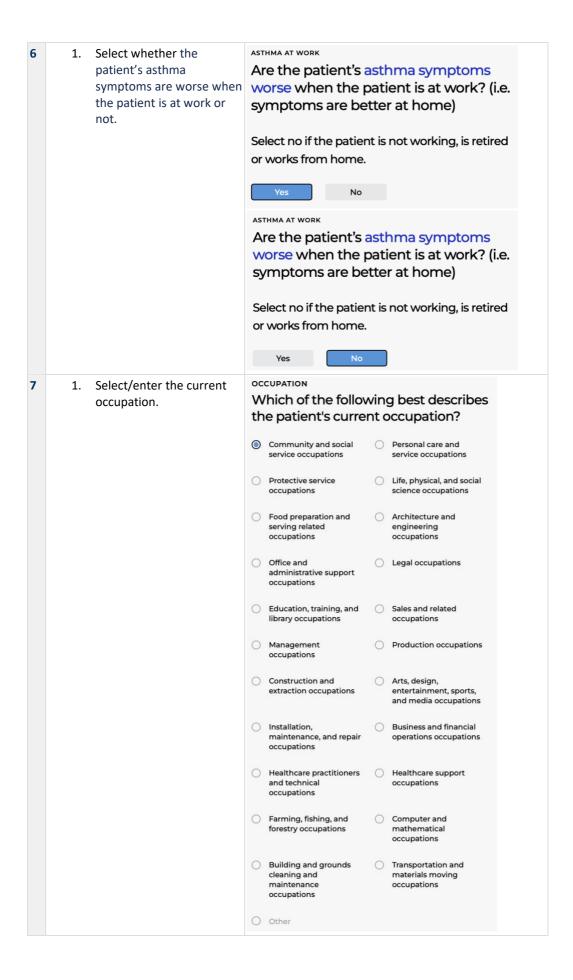
Login

After logging into the Treatment Optimiser, in a "Quick Tour" the main functions of the software are explained. The "Quick Tour" is also accessible from the settings page. To use the software, follow the explanations in the "Quick Tour" and the instructions on screen.

Operating the software with all use cases

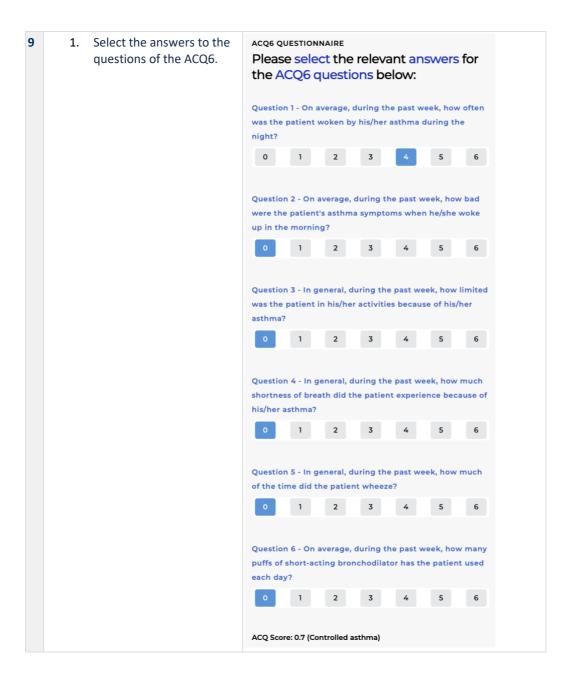


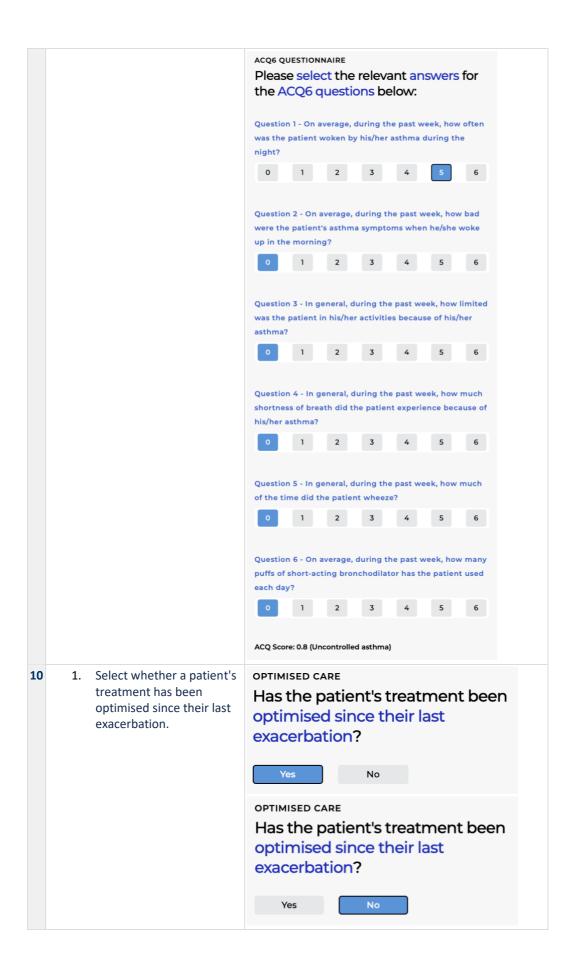
1. Select the number EMERGENCY VISITS of emergency How many times has the patient had attendances, admissions an emergency attendance, admission or unscheduled visits due or unscheduled visit due to asthma to asthma over the past 12 over the past 12 months? months. Never ○ 1time O 2 times or more EMERGENCY VISITS How many times has the patient had an emergency attendance, admission or unscheduled visit due to asthma over the past 12 months? O Never 1 time 2 times or more EMERGENCY VISITS How many times has the patient had an emergency attendance, admission or unscheduled visit due to asthma over the past 12 months? Never ○ 1 time 2 times or more INTENSIVE CARE 5 1. Select whether or not the patient has been intubated Has the patient ever been intubated or or admitted to an ICU admitted to an ICU (intensive care unit) (intensive care unit) or a or a high dependency unit due to their high dependency unit due asthma? to their asthma. No Has the patient ever been intubated or admitted to an ICU (intensive care unit) or a high dependency unit due to their asthma?

