

platform 24

User Manual - Content Studio+

TRIAGE24 v.1

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Triage24 is a certified medical device. All data is encrypted while transmitted and processed according to the GDPR and the Patient Data Act.



Platform24 Healthcare AB

Västra Järnvägsgatan 7, SE-111 64 Stockholm, Sweden



Consult instructions for use: eIFU provided from within the product and via manufacturers webpage.



Basic UDI-DI: 735012722P24001LR

UDI-DI: 7350127221004

Any serious incidents that have occurred in relation to the medical device should be reported to Platform24 and to the competent authority of the Member State in which the user and/or patient is established.

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1. Introduction

1.1. About this manual

This is the User Manual for Content Studio+, Medical developer User Interface within Manage.



NOTE

The User Manual might not always be fully up to date regarding all User Interface (UI) elements. For example, smaller UI elements, such as updated names for buttons, fields etc. might not in themselves produce a new version of the User Manual. All UI changes will, however, be communicated in the Release Notes at the time of the update. All warnings will always be up to date in the User Manual, and, in addition, new warnings will be communicated in the Release Notes.

2. Contact details

2.1. Manufacturer

Address Platform24 Healthcare AB

Västra Järnvägsgatan 7

SE-111 64 Stockholm

Sweden

Website https://platform24.com

2.2. Support

2.2.1. End user support

For questions about editing medical content, contact the Customer Success Manager at Platform24.

2.2.2. Urgent cases

For urgent support cases users should call the Platform24 support phone number below.

Phone: +46 (0) 10-140 23 21

2.2.3. Non urgent cases

For all non urgent support cases users should email the support email below.

E-mail: <support@platform24.com>

For questions regarding additional services or modules your organization may want to buy or activate, users should contact their *Customer Success Manager*, (*CSM*) at Platform24.

2.3. Feedback and questions regarding the user manual

For feedback and questions regarding the user manual, email the user documentation support email below.

E-mail: <support@platform24.com>

2.3.1. Request printed version of the instructions for use

Platform24 provides the instructions for use for its products in electronic form.

If you require a paper version of the user manual, contact Platform24 via:

E-mail: <support@platform24.com>

3. Symbols and admonitions

3.1. Symbols



CE marking



Manufacturer



Consult instructions for use



Warning



Medical Device



Unique Device Identifier

3.2. Admonitions

This section describes admonitions that are used in the user manuals.



WARNING

A warning indicates a hazardous situation that, if not avoided, could result in death or serious injury.



CAUTION

A caution indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.



IMPORTANT

An important admonition indicates information that is important for the user to take note of.



NOTE

A note indicates information that the user should to take note of.



TIP

A tip indicates recommendations for the user.

4. Warnings



WARNING

Any changes regarding configuration (adaptations, texts, rules, medical content, etc.) are carried out in Manage in production but should be put through a review process before they are activated in production.



WARNING

With the product in *active mode*, Manage administers Clinic, where healthcare practitioners receive real patients and the Patient app, in which real patients pursue their digital journey. All changes must be reviewed before releasing them into production.



WARNING

Any changes to the medical content via Content Studio+ have essentially an impact on patient journeys and triage. This puts high demands on everyone editing in Content Studio+ to ensure they have training in how the tool works and use this guide to further understand the functionality.



WARNING

The medical responsibility for content changes lies with the partner carrying out the changes. This means that responsibility to test that any changes made work as intended lies also with the partner.



WARNING

Make sure to test all changes made and identify any ensuing changes required to ensure patient-safe flows.



WARNING

Visualizations do not show components with values in Build time if. For this reason, do not only use the visualizations to understand the structure of the questionnaires.

Recommended use together with the basic view for questionnaires to obtain an overall understanding.



WARNING

Removing a component can pose a patient-safety risk unless a careful analysis of the effects is performed. Make sure to test any changes made and identify any ensuing changes required to ensure patient-safe flows.



WARNING

If a change is made in a **Library**, the change will affect all questionnaires where the **Library** is used. Consider therefore carefully when editing.



WARNING

Editing and adding assessments can pose a patient safety risk unless a careful analysis of the effects is conducted. Make sure to test any changes made and identify any ensuing changes required to ensure patient-safe flows.



WARNING

Editing and adding to questionnaires in the **Triage** sub-menu can pose a patient-safety risk if a careful analysis of the effects is not performed. Make sure to test any changes made and identify any ensuing changes required to ensure patient-safe flows.



IMPORTANT

The device Triage24 does not by itself offer medical advice, possible diagnosis, or treatment recommendations, or inform/drive management of any medical condition.

If populated with medical content containing e.g., medical advice or recommendations on management, the Triage24 device can present such content to patients.

5. Triage24 - Intended Use

5.1. Triage 24

Triage24 is a medical device consisting of a configurable logic based rule engine for medical triage developed for use in healthcare services. It enables healthcare providers to populate it with medical content and business logic that makes it possible to automate triage and direct patients to appropriate pathways within the healthcare system. These pathways can be digital, physical or digi-physical in nature.

Triage24 is intended to be configured and adopted to the conditions and needs of a specific health-care provider. This is achieved either through a service provided by Platform24 or its affiliates or by the healthcare provider. The configuration of the system is made through a web user interface.

The configured implementation of the device allows patients to initiate contact, through an associated application (Patient app), with healthcare providers by answering questions about their medical complaint, medical history and health status. It also allows practitioners, on behalf of a patient, to triage the patient by answering questions in the practitioner user interface, which the patient answers.

Based on his/her answers, the patient is (either in the patient or practitioner application) directed to an appropriate level of care, as determined and configured by the health care provider. Such levels are for example: emergency care, physical appointment, digital appointment or self-care. That care can be provided to the patients through a physical meeting or digital meeting with a healthcare provider. Digital appointments can be facilitated through Platform24, which provides both a practitioner and a patient interface.

The triage algoritm is based on the Swedish standard of Telephone triage protocol RGS (Rådgivningsstödet).



NOTE

Post-triage questions (additional questions posted before the consultation and potential free text information from the patient) is not part of the triage prioritization but can add clear value for the consultation.

5.1.1. Modules of Triage24

Triage24 consist of three modules. The modules are connected to a specific user group, and *user interface* (*UI*) for these groups.

- a. Content Studio+
- b. Patient triage
- c. Assisted Triage

See also Intended Users [14]

5.1.2. Intended use for Triage24

Triage24's intended use is to:

- (a) be configured and adopted to the conditions and needs of a specific healthcare provider through population with medical content and business rules, and
- (b) when populated, guide patients to a suitable level of care based on their symptoms and the medical content.

The configuration (a) is achieved either through a service provided by Platform24 or its affiliates, or by the healthcare provider. The configuration of the system is made through the administration user application Manage¹.

5.1.3. Intended Users

Target client

Healthcare providers who wish to automatically triage patients to the right level of care.

Intended users

Triage24 has three distinct target groups.

- Medical content developers who are trained healthcare personnel, employed or contracted by a healthcare provider utilizing Triage24. The medical content developers' role is to configure and adopt to the conditions and needs of a specific healthcare provider through population with medical content and business rules.
- **Patients** seeking healthcare treatment for themselves or for a child in their care. Patients are the recipients of the device's intended clinical benefits.
- Healthcare professionals (or practitioners) who are trained healthcare professionals, employed or contracted by a healthcare provider utilizing Triage24. If patients are unable to themselves use Triage24 and digitally input their symptoms, health care personnel can instead enter these symptoms into Triage24 and obtain results based on the medical content with which Triage24 is populated.

5.1.4. Intended operational environment for Triage24

Triage24 is intended to be used by healthcare providers and healthcare systems in countries where the population has access to internet through smartphones or computers.

5.1.5. Clinical Benefits

Triage24 generates clinical benefits by offering resource-efficient triage, by providing patients an automated, accurate and safe triage service, which provides patients with information on with what urgency their symptoms may need a medical assessment and/or information on self-care advice.

The accuracy and safety of Triage24 is intended to be superior or equal to that of manual triage and/or other digital triage platforms.

5.1.6. Performance characteristics

The performance of the device has been evaluated through clinical evaluations that concluded that when Triage24 is populated with medical content, it offers triage that is safer and more accurate than manual triage using the same medical content. The evaluation also concludes that the risks associated with the use of the device are acceptable when weighed against the benefits to the patient in the form of safe and accurate triage.

The performance of Triage24 depends on the configuration of medical content. Changes to the medical content can fundamentally change the result of the patient triage and therefore puts high

¹For the sake of clarity, it is noted that the intended use does not include issuing a diagnosis, but to investigate the medical state of the patient to the extent necessary to provide the mentioned guidance to a suitable level of care. It is further noted that the medical content mentioned in the above points (a) and (b) does not in itself form part of the Triage24 medical device.

demands on persons editing this content. Editors must have basic training in how the tool works and to use this guide to further understand the functionality.

Changes made to the medical content must be validated before it is used in the production environment with real patients.

In addition to the validation built into the tool, each health care organisation is responsible for developing a validation- and test process for the medical content.

5.1.7. Implementing Triage24 in the healthcare organization

The Triage24 software is part of a cloud service offered to patients via the Platform24 portal. This service is controlled and provided solely by Platform24.

The decision to implement Triage24 is not made in relation to an individual patient but instead to the primary care operations of the healthcare provider. The use of the device is further adapted to the operation of the specific provider through the implementation of medical content.

For these reasons, medical staff are not required to verify the hardware or software used to access the service by an individual patient.

5.2. Content Studio+ module

Content Studio+ is the module of Triage24 created for the needs of the medical developer user group. So for administering and populating Triage24 with medical content. Medical developers interact with Triage24 via the Content Studio+ user interface.

5.2.1. Intended use for Content Studio+

Content Studio+'s *intended use* is to configure and adopt the *medical content* needed for Triage24 to function to the conditions and needs of a specific healthcare provider.

5.2.2. Intended users for Content Studio+

Medical content developers configuring the care provider medical content.

Details

<u>Type of user</u> Professional

<u>Age</u> >20 years old

Level of instructions

• User manual

- Level *B1-B2* in the language supported in the product for the relevant market.
- Undergone education and training for Content Studio+.
 To ensure a safe development of medical product, Platform24 provides a recommended development process for the medical content that is described in "Process description for Medical Content development in Content Studio+" (D092). This document is part of the educational material provided to new partners, and outlines the medical content development process recommended by Platform24. Partners are required to use this development process for medical content to safeguard the medical safety of the patients.
 To change existing medical content, or to produce new medical content, this process must be followed to ensure that medical and technical safety is maintained at all times.

5.2.3. Intended operational environment for Content Studio+

Application Manage

Interface Content Studio+

• Home/office environment with connection to internet

· Normal ambient conditions

Frequency of use From several times a day to one time a week

Platform The product is used on a standard PC with the minimum requirements:

• Hardware; dual-core processor, 4 GB RAM

• Software; latest versions of Edge, Safari, Chrome or Firefox

Data bandwidth; 300 kb/s (video) / 50 kb/s (voice)

· IT security; https

5.3. Patient triage module

Patient triage is the module of Triage24 created for the needs of the patient user group. Patients interact with Triage24 via a patient application provided by the healthcare provider.

5.3.1. Intended use for Patient triage

Guide patients to a suitable level of care based on their symptoms and the medical content.

5.3.2. Intended users for Patient triage

The target treatment group includes patients seeking care for common primary care conditions (excluding conditions, e.g. infectious diseases, that are rare within Europe).

Details

<u>Type of user</u> Layman

Age • System default: 0-120 years

 System default: someone over 16 can use the module for a child under the age of 18

Defined by care provider

<u>Level of instructions</u> Level <u>B1-B2</u> in the language supported in the product for the relevant

market

<u>Patient state</u> Certain patient populations should not use the system:

1. Patients with life-threatening symptoms, serious conditions or

2. Patients physically or cognitively unable to use digital technology such as smartphones or computers

3. Patients with cognitive issues that are able to use technology, but unable to use it correctly (including but not limited to dementia

or severe mental retardation)

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IMPORTANT

The device Triage24 does not by itself offer medical advice, possible diagnosis, or treatment recommendations, or inform/drive management of any medical condition.

If populated with medical content containing e.g., medical advice or recommendations on management, the Triage24 device can present such content to patients.

5.3.3. Intended operational environment for Patient triage

Application Patient application

• Home/office environment with connection to internet

· Normal ambient conditions

Frequency of use From once a day to one time per year

Platform The product is used on a standard PC or mobile device with the minimum

requirements:

• Hardware; dual-core processor, 4 GB RAM

• Software; latest versions of Edge, Safari, Chrome or Firefox

• Data bandwidth; 300 kb/s (video) / 50 kb/s (voice)

IT security; https

5.4. Assisted Triage module

Assisted triage is the module of Triage24 created for the needs of the practitioner user group performing assisted triage. This means that the practitioner assists patients in being triaged when they cannot use the patient application themselves.

5.4.1. Intended use for Assisted triage

The intended use of Assisted triage is for healthcare professionals to perform automated triage on behalf of the patient and guide patients to a suitable level of care based on their symptoms and the medical content result.

5.4.2. Intended users for Assisted triage

Healthcare professionals working within a healthcare provider.

Details

<u>Type of user</u> Professional <u>Age</u> >20 years old

Level of instructions
 Licensed practitioner, ie medical doctor, nurse, psychologist

• Level *B1-B2* in the language supported in the product for the relevant market.

User manual

5.4.3. Intended operational environment for Assisted triage

Application Assisted triage in Clinic

Environment
 Home/office environment with connection to internet

Normal ambient conditions

Frequency of use

Several times a day

Platform

The product is used on a standard PC with the minimum requirements:

• Hardware; dual-core processor, 4 GB RAM

• Software; latest versions of Edge, Safari, Chrome or Firefox

Data bandwidth; 300 kb/s (video) / 50 kb/s (voice)

IT security; https

5.5. Contraindications Triage24

5.5.1. Patients

Certain patient populations should not use the system:

- 1. Patients with life-threatening symptoms, serious conditions or trauma
- 2. Patients physically or cognitively unable to use digital technology such as smartphones or computers
- 3. Patients with cognitive issues that are able to use technology, but unable to use it correctly (including but not limited to dementia or severe mental retardation)



IMPORTANT

The device Triage24 does not by itself offer medical advice, possible diagnosis, or treatment recommendations, or inform/drive management of any medical condition.

If populated with medical content containing e.g., medical advice or recommendations on management, the Triage24 device can present such content to patients.

Since the intended use of the device, in its configured form populated with medical logic, is to gradually select suitable recipients of medical information, the use of the device itself entails a narrowing of the user intended to receive the given point of information.

At times, such selection will occur between patient populations that are commonplace to either include or exclude from the intended users of a medical device, such as questions regarding pregnancy which will differentiate between patients based on gender. However, since this selection is inherent to the core functioning of the device, it is deemed more feasible to regard it as part of the mode of operation of the device, rather than as a contra-indication or a limitation of its diagnostic indication.

See also Intended users for Patient triage [16]

5.5.2. Medical content developers

Medical content developers should have undergone the training in use of device offered by Platform24 and have a sufficient professional competence to formulate and enter medical logic into the system. See also Intended users for Content Studio+ [15]

5.5.3. Healthcare professionals

Healthcare practitioners should be a licensed practitioner, i.e., medical doctor, nurse, psychologist etc.

See also Intended users for Assisted triage [17]

5.6. Residual risks

Platform24 has been in production since the summer of 2017 and has been used millions of times using the Triage24 product that is now separated into a medical software product. Based on data from the testing and production environment, as well as feedback collected over time from practitioners, customers and partners, Platform24 considers that the risks from all identified hazardous situations have been assessed.

After mitigations are done there are no risks categorized as high.

For residual risks of the medium level, the product is deemed to be acceptable. In later releases, additional work shall be put into lowering the risks.

Additionally, post-market surveillance and vigilance will continuously validate the risk management work.

5.7. Terms and definitions

B1-B2	B1-B2 in the	Common	European	Framework	k <i>of Reference</i> (CEFF	()
	1.0				6.1	

self-assessment scale. e.g. Independent user of the language.

Customer Success Manag- A CSM (Customer Success)

er (CSM)

A CSM (Customer Success Manager) is the customer's main strategic advisor. The CSM is also the customer's main contact person for any contractual, commercial questions/issues. The CSM is the first point of escalation for any unsolved questions/requests/issues

of escalation for any unsolved questions/requests/issues

intended use () The intended use (medical devices) means the use for which the de-

vice is intended according to the data supplied by the manufacturer on the labelling, in the instructions and/or promotional materials

MADRS-S (MADRS)

The Montgomery–Åsberg Depression Rating Scale (MADRS) is a ten-

item diagnostic questionnaire which psychiatrists use to measure the severity of depressive episodes in patients with mood disorders.

MADRS-S is a nine question self-rating version of the MADRS scale,

often used in clinical practice.

medical content ()

Natural language process-

ing (NLP)

Natural language processing (NLP) is a subfield of linguistics, computer science, and artificial intelligence concerned with the interactions between computers and human language, in particular how to program computers to process and analyze large amounts of nat-

ural language data.

user interface (UI) The user interface (UI) is the point at which human users interact

with a computer, website or application.

6. What is Manage and Content Studio+?

Manage is an application with the specific aim of managing users and configuring patient flows in the patient and healthcare provider apps included in Platform24. In addition to Manage, Platform24 also consists of Clinic (healthcare provider view) and the Patient app (or the Patient apps). Healthcare providers work in Clinic while patients make their digital journeys in the Patients apps.

Manage is the administration UI where healthcare providers can manage settings for Clinic, the Patient app and the medical content used to support the triage bot, as well as user roles and access rights in Manage and Clinic.

The area where users can manage the medical content in Manage is called Content Studio+. This document describes Content Studio+ and how it can be used to edit the medical content.

6.1. Platform24 Environments

There are two different environments in Platform24.

Demo environment

The Patient app and Clinic can be tested at will in the demo environment to learn how the platform works. It is also possible here to test any changes made in Content Studio+ before they are released into production.

· Production environment

All applications (Manage, Clinic and the Patient app) in the production environment are in active mode.



WARNING

With the product in *active mode*, Manage administers Clinic, where healthcare practitioners receive real patients and the Patient app, in which real patients pursue their digital journey. All changes must be reviewed before releasing them into production.



WARNING

Any changes regarding configuration (adaptations, texts, rules, medical content, etc.) are carried out in Manage in production but should be put through a review process before they are activated in production.

6.2. Log in to Manage

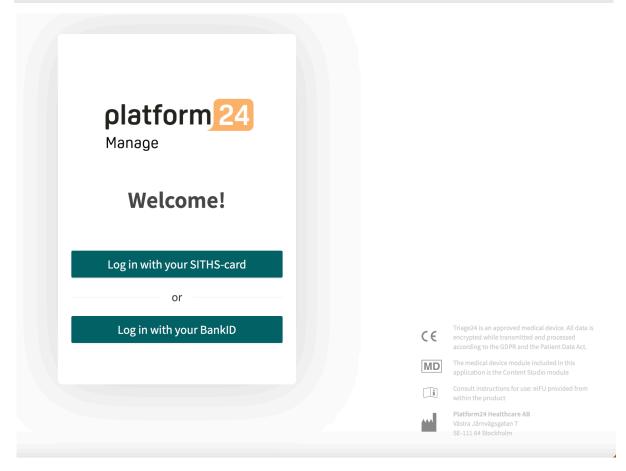
All editing of medical content is carried out in Manage's production environment. Changes are saved in the demo environment before users can actively decide to publish them in the production environment for the Patient app and Clinic. Changes carried out in the production environment are tested in the demo environment.

