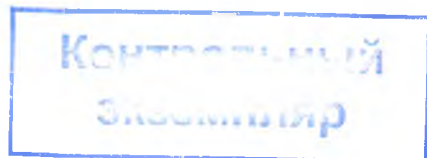


MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
EDUCATIONAL INSTITUTION
BELARUSIAN STATE MEDICAL UNIVERSITY



APPROVED

by First Vice-Rector, Professor

S.V. Gubkin

Sub 12. 2016

Reg. № УД-г. 549a/1617/уч.

INFECTIOUS DISEASES

**Curriculum of higher educational institution
in the educational discipline for the specialty:**

1-79 01 07 Dentistry

Minsk, BSMU 2016

Curriculum is based on the standard educational program “Infectious diseases”, approved 31.08.2016, registration № ТД-Л. 579/тип.

COMPOSED BY:

I.A. Karpov, Ph.D., D.Sc., Professor;

I.O. Stoma, Ph.D., Assistant Professor;

E.N. Yagovdik-Telezhnaia, Ph.D., Associate Professor

RECOMMENDED FOR APPROVAL:

by the Department of Infectious Diseases of the Educational Institution “Belarusian State Medical University”
(protocol № 4 of 09.11.2016);

by the Methodological Commission of Preventive Medicine Disciplines of the Educational Institution “Belarusian State Medical University”
(protocol № 3 of 01.12.2016)

Explanatory note

Infectious Diseases is an academic discipline containing the systematized scientific data and methodology concerning etiology, pathogenesis, clinical features, diagnostics and prevention of infectious diseases.

The Curriculum of the discipline includes the newest scientific data on the causes, classification, clinical features, mechanisms of pathogenesis, diagnostics, differential diagnosis, prevention, treatment of typical infectious diseases, which is very important especially for medical students. Infectious diseases remain frequent causes of morbidity and mortality in many countries. It is also important to understand the significant changes in clinical manifestations of numerous infectious diseases, the discovery of new pharmacological substances and diagnostic methods, new ways of prevention of infectious diseases. It is very important for modern doctors to train the practical skills of clinical work with a patient having a suspected infection. The mentioned changes in well-known infectious diseases and the spread of new infectious diseases make it necessary to combine the knowledge and skills previously learned at such disciplines as General Chemistry, Microbiology, Virology, Immunology, Pathological Physiology, Pharmacology, Internal Diseases, Surgery.

The purpose of teaching and studying of Infectious Diseases is to provide high quality teaching and support of the educational process, which contributes to the training of highly qualified specialists possessing up-to-date knowledge, creative abilities and comprehensive skills in the area of infectious diseases.

The tasks of Infectious Diseases tuition are composed to provide a fundamentally new approach to the educational process based on the integrity of teaching and substantial student independent work in the discipline which is an important area of strategic innovations in education. Aims include the acquiring of skills and knowledge in the areas of:

- main definitions in modern infectology;
- causes and mechanisms of development and spread of infectious diseases;
- clinical features, diagnostics, differential diagnosis and treatment of most important infectious diseases;
- factors contributing to actual condition of infectious diseases.

The tasks of teaching the Infectious Diseases discipline include the formation of students' social, personal and professional competencies based on the knowledge and application of:

- modern aspects of etiology, epidemiology of infectious diseases;
- questions of pathogenesis of infectious diseases;
- clinical features of infectious diseases;
- minimal number of clinical, laboratory and instrumental diagnostic work-up methods for infectious diseases;
- main principles of treatment of infectious diseases.

The successful studying of Infectious Diseases requires skills and knowledge previously acquired in :

General Chemistry. Blood electrolytes. Blood acidosis. Blood alkalinity.

Microbiology, virology, immunology. Classification of microorganisms. Methods of cultivation and identification. Immunity, its characteristics during infectious diseases.

Pathological physiology. Changes in physiological processes during infections.

Pharmacology. Classification of drugs, mechanisms of action, drug interactions, indications and contraindications for anti-infective drugs.

Internal Diseases. Differential diagnosis of therapeutic and infectious diseases.

Surgery. Differential diagnosis of surgical and infectious diseases.

The structure of the curriculum in the educational discipline Infectious Diseases is based on 10 topics, including questions on general and specific infectology.

As a result of studying the Infectious Diseases discipline the student has to know:

- the causes, classification, clinical features, mechanisms of pathogenesis, diagnostics, differential diagnosis;
- methods of prevention, treatment of typical infectious diseases;
- physicians' strategy and methods of urgent medical help in extremely dangerous, epidemic infections.

Student are to be able to:

- determine the indications for additional diagnostic methods and discuss the gained data;
- carry out the differential diagnosis of infectious diseases with non-infectious conditions;
- discuss the clinical diagnosis according to other specialists' consultations;

Students are to master:

- skills of assessment of severity level of infectious diseases;
- methods of interpretation of rash characteristics;
- perform urgent medical help in case of hypovolemic shock, including rehydration volume calculation.

Total number of hours for the study of the discipline is 42 academic hours. Classroom hours according to the types of studies: lectures – 12 hours, practical seminars - 15 hours, student independent work (self-study) – 15 hours.

Current assessment is carried out according to the syllabus of the specialty in the form of a credit (8th semester).

The Form of higher education is full-time.

