



User Manual for Sendinel

Sending SMS and Phone Calls to Patients
<http://www.sendinel.org>

Potsdam, May 2010

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1 What is Sendinel for?

Sendinel aims at improving the communication between clinics and patients. It allows clinics to reach the patients on their cell phones. For example the clinic staff can inform patients if their lab results or medicine have arrived. This quick information transfer avoids useless trips to the clinic for the patients and improves the treatment. The clinic staff can also regularly send messages to a group of people. For example, they can inform all subscribers to "Information about the Clinic" if a specialist is coming the next day.

2 How Does Sendinel Integrate into the Clinic's Workflow?

There are various moments when you can use Sendinel: You can use it, when you make appointments with the patients. So when you write down the date of the next follow-up consultation or the date of the next vaccination in the patient's file, you can ask the patient if he or she wants to be reminded of the appointment. If so, you can enter the information in Sendinel and the patient will be reminded over their mobile phone.

Sendinel can also be used, when you receive lab results or when medicine arrives. You can then notify the waiting patients of the arrival of their lab results or medicine.

3 What Can You Do?

You can

- Remind people of vaccinations
- Remind people of follow-up consultations (for example patients with chronic diseases)
- Tell people that their labresults have arrived
- Tell people that they should come pick up their medicine
- Inform a group of people about something