• **Production environment:** Browse to https://manage.platform24.se/ and log in with the preferred authentication method.



NOTE

Some customers might have a unique environment link. Talk to your superuser at Platform24 if the link does not work.



• Select in the next step which partner to manage and click on **Approve**.

7. Basic Details - Content Studio+

7.1. Working with Content Studio+

Content Studio+ is used to edit the medical content included in the agreement with Platform24 and to create own medical content. Any changes that are made will only be valid for the partner who makes them, which means that any partner using Content Studio+ can entirely decide the medical content used in the triage according to how the partner's operations work.

The tool is powerful and can fundamentally change patient triage, which puts high demands on anyone editing in Content Studio+ to ensure they have basic training in how the tool works and use this guide to further understand the functionality.

The changes made to the medical content using Content Studio+ must be validated before it is used in the production environment with real patients. In addition to the validation steps that are built into the tool, it is up to each partner to develop a validation and test process for the medical changes.

When changes are made to the medical content in Content Studio+, they can and should be checked in the partner's own Patient app and Clinic demo applications.

In addition to a partner's own validation and test processes, a technical review of the changes will be conducted when a partner believes that their own validations and tests are ready for release into production. The assessment is intended to check that any changes that are made will not affect the technical conditions that enable the questionnaires to be used. The technical assessment does NOT include checking the impact any medical changes may have, but only that they are done correctly in a way the system can handle. An example is to check that conditions are written correctly from a technical perspective to ensure steps are not missed.

All changes made after the previous production release will be included in the technical assessment. One recommendation for partners is that they continuously release changes into production as this reduces the extent of the technical assessments.



WARNING

Any changes to the medical content via Content Studio+ have essentially an impact on patient journeys and triage. This puts high demands on everyone editing in Content Studio+ to ensure they have training in how the tool works and use this guide to further understand the functionality.



WARNING

The medical responsibility for content changes lies with the partner carrying out the changes. This means that responsibility to test that any changes made work as intended lies also with the partner.



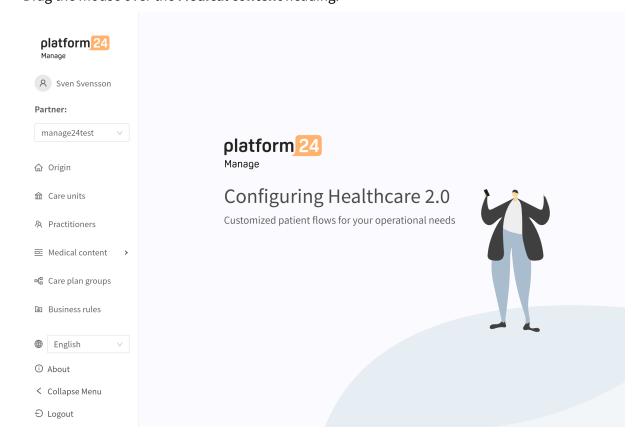
WARNING

Make sure to test all changes made and identify any ensuing changes required to ensure patient-safe flows.

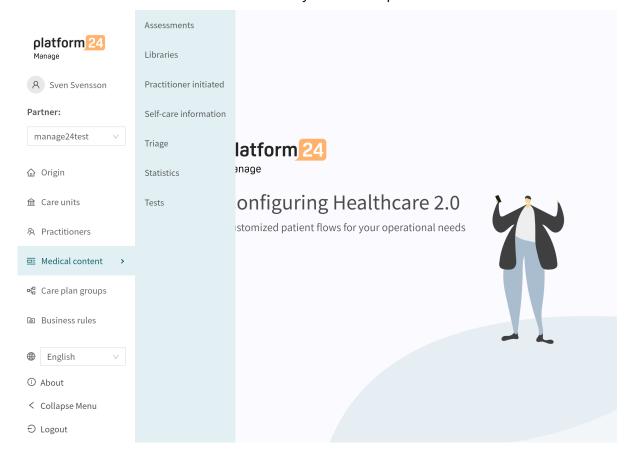
7.2. Access to Content Studio+

A main menu is displayed on the left when you log into Manage.

• Drag the mouse over the **Medical content** heading.



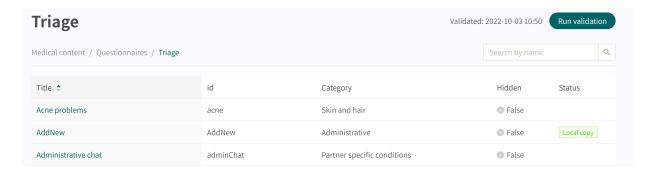
• The various sub-menus under the Medical content heading contain various questionnaires or self-care information. Select which **sub-menu** you want to open.



- **Assessments**: Contains questionnaires that can be used to assess conditions for example mood (*MADRS-S*). These can be sent out on a continual basis to the patient, which means that the healthcare practitioner can see trends based on the answers in the assessment questionnaires.
- **Libraries**: Contain questions that are often used in many of the questionnaires in the medical content. The questions are grouped in different Libraries and can be reused in most other questionnaires.
- Practitioner-initiated: Not used.
- **Self-care information**: Contains self-care information that can be shown to patients after triage. Existing self-care information cannot be edited but new content can be added and edited.
- **Triage**: Contains the questionnaires patients access from the Patient app by entering different search terms in the search engine.
- **Statistics**: This section provides the possibility to see data and statistics on the outcomes of the questionnaires.
- **Tests**: In this section automatic unit tests are created for the triage questionnaires.

7.3. Overview of questionnaires and self-care information

An overview of the questionnaires or self-care information available in each sub-menu is displayed under each sub-menu (**Libraries**, **Self-care information**, **Practitioner-initiated**, **Assessments**, **Triage**).



Title

The column shows the title the questionnaire has been given. This is language-specific and can therefore be available in several languages.



NOTE

This is not available under the **Self-care information** sub-menu.

Id

The ID given to the questionnaire/self-care information. It is designated in English as far as possible because it should be viable to use the ID throughout the system and to also be the key to the questionnaire in other languages.

Category

Specifies in which category the questionnaire is grouped. This is specified when a questionnaire is created.



NOTE

This is not available under the **Self-care information** sub-menu.

Hidden

Specifies if the questionnaire is hidden from patients in the Patient app and hidden for practitioners in Clinic or not. The questionnaire will automatically be created with the value "False", which means that the questionnaire is not hidden from patients and practitioners. This can be set for each questionnaire if you click on them.





NOTE

This is not available under the **Self-care information** sub-menu.

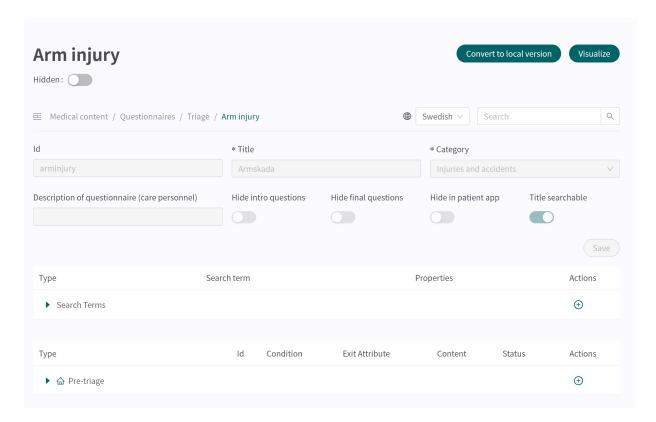
Status

Questionnaires/self-care information can have three values for this field:

Local copy = questionnaire/self-care information only created once for the partner. **Empty** = questionnaire is unchanged compared to Platform24's questionnaire/self-care information.

7.4. Questionnaire Details

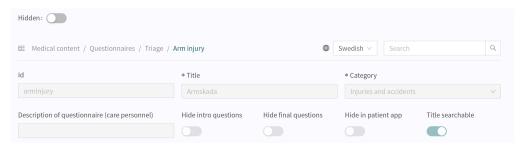
A specific questionnaire can be opened by clicking on it in the overview in the **Triage**, **Assessments**, **Practitioner-initiated** or **Libraries** sub-menus.



The following information is presented in the questionnaire overview.

Metadata

Each questionnaire contains a section called **Metadata** with content that can be seen at the top of the questionnaire. **Metadata** is basic information that is used to set basic setting for the questionnaire. Refer to the Metadata section [67] for more information.



Hidden

Specifies if the questionnaire is hidden from patients in the Patient app and hidden for practitioners in Clinic or not. The questionnaire will automatically be created with the value "False", which means that the questionnaire is visible to patients and practitioners. This can be set for each questionnaire if you click on them.



Visualize



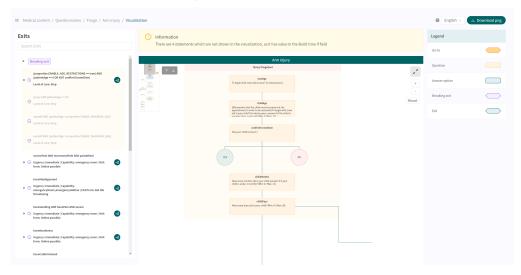
WARNING

Visualizations do not show components with values in Build time if. For this reason, do not only use the visualizations to understand the structure of the questionnaires.

Recommended use together with the basic view for questionnaires to obtain an overall understanding.

It is possible in each questionnaire to visualize what the questionnaire looks like with each of its components (e.g. Questions, Exits, Includes, etc.).

Click the **Visualize** button to open the interactive visualization.



You can click on "**Download png**" to download the file and view it locally. It is also possible to change the language in the content (if the partner has questionnaires in several languages).

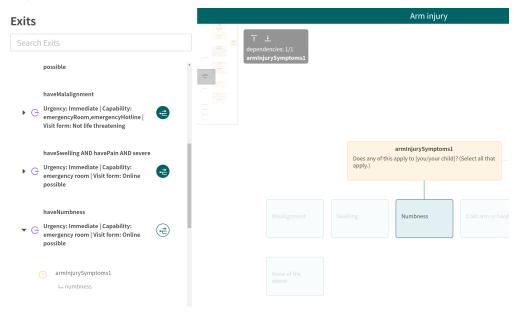


Scrolling allows you to zoom in and out in the visualization. Click and drag to move the window. Click on the expand symbol to maximize and enlarge the visualization in the window.

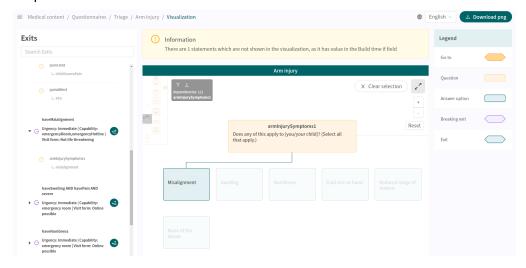


Clicking on a component in the visualization area displays the dependencies and conditions for the specific component. For example, a prior affirmative answer to

a question may be required in order for this specific question to be activated for the patient.



All exits are displayed in the **Exit** list to the left. It is possible to search for content in exits and click on the exits that have a green symbol to their right. An exit can be expanded by clicking on it. By either clicking on the green symbol or on one of the dependencies below, the dependency will be visualized and displayed on the screen. You can click between the dependencies under the exit. This is a way to easily obtain an overview of what conditions are required to activate an exit for the patient.



When a change is made to the questionnaire, the visualization will be updated, making it a good tool for determining changes and to be used as part of the validation before changes are released into production.



NOTE

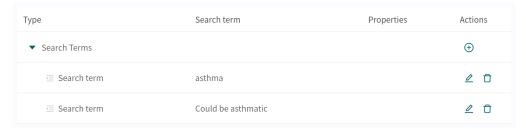
The visualizations do not show components with values in Build time if.

To warn the user, if there are components that are missing in the visualization, an information box is displayed above the visualization. See image below for examples. Therefore, use the original questionnaire view along with the visualizations to obtain a complete picture of the questionnaires and possible patient journeys



Search terms

Section where search terms linked to the questionnaire are compiled. Click on the arrow to expand the section to view all search terms. Refer to the Search terms [69] section for further information.



Status

Questionnaire components can have three values in the status field.

- Local copy = component only created for the partner.
- **Empty** = component has not been changed compared to Platform24's version.



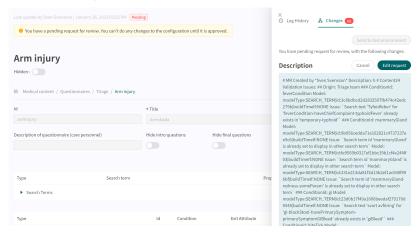
7.5. History, latest changes and testing

Latest update

Specifies which user has made the most recent change for the partner. If a status is not visible here, it is because changes have not been made since the last production release.

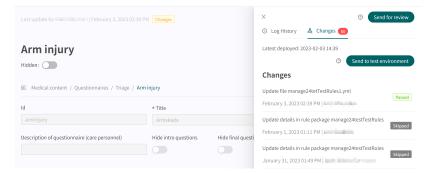


If the partner has an ongoing production release, it will be listed here and no further changes can be made until the production release is complete.

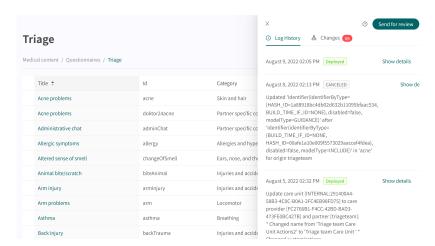


Log history, Changes, Send to test environment and Send for review

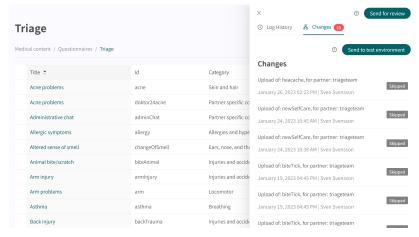
Any changes made for the partner since the last production release will be displayed in the list. What the change was, who made the change, what date and time and whether the change has been saved correctly can be seen under **Changes**. The number of changes is displayed and listed in the red box. The most recent changes are given a status that informs users if the changes have "Passed" or "Failed". It is always the most recent (at the top) change that is valid. If the top one has passed, all the underlying ones have also been saved correctly. If "Failed" is displayed for the three most recent changes, contact the implementation manager or support at Platform24 for further help.



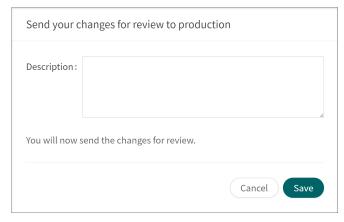
Information about previous production releases is available under the **Log history** tab. More information about what the production release involves (under **Show details**) is available here and status showing whether the production release was successful or not.



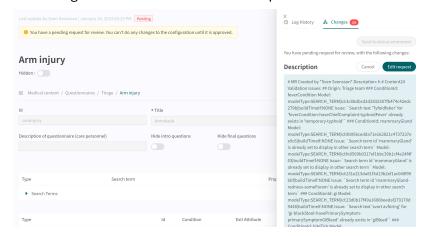
In order for changes in Content Studio+/Manage to be updated in the demo application for the Patient app and Clinic (demo/test environment) one must actively upload the changes. When the button "Send to test environment" is green (within the Change log tab), there are new changes that can be sent out to the demo environment. To upload the changes made in Content Studio+/Manage, click on "Send to test environment". All the changes that were added since the last update to the demo environment will be sent out when clicking on that button. All updates that are listed under a change with "Passed" status have been successfully uploaded to the test environment. If the button "Send to test environment" is gray, there are no new updates to upload to the test environment.



To release the changes made for the partner into production, click on "**Send for review**", describe what changes have been made and the required impact of the changes. Send the request and wait for the technical review to be completed and it has been released into production.



You can cancel the request by clicking **Cancel**, if a review of further changes has to be carried out for the partner.



7.6. Warnings

7.6.1. Overall warnings

A red exclamation mark will appear next to the questionnaire title, if any changes have been made to the questionnaire which interrupt the logic. The exclamation mark will appear in the list showing all the questionnaires and at the specific component where the logic is interrupted. Information about the specific error is shown if you place the mouse pointer over the exclamation mark. This can for example be specifying an incorrect condition that does not exist. The images below show all views where the exclamation mark is shown

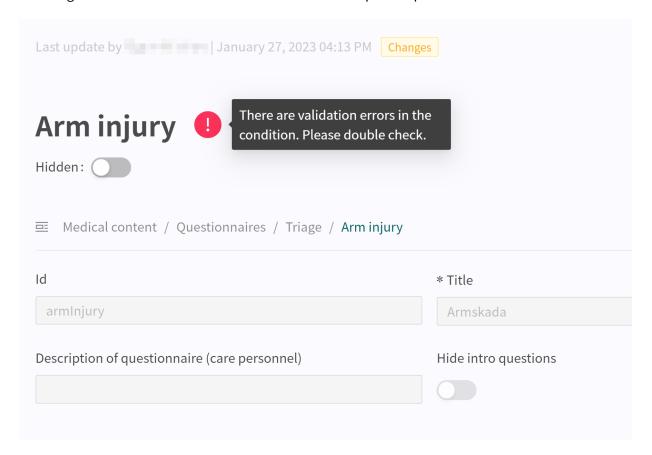
The image below shows the exclamation mark warning in the **Triage** view.



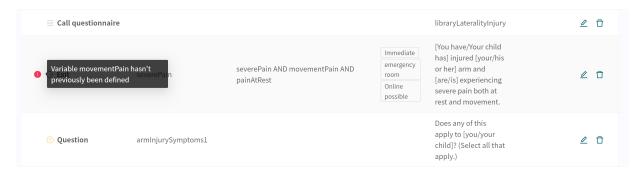
The image below shows the exclamation mark at the questionnaire where the logic is interrupted.



The image below shows the exclamation mark within a specific questionnaire.



The image below shows the exclamation mark at the specific component where the logic is interrupted.



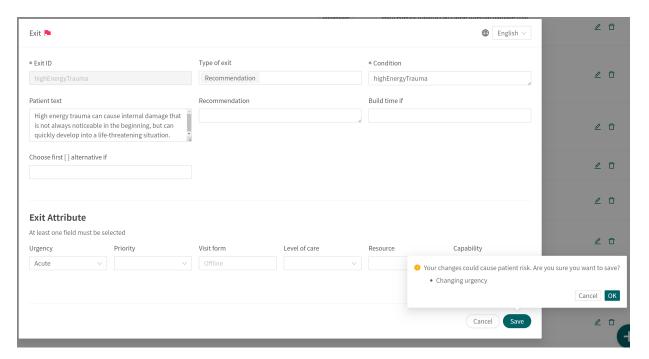
To ensure the questionnaire does not contain any broken logic, always make sure that the questionnaire has no red exclamation marks and conduct thorough tests in the Patient app to rule out

errors and patient risks. To trigger a new validation, press on the button "Run Validation". "Run Validation" is done in the Triage view and starts a validation of all questionnaires.



