the law did not meet the benchmark of 95% recommended by the World Health Organization.

Only 81.3% ($\phi = 7.79$, $p < 0.01$) were timely vaccinated for the first time against hepatitis B, only 35.5% ($\phi = 19.92$, $p < 0.01$) received the third vaccination on time; and only 77.9% ($\phi = 9.25$, $p < 0.01$) were vaccinated against tuberculosis. The proportion of children timely vaccinated against whooping cough, diphtheria, tetanus and polio, was 45.5% ($\phi = 19.80$; $p < 0.01$), and those who have completed the full vaccination set until 6 months accounted for 22.3% ($\phi = 22.42$, $p < 0.01$).

The coverage of children with vaccination against measles, rubella and mumps in the decreed period (12 months) was also insufficient and represented 42.5% ($\phi =$ of 17.03, $p < 0.01$) which does not guarantee epidemiological welfare of the territory, and in case of introduction of infection it can lead to its spread among the unvaccinated population.

According to the vaccination documentation, parents refusal to vaccinate and medical conditions (prematurity, low weight at birth, respiratory distress, neonatal jaundice, maternal HIV-infection) were causes of failure to immunize children against tuberculosis and hepatitis B in maternity. Temporary medical exemptions to immunization (acute respiratory infection, intestinal infection, allergic dermatitis), delayed appearance to the vaccination, and parents refusal to vaccinate were the leading causes of violation of the timing for subsequent vaccination in the outpatient department.

Thus, the examination of outpatient medical records revealed serious shortcomings in terms of preventive vaccination regulated by National calendar and timing of vaccination in young children, which forms a group of people susceptible to infection which is sufficient for activation of the epidemic process.

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REGISTRATION OF DYSENTERY SONNEI CASES IN SPECIALIZED MEDICAL INSTITUTIONS OF THE LENINGRAD REGION

O.A. Istorik[1], E.A. Mikhailova[1], M.A. Chorniy[1], Z.N. Matveeva[2], A.A. Porin[2], L.A. Kaftyreva[2]

[1]Department of Rospotrebnadzor of the Leningrad Region, St. Petersburg, Russia; [2]St. Petersburg Pasteur Institute, St. Petersburg, Russia

We conducted an epidemiological investigation of infectious disease group focus that emerged in January 2018 in one of the specialized hospitals in the Leningrad region.

Within eight days in one of hospital departments nine patients and the department nurse developed similar symptoms: abdominal pain, fever and diarrhea. In all cases, "Acute gastroenteritis of mild severity" was initially diagnosed. Subsequently every case had *S. sonnei* positive result of feces examination. In blood sera specific antibodies were detected in diagnostic titres.

The presumed source was the patient admitted to the hospital in the incubation stage. Numerous violations of the hospital sanitary and epidemiological regime as well as personal hygiene by patients and staff made it possible to implement a contact-household transmission route and the emergence of a group illness. Patients were transferred to the clinic of infectious diseases, preventive and anti-epidemic measures in the hospital allowed to quickly stop the outbreak. Strains of *S. sonnei* characterized by identical enzymatic properties and antibiogram. The strains were resistant to ampicillin, tetracyclines, chloramphenicol, sulfonamides, trimethoprim, and were characterized by a low level resistance to fluoroquinolones. Sensitivity persisted in the expanded spectrum of cephalosporins (ceftazidime, cefatoxime, cefepime) and carbapenems (merapenem), aminoglycosides (gentamicin, tobramycin, amikacin), nitrofurans.

The genotyping of isolated strains using RAPD-PCR, like the phenotypic methods, showed their identity.

During laboratory and clinical examination of medical and technical personnel of the department, as well as workers of the food unit, shigelosis patients and carriers of *S. sonnei* were not identified.

A shigellosis outbreak in a specialized hospital with a long stay of patients, caused by *S. sonnei*, arose as a result of the introduction of infection to the department, and had nosocomial spreading through a contact-household transmission route.

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ZIKA FEVER IN THE WORLD AND THE RISK OF ITS DISTRIBUTION IN THE RUSSIAN FEDERATION

A.B. Khaitovich, M.E. Lukyanova

V.I. Vernadsky Crimean Federal University, Simferopol, Russia

Zika fever is an arbovirus transmissible disease caused by Zika virus and transmitted by mosquitoes Aedes aegypti and Aedes albopictus. Discovered for the first time in 1947 in Uganda, the Zika virus led to diseases among people in the 1960s–1980s in Africa and Asia, then to outbreaks in 2007 on the island of Yap in the Western Pacific and in 2013–2014 in French Polynesia. The epidemic, which began in the fall of 2015 in South and Central America, reached 70 countries and led to more than half a million cases. The aim and objectives of the work are to analyze the dynamics of the incidence of Zika fever and to identify tendencies in the distribution in the regions of the world, to identify the features of mosquito biology and to assess the factors affecting the spread of these diseases and the incidence among humans, and to determine the risks of spreading the fever to other areas.

With the help of GIS, an epidemiological analysis of the incidence and spread of Zika fever was carried out, and the features of mosquito biology were determined. Information about the incidence is obtained from the information messages of the WHO and Rospotrebnadzor. Statistical and graphical methods of investigation were used to process the results.

The epidemic process of Zika fever in South and Central America has come to an end. The analysis of morbidity, which was carried out, showed that the outbreak was uneven in time and space, with 6 phases of the epidemic process identified. The obtained data for biological characteristics of populations of two species of mosquitoes allowed us to attribute *Aedes aegypti* to the group of more important species for epidemic spread — to the main carriers, and *Aedes albopictus* to less significant, secondary carriers. The information obtained does not give an accurate prediction of the further spread of Zika fever in different regions. But it can be assumed that there can be a region in the Russian Federation — the Black Sea coast of the Russian Federation (the Caucasus and the Crimea), which should be assessed at present as unfavorable for the formation of a focal point for augmented transmission of infection. However, with changing climatic conditions, the situation may change. The causative agents of some fevers may expand the regions of distribution and this is associated with the same types of mosquito vectors as in the case of Zika fever.