



BUILDING AN ONLINE SYSTEM FOR APPOINTMENTS TO MEDICAL SPECIALIST

Ivelina Vardeva

*"PROF. D-R ASSEN ZLATAROV UNIVERSITY", BURGAS 8010, STR. PROF. YAKIMOV 1,
BULGARIA
ivardeva@gmail.com*

Abstract: *It is done an examination which aim is to support making an e-system for making an appointment to a medicine specialist. It is examined existing web-based technologies applied in similar systems as well as their advantages and disadvantages. For the examination work and for the elaboration are used web-date based and program languages.*

Developing an online based system gives a possibility for creating flexible applications planning to save time and financial resources for the users when they need to do an appointment as well as the medical specialists for their everyday work.

For the first time in Bulgaria that type system has been applied in the private business in few years ago. Its appliance at the medical institutions could reduce the time of waiting up in a queue in front the doctor's cabinet and it could bring a better organization at the medical centers.

Keywords: *Online system for appointments; online scheduling systems; online systems.*

REFERENCES

E-health could be described like a complex of measures based on technological, organizational and law framework. It provides an information and ranges the whole aspect of health system functioning.

The research context ranges a conformity with the requirements in developing a system of this kind: easy and convenient user interface like an appointment to medical specialist and editing. It must be possible for service users: for both - patients and doctors [1, 2, 3, 4]. The system have to provide a possible expanding - this means a flexibility of system appliance. Fast operations of the system must be predicted independently of the data volume in it.

This type system could decrease the expenses of a medical center in regarding to organization of visitation. Main defects and risks of these systems are the emergency cases which could be directed to emergency room so in that

way the work schedule wouldn't be disturbed.

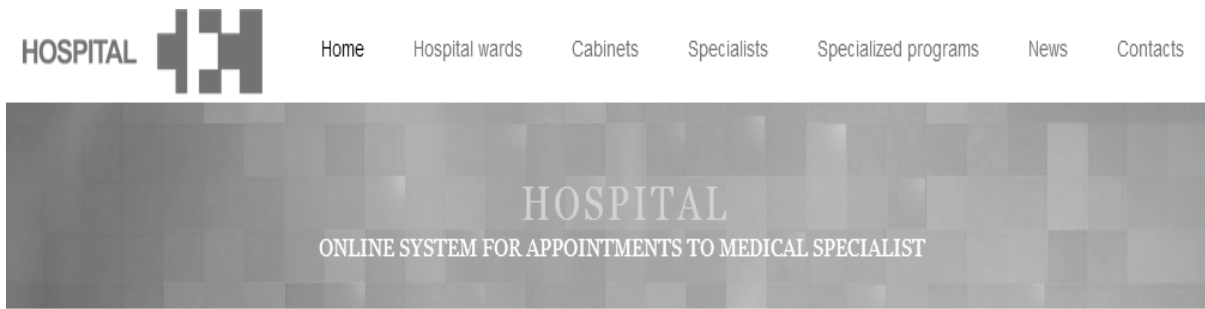
Another advantage of the system is an easy control of every patient's visitations in the concrete medical center, which medical specialists they have visited and if they have outnumbered their due free visitations. Figures from Fig. 1 to 7 are presented screens showed the steps that will follow for appointments in online system.

The screenshot shows the 'Appointment' page of the online system. At the top, there is a navigation menu with 'Home', 'Hospital wards', 'Cabinets', 'Specialists', 'Specialized programs', 'News', and 'Contacts'. Below the menu is a header with the 'HOSPITAL' logo and the text 'ONLINE SYSTEM FOR APPOINTMENTS TO MEDICAL SPECIALIST'. The main content area is titled 'Appointment:' and contains the instruction 'To get access to the system must fill the following fields.' Below this, there are three input fields: '*First and last name: Ivelina Vardeva', '*Mobile phone: 359 123 456 789', and '*Security code: 2322753'. A small image of a security code '2322753' is shown below the security code field, with the instruction '(please insert code from the picture)'. A 'next' button is located at the bottom of the form. At the bottom of the page, there is a copyright notice: 'Copyright © 2014 ivardeva.com developer: Ivelina Vardeva'.

Fig.1 Online system for appointments to medical specialist - Appointment

The screenshot shows the 'Choosing of medical cabinet' page of the online system. At the top, there is a navigation menu with 'Home', 'Hospital wards', 'Cabinets', 'Specialists', 'Specialized programs', 'News', and 'Contacts'. Below the menu is a header with the 'HOSPITAL' logo and the text 'ONLINE SYSTEM FOR APPOINTMENTS TO MEDICAL SPECIALIST'. The main content area is titled 'Choosing of medical cabinet' and contains the text 'Patient: Ivelina Vardeva.' and 'Please select cabinet:'. Below this, there is a list of medical cabinets with radio buttons: 'Anesthesiology', 'Internal Diseases', 'Gynaecology', 'Cardiology', 'Manipulation', 'Neurology', 'Pediatrics', 'Orthopaedics', 'Surgery', and 'Reproductive Health'. The 'Anesthesiology' option is selected.