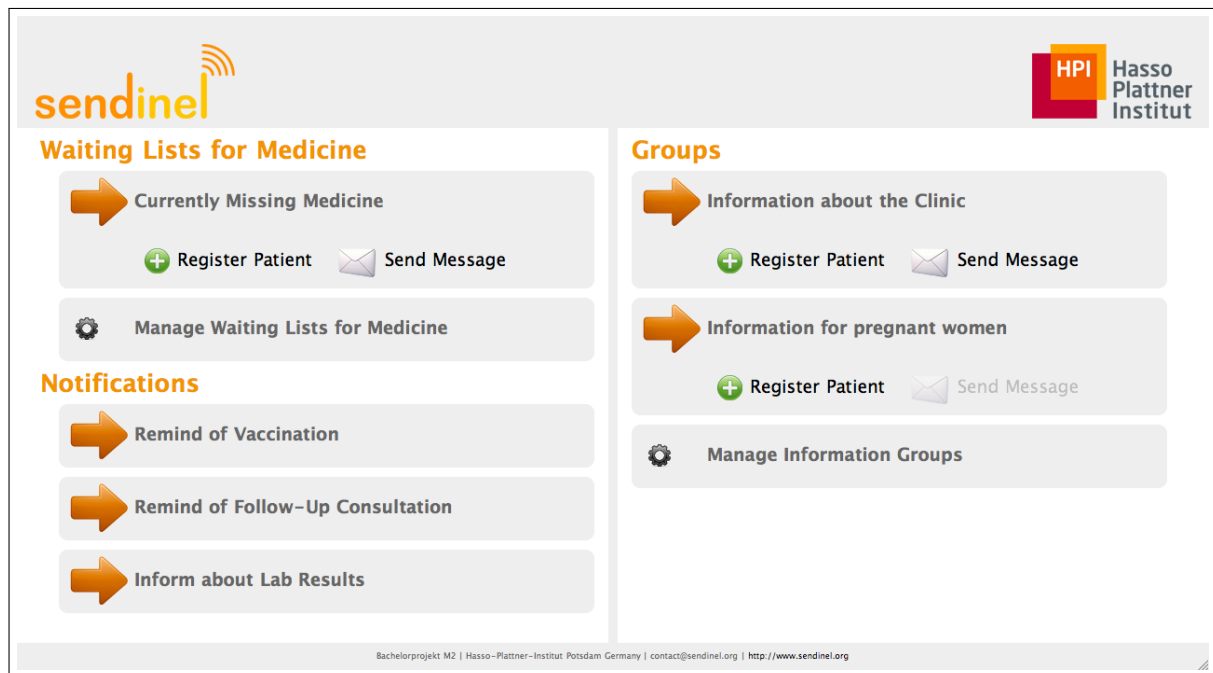


Figure 1: The main menu of Sendinel

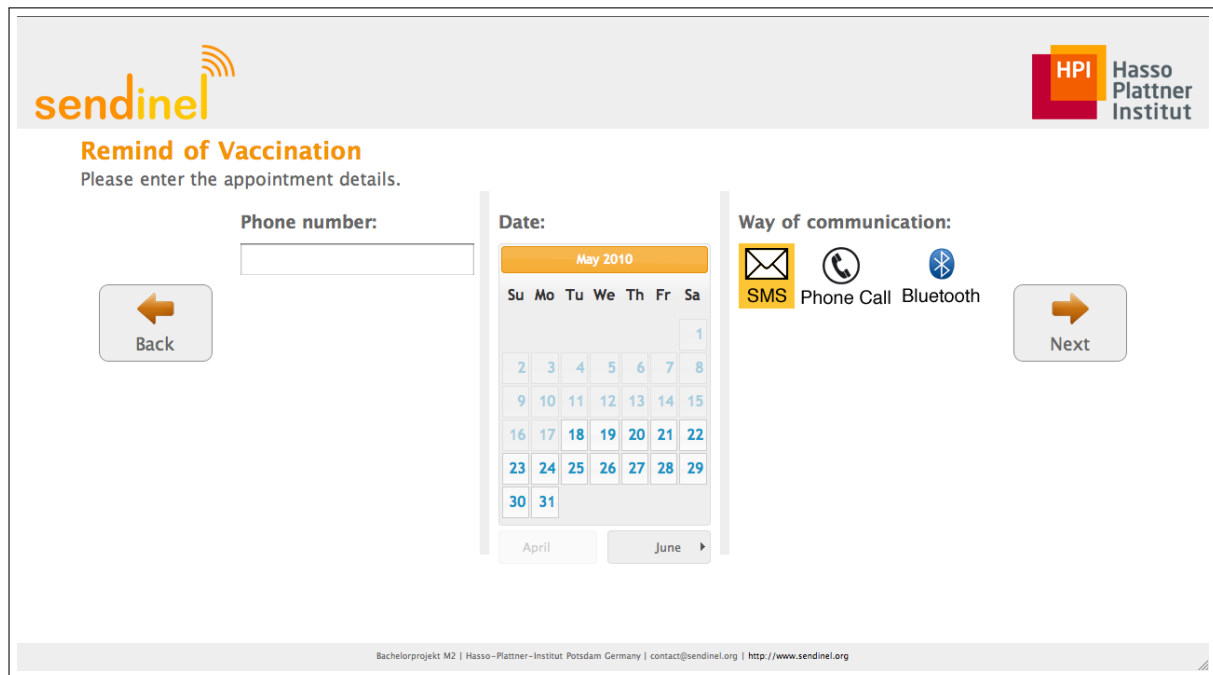
3.1 Remind Patients of Next Vaccination

If you want to remind someone of the next vaccination, click on “Remind of Vaccination” on the main menu.

3.1.1 Entering the phone number

Then your computer screen should look like shown in figure 2.

Here you have to enter the details of the appointment. First of all you have to enter the phone number of the patient.



The screenshot shows a web form titled "Remind of Vaccination" with the instruction "Please enter the appointment details." The form is divided into three main sections: "Phone number:", "Date:", and "Way of communication:". The "Phone number:" section has a text input field and a "Back" button. The "Date:" section features a calendar for May 2010, with dates 1 through 31 displayed in a grid. The "Way of communication:" section has three radio buttons: "SMS" (selected), "Phone Call", and "Bluetooth". A "Next" button is located to the right of the "Way of communication:" section. The form is framed by a header with the "sendinel" logo and the "HPI Hasso Plattner Institut" logo, and a footer with contact information.

sendinel

Remind of Vaccination
Please enter the appointment details.

Phone number:

Back

Date:

May 2010

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

April June

Way of communication:

SMS Phone Call Bluetooth

Next

Bachelorprojekt M2 | Hasso-Plattner-Institut Potsdam Germany | contact@sendinel.org | <http://www.sendinel.org>

Figure 2: If you want to remind a patient of a vaccination, you have to enter the telephone number, the date of the appointment and the way of communication

3.1.2 Entering the date

Then you have to enter the date when the next appointment is going to take place. Please look if the box shows the correct month. If the month is not the right one, you can use the little arrows to the left and right of the month name to choose the next or the previous month.

Then click on the correct date. If you have chosen a date, it will be highlighted in orange.