7.6.2. Warning in the event of changes

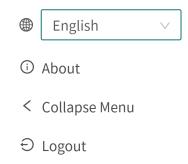
If changes are made to conditions in the components' exits and formulas as well as to urgency levels in exits, a warning message is displayed when saving the change. This is to remind users that any changes have been made may result in a risk for patients. The warning appears each time changes have been made to the conditions and urgency levels in each component.



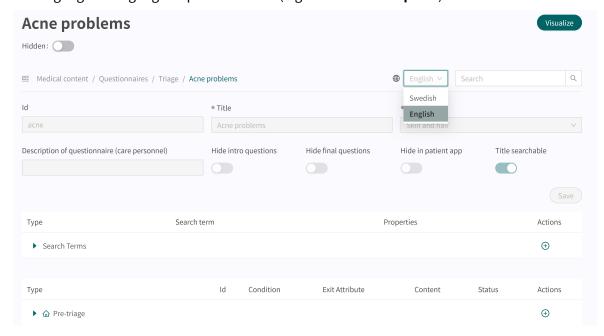
7.7. Languages

Questionnaires can be created and provided to a patient in several different languages. The languages agreed on to use in Platform24 will be displayed and selectable for the various Content Studio+ components.

1. Start by selecting which language to use in Manage in the lower left corner.



 To edit a questionnaire in another language, select the language in the overview to change the language in language-dependent fields (e.g. the field **Description**).

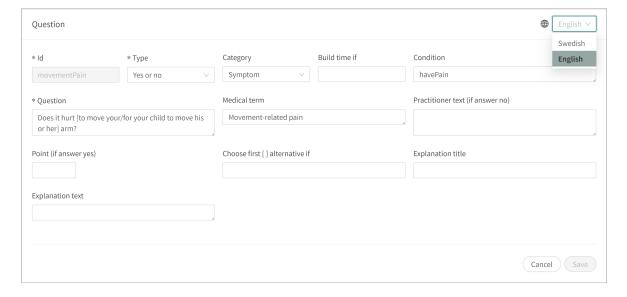


To change the language in a component, for example when editing a Question, click on the field and select the language in which the text should be displayed.



NOTE

The application texts will be displayed in the languages selected in step 1, but the **Question** content will be displayed in the selected language in this step.



7.8. Deleting and undoing component changes

Questionnaires cannot be completely deleted. They can however be deactivated in the Patient app and in Clinic by setting them to "**Hidden**" (refer to the Overview [25] section for more information) or "**Hide in patient app**" (refer to Metadata [26] section for more information).

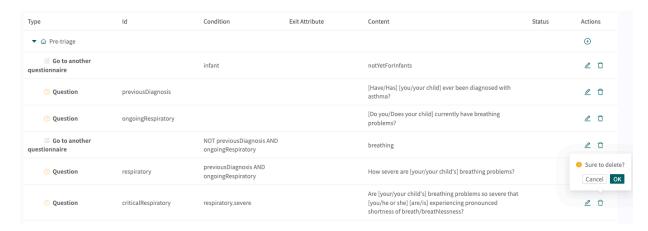
7.8.1. Deleting and recalling components



WARNING

Removing a component can pose a patient-safety risk unless a careful analysis of the effects is performed. Make sure to test any changes made and identify any ensuing changes required to ensure patient-safe flows.

The components (e.g., questions, exits, formulas, etc.) in a questionnaire can be deleted/removed to adapt the questionnaire to a partner's operations. Click on the "**Rubbish bin**" \Box icon next to the "**Pen**" \angle icon to delete a component.



8. Grouping and using questionnaires and selfcare information

8.1. Assessments

Assessments are codified rating scales such as **MADRS-S**, **Dudit** and **Audit**. The assessments always have the category: **Assessments** and are sent from Clinic to the patient.

These questionnaires have no triage exits but contain questions where the answers are rated according to international or national standards. The system totals the user's points, which in turn in its clinical context provides a subset of information about the patient's current wellbeing to healthcare practitioners in Clinic.

It is possible to use assessments that patients can search for in the patient app. These have to be coded as a regular assessment in the **Triage** or **Library** sub-menu. The system enables conditions to be set for the triage exits based on the total points from such an assessment or library.

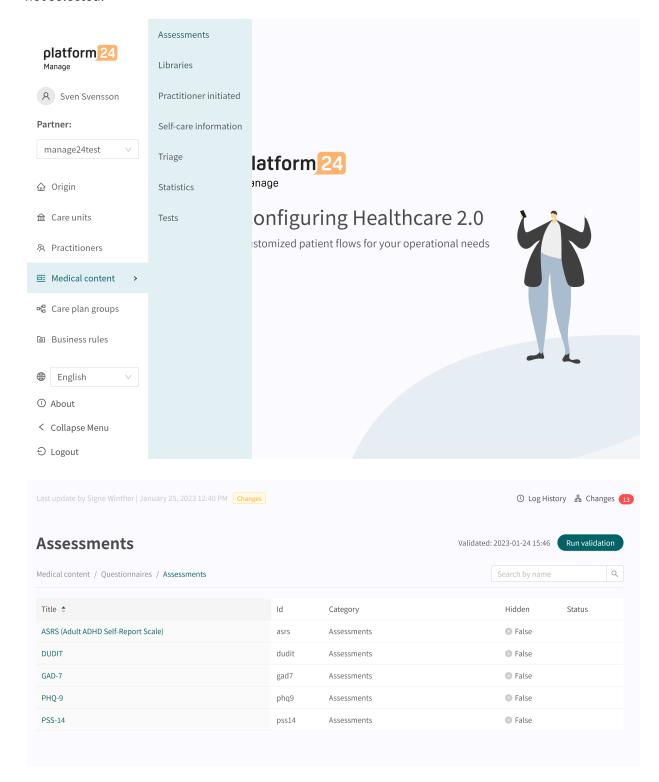


WARNING

Editing and adding assessments can pose a patient safety risk unless a careful analysis of the effects is conducted. Make sure to test any changes made and identify any ensuing changes required to ensure patient-safe flows.

8.1.1. Editing existing questionnaires

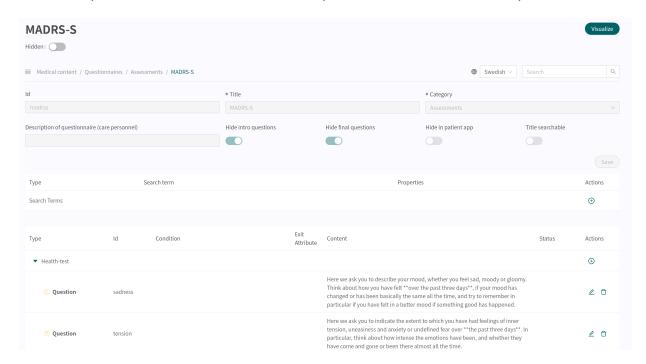
To edit an existing assessment, click on the "Assessment" sub-menu under the "Medical content" menu. Then select the assessment you want to edit. Existing assessments in the status column are not selected.



Click on the questionnaire to be edited (click on the title that is displayed in the "Questionnaire" column).

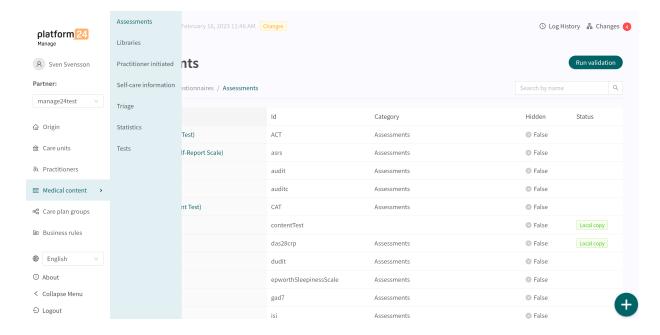
Assessments always have the "**Assessment**" category and always have the "**Health test**" section where the components are available. Click the plus \oplus icon to add a new component to the section

or click the **pen** for a component to edit the existing component. It is not possible to add **Flags**, **Exits** or **Go to another questionnaire** as the assessments are always sent out from Clinic (healthcare practitioner view) and do not then require the above-mentioned components.



8.1.2. Creating new questionnaires

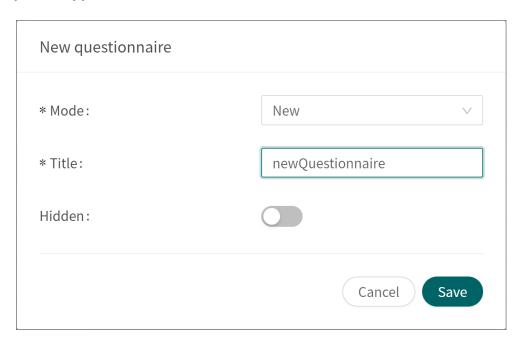
New assessments, which can be sent to patients during an appointment, are created in the "Assessments" section under the "Medical content" menu option.



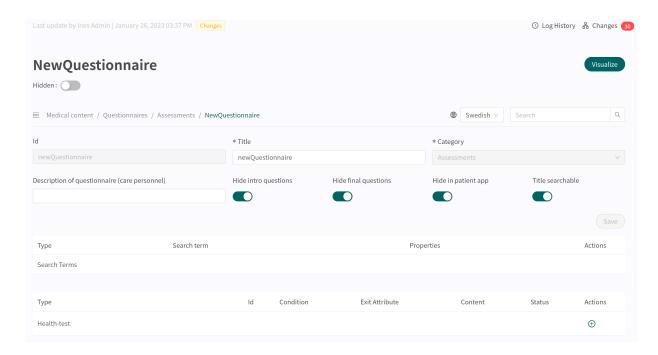
Click the plus sign • in the lower right corner to add a new assessment. In the window that opens, enter a name for the new questionnaire according to valid values:

a-z, A-Z, 0-9 (a-z uppercase and lowercase letters and numbers, no special characters).

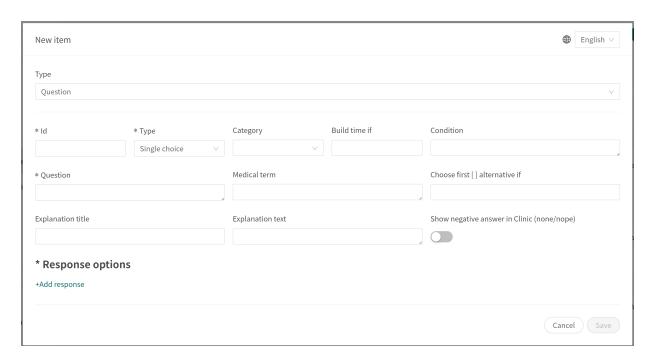
Click on "Save". The questionnaire will automatically be set to hidden in the Patient app (Hide in patient app slider selected).



When the questionnaire has been created, fill in a description of what the questionnaire contains in the **Description** field. Click again on the "**Save**" button. Then click on the plus button \oplus to add statements to the "**Health test**" section.

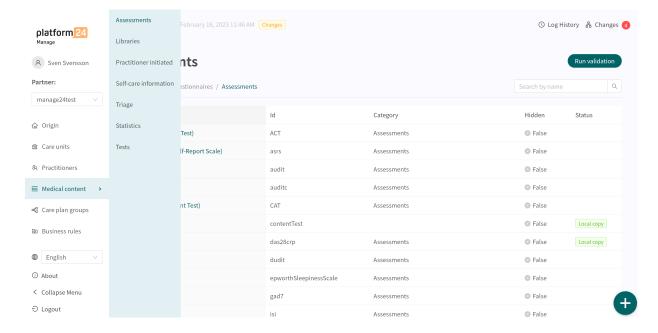


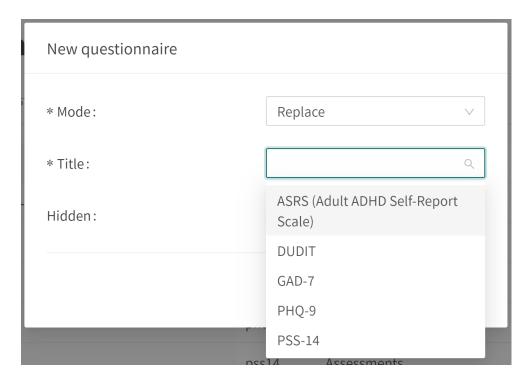
Components are added to the "**Health test**" section by clicking on the plus \oplus sign in the "**Health test**" row and selecting which component type to add in the window that opens. Standard components in **Assessments** are "**Questions**".



8.1.3. Replacing existing questionnaires

To replace an existing questionnaire, go to the questionnaire overview in the **Assessments** section and click on the large plus • sign in the lower right corner.





Select "Replace" in the Mode field and which of the existing questionnaires you want to replace in the Name field. It is only possible to replace existing questionnaires, meaning that any questionnaires without changes will not be displayed in the list. If a questionnaire must be replaced, delete all changes and then carry out the above steps again. When a questionnaire is replaced, it's Id and components are reused and this opens the way to also edit the questionnaire's metadata.

Replaced questionnaires can be edited just like New questionnaires. Refer to the Creating new questionnaires [39].

8.2. Libraries

Libraries contain questionnaire components that are often used and which can be reused in many of the questionnaires in the medical content. These are grouped in different **Libraries**.



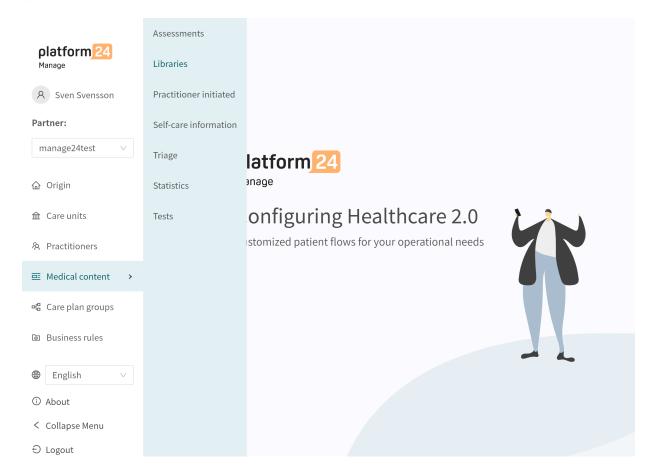
WARNING

If a change is made in a **Library**, the change will affect all questionnaires where the **Library** is used. Consider therefore carefully when editing.

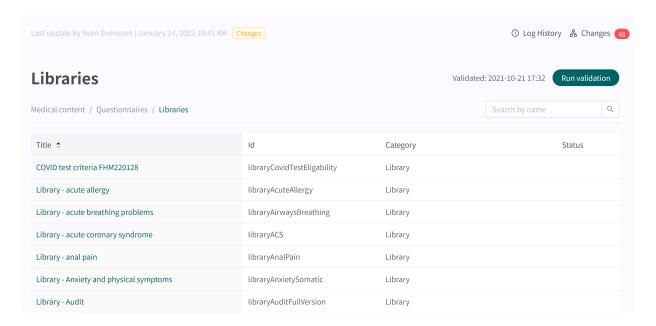
8.2.1. Editing existing libraries

In the existing medical content, there are pre-defined libraries that are used in the medical content questionnaires. It is possible to edit the existing libraries, but be aware that many of the existing libraries and their contents are already used in questionnaires in this solution, and if a library is changed, this will also affect any questionnaires that use that particular library.

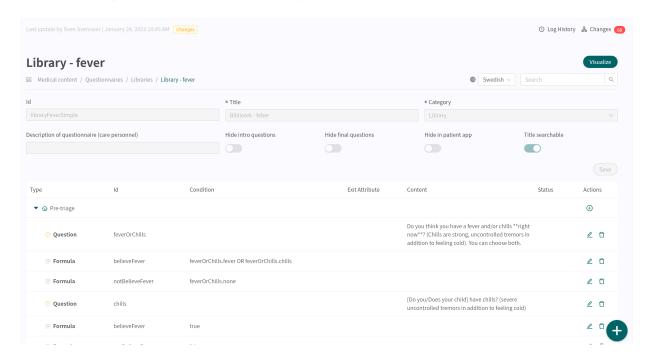
To access **Libraries**, move the cursor over "**Medical content**" and click on the "**Libraries**" menu option.



Search for the libraries to be edited and/or click on the libraries to be edited. Each library is displayed with its title (under the **Title** column), **Id** and **Category**. All libraries have the **Library** category.



In the existing questionnaire, the existing components can be edited by clicking on the **pen** to the right of each component. Click on the plus in the section (in this case **Pre-triage**) to add additional components and select which component to add.



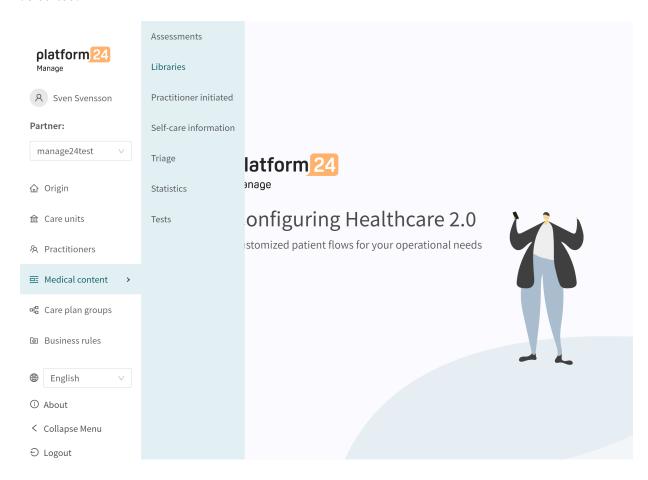
When editing existing libraries, it is not possible to edit a questionnaire's basic information (metadata [67]).

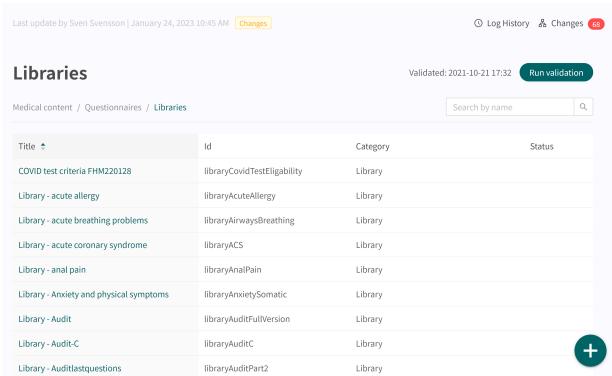
If users wish to edit metadata (for example, the description of the library), refer to the Replacing Existing Libraries [48] section.

8.2.2. Creating new libraries

To create a new library, go to the **Libraries** section under the "**Medical content**" menu and click on the plus • icon in the lower right corner.

Click "Save". The questionnaire will automatically be given the "Library" category and this cannot be edited.



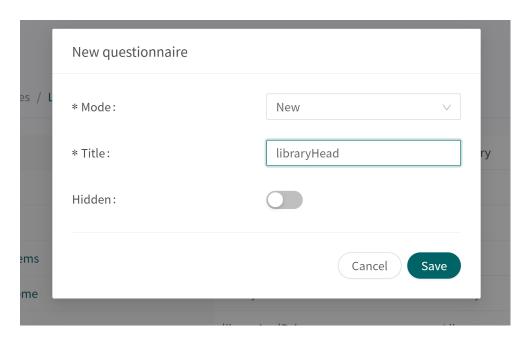


Select "New" and enter an Id (Name) for the new library file.

