Translational Research and Patient Safety in Europe

D5.5
Mobile eHealth application for the delivery of Patient Related Outcome Measures
User manual - TRANSFoRm Study System – web application user guide

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Table of Contents

1.0 GENERAL INFORMATION ................................................................................................................. 4
1.1 System Overview .............................................................................................................................. 4
1.2 Project References ............................................................................................................................ 4
1.3 Authorized Use Permission .............................................................................................................. 4
1.4 Points of Contact ............................................................................................................................. 4
  1.4.1 Information ................................................................................................................................. 4
  1.4.2 Coordination ............................................................................................................................... 5
1.5 Acronyms and Abbreviations .......................................................................................................... 5

2.0 SYSTEM CONCEPTS ......................................................................................................................... 6
  2.1 Available actions ............................................................................................................................ 6
  2.2 System specification ....................................................................................................................... 6

3.0 GETTING STARTED ............................................................................................................................ 7
  3.1 System requirements ...................................................................................................................... 7
  3.2 First log in ..................................................................................................................................... 8
  3.3 Cookies .......................................................................................................................................... 8
  3.4 Session .......................................................................................................................................... 8
  3.5 Exit System .................................................................................................................................... 9

4.0 USING the SYSTEM .......................................................................................................................... 10
  4.1 Tutorial Overview .......................................................................................................................... 10
  4.2 Log in screen ................................................................................................................................ 11
  4.3 Questionnaire selection screen ..................................................................................................... 13
  4.4 Questionnaire screen .................................................................................................................... 14
  4.5 Example scenario .......................................................................................................................... 15

5.0 Troubleshooting ............................................................................................................................... 18
  5.1 System Limitations ......................................................................................................................... 18
  5.2 Known Issues ................................................................................................................................ 18
  5.3 Unknown Issues ............................................................................................................................. 18
1.0 GENERAL INFORMATION

1.1 System Overview

TRANSFoRm Study System web application is designed to enable users filling out PROM and CROM questionnaires. This tool complements the TSS mobile application with additional functionalities like ability to fill out CROMs. The web application is only available by means of a web browser. Both patients and clinicians can be registered as its users.

1.2 Project References

- Software Deliverable Technical Description
- TRANSFoRm Technical Overview
- D3.5 Software Integration Plan
- D5.2: Application of the Provenance Model
- D6.2 Clinical Research Information Model
- D7.3 Delivery system for mobile and real-time e-Health
- D5.5 Mobile eHealth application for the delivery of Patient Related Outcome Measures

1.3 Authorized Use Permission

This document and the corresponding web application are part of the EU Framework 7 programme, Translational Research and Patient Safety in Europe (TRANSFoRm). Access to the web application is limited and permission must be sought before making copies. Please contact the relevant department for more information.

1.4 Points of Contact

1.4.1 Information

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1.4.2 Coordination

All queries should be passed to:
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Correspondence address:
Wybrzeże Wyspiańskiego 27
50-370 Wrocław
Poland

Location:
building A-1 office 203

1.5 Acronyms and Abbreviations

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<th>Acronym</th>
<th>Description</th>
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<tr>
<td>CDISC</td>
<td>Clinical Data Interchange Standards Consortium</td>
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<tr>
<td>CROM</td>
<td>Clinician Reported Outcome Measures</td>
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<tr>
<td>ODM</td>
<td>Operational Data Model</td>
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<tr>
<td>PROM</td>
<td>Patient Reported Outcome Measures</td>
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<tr>
<td>SDB</td>
<td>Study Database</td>
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<td>SRH</td>
<td>Self-rated health</td>
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<tr>
<td>TSS</td>
<td>TRANSFoRm Study System</td>
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2.0 SYSTEM CONCEPTS

This section describes the way in which the application operates with the listed actions available for its user. A complete usage tutorial with examples can be found in the next chapter of this document.

2.1 Available actions

Every user after logging in the TSS Web application can perform the following actions:

- log in
- check pending questionnaires
- check which questionnaires have been completed
- fill out questionnaires
- submit completed questionnaires
- log out

2.2 System specification

Technologies used to construct TSS web application:

- HTML 4.0
- Javascript 1.8.5
- jQuery 1.10.2
- jQuery UI 1.10.3
3.0 GETTING STARTED

3.1 System requirements

There are a few rules to follow to run the web application. There is no specific requirement for the operating system. The software can run on machines with potentially any operating system installed. However, there are some requirements for the web browser used. TSS web application can be used with the following browsers:

- **Google Chrome** version 6 or higher
- **Firefox** version 3.6 or higher
- **Opera** version 12.1x or higher
- **Safari** version 5 or higher
- **Internet Explorer** version 9 or higher

In case you do not have any of the above mentioned browsers installed, they can be downloaded using one of the links provided below:

- Google Chrome
  - [https://www.google.com/chrome/browser/](https://www.google.com/chrome/browser/)
- Mozilla Firefox
- Internet Explorer
- Opera
- Safari
  - [http://support.apple.com/kb/dl1531](http://support.apple.com/kb/dl1531)

Please note that Apple does not support Safari on Windows anymore. You are advised to install any other web browser.
3.2 First log in

To use the TSS web application, you need to possess a login and password. After you are included in the clinical research study, you should receive all necessary credentials via an email entitled “Welcome to the TRANSFoRm Study System”. In that email they will have the lines such as:

- Your login is: [login]
- Your password is: [password]

Fields [login] and [password] will contain your valid unique login and password, respectively.