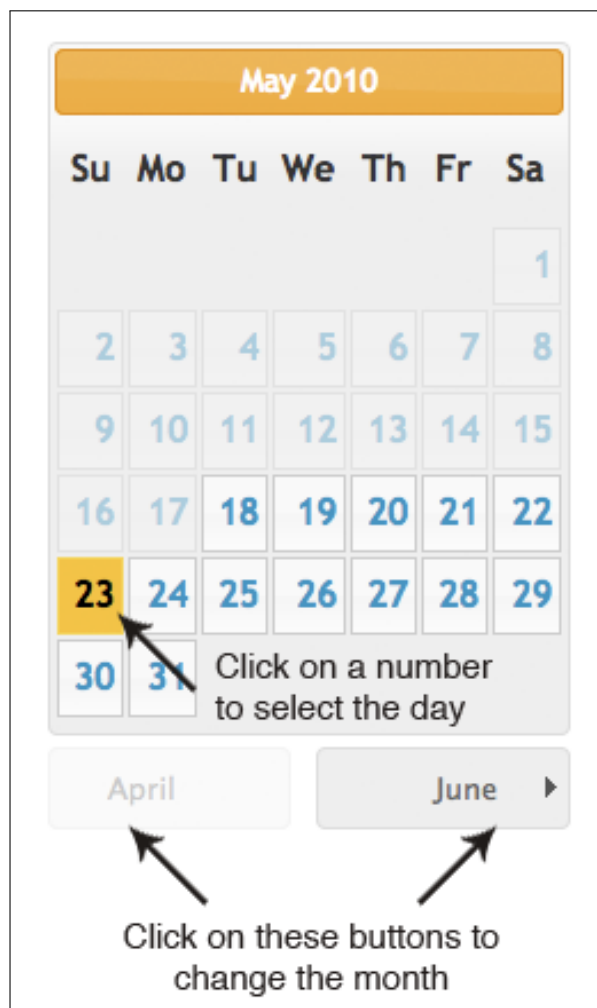


Figure 3: Use the calendar to choose the correct date

3.1.3 Choosing the way of communication

As a last step, you have to choose the way of communication. If you want your patient to receive an SMS, click on the SMS symbol.

If you think, that your patient might be illiterate, choose “Phone Call”. The patient will then be called one day before the appointment and reminded of the vaccination. The call will be done by the computer and a computer voice will speak to the patient.

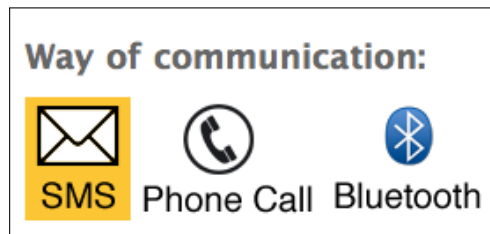


Figure 4: Choose one of the default ways of communication

If Bluetooth is available in Sendinel the Bluetooth® -symbol indicates that you can also choose that way of communication.

3.1.4 Finishing the appointment

Finally, click on the next button at the bottom of the screen to save the entered data.



Figure 5: When you have entered all information, you need to click on “Next”

Sending appointments via Bluetooth® First of all you will see a page like shown in figure 6. This list is refreshed every three seconds. If the mobile phone of the patient does not appear in the list after thirty seconds kindly ask him/her if Bluetooth® is switched on on his/her mobile phone and if the visibility is set to visible.



Figure 6: Choose the patients' mobile phone from the list of available phones

The computer then tries to send the appointment via Bluetooth® to the mobile phone of the patient. Please ask the patient to accept and open the file. This procedure can take up to **one minute**. If it was not possible to send the appointment an error message will indicate that.

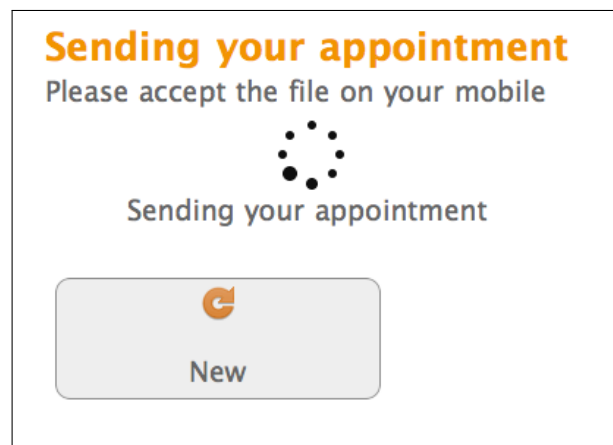


Figure 7: The appointment is sent to the patient via Bluetooth

If you entered all information correctly, you will see the following screen:

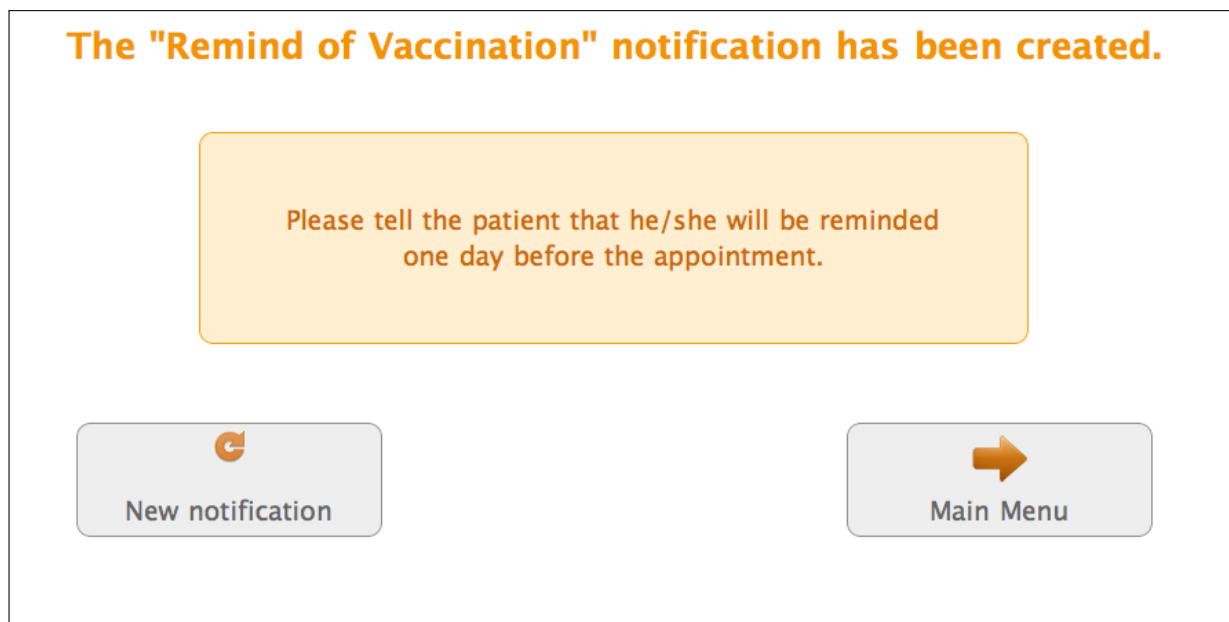


Figure 8: You have successfully entered a Vaccination reminder.

You should now inform the patient that he/she will be contacted one day before the vaccination is scheduled. Then the patient will not be surprised to receive an SMS or a phone call from the clinic.

After two minutes or when you click on the next button, you will return to the main menu of Sendinel.

3.1.5 Troubleshooting

You clicked next but still see the form? Then there should be an error message. Look for an error message on the screen. It will help you to enter all information correctly. When you have followed the advice, click on the next button again.

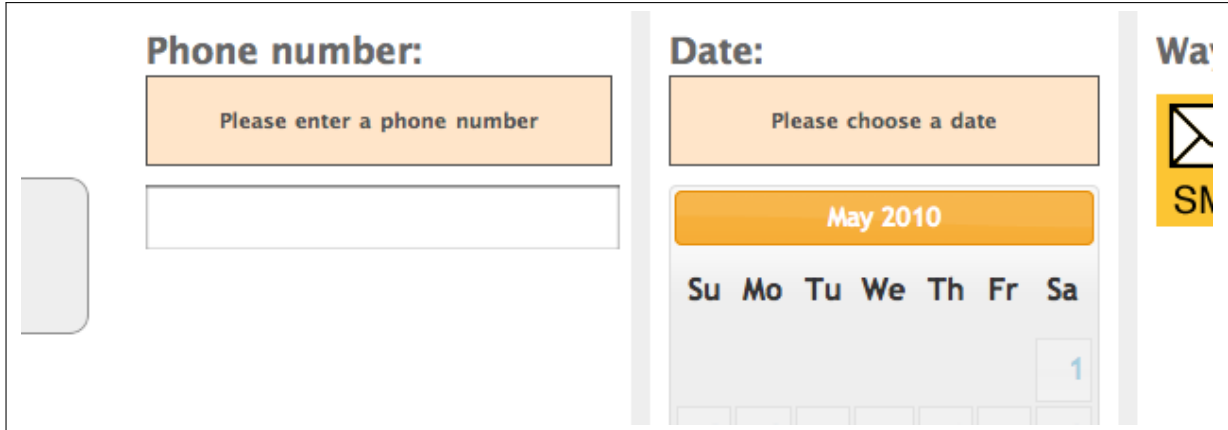


Figure 9: When you did not enter neither phone number nor date of the appointment, you will see these two error messages

Bluetooth® Errors If you get an error message like shown in figure 10 then there is a problem with your Bluetooth® device or the local Bluetooth® server is not running. Please refer to section NUMBER in the installation guide or ask an administrator to assist you.

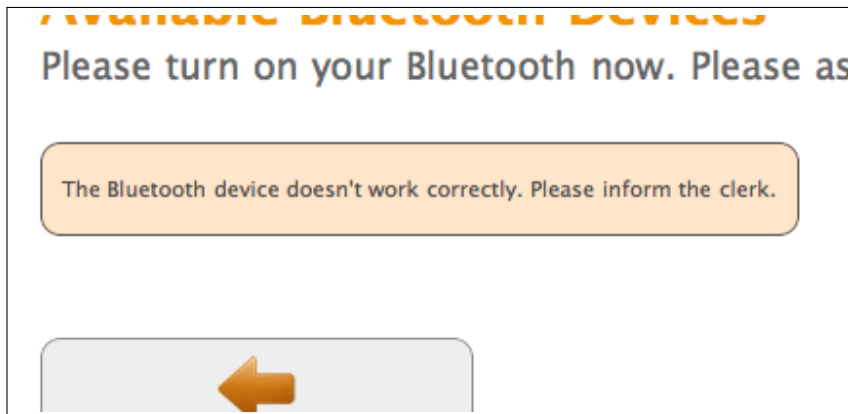


Figure 10: If you see an error like this please refer to the Bluetooth® section in the installation manual

3.2 Remind Patients of Follow-Up Consultations

This works nearly exactly like reminders for vaccinations.