Fig.2 Online system for appointments to medical specialist – Choosing of medical cabinet



Choosing a specialist

Patient: Ivelina Vardeva.

Cabinet: Anesthesiology

Please select specialist:

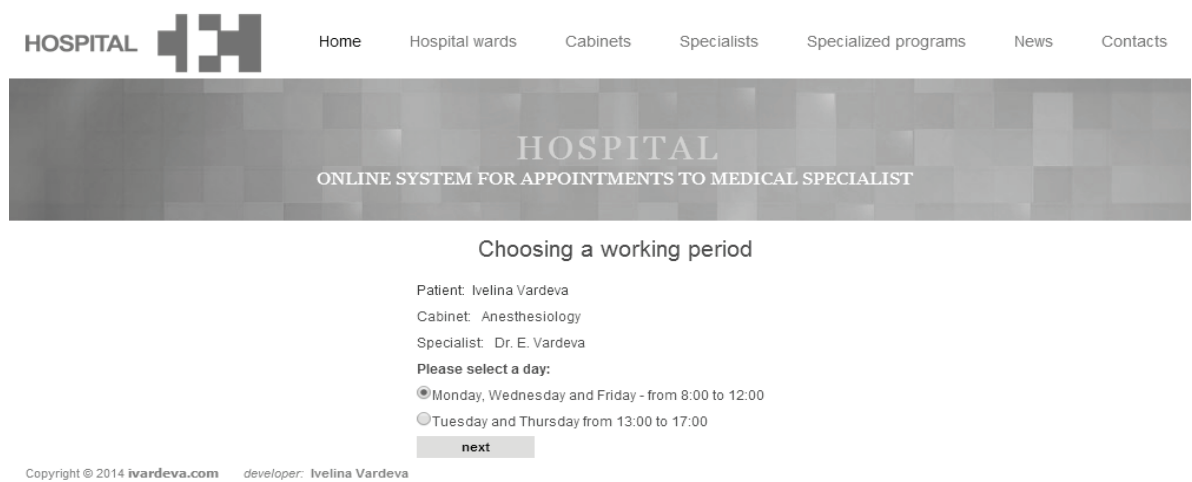
Dr. E. Vardeva

Dr. R. Petkova

next

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Fig.3 Online system for appointments to medical specialist – Choosing a specialist



Choosing a working period

Patient: Ivelina Vardeva

Cabinet: Anesthesiology

Specialist: Dr. E. Vardeva

Please select a day:

Monday, Wednesday and Friday - from 8:00 to 12:00

Tuesday and Thursday from 13:00 to 17:00

next

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Fig.4 Online system for appointments to medical specialist – Choosing a working period