If you want to know how to use credentials to log into the system, you should use the below link and go to chapter 4 of this document.

TSS web application address: http://156.17.131.247:8080/gord/

3.3 Cookies

Before you begin any interaction with the web application you should be aware that a cookies mechanism is used for the storage information necessary for running the TSS web application. Thus, before you can start using the application, the cookies must be accepted on the login page.

You will be greeted by cookie acceptation message above the login screen (Fig. 4.2.1).

It is also vital to note that there is no personal information stored in cookies. They contain only information necessary for running the TSS web application.

3.4 Session

Every possible communication with the TSS SS relies on a valid session key which is generated every time you log in into the system. There are also some rules to abide by correlated to this key:

- session key is only valid for 20 minutes
- when opening the questionnaire selection and questionnaire web page the session key expiration timer is reset back to 20 minutes
• filling out one questionnaire can last for only 20 minutes

3.5 Exit System

To quit the system, you just need to close the web browser.
4.0 USING the SYSTEM

4.1 Tutorial Overview

In this chapter, you will get familiar with the TSS web application. Every step of interaction with the system will be explained one by one. However, it is also recommended to read the content of chapter 3 above. If you encounter any problem during the runtime, you should refer again to this chapter and additionally to chapter 5. Further help can be sought by scrolling down each sub chapter for a section called “What could go wrong?”. All Figures in this document display the web application on Google Chrome web browser. If you decide to use another browser, the display will look similar.

The interaction with the system in case of errors/notifications is done through dialog boxes. A first example is the standard “OK” dialog box, see Fig. 4.1.1. This is used just to display information about a specific situation. If something like this pops up, it is advised to read the text in the dialog box and click the “OK” button. The dialogue box will disappear and the system and interaction will return to its main course.

![Fig. 4.1.1 OK dialog box](image)

The second type of dialog box is used for different purposes. In particular, it informs you about the possible actions you can undertake and gives you the option to agree or cancel. It means that you can either accept what you have just done and continue with the desired action (the ‘I agree’ button) or the process can be canceled by clicking the ‘Cancel’ button. An example is presented in Fig. 4.1.2.
4.2 Log in screen

This is the first screen the user will be interacting with. The most notable elements are the cookie and login boxes. You can use the cookie box to:

- read information about cookies on this web site
- accept cookies by clicking the “ACCEPT COOKIES” button

You can use the login box to interact in the following ways:

- enter your unique username in the “Username” field (please refer to chapter 3.2 of this document for details on how to obtain a username)
- enter your password in the “Password” field (please refer to chapter 3.2 of this document for details on how to obtain a password)
- click the “Forgot your password?” link in case your credentials are lost
- click the “Login” button if you want to log into the system
As seen in Fig. 4.2.1, the interaction items are:

1. “Cookie bar” with “ACCEPT COOKIES” button—displays information about cookies and enables the user to accept terms of cookie usage in the TSS web application
2. “Username” field— in here the user writes down your username
3. “Password” field— in here the user write down the your password
4. “Forgot the your password?” link—displays information about steps the user needs to take if you have lost your credentials
5. “Login” button—enables to log into the application

What can go wrong?

On this screen you may see the following information displayed:

- “Couldn't connect to server. Please, try again later.”—this means that the server on which the application runs has encountered some difficulties. You should try again later—just repeat the login procedure
- “Username and password cannot be empty.”—this means that you have clicked the “Login” button before filling the “Username” and “Password” fields with your credentials. The proper credentials should be utilized.
• “Wrong username or password.” – this means that you have filled the “Username” or “Password” fields with the wrong credentials. You should retry to log in using the proper credentials

• “Cookies have not been accepted! Above you will find the "cookie accept" banner.” – this means that you have not accepted the TSS web application cookie policy. You should use the button on the “Cookie bar” to accept cookies or leave the application

### 4.3 Questionnaire selection screen

After successful log in, the questionnaire selection screen comes up. There are three main interaction areas on this screen. The first one is the pending questionnaire area which is used to:

- select a questionnaire for completion
- check start and due dates of every questionnaire

The second interaction area is the completed questionnaire screen which is used to:

- see every completion date for the questionnaires already filled out

The third area consists of the “Log out” button only and is used to exit the application.