- Click on “Remind of Follow-Up Consultation” on the main menu.
- Then enter the phone number of the patient and the date of the appointment
- Choose a fitting way of communication
- Click on next, maybe correct errors, and then you are finished

3.3 Inform Patients That Their Lab Results Have Arrived

This works also very similar to reminders for vaccinations

- Click on “Inform about Lab Result” on the main menu.
- Then enter the phone number of the patient and choose a fitting way of communication
- Click on next, maybe correct errors, and then you are finished

If you want to inform more than one patient that the lab results have arrived, you may use the “Next” button on the last screen.

3.4 Inform About Arrival of Medicine

If you want to inform patients who have been waiting for medicine that their medicine has arrived, you can use Sendinel. You can click on "Send Message" under Waiting Lists for Medicine - Currently Missing Medicine. Then you will find a screen where you can choose the name of the medicine and write a text. You can only choose names of medicines where there exists a waiting list for it. So if you can't find the name of the newly arrived medicine in the list, that means that noone is waiting for it and noone needs to be informed.

3.5 Send Notifications to Groups

You can regularly send information to a group of patients. For example you can notify all subscribers to “information for pregnant women” if there is going to be a gymnastics training for them.

You can enter the groups yourself. Every group you add can be found on the main screen.

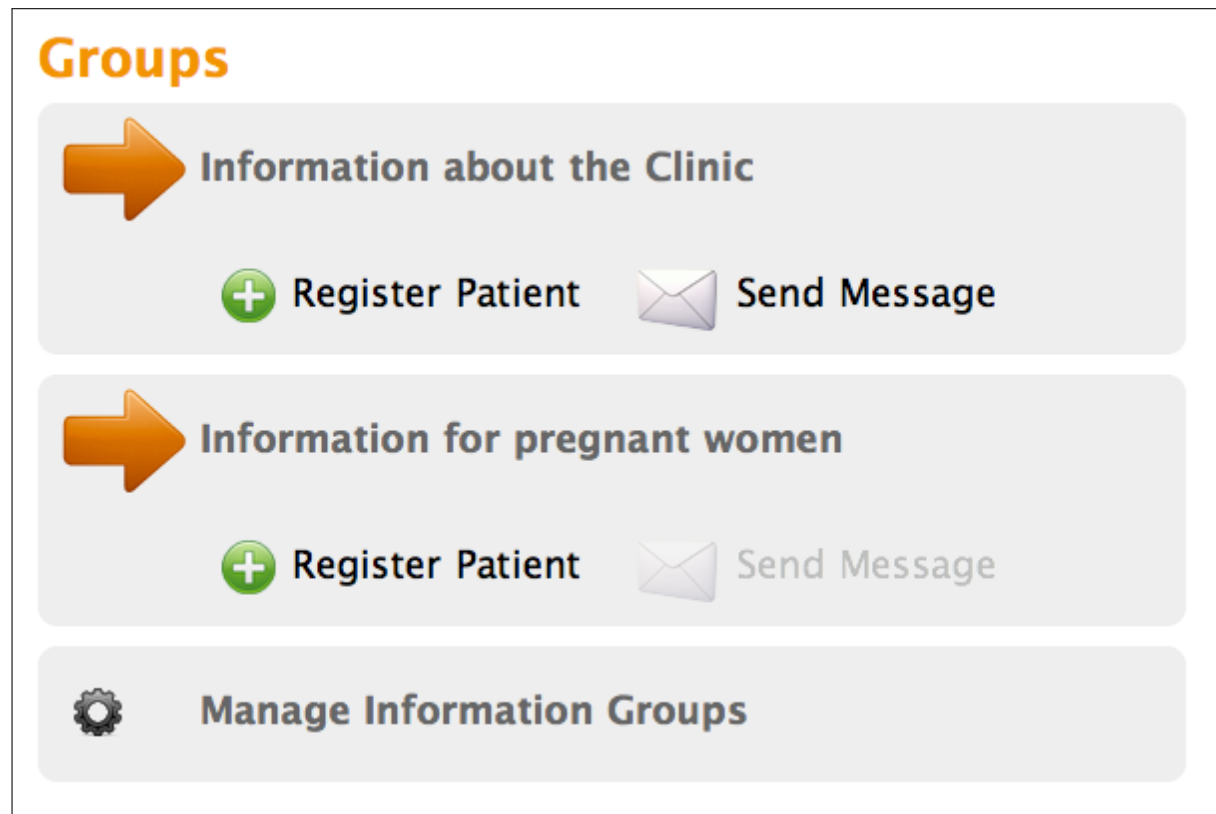
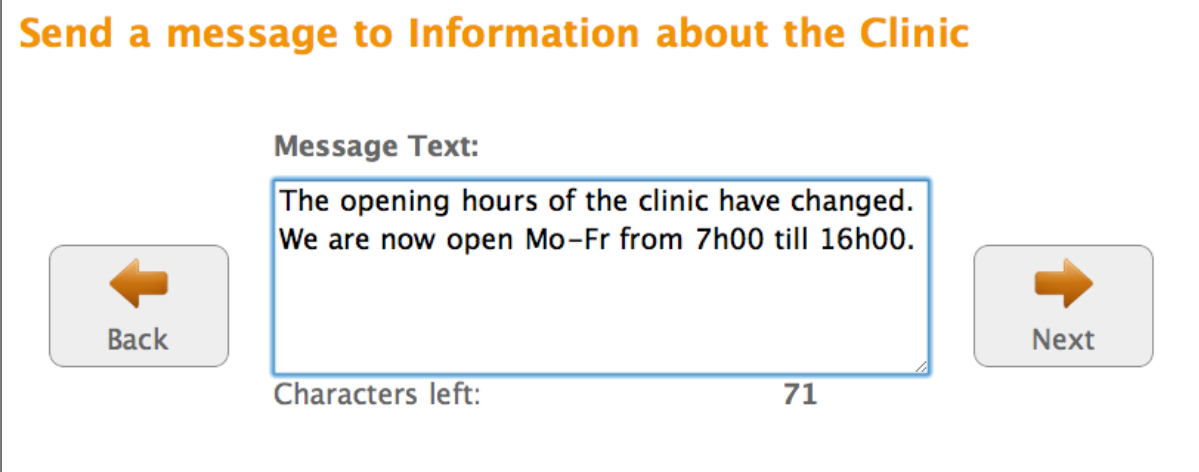