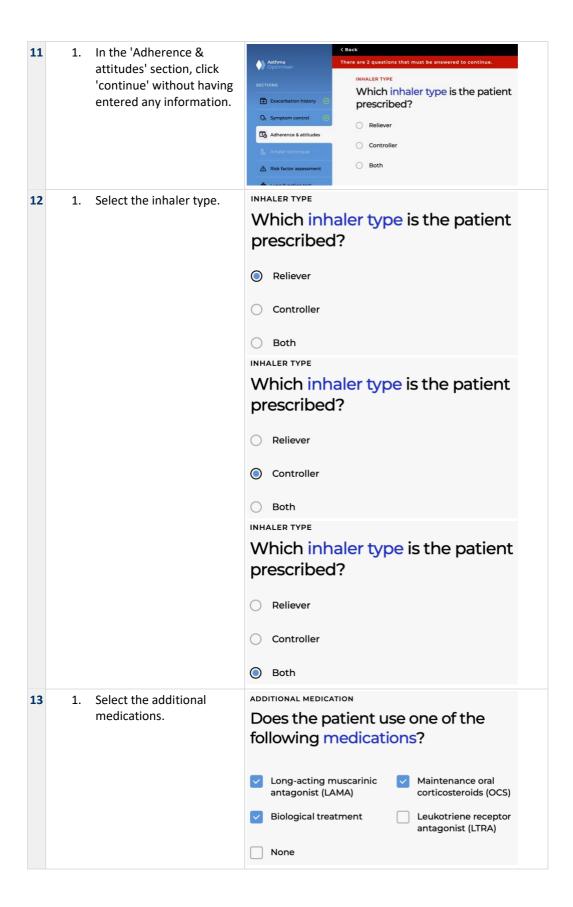


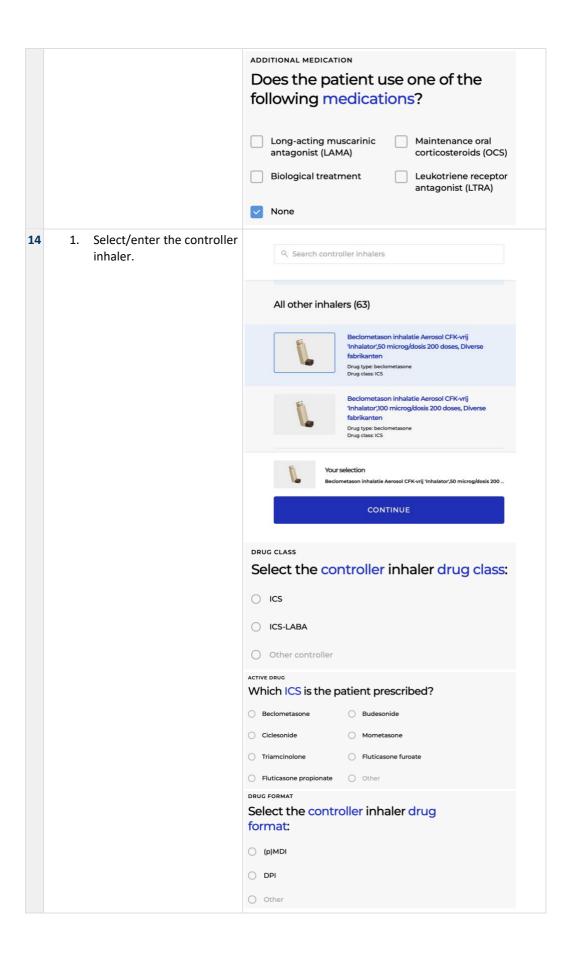
8 1. In the 'Symptom control' ACQ6 QUESTIONNAIRE section, click 'continue' Please select the relevant answers for the ACQ6 questions below: without having entered Ω_c Symptom control ③

