AUTOMATIC ROBOTIC SYSTEM OF DIAGNOSING AND TREATMENT IN INTENSIVE CARE UNIT

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In the intensive care unit, on average, patients experience 1.7 errors per day. Medication errors account for 78% of serious medical errors in the ICU (Rothschild et al, 2005).

Strategies that have been shown to be successful:

- Medication standardization
- Computerized physician order entry (CPOE)
- Bar code technology
- Computerized intravenous infusion devices

Actuality
AUTOMATIC ROBOTIC SYSTEM OF DIAGNOSING AND TREATMENT
What is it?

Block of drug administration

Analytical unit

Patient monitor

Portable blood analyzer
Analytical unit: decision support system - processing of received information, the definition of the state, providing recommendations.

Protocols based on National Clinical Guidelines:

- Thromboembolia of pulmonary artery
- Asthmatic status
- Cardiopulmonary edema
- Acute coronary syndrome
- Hypo- and hyperglycemic coma
- Live threatening arrhythmias
- Hemorrhage
- Septic conditions
- Stroke

Analytical unit

Algorithms in the System

Medical protocol description language
How does the System work?

Patient data
Bedside Monitor
Required additional information

Diagnosis
Confirmation

Treatment

[Image of a medical monitoring screen with readings]
Materials and methods

Interface of the System
Results

38 Diagnosed
34 Beyond worked
13 Misdiagnosed

Number of patients received treatment by the System
Automatic robotic system helps to diagnosis in 95% of cases and suggest about first therapeutic actions. In time sensitive cases it can prevent misdiagnosis and improper treatment.

Conclusion
Questions?