Figure 11: You find all existing groups on the main screen

3.5.1 Sending a Message

When you want to send a message to a certain group, you have to click on “send” next to the title. So let’s assume, I want to send a message to the group named “Clinic Information”. I click on “send” next to “Clinic Information” on the main page. This leads me to a new screen:



Send a message to Information about the Clinic

Message Text:

The opening hours of the clinic have changed.
We are now open Mo–Fr from 7h00 till 16h00.

Back

Next

Characters left: 71

Figure 12: Writing a new message to the Clinic Information group

You have only 160 characters for your message, so that it all fits in one SMS. This message will then be sent to all subscribers to that group.

After you have clicked on “next” you see the success message:

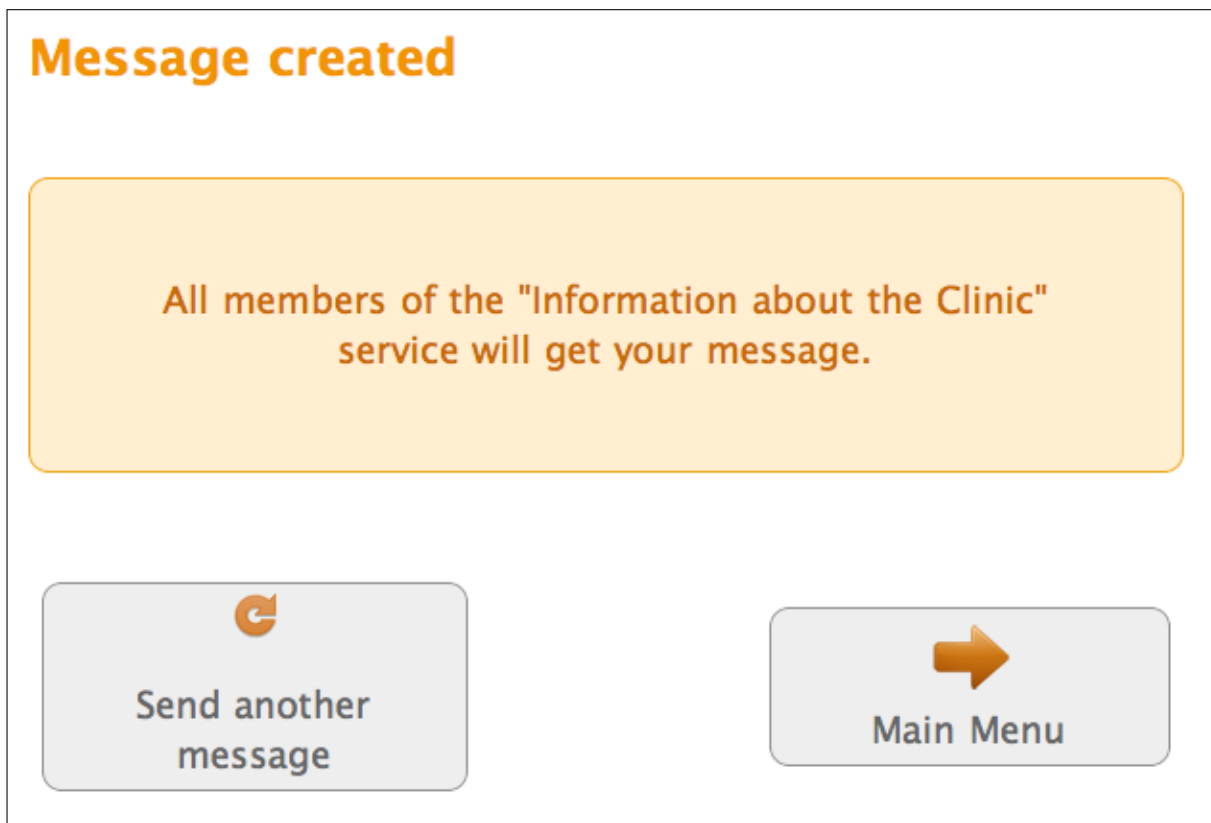


Figure 13: Having successfully sent an information to all group members

3.5.2 Registering Patients to Groups

But who subscribes the patients to the groups? This must also be you, the clinic staff. So for example, if there is a pregnant woman, it might be good to ask her if she wants to be subscribed to “Information for pregnant women”. Then she would receive all messages that the clinic writes on the topic, until she is unsubscribed again.

In order to register a patient, click on “Register Patient” next to the name of the group. So in our example you would have to click as shown in figure 14.



Figure 14: To register a patient in the group “Information for pregnant women”, you have to click on “Register Patient”