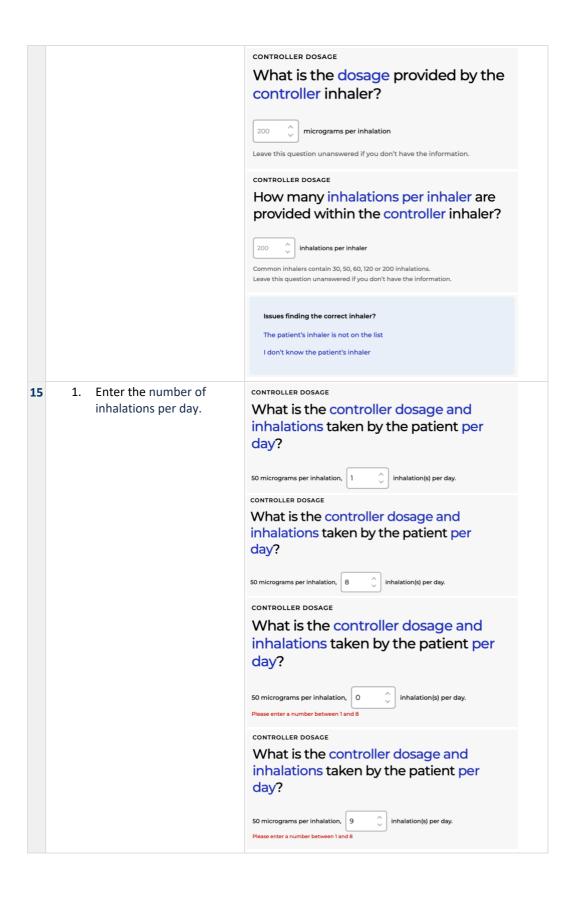
Adherence & attitudes any information. was the patient woken by his/her asthma during the 0 1 2 3 4 5 6 A Risk factor assessment db Lung function Question 2 - On average, during the past week, how bad were the patient's asthma symptoms when he/she woke up in the morning? 0 1 2 3 4 5 6 Question 3 - In general, during the past week, how limited was the patient in his/her activities because of his/her asthma? 0 1 2 3 4 5 6 Question 4 - In general, during the past week, how much shortness of breath did the patient experience because of his/her asthma? 0 1 2 3 4 5 6 Question 5 - In general, during the past week, how much of the time did the patient wheeze? 0 1 2 3 4 5 6 Question 6 - On average, during the past week, how many puffs of short-acting bronchodilator has the patient used each day? 0 1 2 3 4 5 6