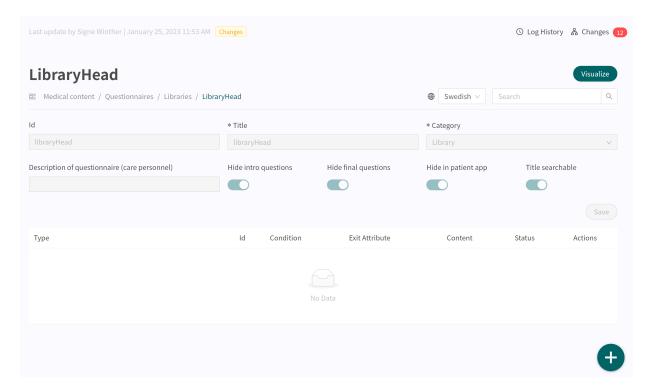
The ID needs to be in English and may contain the following characters (no special characters):

- a-z
- A-Z
- 0-9

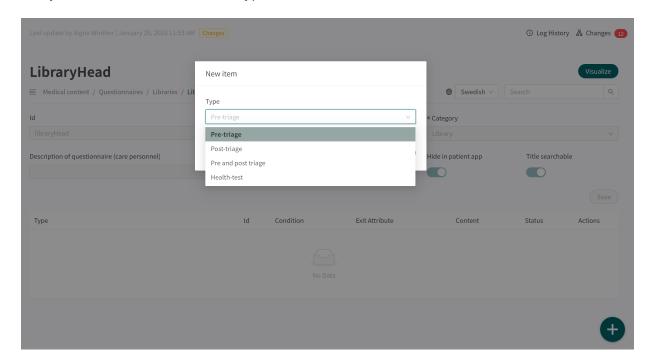
Click "Save". The questionnaire will automatically be given the "Library" category and this cannot be edited.



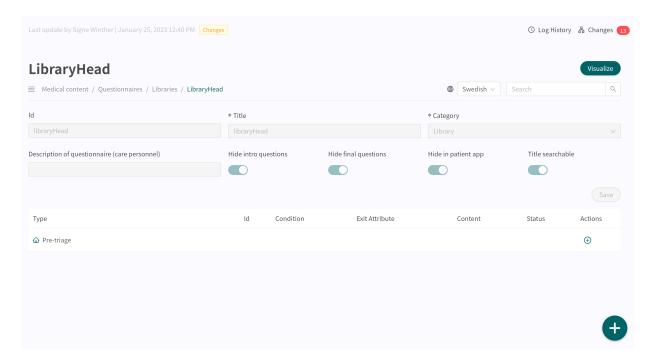
When a new library has been created, it opens directly. **Library metadata** is set automatically to ensure they have the correct settings.



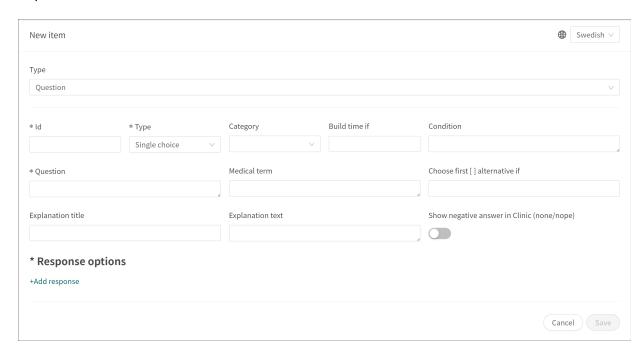
New sections can be added to the library by clicking the plus • button again in the lower right corner, when you are inside the questionnaire. Here you can choose which section you want to add, you can add a section for each type. Select the section and click **Save**.



Components can then be added to the section by clicking the plus \oplus sign in the section in which the component is to be added.



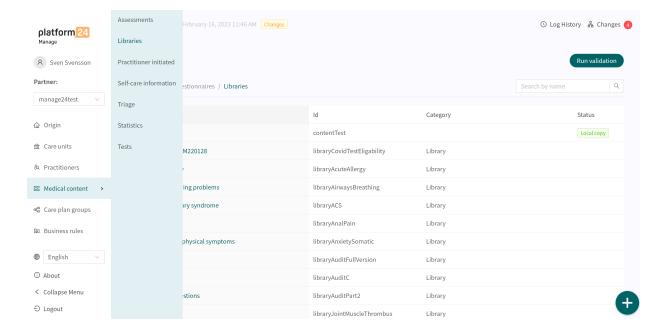
Select in the first **Type** field the type of component to add. Based on component selection, it will be possible to fill in different fields.



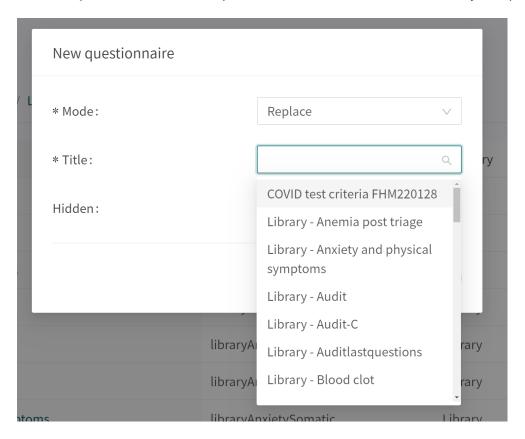
Fields that are mandatory to fill in are marked with an asterisk (*). Click **Save** when the component is complete. The new component will be displayed at the bottom of the selected section. You can drag the new component in the list to sort the order.

8.2.3. Replacing existing libraries

To replace an existing library, go to the **Libraries** section, click on the plus • icon in the lower right corner.



Select "Replace" in the Mode drop-down list, and then select which library to replace.



Replacing a questionnaire means copying the entire questionnaire, reusing the same **Id** and the content is copied, but the questionnaire is given **Local copy** for the partner status, meaning that the partner takes full responsibility for further development of the questionnaire.

8.3. Practitioner-initiated

Not used.

8.4. Self-care information

Consists of self-care information provided to patients after triage, if the patient has been triaged to self-care information with a **wait** urgency level. There is self-care information that is included from Platform24 and which is referred to as **default**. It is possible to add new self-care information or replace existing self-care information if required. Self-care information can be linked to a triage exit if the **wait** exit attribute is selected. Refer to the Exits [79] section.

8.4.1. Existing self-care information

The default self-care information is provided by Platform24.



NOTE

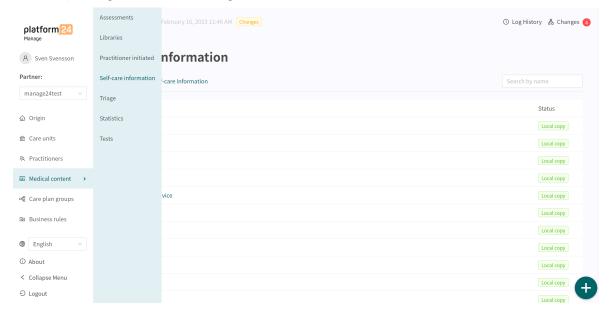
If more languages are to be supported, this option must be added in the setting **Customization** for key **Available Languages** for this origin.

8.4.2. Creating new self-care information

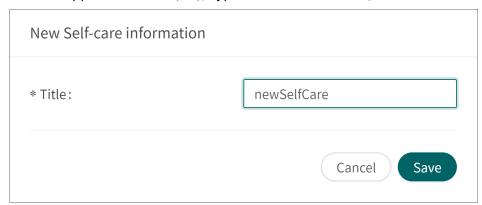
Healthcare practitioners can, if they wish, create their own self-care information in Content Studio+.

To create new self-care information in Content Studio+:

1. Click the plus sign • in the lower right corner of the self-care information's overview window.

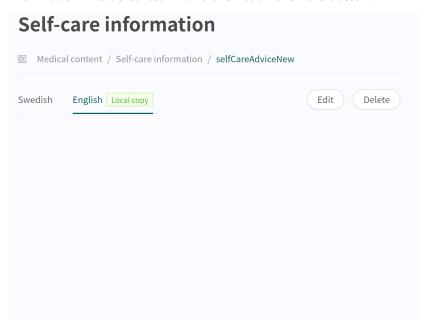


2. Enter a title of the self-care information in the **Title** field. Allowed values: **a-z**, **A-Z**, **-**, _ (lower-case and uppercase letters (a-z), hyphens and underscores).



3. Click Save.

4. When the new self-care information has been created, click on the language the self-care information will be edited in and then click the **Edit** button.



5. Enter the desired self-care information and format the information using the available format options: bold, italic, ordered list, unordered list, links, H2-format (heading styles). It is possible to add a picture to the self-care information by clicking the picture icon. The images available to select from are uploaded by Platform24 upon request. Select **Preview** to preview the self-care information. Use the **Delete** button to delete a specific language.



6. When the desired changes are made, click the **Save** button.

New self-care information is given **Local copy** status (Local copy), which can be seen in the language of the added self-care information and in the self-care information overview.

8.4.3. Editing existing self-care information

Click the **Edit** button to edit existing self-care information. Edited self-care information will get the status **Modified** (Modified) with the exception of self-care advice created by medical content developers that always will have the status **Local copy** (Local copy).

8.5. Triage

The questionnaires available in the **Triage** section are those patients themselves can search for in the patient app.



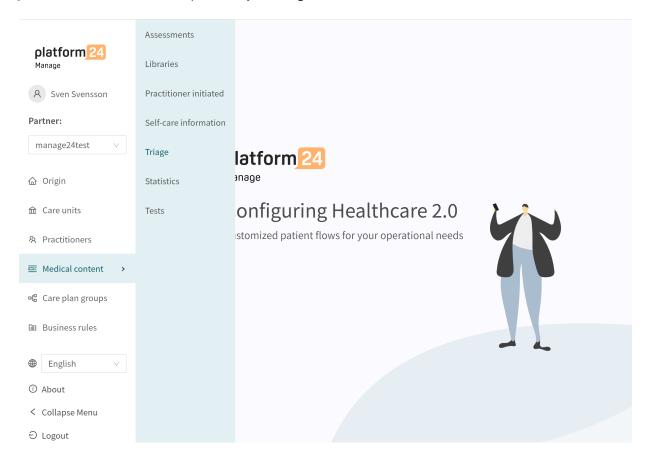
WARNING

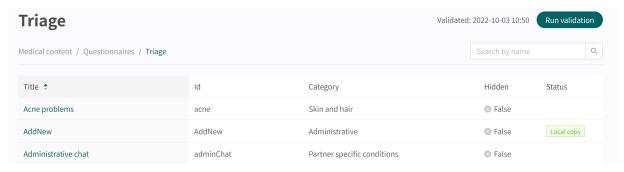
Editing and adding to questionnaires in the **Triage** sub-menu can pose a patient-safety risk if a careful analysis of the effects is not performed. Make sure to test any changes made and identify any ensuing changes required to ensure patient-safe flows.

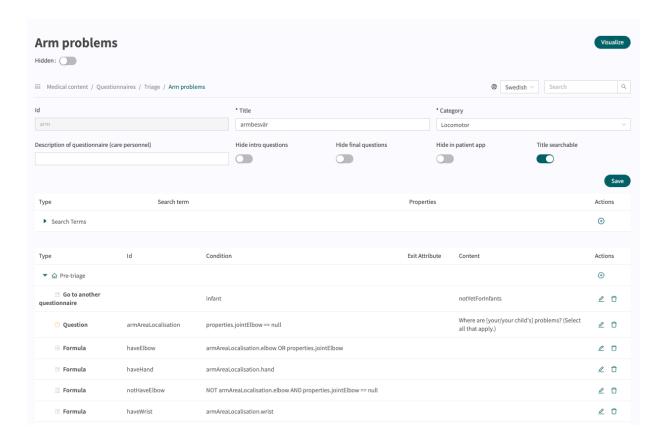
8.5.1. Editing existing questionnaires

The existing questionnaires in this section can be edited with regards pre- and post-triage components. The **metadata** (basic settings) cannot be edited. If one of these fields has to be edited, users can either create a new questionnaire or replace the existing questionnaire.

An existing questionnaire in the **Triage** section can be edited by clicking on the questionnaire you want to edit. In the questionnaire you can select to edit an existing component by clicking on the **pen** \angle , or to add a new component by clicking on the \oplus button in the desired section.

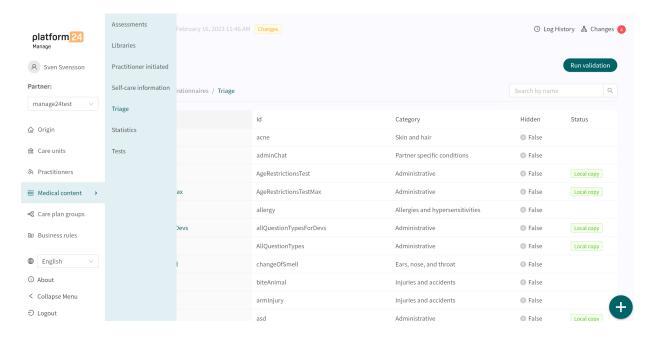






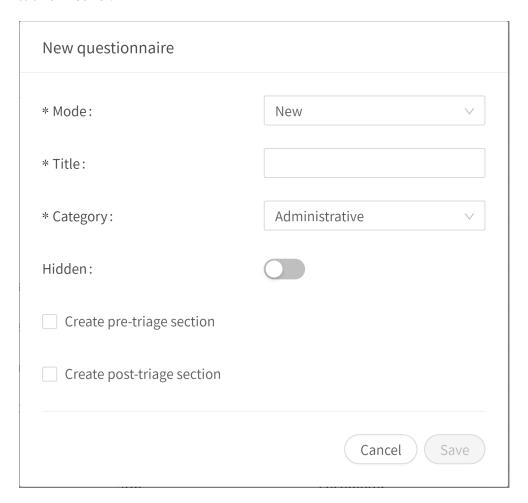
8.5.2. Creating new questionnaires

A new questionnaire is created in the questionnaire overview in the **Triage** section. Click on the large sign in the lower right corner to open the dialog for creating new questionnaires.

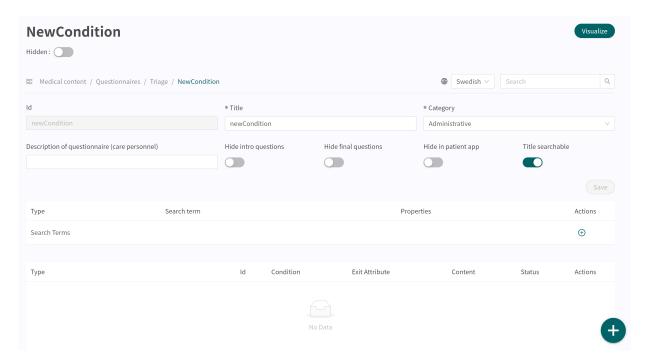


In the window that opens, enter a name **Id** for the new questionnaire using valid characters: **a-z**, **A-Z**, select which category the questionnaire belongs to, specify if the pre-triage and/or post-triage

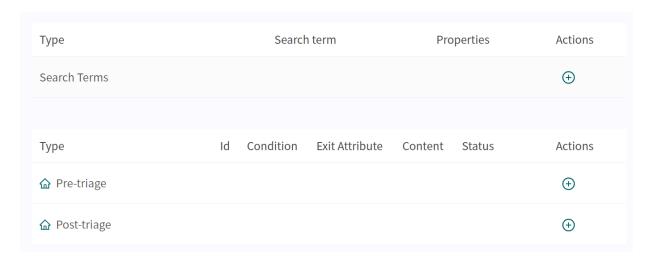
sections in the questionnaire should be created straightaway (can also be added afterwards) and click on "Save".



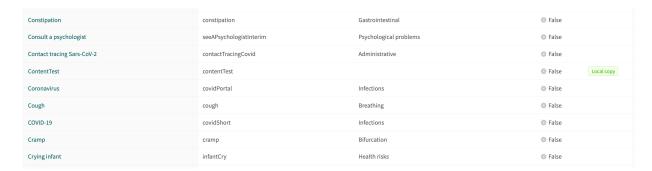
The newly created questionnaire will be visible straightaway on the screen and additional details can be entered or changed, for example a questionnaire **Description**, **Category**, settings if intro and final questions should be asked, etc.



Begin constructing the newly created questionnaire by clicking on the plus \oplus buttons in the different sections.

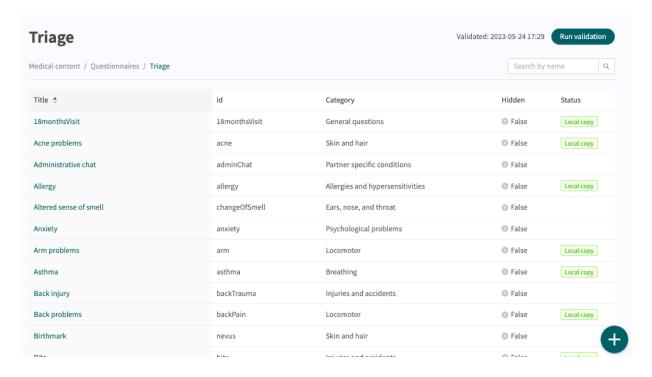


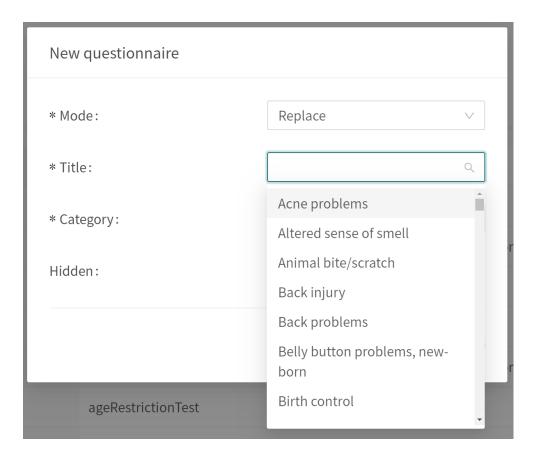
All newly created questionnaires (as well as replaced ones) will have **Local copy** status in the **Medical questionnaires** overview section.



8.5.3. Replacing existing questionnaires

Existing questionnaires can be replaced in the questionnaires overview in the triage section by clicking on the large plus • sign in the lower right corner.



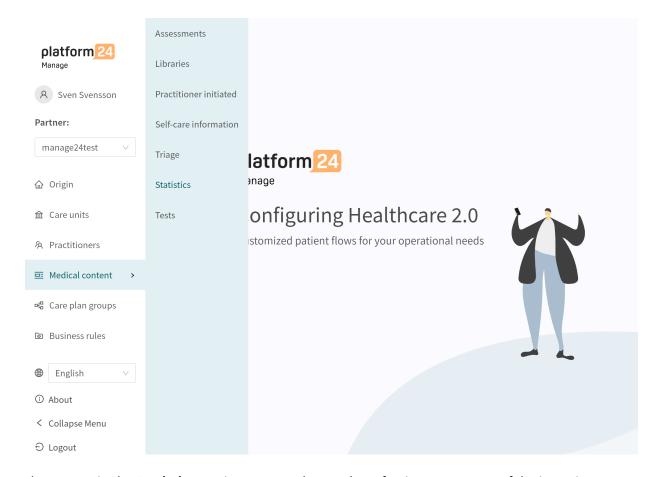


Select "Replace" in the first drop-down list and which of the existing questionnaires you want to replace in the second drop-down list. Select also which category the replaced questionnaire must belong to (can also be changed afterwards). When a questionnaire is replaced, it's Id and components are reused and this opens the way to also edit the questionnaire's metadata.