Then you can enter the phone number of the patient and choose, if he/she should receive an SMS or a phone call. After that, click on “next”. If you have entered all information correctly, you should then see a successmessage. Then the patient is registered in the group “Information for pregnant women”.

3.5.3 Removing Patients from Groups

When you want to remove a patient from a group, you need to know the phone number that the patient was registered with. Then you have to click on “Manage Information Groups” on the main menu. You will find a list of all existing groups, with two links for each group: “Remove group” and “Group members”. Click on “Group members” behind the group that you want the patient to unsubscribe of. We will use here again the example of the “Information for pregnant women” group.



Figure 15: In order to delete a patient from an information group, the “group members” link has to be followed’

You then see a list of all patients who are subscribed in that information group. Choose the patient that you want to delete and follow the link “Remove patient from group” which is next to that patient. Confirm that you do want to delete that patient and the patient is deleted.

3.5.4 Adding an Information Group

In order to add an information group, click on “Manage Information Groups”. Once again, you will see a list of all existing information groups. Right under that list, you can find a link “Create information group”. If you follow that link, you will find the screen as shown in figure 16.

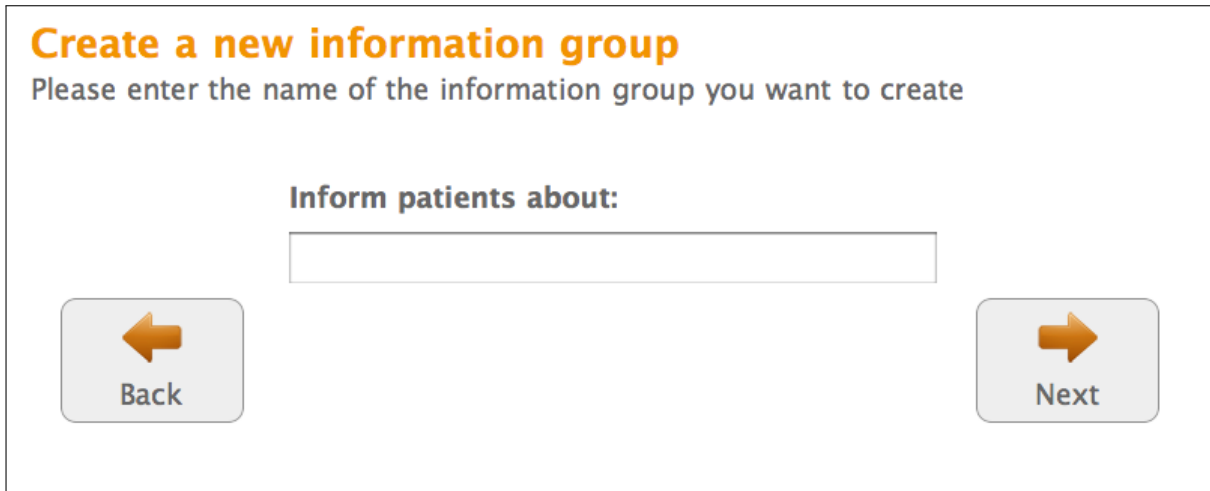


Figure 16: In this screen, the name of the group is entered

After having pressed on “save”, you return to the overview page of the information groups. Following the “Back to Main Menu” link which is under “Create Information Group”, you return to the main screen.