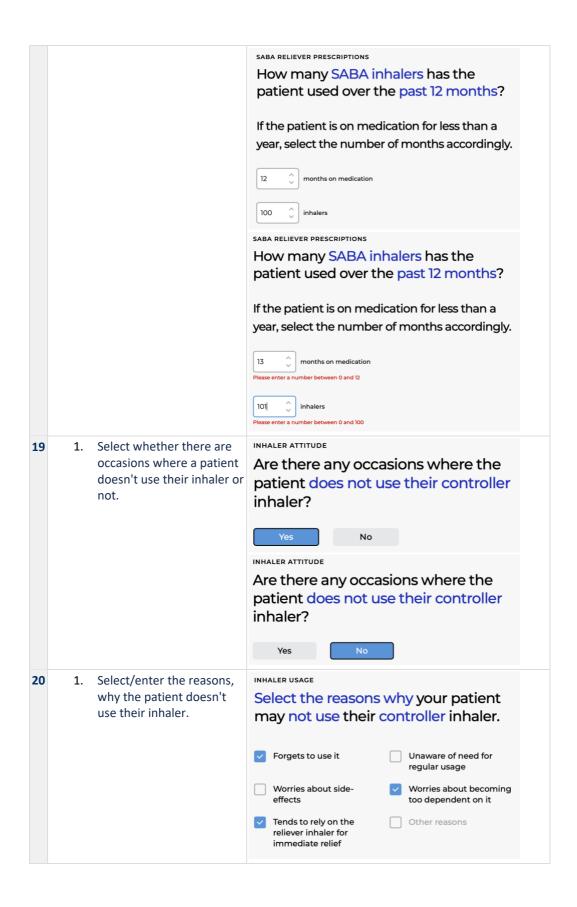


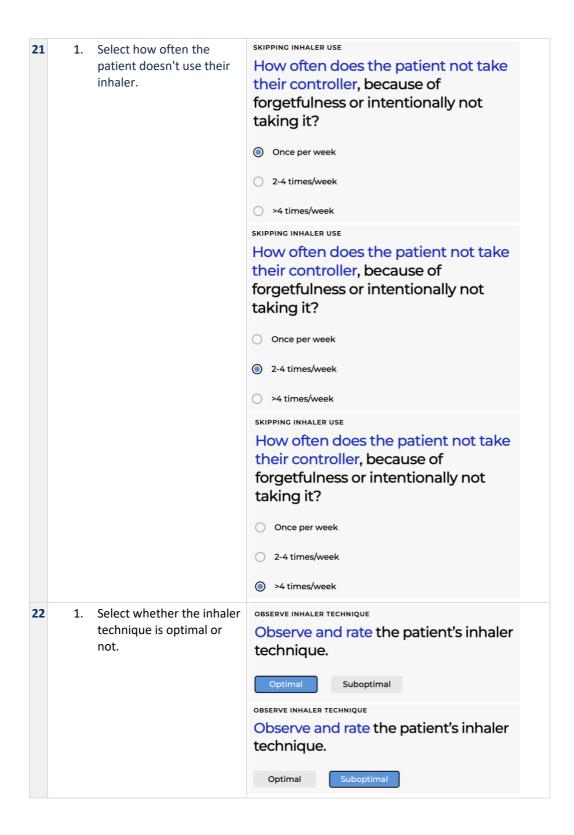


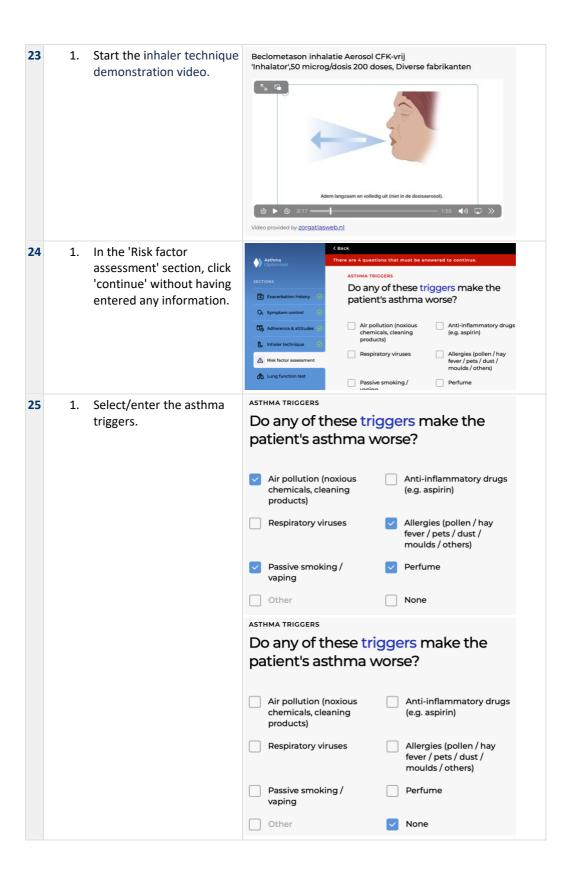




16	1.	Enter the number of months on medication and controller prescriptions.	How many controller devices has the patient had over the past 12 months? If the patient is on medication for less than a year, select the number of months accordingly. O	
			25 devices Please enter a number between 0 and 24	
17	1.	Select the reliever inhaler type.	SABA Low dose ICS-formoterol DRUG CLASS Select the reliever inhaler drug class: DRUG CLASS Select the reliever inhaler drug class: SABA Low dose ICS-formoterol	
18	1.	Enter the number of months on medication and SABA reliever prescriptions.	How many SABA inhalers has the patient used over the past 12 months? If the patient is on medication for less than a year, select the number of months accordingly.	