Replaced questionnaires can be edited just like New questionnaires. Refer to the Creating new questionnaires [53].

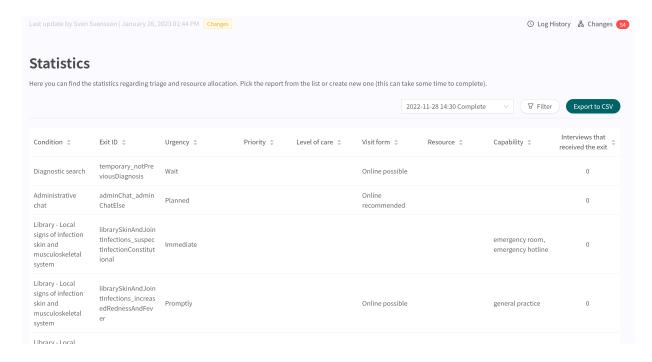
8.6. Statistics

Under the **Statistics** section in Content Studio+, it is possible to create reports containing the existing outcomes in the medical content together with the actual number of interviews that resulted in the outcomes.



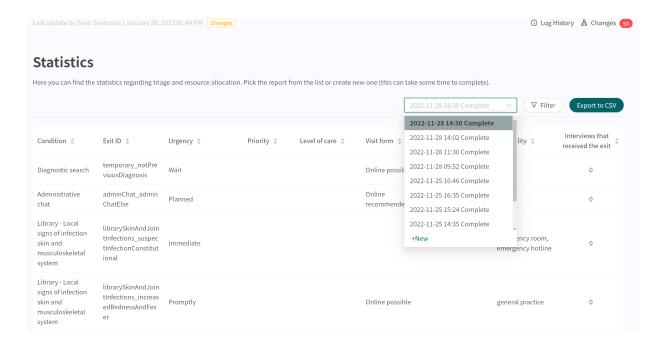
The reports in the **Statistics** section present the number of unique outcomes of the interview based on the medical content. The outcomes are grouped according to Condition, Exit id, Urgency, Priority, Level of care, Visit form, Resource, Capability and number of interviews that received that specific exit. The reports in Statistics count outcomes based on exit IDs that exist in a specific

questionnaire. The reports allow the user to look at concrete combinations of outcome attributes and how often interviews end up on the specific combination.



When you open the **Statistics** tab, the most recent report is displayed at the top by default. However, it is possible to change to an earlier result. It is also possible to filter by exit attribute value to get more specific results and to be able to export the report in CSV format. The filtering function can also be used to manage multiple selections for each filtering option.

To generate a new report, the user needs to open the report drop down and click on the "+New" button.



8.7. Unit tests

Unit tests enables the testing of patient flows in Content Studio+.

Through unit tests, automatic tests are conducted to test different patient flows. When changes are made to the questionnaires, unit testing can be used to discover potential interruptions or errors in the patient flow.

8.7.1. The interview

Interviews for testing purposes are performed via the Patient app in the demo environment.

Each interview has an unique **interview ID**, that can be used to identify it. The **interview ID** can be found from the URL when the final question has been answered in the interview.

The URL of an interview always ends with the element:

...triageinterviewid=... followed by an text string containing letters, numbers and hyphens.

Example:

...triageinterviewid=f303bd76-6e2d-43fc-bf61-2b8dceb04908

The text string after triageinterviewid= is the interview ID.

.platform24.se/chat/triage?triageInterviewId=a8bc7071-e323-41c2-8585-b77613818cd4

Acne problems



Interview types

An interview can be performed as an anonymous patient or as a logged in patient.

Logged in Patient When testing as a logged in patient, this particular patients pa-

rameters, such as gender, age etc, are taken into account in the

unit test logic.

Anonymous (not logged in)

patient

Patient parameters, such as gender, age etc, are inserted into the

system via the interview questions.



NOTE

If a logged in or anonymous patient is to be used for testing depends on what type of patient flows your organisation uses.

All types of patient interviews used in production should be tested.



IMPORTANT

Interviews used for testing purposes should always be saved and documented.

8.7.2. Conducting unit tests

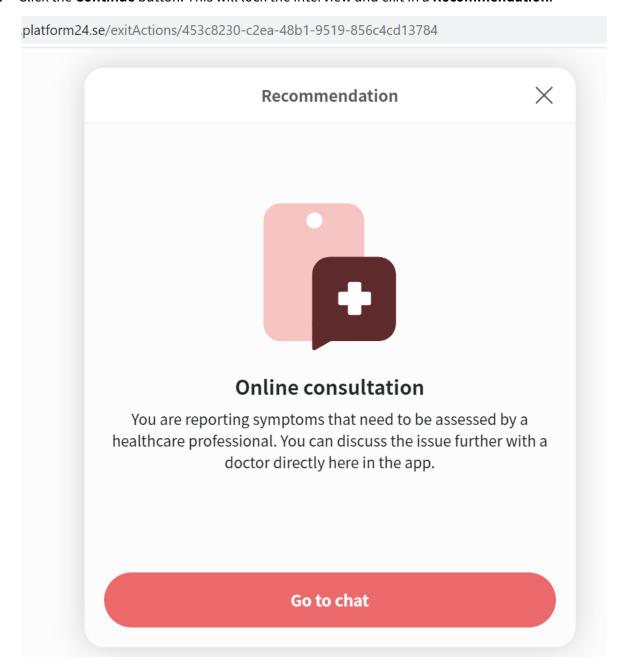
To create a unit test you need the an **interview ID** from an interview performed in the patient flow you intend to test.

Each **interview ID** is unique and connected to a specific interview.

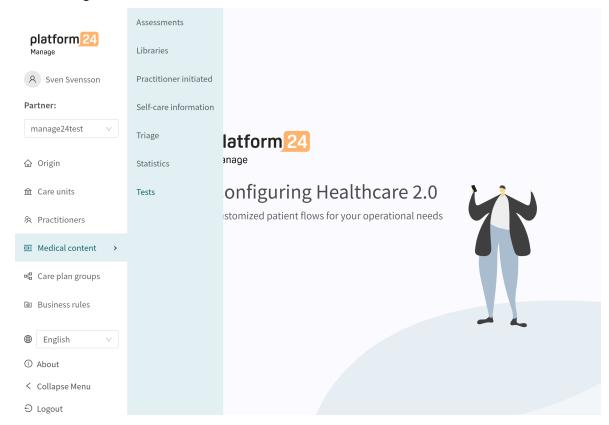
- 1. Go to the demo environment.
- 2. Start the Patient app and step through the patient flow that you wish to test, but without clicking the **Continue** button (clicking the **Continue** button will lock the interview and the **interview ID** will no longer be displayed).
- 3. Before clicking the **Continue** button, copy the **interview ID** from the interview URL.

.platform24.se/chat/triage?triageInterviewId=a8bc7071-e323-41c2-8585-b77613818cd4 Acne problems Х **Previous question** □ Chatbot Thanks for your response! You can now review your answers, and if needed change, before continuing See my answers **Continue**

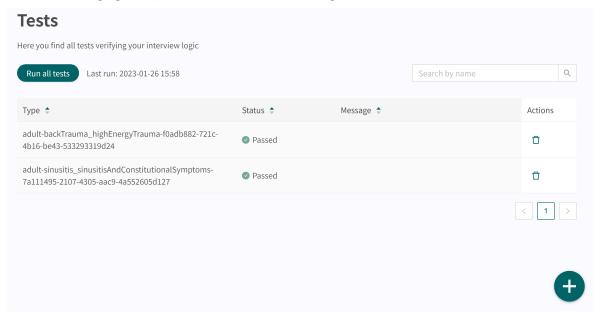
4. Click the **Continue** button. This will lock the interview and exit in a **Recommendation**.



5. Go to Manage and click on the **Tests** section in the **Medical content**.



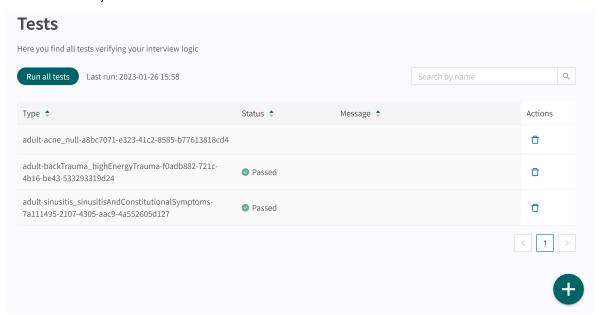
6. Click on the large green plus • button in the lower right corner.



7. Paste the Interview ID into the Interview ID field in the pop-up and click Save test.

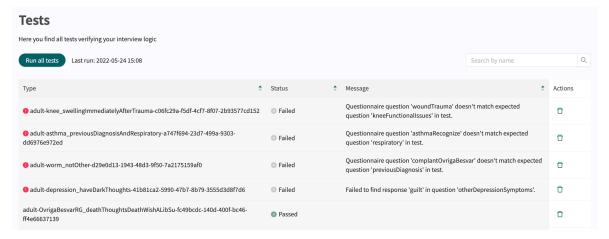


8. To start the test, click on the **Run all tests** button.

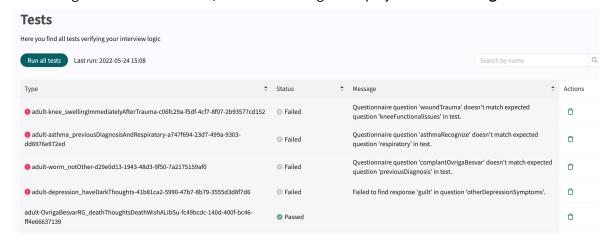


- 9. When the tests are running the **Run all tests** button will be blocked and a text **Validation in progress** will be visible.
- 10. The result of each tested patient flow is presented in the **Status** column with "**Passed**" or "**Failed**".

Tests with the **Failed** result are displayed at the top of the list.



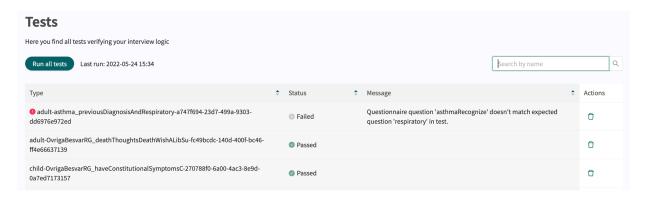
11. If the test gets the result "Failed", the error message is displayed in the Message column.



12. To the right, next to the **Run all tests** button, the date and time of the last test run is presented.

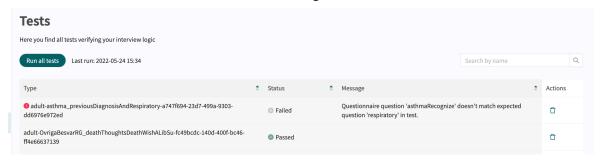
8.7.3. Searching for tests

Searching for a test is done by using the search field in the upper right corner.

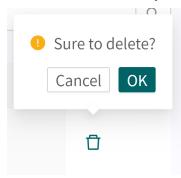


8.7.4. Deleting tests

To delete a test, click the rubbish bin icon to the right of the test.



2. Click OK to confirm that you wish to delete the selected test.



9. Components in Questionnaires

Questionnaires can consist of many different components. Here is a description of what different components do and should be used for and what attributes exist for each component.

9.1. Metadata

Each questionnaire contains a section called **Metadata** with content that can be seen at the top of the questionnaire. **Metadata** is basic information that helps to identify the questionnaire.

9.1.1. Attributes and values in Metadata



NOTE

All attributes are not valid for all types of questionnaires.

Id

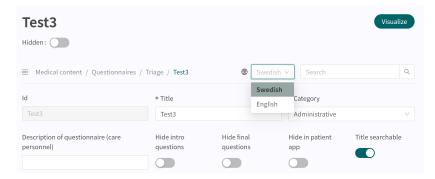
All questionnaires have an Id.

The **Id** needs to be in English and may contain the following characters (no numbers or special characters):

- a-z
- A-Z

Title

Questionnaire free text title. This must be stated for all languages the questionnaires will be displayed in. Switch language for the questionnaire to edit the **Title** field in another language.

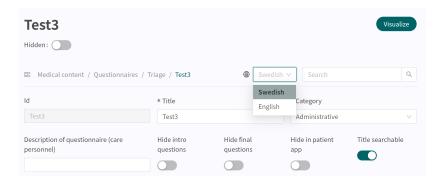


Category

All questionnaires are divided into categories. Certain categories can only be selected within certain sections, for example, only questionnaires in the **Libraries** section can have the **Libraries** category. Categories can only be selected and edited when users create a new or replaces an existing questionnaire in the triage section. In the other sections, system categories are defined based on section.

Description of questionnaire

A free text field where a description of the questionnaire can be added. This description will be visible in Clinic for practitioners. Switch language for the questionnaire to edit the **Description of questionnaire** field in another language.



Hidden A setting that hides the questionnaire. The questionnaire will not

be visible in Clinic or in the Patient app.

Hide intro questions A setting that enables intro questions from the libraryTriage-

Boot library to be asked or not asked. They are always automati-

cally asked in questionnaires.

Hide final questions A setting that enables final questions from the libraryTriage-

Boot library to be asked or not asked. They are always automatically asked in questionnaires once the triage is concluded.

Hide in patient appA setting that prevents any search terms from being loaded into

the questionnaire's *Natural language processing* and as a result the patient cannot see the questionnaire in the Patient app. This applies to the entire system and should be used if questionnaires are never loaded into NLP or displayed to patients, e.g., assess-

ments.

Title searchable A setting that enables questionnaire descriptions to be generated

as search terms in the Patient app.

9.2. Sections

9.2.1. Pre-triage

This section defines the components used before patients are given recommendations after a concluded triage. This section contains logic-driven questions and exits, where most of a questionnaire is defined. Can only be added to the following "**Triage**" and "**Libraries**" questionnaire categories.

9.2.2. Post-triage

This section is used to define components that are used after the patient has been booked/has queued for an appointment. This section normally contains questions that are good for healthcare practitioners to be aware of, but which do not drive any logic further in how patients should be triaged. For example, the issue of asking patients to upload photos is something that currently cannot drive logic but is good for healthcare practitioners to see, even if it is not decisive. This section can be added to all questionnaire categories except "Assessments".

9.2.3. Health tests

Occurs in questionnaires with the questionnaire category "Assessment" and, in certain cases, "Libraries" categories. Questionnaires with the "Assessment" section very rarely have logic-driving components, but are static and straightforward with the most questions. An example is the MADRS-S questionnaire

9.2.4. Pre-Post triage

Only in questionnaires with "**Libraries**" category. Library statements can be defined as "pre-and-post-triage", which means that questionnaires using library questions can be borrowed for either pre- or post-triage.

9.3. Search terms

Search terms describe which search terms patients or healthcare practitioners should use using a free text search in the Patient app or Clinic to access a specific questionnaire. If users select a search term, the questionnaire to which the search term belongs will be displayed. E.g.: **Search term**: "Headache" results in **Questionnaire**: "Headache". Normally, there are already several search terms defined for a questionnaire, but it is possible for users to add more if required.

The search term must always contain:

· Search term

9.3.1. Attributes and values in the Search term component

Search term

Search term displayed in the patient app to provide access to the questionnaire where it is defined. Note that the *NLP* solution in Platform24 calculates probabilities that what the patient has written matches the exact search terms for a questionnaire and, based on this, displays the search results

Properties



NOTE

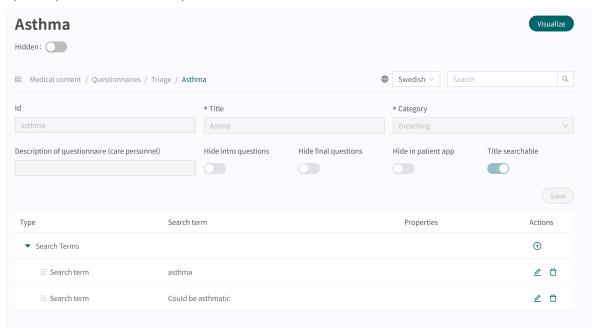
It is currently not possible to edit properties.

Properties added to questionnaires by patients, such as a search term like "pain in leg" should have "leg" as a property to ensure the logic in the questionnaire can then be based on the knowledge that patients have already stated that the pain is in a leg (and not an arm). The properties can be used for conditions (in other components) by typing "properties. properties". Users are allowed to define their own properties for search terms, but then they also are required to add logic for how a property must be used in a questionnaire, for example using conditions.

The "someParam" property is set for some search terms in the medical content. It has been used for many search terms because it is easier to specify logic based on a property used by many search terms and which, as a patient, then has an impact on more inputs in the questionnaire. Can be compared to a generic property used by many search terms.

9.3.2. How to add a search term

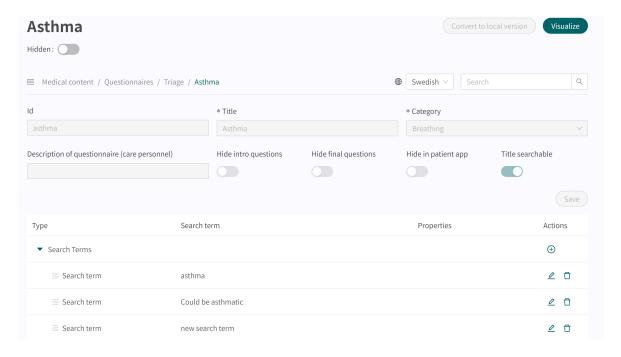
1. Open a questionnaire and expand the "Search Terms" section.



- 2. Click the plus 🕀 sign in the **Actions** column to add new terms to the questionnaire.
- 3. Select which language the search term should be added to and specify the search term in the **Search term** field.



- 4. If desired, it is possible to add properties to the search term in the **Properties** field. Properties can be, for example, that the patient already has indicated the localization of the pain via the search term and should not receive a question about the localization of the pain in the questionnaire.
 - The added properties in a search term can be used in conditions by typing "properties.<Properties". Users are allowed to define their own properties for search terms, but then they also are required to add logic for how a property must be used in a questionnaire, for example using conditions.
- 5. Click **Save**. The search term will now be displayed in the search term list.



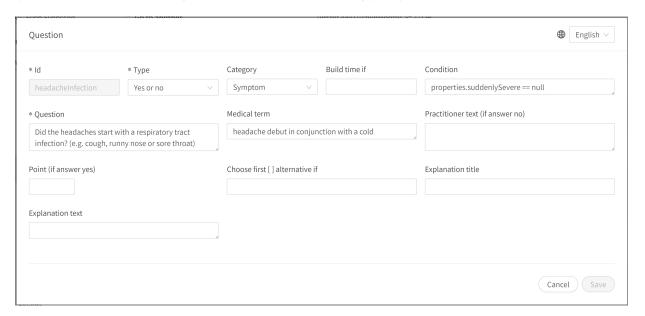
Example:

In the **Headache questionnaire**, there is the search term, "Got a pounding headache" with the properties "severe", "suddenly" and "suddenlySevere".



