Information on infectious agents

ULSVIS collects and analyzes the data on infectious agents isolated in the laboratories operating in 22 personal and public health care institutions and private laboratories. In 2015, the clinical material of 5.470 individuals, who were subjected to bacteriological, parasitological and serological tests, was examined in the laboratories.

Among infectious agents registered in 2015, intestinal infectious agents accounted for 76.6%. Campylobacter (52.1%, dominate *C.jejuni*) and Salmonella (41.2% dominate *S.enteritidis*) were the predominant intestinal pathogens.

Neither serogroup nor serotype of the major part of cultured microorganisms of *Neisseria meningitidis* and *Streptococcus pneumoniae* was identified. In 2015, 201 pathogens *Streptococcus pneumoniae* were cultured from blood and/or cerebrospinal fluid, of which only 73 were serotyped. Non-serotyped accounted for 71.6%. Of all cultured *Neisseria meningitinis* 38 agents were serogroup B, 2 microorganisms were serogroup C. 15 *Neisseria meningitidis* agents (27.3%) were non-typed.

Identification of infections agents from clinical samples (type, serogroup and serotype) remain a serious problem. Typing and subtyping of Human zoonotic agents, and surveillance of antimicrobial resistance is regulated by legislation, aimed at improving the quality of microbiological diagnostics and ensuring that the cultures of infectious were identified agents isolated in infection outbreaks were identified and typed.

Huge antimicrobial pharmaceuticals usage still relevant in Lithuania. Antibiotics are used often, too long and their prescription usually are not substantiated by microbiological research. From all microorganisms collected at ULSVIS system in 2015, the Methicillin-resistant *Staphylococcus aureus* (MRSA) accounted for 10.5 %.

Ciprofloxacin-resistant *Campylobacter* – 85.4%; Tetracyclines-resistant *Campylobacter* – 76.6 %; Tetracyclines-resistant *Salmonella typhimurium* - 71%; Nalidixic Acid-resistant *Salmonella enteritidis* – 29.6 %, Ciprofloxacin-resistant *Salmonella enteritidis* – 16.9% and ect. 3.8% of *S. typhimurium* was resistant to four antimicrobial pharmaceuticals.

According to the latest research[1], more than 40% of antibiotic prescriptions are inappropriate and needlessly.

In the survey participated by 43 countries out of 53, revealed that:

- in 19 European countries, people can legally buy some antibiotics over the counter;
- in many countries, the general public can still buy antibiotics over the counter, without diagnosis or prescription, and use them at will;
- in 5 countries, people can buy antibiotics on the Internet without a prescription;
- in 12 countries, people can buy antibiotics from other sources than a pharmacy, such as the black market or veterinary clinics;
- in 15 countries, pharmacists and doctors work closely together on prescribing;
- in 36 countries, survey respondents agree that pharmacists can provide needed advice on antibiotic use to patients.

[1] Pharmacists have decisive role in combating antibiotic resistance, says new WHO European survey, 2014