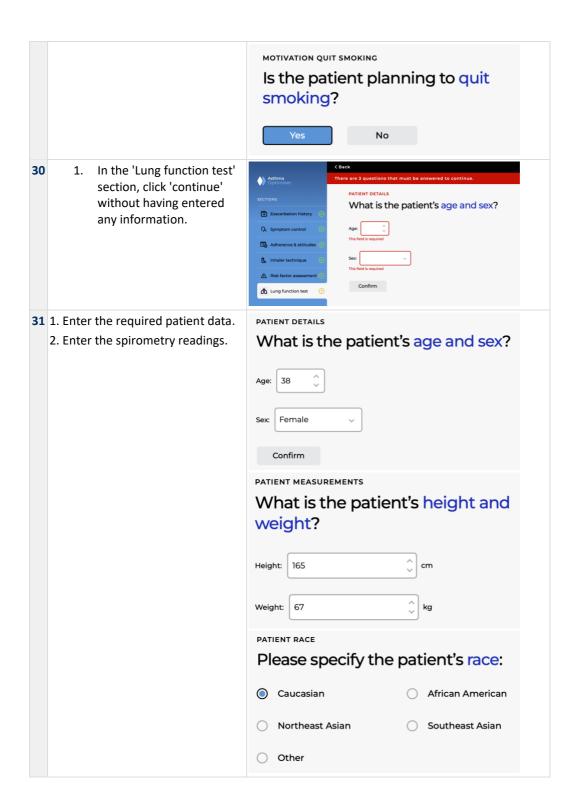


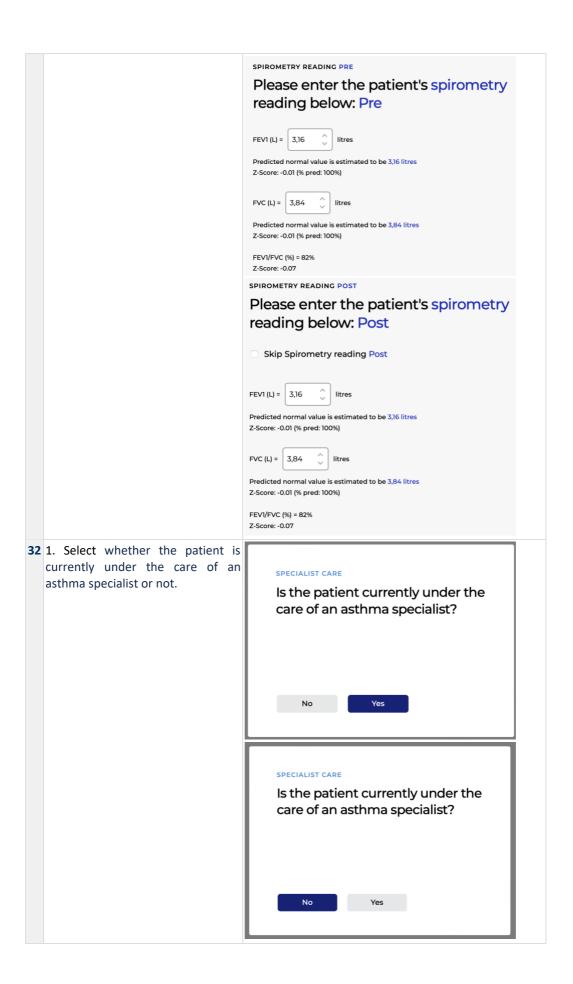


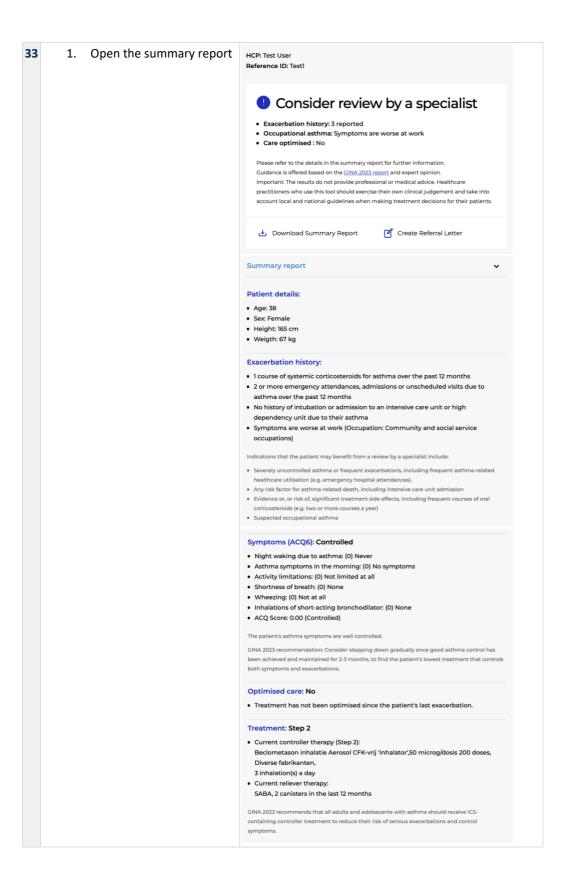


26	1. Select whether the patient smokes, has smoked in the past, or has never smoked.	Is the patient smoking or did the patient smoke in the past? © Current smoker Former smoker Never smoker smoking Is the patient smoking or did the
		patient smoke in the past? Current smoker Former smoker Never smoker smoking Is the patient smoking or did the patient smoke in the past? Current smoker Former smoker
27	Select/enter the comorbidities.	© Never smoker COMORBIDITIES Does the patient have any of these comorbidities that may contribute to their symptoms, impaired quality of life, and poor asthma control? Anxiety or depression Obstructive sleep apnoea ✓ Deconditioning Bronchiectasis ✓ Obesity Cardiac disease Chronic rhinosinusitis or nasal polyps ✓ Gastroesophageal reflux disease None

			Does the patient have any of these comorbidities that may contribute to their symptoms, impaired quality of life, and poor asthma control? Anxiety or depression Obstructive sleep apnoea Deconditioning Bronchiectasis Obesity Cardiac disease Chronic rhinosinusitis or nasal polyps Chronic obstructive pulmonary disease Gastroesophageal reflux Other
28	1.	Select/enter the socioeconomic factors.	Is the patient exposed to any of these socioeconomic status (SES) triggers that may contribute to their symptoms, impaired quality of life, and poor asthma control?
			Educational attainment Other No SES detected SOCIOECONOMIC FACTORS Is the patient exposed to any of these socioeconomic status (SES) triggers that may contribute to their symptoms, impaired quality of life, and poor asthma control?
			Financial status Living conditions (mould, dust, other) Educational attainment Occupational Other No SES detected
29	1.	Enter required data about the patient's smoking habits.	How many years has the patient been smoking? 10 years CIGARETTES PER DAY How many cigarettes per day does the patient smoke? 20 cigarettes per day







Adherence: Good (91%)

 Controller (Good: 91%): Beclometason inhalatie Aerosol CFK-vrij 'Inhalator',50 microg/dosis 200 doses, Diverse fabrikanten:

5.5 required controller device(s) according to treatment, 5 controller device(s) in the last 12 months

Inhaler attitude: Inconsistent usage

- The patient does not use inhaler once per week.
- The patient forgets to use the inhaler.
- The patient worries about becoming too dependent on it.
- The patient tends to rely on reliever inhaler for immediate relief.

A discussion with the patient on the highlighted concerns may be appropriate. Poor adherence and incorrect inhaler technique may underlie poor symptom control and are potentially modifiable risk factors for future exacerbations, even in patients with few symptoms.

GINA 2023 recommendation: depending on the clinical context, identify and treat modifiable risk factors before considering a review by a specialist. Evidence of, or risk of, significant treatment side-effects is an indication that the patient may benefit from a review by a specialist.

If the patient forgets to use their inhaler, suggest associating the daily adherence with another routine activity like brushing their teeth.

Lung function test: Pre FEV1(L) Ratio: 100%, Post FEV1(L) Ratio: 100%

- Pre FEV1(L) Ratio = 100% (Z-score: -0.01)
- Pre FEV1/FVC(%) = 82% (Z-score: -0.07)
- Post FEV1(L) Ratio = 100% (Z-score: -0.01)
- Post FEV1/FVC(%) = 82% (Z-score: -0.07)
- Age = 38
- Height = 165 cm
- Weight = 67 kg
- Sex = FemaleRace = Caucasian
- DMI = 24.61

Measure lung function at start of treatment. After 3-6 months of controller treatment record personal best lung function, and take periodic measurements for ongoing risk assessment.

