# OB-GYN MEDICAL INFORMATION SYSTEM

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**Basic characteristics, essence of the development**
Medical information system (MIS) was created to automate work with medical documents in health care facilities of obstetrics and gynaecology specialization for all types of medical care: medical examinations, monitoring pregnant women, regular medical examinations and treatment in hospital.
The main tasks of the MIS are: information support of treatment and diagnostic processes, information support of work of medical personnel, report and analysis of the quality of the treatment process, control and rationalization of material, human and financial resources, planning and optimization of the treatment process.

**Patentable and competitive results**
The MIS enables to:
- Create a unified information environment of obstetrics and gynaecology departments, and laboratory and diagnostic facilities.
- Input and store electronic medical records of patients.
- Control medical prescriptions, monitor patients' state, control medicine expenses.
- Develop, create and automate planning, procedural, accounting and reporting documents.
- Fulfil analytical processing of medical data in real-time mode.
- Monitor indicators of quality of obstetrics and gynecology care.
- Prepare reports on health activities under the current legislation of Ukraine and make medical statistics forms.

**Comparison with world analogues**
While creating the IS, there were taken into account advantages and disadvantages of the best systems implemented in various countries, including the EU and the USA: digiChart OB / GYN, WRS Health, VersaSuite OBGYN EHR and others.
It is proposed to use Oracle Database 11g as a DMBS.

**Economic attractiveness of the development for market promotion, implementation, parameters, price**
Features that distinguish the system from others:
1) The MIS is compatible with the international HL7 medical coding system, the basic configuration includes treatment protocols of pathological conditions of obstetrics and gynaecology type that cover much of women's diseases and programmes of prenatal care, approved by the Ministry of Health of Ukraine.
2) For obstetrics care, the MIS uses interactive diagrams that allow taking standard prenatal records under orders and protocols of prenatal care.
3) Presence of advanced means of visualization and data analysis, providing joint conduct of research and programmes. The system uses QlikView software package for reporting.
4) In order to ensure proper control of data, the MIS uses Oracle advanced security means, restricting access, passwords, encryption technologies, etc.
Medical facilities and HEI of Ukraine get the MIS according to the DaaS model – it is installed directly at the customer, being constantly updated and maintained by the developer.

**Branches, ministries, departments, enterprises and organizations where the development results are going to be implemented**
The product is aimed at obstetrics and gynecology medical institutions of Ukraine. The programme can be used in specialized medical institutions and higher educational institutions of the Ministry of Health.

**Development readiness level** - (100%). The system is at the stage of beta testing.

## Implementation results

The user interface is designed in the form of web pages. Data output is carried out using Ajax DHTML and XML.
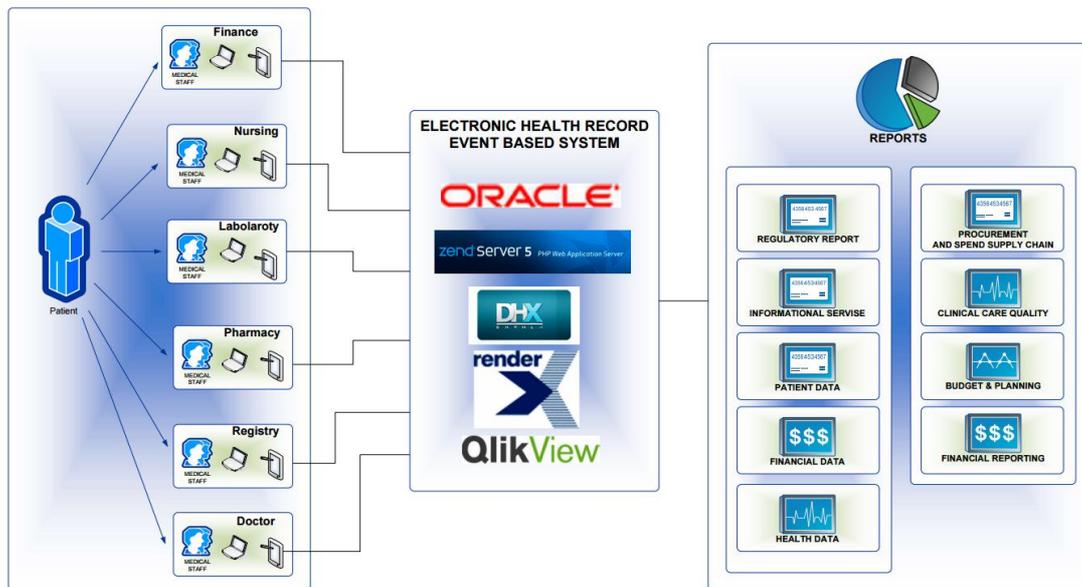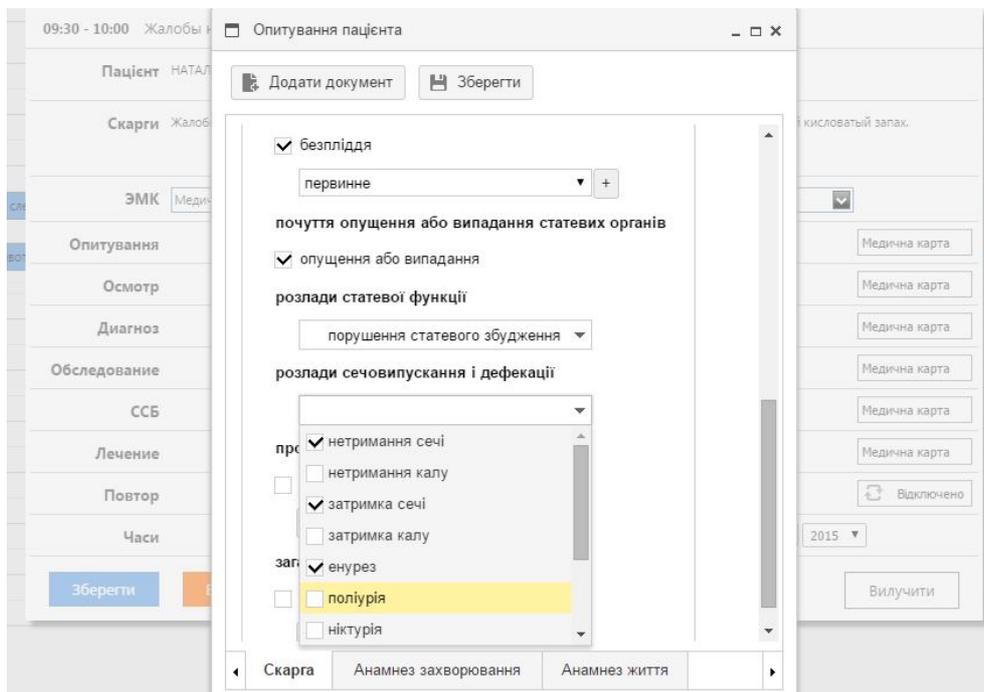


Figure 1 – Basic structural components of the system



Figure 2 – Interface fragment