![Fig. 4.3.1 The questionnaire selection screen](image)

As seen in Fig. 4.2.1, interaction items are:

1. “Questionnaire information” area – displays information about the currently selected questionnaire. You can check the start and due date for the selected questionnaire. Most importantly you can click the “Fill out” button to access that particular questionnaire
2. “Completed tab” – you can check completion dates for every questionnaire you have
3. “Log out” button – enables you to exit the web application

What can go wrong?
On this screen you may see one of the following messages:

- “Couldn't connect to server. Please, try again later.” – this means that the server on which the application runs has encountered some difficulties. You should try again later
- “Session expired, please log in again.” – this means that you have not interacted with the web site for longer than 10 minutes. You should log in to the application again
- “There are no questionnaires to complete.” – this means that you have no pending questionnaires. You will be notified by an email reminder about new questionnaires.

4.4 Questionnaire screen

This is the final screen you will be interacting with in the process of filling out a questionnaire. Here, you can find four main interaction areas. The first one is the questionnaire itself on which the user can:

- select an answer for any given question. Please note that in order to save the answers you have to complete all questions in the questionnaire. You will not be able to save your answers, if even one question is not completed

All other interaction items are buttons. Two of them are specific for this screen. The “Close” button enables you:

- to close the questionnaire without saving any of your answers
On the lower right corner of the screen is the “Send” button which enables you:

- to save all your answers and send them to the server. In practice, this means that the current questionnaire is flagged as completed and therefore will not appear on the questionnaire selection screen any more

Finally, on the top right corner of the screen is the “Log out” button which enables you to exit the application.
Fig. 4.4.1 Questionnaire screen

As seen in Fig. 4.2.1 interaction items are:

1. “Questionnaire” area – contains your answers to the questions in the selected questionnaire
2. “Log out” button – you can exit the application by using this button
3. “Close” button – enables you to close the questionnaire without saving any answer
4. “Save” button – sends all of your answers to the server and flags this questionnaire as completed. You cannot fill out this questionnaire again after this process!

What can go wrong?

On this screen the user may see the messages:

- “Couldn't connect to server. Please, try again later.” – this means that the server on which the application runs has encountered some difficulties. You should try again later
- “This questionnaire has been already sent to the server from another device.” – this is displayed if you have already filled out the questionnaire by means of the mobile device
- “You have to answer all questions.” – there are still some questions for which you have not provided any answer. You need to answer all questions to be able to save your answers and submit (“Send”) the questionnaire

4.5 Example scenario
This chapter will guide the user through the process of using the TSS web application. You will start with logging into the system and will follow all steps to filling out a questionnaire. You are advised to follow the numbers representing the correct order of steps that you need to take to successfully complete each task.

Additional notice: you should remember to accept cookies by pressing the button on the “Cookie bar”. It is highlighted in Fig. 4.5.1 by a red frame with words “optional” near it.

After you have accepted the cookies, the next step would be to write down your credentials in the appropriate fields. Here are the steps you need to follow:

1. Type your username in the “Username” field (please refer to chapter 3.2 of this document for details on how to obtain your username)
2. Type your password in the “Password” field (please refer to chapter 3.2 of this document for details on how to obtain your password)
3. Click on the “Login” button
If everything goes as planned you will be taken to the questionnaire selection screen (Fig. 4.5.2).

**Fig. 4.5.2 Questionnaire selection screen walkthrough**

1. You first need to choose a questionnaire you want to fill out from drop down list in the lower left corner of the screen.
2. You then need to click on the “Fill out” button which will transfer you to the next screen where you will be able to answer the questions in the selected questionnaire

The last screen of the web application displays the questionnaire you have selected. Your main goal is to answer every question displayed on your screen. Figure 4.5.3 gives a representation of the questionnaire screen. The layout may change based on what you have chosen on the previous screen. Here is an example of how it might look like:

**Fig. 4.5.3 Questionnaire screen walkthrough**
1. Fill out any questions available to you by selecting one option from the drop-down list box. You may also type in the answer manually. Remember also that you are expected to answer every question to proceed further.

2. Once you have answered all questions, please click the “Send” button. If everything was completed successfully and sent to the server, a dialog box similar to the one presented in Fig. 4.5.4 will appear:

![Questionnaire sent dialog box](image)

Fig. 4.5.4 Questionnaire sent dialog box

5.0 Troubleshooting

5.1 System Limitations

Currently the only system limitations are related to selection of web browsers by the user. Please see chapter 3.1 “System requirements” for more information about this topic.

5.2 Known Issues

Some critical application functionalities may not work because the user has an outdated web browser installed on his PC.

5.3 Unknown Issues

None.