Low FEV1, especially <60% predicted, is a potentially modifiable risk factor for future exacerbations even in patients with few symptoms. Low initial FEV1 is a risk factor for developing persistent

A reduced FEV1/FVC ratio, is indicative of obstructive lung disease. A z score of -1.64 or less indicates that 95% of people with these characteristics record a higher FEV1 value.

Low lung function despite correct inhaler technique, good adherence with step 4 treatment (moderate dose ICS-LABA) and identification and treatment of modifiable risk factors and comorbidities, is an indication that the patient may benefit from a review by a specialist.

Inhaler technique: Optimal

The patient's technique is optimal.

Risk factors: Present

Triggers:

Air pollution (noxious chemicals, cleaning products),

Allergies (pollen / hay fever / pets / dust / moulds / others),
Passive smoking / vaping,

Perfume

Smoking:

Smoking:
Current smoker (10 pack-years, motivated to quit)

Comorbidities:
 Other (),

Deconditioning,

Obesity,

Gastroesophageal reflux disease

Socio economic factors:

Living conditions (mould, dust, other),

Occupational

GINA 2023 recommendation: depending on the clinical context, identify and treat modifiable risk factors and comorbidities before considering a review by a specialist. Suspected occupational asthma is an indication that the patient may benefit from a review by a specialist.

Having risk factors may increase the patient's risk of exacerbations even if they have few asthma

Select the symptom control test to be used in

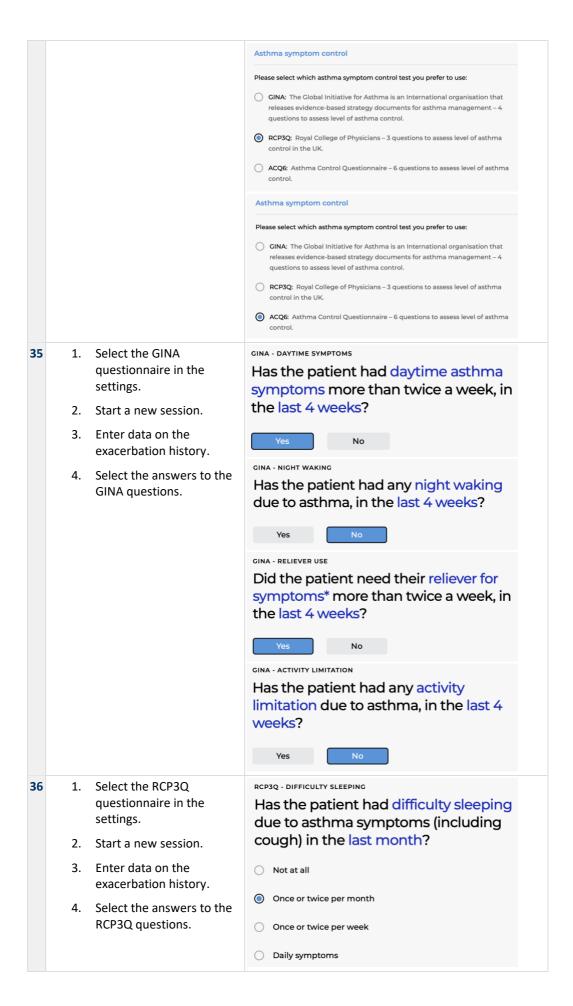
Asthma symptom control

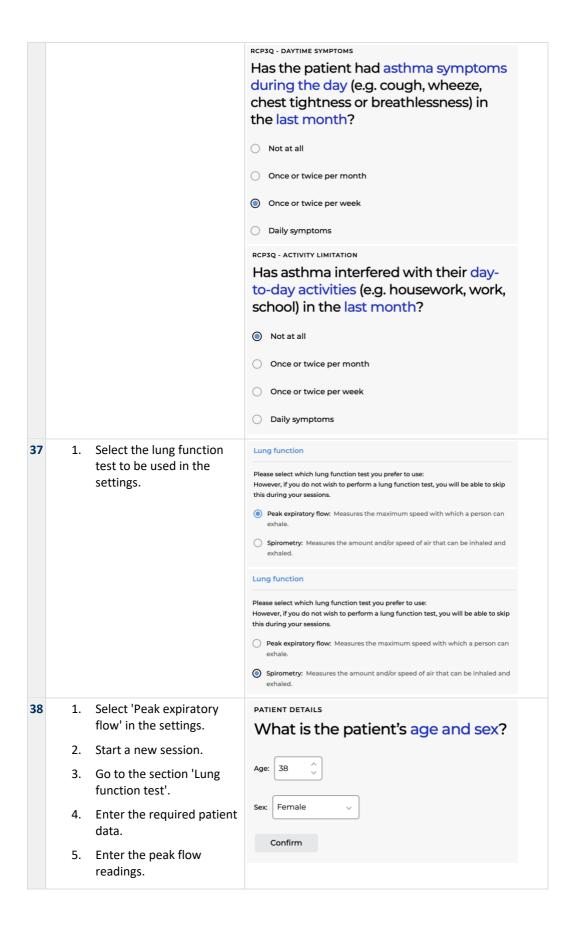
Please select which asthma symptom control test you prefer to use:

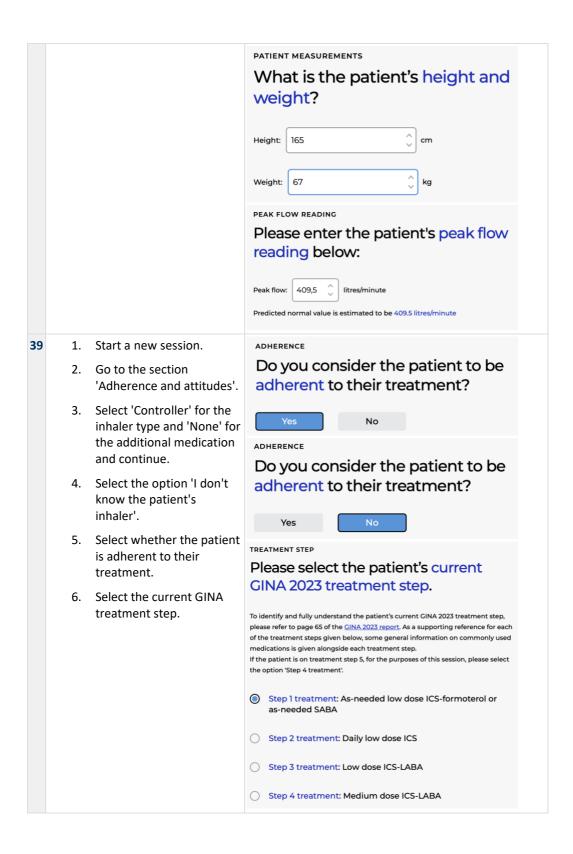
- GINA: The Global Initiative for Asthma is an International organisation that releases evidence-based strategy documents for asthma management 4
 Guestions to assess level of asthma control.
- RCP3Q: Royal College of Physicians 3 questions to assess level of asthma control in the UK
- ACQ6: Asthma Control Questionnaire 6 questions to assess level of asthma control.

the settings.