In the question "headacheInfection" there is a condition (properties.suddenlySevere == null), which means that patients who have sought help using the above search term will not

be asked this question. This is because they have already provided information that makes the question below unnecessary from a medical and usability perspective.



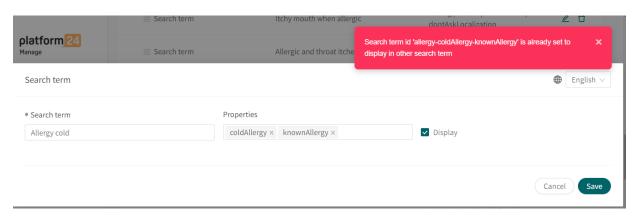
9.3.3. Unique search terms and the Display option

A search term is unique if it has a unique set of properties compared to other search terms. If several search terms share the exact same properties, the search term that is first (at the top) of the list, will be the one displayed in the Patient app in a free text search that matches the search term according to NLP.

To organize and select which search term to display when searching in the Patient app, it is also possible to select the **Display** option to determine which search term to display.



If two or more search terms with the same properties are marked with **Display**, an error message will be shown as it is not possible to use the **Display** option on multiple search terms with the same properties.

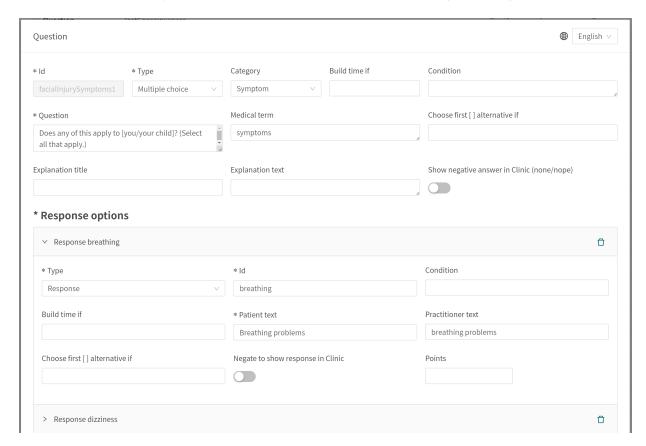


9.4. Questions

The core functionality of the triage is to ask patient some questions. In this section, more detailed information about how questions are created is given.

Questions must always contain:

- ID
- Question type
- Category (if the question is to be included in the medical history summary in Clinic)
- Question
- **Response** (for Single choice and Multiple choice question type)
- Medical term (if the question is to be included in the medical history summary in Clinic)



9.4.1. Attributes and values in Questions

ID

All questions have an ID.

The **ID** needs to be in English and may contain the following characters (no special characters):

- a-z
- A-Z
- 0-9

Question type

Different types of questions to ask can be selected.

The following question types are available:

- **Multiple choice** must contain at least one response option and several answers can be selected by the patient
- **Single choice** must contain at least one response option and one answer can be selected by the patient
- Yes/No the system auto-generates the Yes and No response options
- Yes/No/Maybe the system auto-generates the Yes, No and Maybe response options
- Number a minimum and maximum value can be specified to indicate within which range the patient can answer the question
- **File** used when the patient is asked to upload an image or a pdf file. Supported file formats are jpg, png, jpeg and pdf. The question can be made optional using the "**skippable**" field.
- Medication Prescription renewal uses this question type.
- **Date** displays a calendar view to the patient in question. The question can be made optional using the "**skippable**" field.
- **Free text** the patient can answer using free text. The question can be made optional using the "**skippable**" field.



NOTE

The triage bot doesn't use the content of the **Free text** field to calculate its results. Instead the free text reply is used to give the practitioner additional context.

 Range – provides the patient with a slider in the patient app to interact with when providing an answer. Min and Max values, Step and Unit headings are stated in the question. Step indicate how many decimals are allowed in the answer, i.e., how detailed the answer can be.



Category

Category can be specified for questions. The category specifies how and under which category the question should be summarized in the medical history summary in Clinic. There is a table and instructions (refer to the smartText User Manual) which specify how categories for each question type should be specified.

Refer to general **Build time if** in the Frequently occurring attrib-**Build time if**

utes section.

Condition

Conditions for when a component will be activated for the patient. For example, a response to a question is required for the next question to be asked.

If the condition is to validate that a patient has answered a certain answer, the following syntax is specified:

```
<questionId>.<responsId>
```

If the condition is to validate that a patient answered **Yes** (yes/no question) the following is used:

```
<questionId>
```

If the condition is to validate that the patient answered **No** (yes/no question) the following is used:

```
NOT <questionId>
```

If the condition is based on **answer points**, the following is used:

```
<questionId>.points
```

If the question has to be answered but the answer to the question does not affect the logic but only THAT the question is answered:

```
vars.<questionId>
vars.<questionId>.<responsId>
```

Conditions can be based on dates. A date can come from three sources:

- Properties (properties.creationDate, properties.startedDate, healthDataValue.date)
- Answers to date questions, using the questionId of the date question.
- Static dates (using the syntax date (YYYY-MM-DD).

Dates should have format YYYY-MM-DD.

To get days/months/years:

```
day(someDate)
month(someDate)
year(someDate)
```

To get the amount of days/weeks/months/years between to dates:

```
days(someDate, someOtherDate)
weeks(someDate, someOtherDate)
months(someDate, someOtherDate)
years(someDate, someOtherDate)
```

It is also possible to write conditions based on:

systemBirthDate (the birth date of the patient)

systemAge (the age of the patient)

systemGender (the gender of the patient)

Conditions can contain several validations and answers to previous questions or questionnaires where the following can be used to bind the conditions together and check the value:

Binding conditions:

AND = and

OR = or

What has to be fulfilled:

"!=" = not equal to

"==" = equal to

If no value can exist:

null = no value



NOTE

The Free Text, Medication and File question types cannot be used in conditions.

Question

The text that the patient sees in the patient app. The following [... /...] syntax can be used here to direct the question to the correct person seeking medical care which is [You /your child] by default.

This [... /... /... /...] syntax can also be used to direct the question based on answers to previous questions and properties. Enter the conditions in the "Choose first [] alternative if" to specify which of the options should be used.

Choose first [] alternative if

If a logic other than default [You/Your child] has to be used, other conditions can be used to control whether the first or second option in the syntax should be used.

For example, if the question:

""[Have the problems arisen/Did the problems arise] in connection with exposure to the cold?""

is displayed in the "Question" field, the parameter ongoing has to be specified in the "Choose first [] alternative if" field, where "ongoingAllergy" is a parameter from a search term that accompanies the patient in their patient journey if they sought help e.g. for "Ongoing allergic reaction" If ongoingAllergy exists, the first option in "[]" will be used, and if ongoing is not specified for the patient, the second option will be displayed in the question.



Medical term

The text that will be used in the medical history summary of the interview and displayed in Clinic. Refer to the smartText User Manual for more information.

Points (if answer is yes)

Points that can be set for Yes/No question types. The points are generated if a patient answers Yes to a question and this can be used in the questionnaire to calculate a total score or control other flows in the questionnaire.

Points (for response options)

For **Single choice** and **Multiple choice** question types, one or more response options must be added and points can be set for each answer option, which are then generated if the patient answered exactly with that answer in the interview.

Information

Information text that is displayed under a question if the questionnaire is sent from Clinic.

Explanation title

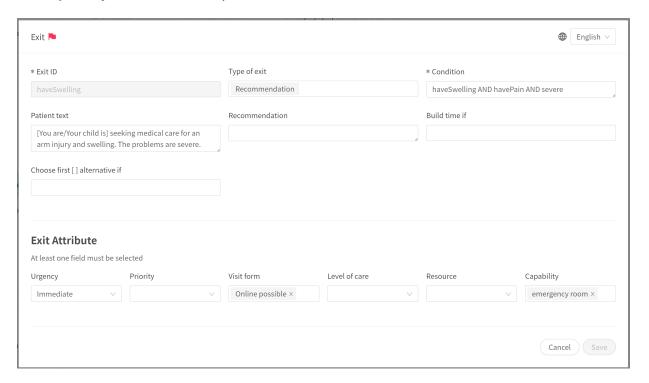
Information title that is displayed under a question if patients themselves search for the questionnaire using the Patient app. This text is clickable and leads to **Explanation text** (see below).

Explanation text

Information text that is displayed under a question if patients themselves search for the questionnaire using the Patient app. Displayed if a patient has clicked on the title (**Explanation title**).

9.5. Exits

Exits are used to define triage rules, and therefore **Urgency**, **Visit form**, **Level of care**, **Resource** and **Capability** recommended to patients based on interview answers.



Exits must always contain values for the following attributes:

- Condition
- Exit ID
- At least one of the following Exit Attributes:
 - Urgency
 - · Visit form
 - · Level of care
 - Resource
 - Capability

9.5.1. Attributes and values in Exits

Exit ID

All exits are assigned an **ID**.

The **ID** needs to be in English and may contain the following characters (no special characters):

- a-z
- A-Z
- 0-9

Condition

Conditions for when an exit is activated for a patient. For example, if a specific answer to a question is to activate the exit. If the condition is to validate that a patient has answered a certain answer, the following syntax is specified:

```
<questionId>.<responsId>
```

If the condition is to validate that a patient answered **Yes** (yes/no question) the following is used:

```
<questionId>
```

If the condition is to validate that the patient answered **No** (yes/no question) the following is used:

```
NOT <questionId>
```

If the condition is based on **answer points**, the following is used:

```
<questionId>.points
```

If the question has to be answered but the answer to the question does not affect the logic but only THAT the question is answered:

```
vars.<questionId>
vars.<questionId>.<responsId>
```

Conditions can be based on dates. A date can come from three sources:

- Properties (properties.creationDate, properties.startedDate, healthDataValue.date)
- Answers to date questions, using the questionId of the date question.
- Static dates (using the syntax date (YYYY-MM-DD).

Dates should have format YYYY-MM-DD.

To get days/months/years:

```
day(someDate)
month(someDate)
year(someDate)
```

To get the amount of days/weeks/months/years between to dates:

```
days(someDate, someOtherDate)
weeks(someDate, someOtherDate)
months(someDate, someOtherDate)
years(someDate, someOtherDate)
```

It is also possible to write conditions based on:

systemBirthDate (the birth date of the patient)

systemAge (the age of the patient)

systemGender (the gender of the patient)

Conditions can contain several validations and answers to previous questions or questionnaires where the following can be used to bind the conditions together and check the value:

Binding conditions:

AND = and

OR = or

What has to be fulfilled:

"! = " = not equal to

"==" = equal to

If no value can exist:

null = no value

It is important to have spaces between the first value, the minus sign and the next value to write a formula with subtraction (–). If this is not done, the formula is interpreted as a name instead of an equation.

• **OK**: 23 - someVariable

• Not OK: 23-someVariable



NOTE

The Free Text, Medication and File question types cannot be used in conditions.

Type of exit

Here the following types can be selected (numerous types can be selected)

- Service request when a service request has to be created for a patient. An analysis is selected in "Analyses" field.
- Recommendation when a patient should receive a recommendation about the next step, for instance booking an appointment.

If both Service request and Recommendation are selected, patients will receive the recommendation (for example, "Book an appointment") and a service request with listed tests.

The text entered here will be displayed as the final chat bubble in the triage. This text often confirms what details the patient has provided.

Patient text

Recommendation

Build time if

A specific recommendation text based on a specific exit given to the patients in the recommendation page. If urgency level "Wait" is selected under the "Recommendation" exit type, this text is not displayed on the recommendation page but only when a patient clicks forward to read the self-care information.

Build time if can be set for the following components in questionnaires and is used to decide if components should be included or not, based on formulas, properties and parameters. Refer to the Frequently occurring attributes [108] section for a longer description of **Build time if**:

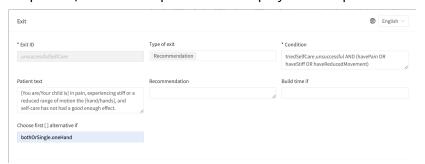
- Include
- Exits
- Answer (in questions)
- Formulas
- Ouestions
- · Go to another questionnaire
- · Call questionnaire

Choose first [] alternative if

If a logic other than default [You/Your child] has to be used, other conditions can be used to control whether the first or second option in the syntax should be used.

For example:

For the Patient text "[You are/Your child is] in pain, experiencing stiff or a reduced range of motion in the [hand/hands] and self-care has not had a good enough effect.", the parameter bothOrSingle.oneHand has to be specified in the Choose first [] alternative if: field, where bothOrSingle.oneHand is a parameter from a previous question that accompanies the patient in their patient journey. If bothOrSingle.oneHand exists, the first option in "[]" will be used, and if ongoing is not specified for the patient, the second option will be displayed to the patient.



Analyses

The "Analyses" field can be filled in if the Service request type is selected under Type of exit. This is a drop-down list with selectable analyses for which a Service request can be sent. Select one or more.

Exit attributes

The **Exit attributes** section can be displayed if the **Recommendation type** is selected under **Type of exit**. Attributes that will be generated if the patient ends up in this exit are shown in this section.

Urgency

- Immediate
- Promptly
- Acute
- Planned
- Wait

Visit form

- Online recommended if patient will receive an online recommendation
- Online possible if patient is offered choice to go online as a secondary recommendation
- If value is not selected here, the patient is recommended offline care

Level of care

- Stop
- Online
- Hotline
- · Primary care
- Specialist care
- Emergency
- Previous clinic
- Self-care

Resource

Partners can choose to add their own resources by contacting their implementation manager (PSM) at Platform24. The added resources will have a green asterisk next to their name to indicate that they are partner-specific.

These are the resources that come with and can be used in the system:

- Occupational therapist
- Paediatrician
- Midwife
- · Biomedical analyst
- Dermatologist
- Dietician
- Pharmacist
- Physiotherapist
- Health scientist
- Counsellor
- · Speech therapist
- Doctor

- · Medical administrator
- Optician
- Orthopaedist
- · Personal trainer
- Psychiatrist
- Psychologist
- Rehab Coordinator
- Nurse
- Dentist
- Therapist
- · Assistant nurse
- Care Coordinator
- Ophthalmologist

Capability

Partners can choose to add their own capabilities by contacting their implementation manager (PSM) at Platform24. The added capabilities will have a green asterisk next to their name to indicate that they are partner-specific.

These are the capabilities that come with and can be used in the system:

- addiction
- antenatal
- child health center
- dental
- emergency hotline
- emergency room
- · general practice
- guidance hotline
- gynecology
- · home care
- infection
- · maternity
- obstetrics
- ophthalmology
- optometry
- · poisoning
- personal training
- physiotherapy
- psychiatry
- · psychiatric hotline
- psychology

Self-care advice

youth

If the urgency level "Wait" is selected, an Selfcare advice field is displayed under the exit attributes. Self-care information that exists and has been created in the solution can be selected in the drop-down list. This is then the self-care advice patients will receive if they meet the condition for this exit.



9.5.2. Exit care advice



NOTE

This feature is optional and only available for partners who have activated it.

Contact the your *super user* or *customer success manager* for further information.

To give further information to healthcare professionals about a specific exit, the free text field **Exit Care Advice** is used. The exit care advice is shown to practitioners in the Clinic patient view of the triage results. The advice does not affect the triage logic or the exit.

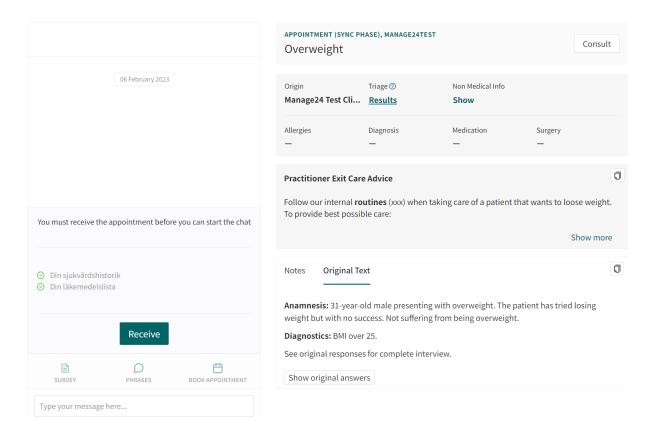
The exit care advice is a free-text field on the exit statement in the medical content, and intends to guide patients to the right level of care by giving the practitioner additional information based on the exit level. The exit care advice is shown for practitioners in Clinic, if the patient exited on an exit with a defined exit care advice.

Example of exit care advice: "The patient is suitable for an appointment with an orthopedist with a previous MR examination."



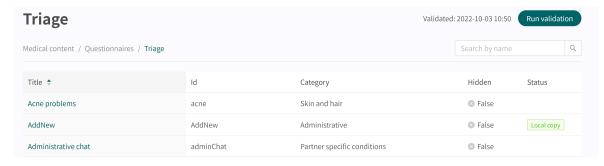
NOTE

Exit care advice must NOT be used to diagnose or to recommend a specific drug for one or more patients.

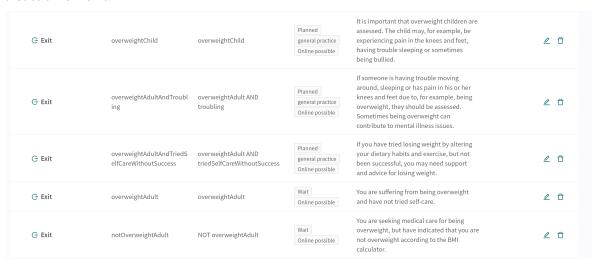


How to create an exit care advice

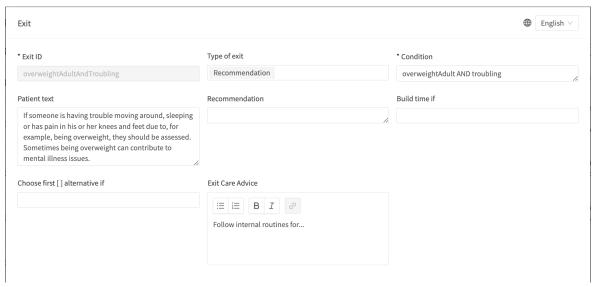
1. Select the questionnaire where the exit is defined or is going to be created by clicking the questionnaire title.



Select the Exit where you wish to add the exit care advice by clicking the title. You can also create a new exit.



3. Write the advice in the free text field **Exit Care Advice**. It is possible to format the exit care advice text by using the toolbox in the text field.

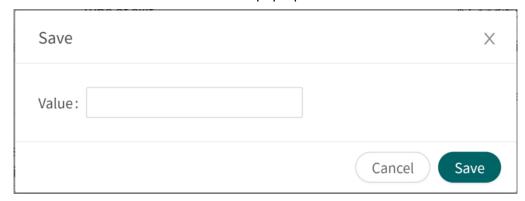


- 4. It is possible to add a link to the exit care advice.
 - a. Highlight the part of the text you want to connect the link to, and click on the link icon.

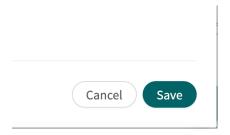
Exit Care Advice



b. Paste the link into the **Value** field in the pop-up and click on "**Save**".