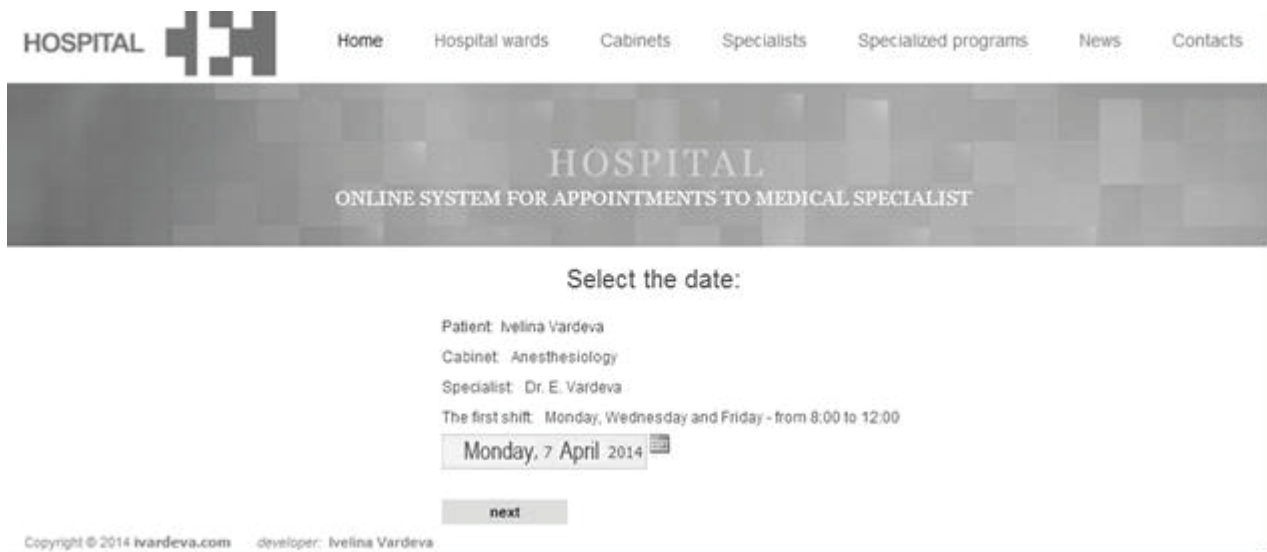


Fig.5 Online system for appointments to medical specialist – Select the date

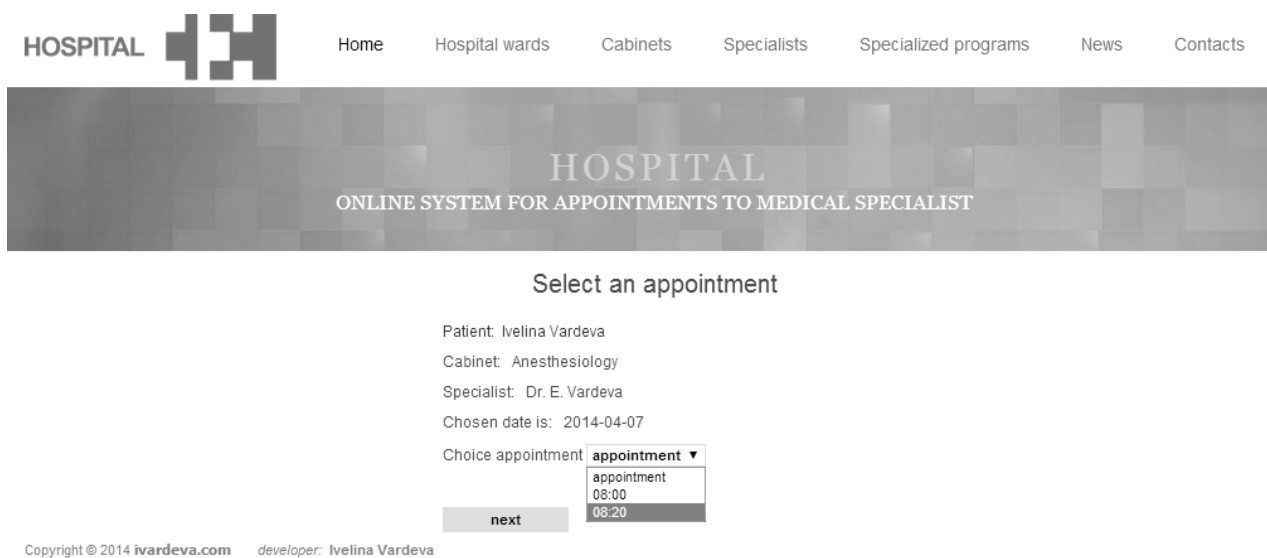


Fig.6 Online system for appointments to medical specialist – Select an appointment



Recorded data:

Patient: *Ivelina Vardeva*
Mob. phone: *359 123 456 789*
Specialist: *Dr. E. Vardeva*
Cabinet: *Anesthesiology*
Working shift: *first*
Data: *2014-04-07*
Hour: *08:20*

The query is saved successfully!

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Fig.7 Online system for appointments to medical specialist – Recorded data

Another part of the research includes information about system development in the time. Based on collected data could be determined what kind of medical services have been used from the patients, which are the most visited medical specialists and from what diseases have been treated the patients.

It is necessary the system to give a module for the patients as well as the medical specialists. Every doctor bears absolute responsibility for preparing a week schedule and observes the booked appointments for their room.

The research refers to patients' problems which concern waiting in front the doctor's room because of the lots of patients, confusion with the doctor's working shifts, leaves and national holidays. It is developed just a little part of web-based application including the exact making of appointment at one medicine section.

The main purpose of this web-based system is to cover patients' and doctors' requirements and to develop the application in use for the both parts. By using this kind of system could be helped taking a medicine decisions based on already collected data for patients' treatment. In that way it is possible to be increased the quality and the capacity of the treated patients.

European Union defines the e-health like "usage of the current informative and communicational technologies for citizen, patients and medicine specialists."

It is necessary to encourage a new sort of relationships between the medical centers and the citizen. The both parts have to be involved in taking decisions. The main directions of the e-health are committing systems and services to the users – patients and doctors. It is also necessary to be investigated the requirements for covering the specific needs of the medical centers.

The expected benefits of that sort system according to the quality range over giving a reliable medical information. Every patient has an access to their data in

every moment of time. The patients are given mobility of the services – they could choose the medical center.

CONCLUSION

The proposed system of e-appointment to a medical specialist could be applied by every type of health centers. The researches of the health centers giving web-based services show patients' satisfaction because they save time and financial resources.

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