34

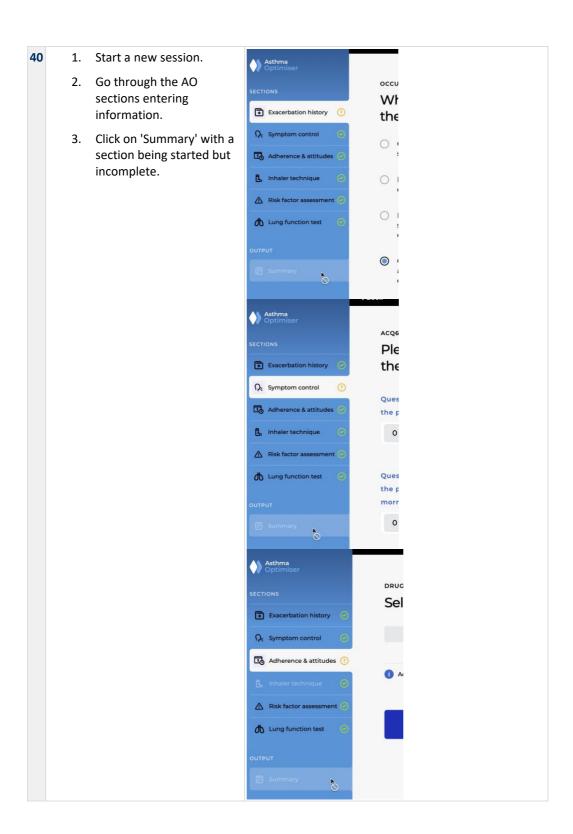


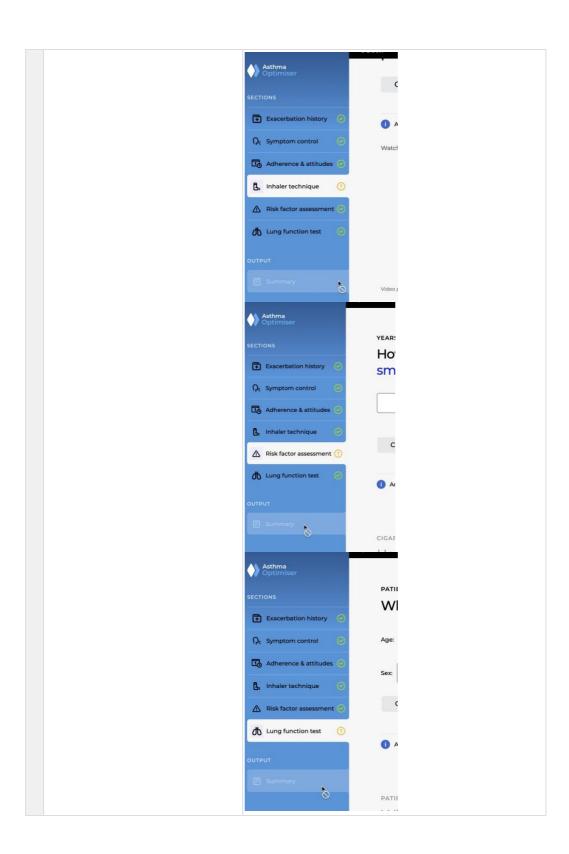




TREATMENT STEP Please select the patient's current GINA 2023 treatment step. To identify and fully understand the patient's current GINA 2023 treatment step, $\,$ please refer to page 65 of the GINA 2023 report. As a supporting reference for each of the treatment steps given below, some general information on commonly used medications is given alongside each treatment step. If the patient is on treatment step 5, for the purposes of this session, please select the option 'Step 4 treatment'. Step 1 treatment: As-needed low dose ICS-formoterol or as-needed SABA Step 2 treatment: Daily low dose ICS Step 3 treatment: Low dose ICS-LABA O Step 4 treatment: Medium dose ICS-LABA TREATMENT STEP Please select the patient's current GINA 2023 treatment step. To identify and fully understand the patient's current GINA 2023 treatment step, please refer to page 65 of the GINA 2023 report. As a supporting reference for each of the treatment steps given below, some general information on commonly used medications is given alongside each treatment step. If the patient is on treatment step 5, for the purposes of this session, please select the option 'Step 4 treatment'. Step 1 treatment: As-needed low dose ICS-formoterol or as-needed SABA O Step 2 treatment: Daily low dose ICS Step 3 treatment: Low dose ICS-LABA O Step 4 treatment: Medium dose ICS-LABA TREATMENT STEP Please select the patient's current GINA 2023 treatment step. To identify and fully understand the patient's current GINA 2023 treatment step, please refer to page 65 of the GINA 2023 report. As a supporting reference for each of the treatment steps given below, some general information on commonly used medications is given alongside each treatment step. If the patient is on treatment step 5, for the purposes of this session, please select the option 'Step 4 treatment'. Step 1 treatment: As-needed low dose ICS-formoterol or as-needed SABA O Step 2 treatment: Daily low dose ICS Step 3 treatment: Low dose ICS-LABA

Step 4 treatment: Medium dose ICS-LABA





15 Possible Sources of Error and Remedies

	Error	Error source	Remedy
1	User interface cannot be	No adequate internet	Make sure the computer system you are using is
	loaded or refreshed	connection available	connected to the internet.
			Restart the browser software.

16 Safety and Operating Instructions

This instruction manual describes the currently valid status of the product considering the requirements of MDR 2017/745. Strict adherence to the operating instructions is a prerequisite for the intended use of the Treatment Optimiser. Please follow the manufacturer's specifications (technical data, explanation and compliance with the pictograms and other information).

17 Deviation from the Intended Purpose

Any non-compliance of the procedures described in this instruction manual will result in a deviation from the intended purpose. In this case, the operator/user must provide proof of compliance with all applicable essential requirements. This is possible with the implementation of a corresponding conformity assessment procedure within the scope of in-house-manufacture (compare § 12, section 1, last sentence, Medical Product Law). The operator/user is responsible for the proper performance of the conformity assessment, and he also assumes the complete product liability - not only the liability for the application/use of the medical device changed by him.

LOTHAR MEDTEC guarantees the safety, reliability, and function only if the product is used in compliance with the instruction manual.

This instruction manual is considered part of the product and must be always kept accessible.

If any potentially serious harm to a patient occurs during use of the product, such an occurrence must be reported immediately to the manufacturer and to the appropriate national competent authorities.

18 Medical Responsibility

The Treatment Optimiser is not intended to give professional or medical advice. General practitioners and their staff who use this tool should exercise their own clinical judgement and take into account applicable guidelines when making treatment decisions for their patients.

19 CE notice

The CC 0123 symbol indicates that the Treatment Optimiser complies with the provisions of the Medical Device Regulation 2017/745 of the European Commission. It also indicates that the Treatment Optimiser meets or exceeds the requirements of the applicable technical standards.

20 Maintenance

In the event of malfunctions, LOTHAR MEDTEC support team will be happy to advise you and to take care for remedy.

21 Literature

The Treatment Optimiser implements applicable parts of the following published recogniszed guidelines:

Global Initiative for Asthma. Global Strategy for Asthma Management and Prevention, 2023.

Available from www.ginasthma.org.

The Treatment Optimiser implements the following published reference models for calculation of patient-specific reference values:

Spirometry

Philip H. Quanjer, Sanja Stanojevic, Tim J. Cole, Xaver Baur, Graham L. Hall, Bruce H. Culver, Paul L. Enright, John L. Hankinson, Mary S.M. Ip, Jinping Zheng, Janet Stocks and the ERS Global Lung Function Initiative, Multi-ethnic reference values for spirometry for the 3–95-yr age range: the global lung function 2012 equations, Eur Respir J, 2012; 40.

Peak flow

Sterk PJ, Fabbri LM, Quanjer PH, Cockcroft DW, O'Byrne PM, Anderson SD, Juniper EF, Malo JL., Airway responsiveness. Standardized challenge testing with pharmacological, physical and sensitizing stimuli in adults. Report Working Party Standardization of Lung Function Tests, European Community for Steel and Coal. Official Statement of the European Respiratory Society. Eur Respir J Suppl. 1993; 16.

22 Contact

LOTHAR MEDTEC GmbH Magdalene-Schoch-Str. 5 97074 Wuerzburg, Germany Tel.: +49 931 6193816-0 E-Mail: info@lothar-medtec.de