5. Finish adding the advice by clicking the **Save** button.



9.5.3. Breaking exits

If urgency level "Immediate" is set for a "Recommendation" exit type, for example in a questionnaire for an ongoing chest pain, the exit will break the process. This means that if a user meets the **Exit condition**, the interview is immediately cancelled and the user is taken to the recommendation page straightaway, without having to answer the remaining questions in the questionnaire.

The questionnaire is cancelled even if a "**Stop**" level of care is set for an Exit.

9.5.4. Default exits

Default exits are exits that are unconditional. If conditions are not specified for an **Exit**, any patient journeys not identified by the other previous Exits in triage will end up in this **Exit**. It is only possible to have one exit for each questionnaire that is unconditional. These exits are used as a backup to ensure patients always receive a recommendation.

9.6. Formulas

A formula is a complex expression of normally several, longer expressions (e.g., answers to questions). Formulas can also be used to create calculations for assessments.

When a **Formula** is set, it can be used again in the questionnaire, for example as a question condition to avoid a repeat of all expressions.

Formulas must always contain values for following attributes:

- Formula ID
- Condition

9.6.1. Attributes and values in Formulas

Formula ID All formulas have an ID.

The **ID** needs to be in English and may contain the following characters (no special characters):

- a-z
- A-Z
- 0-9

Condition

Conditions for when formulas are activated for a patient. For example, if a specific answer to a question is to activate the formula. The **Formula ID** can then be used again in the questionnaire.

If the condition is to validate that a patient has answered a certain answer, the following syntax is specified:

```
<questionId>.<responsId>
```

If the condition is to validate that a patient answered **Yes** (yes/no question) the following is used:

```
<questionId>
```

If the condition is to validate that the patient answered **No** (yes/no question) the following is used:

```
NOT <questionId>
```

If the condition is based on **answer points**, the following is used:

```
<questionId>.points
```

If the question has to be answered but the answer to the question does not affect the logic but only THAT the question is answered:

```
vars.<questionId>
vars.<questionId>.<responsId>
```

Conditions can be based on dates. A date can come from three sources:

- Properties (properties.creationDate, properties.startedDate, healthDataValue.date)
- Answers to date questions, using the questionId of the date question.
- Static dates (using the syntax date (YYYY-MM-DD).

Dates should have format YYYY-MM-DD.

To get days/months/years:

```
day(someDate)
month(someDate)
year(someDate)
```

To get the amount of days/weeks/months/years between to dates:

```
days(someDate, someOtherDate)
weeks(someDate, someOtherDate)
months(someDate, someOtherDate)
years(someDate, someOtherDate)
```

It is also possible to write conditions based on:

systemBirthDate (the birth date of the patient)

systemAge (the age of the patient)

systemGender (the gender of the patient)

Conditions can contain several validations and answers to previous questions or questionnaires where the following can be used to bind the conditions together and check the value:

Binding conditions:

AND = and

OR = or

What has to be fulfilled:

"! = " = not equal to

"==" = equal to

If no value can exist:

null = no value

It is important to have spaces between the first value, the minus sign and the next value to write a formula with subtraction (–). If this is not done, the formula is interpreted as a name instead of an equation.

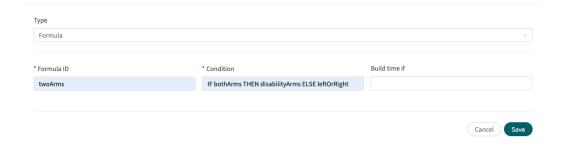
- **OK**:23 someVariable
- Not OK: 23-someVariable

If Then Else conditions

IF someVariable THEN someValue ELSE someOtherValue

If the condition someVariable is met, someValue will be used, but if the condition someVariable isn't met, someOtherValue will be used.

Example:





NOTE

The Free Text, Medication and File question types cannot be used in conditions.



In the above expression, laterality is the question's ID, and left and right are the answer's ID in the question you want to include.

Answers can also be negated in a formula.



Where Formula Id = isNotItching

Condition = NOT allergySymptoms.itching AND properties.itching ==
null

Here the user must not have answered itching on the question allergySymptoms, hence the NOT is written, and the property itching, which comes from a search term, is not true i.e. == null.



NOTE

- Formulas cannot be negated, meaning NOT unilateralSymptoms cannot be written. A new formula could be created instead called notUnilateralSymptoms = NOT laterality.left AND NOT laterality.right.
- Note also that Formulas are not included when a user goes to another questionnaire.

9.7. Include

Used to include (drag in) a question or a completely different library, in the questionnaire in question.

The aim here is to avoid duplicates of questions and answers.

9.7.1. Attributes and values in Include

Include library

Drop-down list of existing libraries that can be included.

Question

Drop-down list where a specific question can be selected to be included or all questions are selected. Only one selection can be made in the list.

Build time if

Build time if can be set for the following components in questionnaires and is used to decide if components should be included or not, based on formulas, properties and parameters. Refer to the Frequently occurring attributes [108] section for a longer description of **Build time if**:

- Include
- Exits
- **Answer** (in questions)
- Formulas
- Questions
- Go to another questionnaire
- Call questionnaire

Condition

Conditions for when a component has to be activated for the patient. For example, if the option that an answer to a question is required before the next one is asked has been selected to include another questionnaire. If the condition is to validate that a patient has answered a certain answer, the following syntax is specified:

```
<questionId>.<responsId>
```

If the condition is to validate that a patient answered **Yes** (yes/no question) the following is used:

```
<questionId>
```

If the condition is to validate that the patient answered **No** (yes/no question) the following is used:

```
NOT <questionId>
```

If the condition is based on **answer points**, the following is used:

```
<questionId>.points
```

If the question has to be answered but the answer to the question does not affect the logic but only THAT the question is answered:

```
vars.<questionId>
vars.<questionId>.<responsId>
```

Conditions can be based on dates. A date can come from three sources:

- Properties (properties.creationDate, properties.startedDate, healthDataValue.date)
- Answers to date questions, using the questionId of the date question.
- Static dates (using the syntax date (YYYY-MM-DD).

Dates should have format YYYY-MM-DD.

To get days/months/years:

```
day(someDate)
month(someDate)
year(someDate)
```

To get the amount of days/weeks/months/years between to dates:

```
days(someDate, someOtherDate)
weeks(someDate, someOtherDate)
months(someDate, someOtherDate)
years(someDate, someOtherDate)
```

It is also possible to write conditions based on:

systemBirthDate (the birth date of the patient)

systemAge (the age of the patient)

systemGender (the gender of the patient)

Conditions can contain several validations and answers to previous questions or questionnaires where the following can be used to bind the conditions together and check the value:

Binding conditions:

AND = and

OR = or

What has to be fulfilled:

"! = " = not equal to

"==" = equal to

If no value can exist:

null = no value

It is important to have spaces between the first value, the minus sign and the next value to write a formula with subtraction (-). If this is not done, the formula is interpreted as a name instead of an equation.

• OK: 23 - someVariable

• Not OK: 23-someVariable



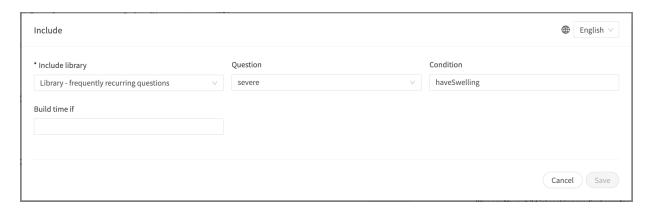
NOTE

The Free Text, Medication and File question types cannot be used in conditions.



NOTE

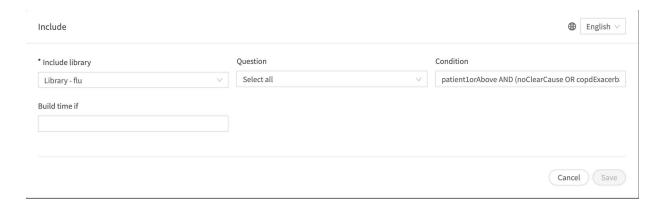
A library can only be included once per questionnaire. If, on the other hand, the condition for including a library is not met, a library that meets another condition can be included in the same form. It is possible to set **Condition** and **Build time if** to define when the **Include library** statement should be activated. This is done, for instance, to prevent all users in the main questionnaire receiving the questions that are in the included library or questionnaire.



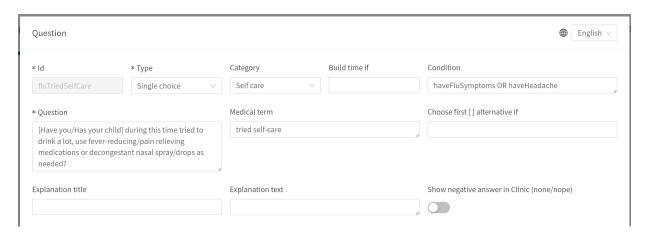
The library, or the question from a library, that is included in a questionnaire will inherit the condition that led to the library being included. This means that when the library is included in the questionnaire, the previously fulfilled conditions will be merged with the new conditions that are added in connection with questions in the included library.

Examples of when the terms for the include are merged with the terms for the question in the included library:

The cough questionnaire has the following include:



libraryFlu has a question with the following conditions:



When libraryFlu is included in cough These two conditions will be merged, leading to the question fluTriedSelfCare to be asked if the following condition is met:

(haveFluSymptoms OR haveHeadache) AND (patientlorAbove AND (noClearCause OR copdExacerbation.none))

However, the condition in **Include** is not merged with the condition for the outcome in the included file.

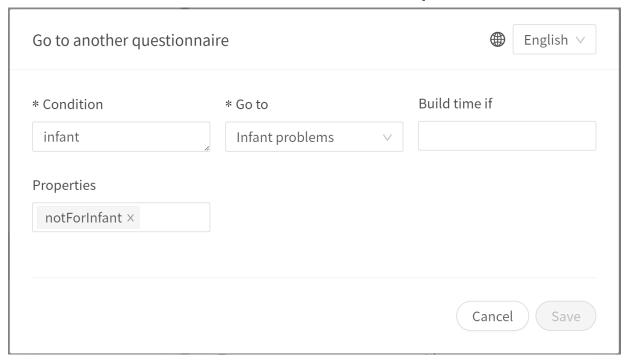
9.8. Go to another questionnaire

Skip to an entirely different questionnaire as soon as the conditions for the component are met. Patients then do not return to the first questionnaire.

Go to another questionnaire must always contain attribute values:

If (conditions to be met e.g. believeAllergy AND triedSelfCareSuffix.unsuccessful) Go to (name of the questionnaire skipped to e.g. Suspected allergy)

9.8.1. Attributes and values in Go to another questionnaire



Condition

Conditions for when a component has to be activated for the patient. For example, if the option that an answer to a question is required before the next one is asked has been selected to **Go to another questionnaire**.

If the condition is to validate that a patient has answered a certain answer, the following syntax is specified:

<questionId>.<responsId>

If the condition is to validate that a patient answered **Yes** (yes/no question) the following is used:

<questionId>

If the condition is to validate that the patient answered **No** (yes/no question) the following is used:

```
NOT <questionId>
```

If the condition is based on **answer points**, the following is used:

```
<questionId>.points
```

If the question has to be answered but the answer to the question does not affect the logic but only THAT the question is answered:

```
vars.<questionId>
vars.<questionId>.<responsId>
```

Conditions can be based on dates. A date can come from three sources:

- Properties (properties.creationDate, properties.startedDate, healthDataValue.date)
- Answers to date questions, using the questionId of the date question.
- Static dates (using the syntax date (YYYY-MM-DD).

Dates should have format YYYY-MM-DD.

To get days/months/years:

```
day(someDate)
month(someDate)
year(someDate)
```

To get the amount of days/weeks/months/years between to dates:

```
days(someDate, someOtherDate)
weeks(someDate, someOtherDate)
months(someDate, someOtherDate)
years(someDate, someOtherDate)
```

It is also possible to write conditions based on:

```
systemBirthDate (the birth date of the patient)
systemAge (the age of the patient)
```

```
systemGender (the gender of the patient)
```

Conditions can contain several validations and answers to previous questions or questionnaires where the following can be used to bind the conditions together and check the value:

Binding conditions:

```
AND = and
OR = or
```

What has to be fulfilled:

"! = " = not equal to

"==" = equal to

If no value can exist:

null = no value

It is important to have spaces between the first value, the minus sign and the next value to write a formula with subtraction (-). If this is not done, the formula is interpreted as a name instead of an equation.

• OK: 23 - someVariable

• Not OK: 23-someVariable



NOTE

The Free Text, Medication and File question types cannot be used in conditions.

Go to

Drop-down list where another questionnaire can be selected which the patient will answer instead.

Build time if

Build time if can be set for the following components in questionnaires and is used to decide if components should be included or not, based on formulas, properties and parameters. Refer to the Frequently occurring attributes [108] section for a longer description of **Build time if**:

- Include
- Exits
- Answer (in questions)
- Formulas
- Ouestions
- · Go to another questionnaire
- · Call questionnaire

Properties

Properties can be set when you **Go to** another questionnaire to include the required properties in the next questionnaire.



NOTE

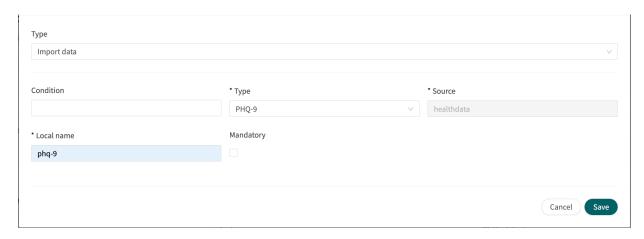
Formulas are not included when Skipping to other questionnaire, while Properties are included.

Properties can, for instance, be used when a user has already answered a question about where an injury is and then does not have to answer the same question again when the user has gone to another questionnaire

9.9. Import data

Import data is a statement that can be used in questionnaires where logic has to be based on values in the health database for patients. The value retrieved from the health database can then

be checked with different conditions to drive logic in the patient flow. It is possible to write conditions that define if the value is greater or less than X. It is possible to drive logic based on how old the result is, i.e. when it was added to the health database. It is also possible to create different types of equations using the value that can drive logic.



Examples of data imports that can be carried out in questionnaires are the importing of values from analyses (lab) conducted for patients and then defining when results are still valid or not in formulas. There may for instance be formulas that indicate how old the test may be, what the result was or if there is a value or not. In the continuation of the questionnaire, the formula is then used to drive logic for the questions and exits that the patient receives.



The following checks on results from Importing data can be conducted (the tsh test example):

- tsh.ageInDays to import number of days since the test was done
- tsh.value to import test result

Greater than (>), less than (<), not equal to (! =), equal to (==) can be checked for both call-ups.

9.9.1. Attributes and values in Import data

Condition Conditions for when importing data from selected source.

Type Drop-down list with selectable values to import from specified source.

Source The database from which values are imported.

Local name Imported values can be given a local value name for reuse in the questionnaire un-

der conditions. For example, P-glucose can have the local name: glucose to simplify

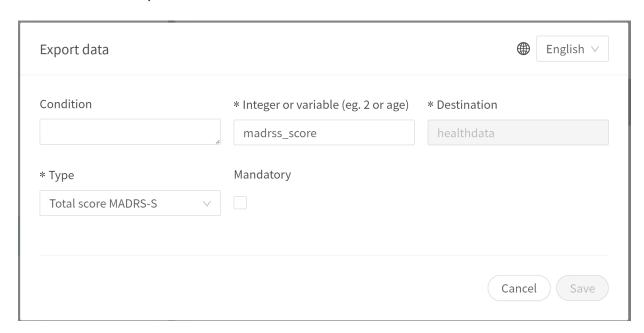
using the value.

Mandatory Check box indicating whether a value has to be imported from the database.

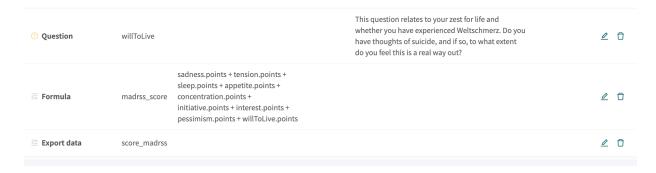
9.10. Export data

Export data is a component that can be used in questionnaires where logic has to be based on values in the health database for patients. Values that are exported from the health database

can then be used to create visualizations in Clinic (trends, etc.) but can also be used if patients return with a new case. The **Formula** component also works well with **Export data**, for example to calculate values to export into the health database.



An example is where answers provided by patients in assessments are converted into a formula and exported to the health database.



9.10.1. Attributes and values in Exporting data

Condition Conditions for when exporting data to the health database.

Local name The formula or value that is given in the questionnaire and which is exported to

the database. The **Local name** component will only accept allowed values for the specific Type. The statement will guide what type of value is expected, e.g., integer,

decimal or Snomed CT code.

Destination The database to which values are exported. Only one database can be currently

selected.

Type Drop-down list with selectable values to export to the database.

Mandatory Check box indicating whether a value has to be exported to the database in order

for the questionnaire to be valid for patients to complete.

9.11. Call questionnaire

Used to Include a library questionnaire, but with the option of specifying parameters (properties) that control the included questionnaire assuming the **Parameter**.

9.11.1. Attributes and values in Call questionnaire

Call library Drop-down list with libraries that can be used.

Parameters The parameters required to be sent to the included library. At least one parame-

ter must be specified to use the component. More than one parameter can be

added. Ensure that the parameter is used in the included questionnaire.

Condition Conditions for when a library is included with the specified parameters.

Build time ifBuild time if can be set for the following components in questionnaires and is used to decide if components should be included or not, based on formulas, properties and parameters. Refer to the Frequently occurring attributes [108]

section for a longer description of **Build time if**:

Include

Exits

• Answer (in questions)

Formulas

Ouestions

· Go to another questionnaire

· Call questionnaire

For example, in the **Shoulder** problems questionnaire, the **Pain** library, where the assumePain parameter is sent, has the following call-ups which impacts on how the questions in the library are asked. A component condition is also set, which steers the logic if the component will be activated for the patient.



9.12. Flags

The flag component displays additional information to a healthcare professional when a patient fulfills certain symptoms or answers. In Content Studio+, the medical content developers can add one or more flags in questionnaires. A flag can be seen by the practitioner in Clinic if the patient, in the triage, fulfills the conditions of that flag.

The flag will not change the interview exit attributes in the rule engine. However, the flag can be used in the rule engine to adjust the recommendation to the patient after the triage.

Flags have two use cases:

- To guide patients to the right level of care by highlighting/flagging important information to the practitioner that has been gathered in the triage.
- To use flags in the rule engine to enhance the recommendation of care for the patient.

Example of use case for Flags: "You have an ongoing COVID-19 infection and it is important to be aware of current guidelines. Read more about testing and isolation at Folkhälsomyndigheten."



NOTE

Flags must NOT be used to diagnose (including making statements of a diagnostic nature) or to recommend treatment for an individual patient. Flags are to be used at a common level and applied to a group of patients.

9.12.1. Attributes and values in flags

Condition

Conditions for when a component has to be activated for the patient. For example, if the option that a response to a question is required before the next one is asked has been selected to activate and display flags in Clinic.