3.5.5 Deleting an Information Group

If you want to delete an information group, you have to follow the “Manage Information Groups” link on the main page. You will then again see the list of all existing information groups. Next to each group, you will find a link called “Remove Group”. Follow that link at the appropriate group and confirm your decision. Then the group is deleted. You can return to the main screen using the “Back to Main Menu” link.

3.6 Manage your Medicine

You can use Sendinel to inform patients when their medicine is available. Therefor you first need to register the patient when he wants a medicine which is not available at the moment. If the medicine arrives, you can send a message which will inform all patients that have been registered for this medicine before.

3.6.1 Register a Patient for a Medicine Waiting List

Click on “Register Patient” under “Currently Missing Medicine” and input the necessary information. First you have to enter the patients’ mobile phone number and choose the way of communication. After that you have to choose the medicine the patient is waiting for. If the right medicine is not in the list you can add a new one in “Manage Watiting Lists for Medicine” on the main menu (see also 3.6.3). You can then click next to finish the registration.

Register patient for Waiting List for Medicine

Please enter the patient's phone number and the way the patient wants to receive the notification. Then choose the medicine the patient is waiting for.

Phone number:

Way of communication:

 SMS  Phone Call

Medicine:

✓ ----

Aspirin

Neoangin

Back

Next

Figure 17: Register a patient

3.6.2 Inform About Arrival of Medicine

Click on “Send Message” under “Waiting Lists for Medicine - Currently Missing Medicine”. Then you will find a screen where you can choose the name of a medicine and write a text. You can only choose names of medicines which have a waiting list. If you can’t find the name of a medicine that has newly arrived in the list, it means that no one is waiting for it and no one needs to be informed.

When you have chosen the name of the medicine, the text field is automatically filled with a standard text. If you like that text, you can click on the “Next”-button and all patients of the waiting list will receive it. Otherwise you may edit it first and then continue.

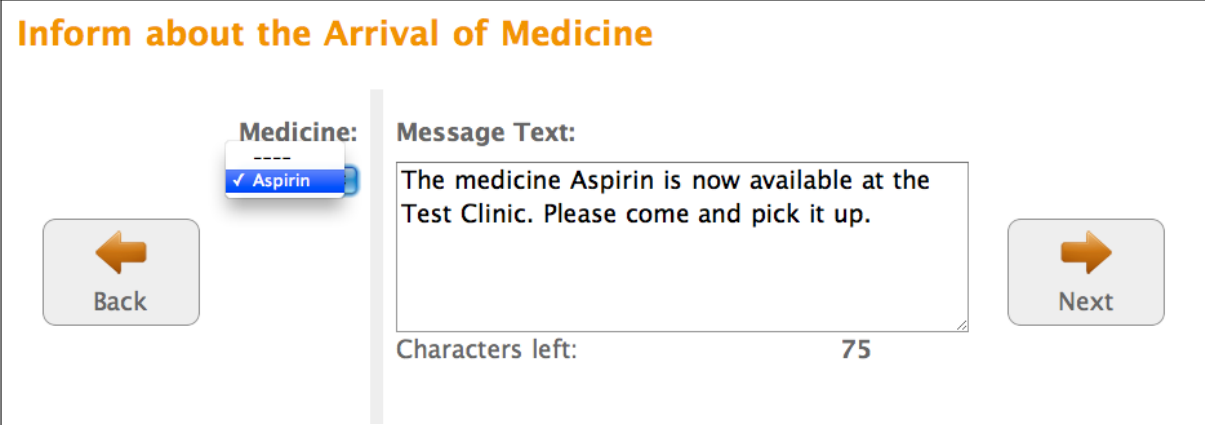


Figure 18: Inform about the arrival of new medicine

3.6.3 Add a new Waiting List for Medicine

After clicking “Manage Waiting Lists for Medicine” on the main menu you see an overview of all Medicines patients are waiting for. You can add a new waiting list by clicking “Create waiting list for medicine”. Here you have to enter the name of the new medicine.

3.6.4 Remove a Waiting List for Medicine

After clicking “Manage Waiting Lists for Medicine” You can remove a medicine waiting list by clicking “Remove list”. You should take care of waiting lists that have no members. If no one is waiting for a medicine you can remove the waiting list.

4 Question and Answers

4.1 How do I change the hospitalname?

To change the name of the hospital, you have to access the admin interface. For further details please refer to the installation manual.

4.2 How do I add another appointmenttype?

To add another appointmenttype, you have to access the admin interface. For further details please refer to the installation manual.

4.3 How do I enable or disable Bluetooth® ?

To enable or disable the Bluetooth® -functionality of Sendinel, you have to access the admin interface. For further details please refer to the installation manual.

4.4 How do I enable or disable authentication?

If you want to switch the authentication on or off you have to change the settingsfile of Sendinel. For further details please refer to the installation manual.