If the condition is to validate that a patient has answered a certain answer, the following syntax is specified:

```
<questionId>.<responsId>
```

If the condition is to validate that a patient answered **Yes** (yes/no question) the following is used:

```
<questionId>
```

If the condition is to validate that the patient answered **No** (yes/no question) the following is used:

```
NOT <questionId>
```

If the condition is based on **answer points**, the following is used:

```
<questionId>.points
```

If the question has to be answered but the answer to the question does not affect the logic but only THAT the question is answered:

```
vars.<questionId>
vars.<questionId>.<responsId>
```

Conditions can be based on dates. A date can come from three sources:

- Properties (properties.creationDate, properties.startedDate, healthDataValue.date)
- Answers to date questions, using the questionId of the date question.
- Static dates (using the syntax date (YYYY-MM-DD).

Dates should have format YYYY-MM-DD.

To get days/months/years:

```
day(someDate)
month(someDate)
year(someDate)
```

To get the amount of days/weeks/months/years between to dates:

```
days(someDate, someOtherDate)
weeks(someDate, someOtherDate)
months(someDate, someOtherDate)
years(someDate, someOtherDate)
```

It is also possible to write conditions based on:

systemBirthDate (the birth date of the patient)

systemAge (the age of the patient)

systemGender (the gender of the patient)

Conditions can contain several validations and answers to previous questions or questionnaires where the following can be used to bind the conditions together and check the value:

Binding conditions:

AND = and

OR = or

What has to be fulfilled:

"! = " = not equal to

"==" = equal to

If no value can exist:

null = no value

It is important to have spaces between the first value, the minus sign and the next value to write a formula with subtraction (–). If this is not done, the formula is interpreted as a name instead of an equation.

• OK: 23 - someVariable

• Not OK: 23-someVariable



NOTE

The Free Text, Medication and File question types cannot be used in conditions.

Medical term

Flag text displayed to healthcare practitioners in Clinic for patients who have fulfilled the flag condition (see **Condition**).

Code

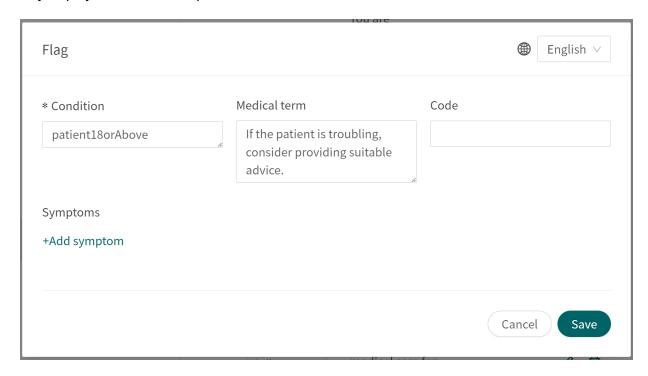
A code that can be specified if apply additional logic to the business rules.

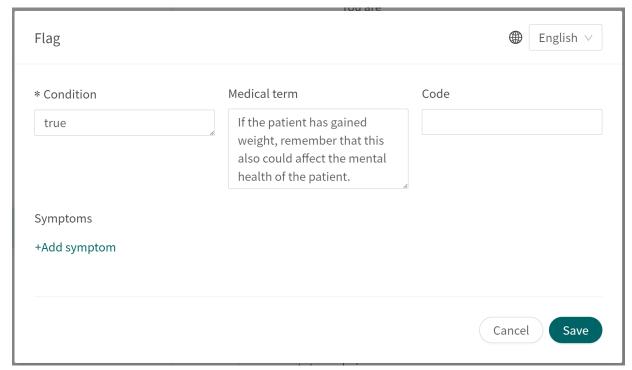
Symptom

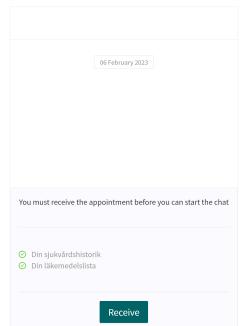
One or more symptoms patients have fulfilled, meaning the current flag has been defined.

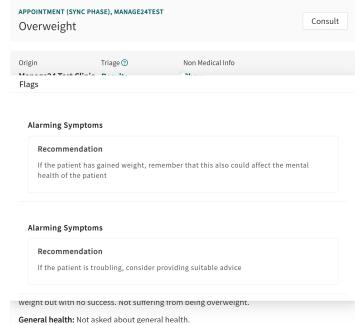
For example, in the **Nasal congestion** questionnaire for the unilateral nasal congestion for more than 3 weeks condition, the **Duration** more than 3 weeks symptom is stated and the '**Consider**

referring to an ENT specialist to rule out malignancy' recommendation are displayed. **Flags** are only displayed to healthcare professionals in Clinic and do not in themselves affect exits.









10. Frequently occurring attributes

Certain attributes and values occur in several different questionnaire components. A more detailed description of what this entails is shown below.

10.1. ID

Formulas, components, response options etc. have an ID that is used to drive logic.

The **ID** needs to be in English and may contain the following characters (no special characters):

- a-z
- A-Z
- 0-9

Numbers, 0-9, may be used in Question and Formula IDs. Other IDs use only letters.

This type of ID may be used for self-care information IDs.

10.2. Patient

The questions that patients see in the patient app can be formatted according to the following options and commands:

- \n\n = line break
- *italic* = italic
- **bold** = bold
- \n\n* = bullet point list
- \n\n**1.Text...\n\n**2.Text\n\n**3.Text...\n\n* = bullet point list with numbers.

10.3. Build time if

Build time if can be set for the following components in a questionnaire:

- Include
- Exits
- · Answer (in questions)
- Formulas
- Ouestions
- · Go to another questionnaire
- · Call questionnaire

Libraries contain questionnaire components that are used in most medical content questionnaires. These are grouped in different **Libraries**.

To use a library for more than one medical condition, variations to the library's questionnaire components are permitted using the **Build time if** parameter.

An example is the "libraryFeverSimple" library where the first question asks patents if they have a fever and/or chills.

If patients are actually seeking medical care for a fever, it is not a good idea to ask that question.

To prevent this, the "feverCondition" questionnaire begins with a formula that states whether the patient thinks or knows that they have a fever:

• Formula: suspectFever = true



This formula is specified before "libraryFever" and, also as a result, "libraryFeverSimple" are included.

The "believeFeverOrChills" question in "libraryFeverSimple" has a **Build Time If** condition ensuring it is not asked when "suspectFever" is included. Note that it does not matter how the formula is set, only that it exists.

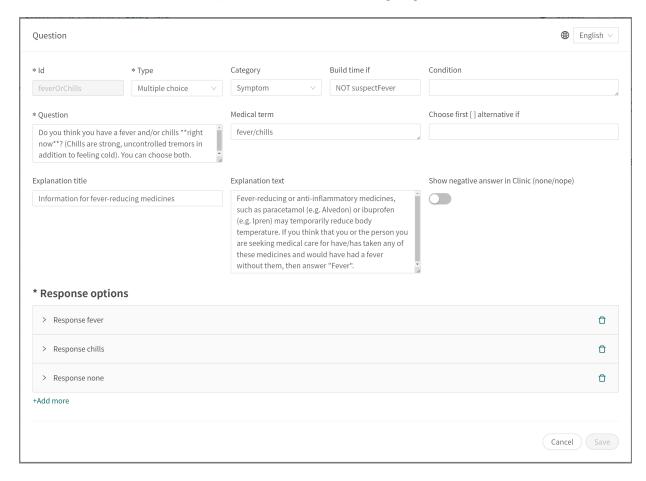
• Id field: believeFeverOrChills AS yesno

Category field: Symptom

Build Time If field: NOT suspectFever

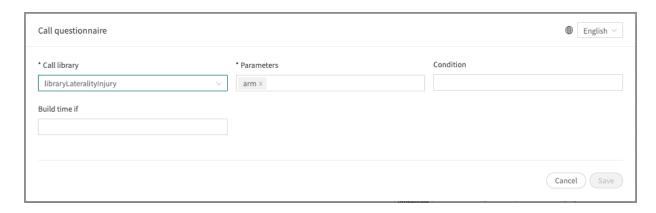
Question field (visible for the patient): "Do you think [you have/your child has] at this moment a fever and/or..."

Medical term field (visible for practitioners in Clinic): "Ongoing fever/chills"

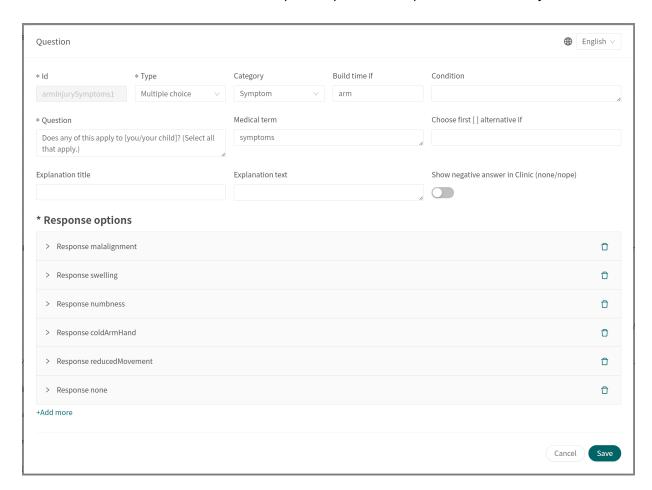


Another way to send values to a Library is to use the Call questionnaire component with parameters which are then used in the **Build time if**.

• Call: libraryLateralityInjury (arm)



Arm is then used as a **Build time if** for a response option to the question in the library.



Note that answers from patients in **Build time if** cannot be used because they are evaluated before a patient journey has begun.

There are a number of other conditions that can be used:

Build time if: xxx [NOT] IN OUESTIONS

Includes the questionnaire component if a question exists or does not exist in the set of questions.

Build time if: WORKSHEET IS [NOT] xxx

Includes the questionnaire component if the medical condition questionnaire is/is not specified.

Build time if: WORKSHEET IS [NOT] INCLUDED

Includes the questionnaire component if it is added/not added as a result of the **Include** or **Call up** questionnaire component.

10.4. Condition

Conditions for when a component has to be activated for the patient. For example, if a specific answer to a question is to activate the component.

If the condition is to validate that a patient has answered a certain answer, the following syntax is specified:

```
<questionId>.<responsId>
```

If the condition is to validate that a patient answered **Yes** (yes/no question) the following is used:

```
<questionId>
```

If the condition is to validate that the patient answered **No** (yes/no question) the following is used:

```
NOT <questionId>
```

If the condition is based on **answer points**, the following is used:

```
<questionId>.points
```

If the question has to be answered but the answer to the question does not affect the logic but only THAT the question is answered:

```
vars.<questionId>
vars.<questionId>.<responsId>
```

Conditions can be based on dates. A date can come from three sources:

- Properties (properties.creationDate, properties.startedDate, healthDataValue.date)
- Answers to date questions, using the questionId of the date question.
- Static dates (using the syntax date (YYYY-MM-DD).

Dates should have format YYYY-MM-DD.

To get days/months/years:

```
day(someDate)
month(someDate)
year(someDate)
```

To get the amount of days/weeks/months/years between to dates:

```
days(someDate, someOtherDate)
weeks(someDate, someOtherDate)
months(someDate, someOtherDate)
years(someDate, someOtherDate)
```

It is also possible to write conditions based on:

systemBirthDate (the birth date of the patient)

systemAge (the age of the patient)

systemGender (the gender of the patient)

Conditions can contain several validations and answers to previous questions or questionnaires where the following can be used to bind the conditions together and check the value:

Binding conditions:

AND = and

OR = or

What has to be fulfilled:

"! = " = not equal to

"==" = equal to

If no value can exist:

null = no value

It is important to have spaces between the first value, the minus sign and the next value to write a formula with subtraction (–). If this is not done, the formula is interpreted as a name instead of an equation.

• OK: 23 - someVariable

• Not OK: 23-someVariable



NOTE

The Free Text, Medication and File question types cannot be used in conditions.

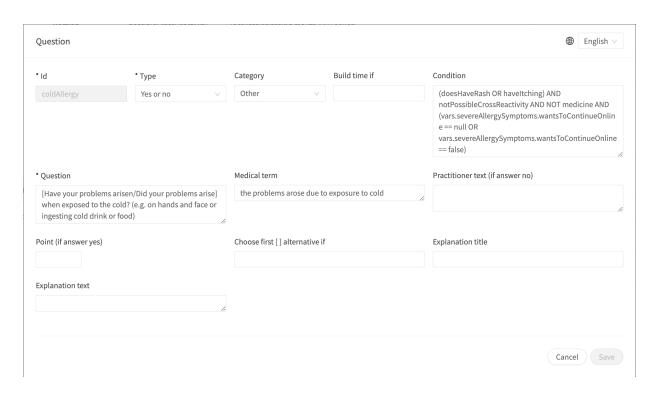
10.5. Choose first [] alternative if

If a logic other than default [You/Your child] has to be used, other conditions can be used to control whether the first or second option in the syntax should be used.

For example, if the question:

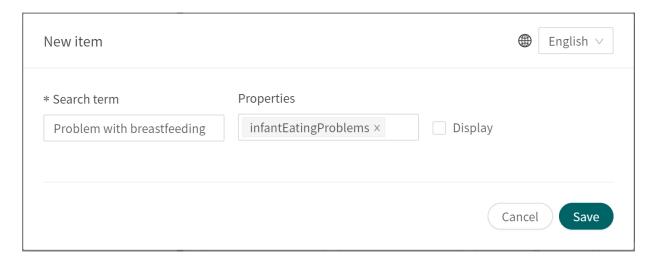
"[Have the problems arisen/Did the problems arise] in connection with exposure to the cold?"

is displayed in the "Question" field, the parameter ongoing has to be specified in the Choose first [] alternative if field, where "ongoingAllergy" is a parameter from a search term that accompanies the patient in their patient journey if they sought help e.g. for "Ongoing allergic reaction". If ongoingAllergy exists, the first option in "[]" will be used, and if ongoing is not specified for the patient, the second option will be displayed in the question.



10.6. Properties

Properties are set in the **Search terms** section, for example the search term: "Problem with breastfeeding" has the infantEatingProblems property.



This property can then be used as a condition for a question, e.g. **Question**: eatingProblemDetails has the conditions: properties.infantEatingProblems AND infant

Properties can also be set when you use **Go to another questionnaire** to include the required properties in the next questionnaire.

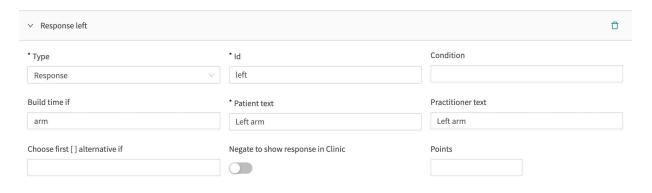


NOTE

Formulas are not included when using **Go to another questionnaire**, while **Properties** are included.

10.7. Response options

- Type: Response
- ID, refer to ID [108] above
- Condition: refer to Condition [111] above
- Choose first [] alternative if: refer to Choose first [] alternative if [112] above
- Patient response: what the response option is called for the patient
- **Health practitioner response**: how the response option is displayed in the medical history summary in Clinic
- Negate to show response in Clinic: refer to the smartText User Manual
- Points (only for multiple choice, single choice and yesNo questions)



10.8. Points

Points can be specified per question or response option in the following question types:

- Multiple choice questions
- · Single choice questions
- Yes or no questions

The points can be used to sum up a score from a questionnaire and can be both integers and decimals. Points can also be used to write conditions in the questionnaire statements.

11. Versions

Versions of the Content Studio+ User Manual.

#	Date	Description
0.1	2020-11-02	First draft
0.2	2020-11-27	Updated after assessment
0.3	2021-02-16	Updating and addition of function descriptions
1.0	2021-02-16	1st version of Content24 User guide
2.0	2021-03-29	2nd version of Content24 User guide including updating of function descriptions.
3.0	2021-09-06	Format updates. Cover, color-scheme, format of warnings.
4.0	2021-10-04	Addition of descriptions on how to edit search terms.
5.0	2021-11-02	Update based on release-notes.
5.1	2022-03-02	Transfer of the content from the Word file version to Paligo. No content updates apart from minor spelling and grammatical fixes and to fix some re-use issues.
8.0	Not released to end users. Tran- sitionary ver- sion.	Transition to version 8 for synchronisation with the SE-sv manual. Updates made in the SE-sv in v6, v7 and v8 are included. from v6 SE-sv - Update of contact information, unit tests and exit care advice. from v7 SE-sv - Links in exit care advice. from v8 SE-sv - added IF THEN ELSE explanation for formulas added, Scale removed from note on usage in conditions, Metadata "hide health profile" is now deactivated
9.0	2022-03-17	Rewrite and update of Unit tests
9.1	2022-03-29	Structural updates with no effect on content
9.2	2022-05-25	Correction of texts for Unit tests. Not officially published. Added clarification to Free text question types.
10.0	2022-10-31	Updated publication after Triage24 MDR certification. Changed manual name from User Guide to User Manual.
		Changed name from decision support to flags.
		Updated sections regarding exit care advice, conditions and flags.

#	Date	Description
11.0	2023-04-17	Main updates are:
		Changed Content24 to Content Studio, Manage24 to Manage and Clinic ic24 to Clinic
		Almost all images replaced (due to new logotype and UI changes)
		 Section 5.1.3 Intended users updated for medical content developers: medical developers changed to medical content developers and business rules added to their role.
		 Section 5.2.3. Intended operational environment for Content Studio updated. Clarified that the application is Manage and the interface is Content Studio.
		 Self-care information updates (UI changes, and information on Medi- Bas removed)
		Question type
		Questionnaire description
		Metadata (new and changed fields)
		Export data in Local name component
		More supported file formats for questions
		 "Replace staff response on question" field deleted as it is no longer in use
		Name/Title/Description/Questionnaire aligned to title
		Date questions possible to add as as skippable
		Information about automatic added none responses removed
		 Text from Abstract moved into an Introduction chapter. Clarifying note added to the Introduction chapter regarding updates in the man- uals.
12.0	2023-09-22	Main updates are:
		 Product name changed to Content Studio⁺.
		 Information about point of contact in case of serious incidents moved from Intended use chapter to page 2.
		Updated intended use according to document <i>Triage24 - Definitions</i> of intended use, user profiles and use environments SE-en D490.
		Technical support section updated.
		Symbols Chapter updated with admonitions description.
		"Modified" status removed from questionnaires.
		 Maximum limit for changes to questionnaires removed as only local copy or unchanged questionnaires from Platform24 now exist.
		Format for dates clarified in conditions.

#	Date	Description
13.0	2024-01-11	Main updates are:
		 Section 8.4.2 updated with the possibility to include images in self- care information.
		Section 9.3.2 restructured and clarified.
		• New section 9.3.3 Unique search terms and the Display option added.
		 Section 10.8 updated and information added that points can be both integers and decimals.
		 Intended use for Triage24 updated to include business rules, a clarify- ing note and some other minor clarifications.
		Support email for user manuals updated.

12. References

Title	Description
User Manual - smartText in Content Studio	The smartText User Manual gives more information about smartText and how it is configured. smartText is the text summary for practitioners that is generated after a patient interview.