THEMATIC PLAN

Section (topic) title	The number of class hours	
	Lectures	Practical classes
1. General questions of infectology	2	1
2. Diarrheal diseases	-	2
3. Infectious diseases of central nervous system	2	1
4. Viral hepatitis	1	2
5. Acute respiratory viral infections	-	1
6. Odontogenic sepsis	2	2
7. Infectious complications in maxillofacial surgery	1	2
8. Infections of oral cavity	1	1
9. HIV-infection	2	2
10. Healthcare-associated infections	1	1
Total hours	12	15

CONTENT OF THE EDUCATIONAL MATERIAL

1. General questions of infectology

General characteristics of infectious diseases. Basics of diagnostics, treatment and prevention of infectious diseases.

Main groups of pathogenic microorganisms. Normal and pathogenic microorganisms of oral cavity. Dysbiosis of oral cavity: definition, association with pathologic conditions.

Bacterial biofilms: definition, infections in dentistry, associated with biofilms.

Acutely developed hyperpyretic fever: main causes, strategy on out-patient level of medical help.

Fever of unknown origin: definition, main causes. Basics of diagnostics in patients with fever.

2. Diarrheal diseases

Pathogenetic types of infectious diarrheas: key microorganisms, mechanisms of development, clinical features.

Principles of etiotropic therapy of intestinal infections and invasions. Rehydration therapy: definition, types, principles. Pathogenetic therapy of diarrheal diseases. Probiotics: definition, role in prevention and treatment of intestinal infections and invasions.

Urgent medical help in patients with hypovolemic shock.

Non-typhoid salmonellosis. Etiology. Epidemiology. Pathogenesis. Clinical manifestations. Diagnostics. Differential diagnosis. Treatment. Prevention.

Food poisoning (Food-borne disease). Etiology. Epidemiology. Pathogenesis. Clinical manifestations. Diagnostics. Differential diagnosis. Treatment. Prevention.

C.difficile-associated infection. Etiology. Epidemiology. Pathogenesis. Clinical importance in antibiotic-associated diarrheas. Clinical forms. Diagnostics. Differential diagnosis. Treatment. Prevention.

Stool analysis interpretation in acute diarrheal diseases. Plan of diagnostic work-up and treatment in a patient with acute diarrhea. Plan of epidemiological work in case of outbreak.

3. Infectious diseases of central nervous system

Main clinical symptoms of central nervous system diseases (meningitis, encephalitis, cerebral oedema): causes, clinical features, diagnostics, principles of pathogenetic therapy.

Infectious diseases of central nervous system of odontogenic origin (meningitis, brain abscess). Etiology. Pathogenesis. Clinical manifestations. Diagnostics. Differential diagnosis. Treatment. Prevention.

Meningococcal infection. Etiology. Epidemiology. Pathogenesis. Classification. Clinical manifestations. Diagnostics. Differential diagnosis. Treatment. Prevention.

Interpretation of cerebrospinal fluid analysis. Urgent medical help on out-patient stage for patients with meningococemia, meningitis.

4. Viral hepatitis

Acute viral hepatitis. Etiology. Epidemiology. Pathogenesis. Modern classification. Clinical manifestations. Diagnostics. Differential diagnosis. Treatment. Prevention.

Chronic viral hepatitis: Etiology. Epidemiology. Pathogenesis. Modern classification. Clinical manifestations. Diagnostics. Differential diagnosis. Possibilities of etiotropic treatment. Prevention.

Plan of diagnostic work-up for patients with hepatitis. Indications for hepatitis B vaccination.

5. Acute respiratory viral infections

Acute respiratory viral infection (common cold): definition, main causative agents (parainfluenza, adenoviruses, RS-viruses, rhinoviruses), clinical features, laboratory diagnostics, principles of pathogenetic therapy.

Flu (influenza). Etiology. Epidemiology. Pathogenesis. Modern classification. Clinical manifestations. Diagnostics. Differential diagnosis. Possibilities of etiotropic treatment. Prevention.

Severe acute respiratory syndrome: definition, causes, treatment strategy.

Plan of diagnostic work-up and treatment of a patient with acute respiratory viral infection. Flu vaccination – indications and contraindications.

6. Odontogenic sepsis

Sepsis: main causes, pathogenesis, modern classification, clinical manifestations, diagnostics, principles of etiotropic and pathogenetic treatment.

Strategy in patients with severe sepsis and septic shock, urgent medical help.

7. Infectious complications in maxillofacial surgery

Cellulitis. Etiology. Pathogenesis. Clinical manifestations. Diagnostics. Differential diagnosis. Antibacterial therapy. Prevention.

Infections of deep fascial layers of head and neck. Etiology. Pathogenesis. Clinical manifestations. Diagnostics. Differential diagnosis. Antibacterial therapy. Prevention.

Perioperative surgical prophylaxis of infectious complications during dental manipulations.

Plan of diagnostic work-up and treatment of patients with infectious complications in maxillofacial area.

8. Infections of oral cavity

Acute tonsillopharyngitis: etiology, clinical features, differential diagnosis of bacterial and viral tonsillopharyngitis, principles of etiotropic and pathogenetic therapy.

Herpetic stomatitis. Etiology. Pathogenesis. Clinical manifestations. Diagnostics. Differential diagnosis. Etiotropic therapy. Prevention.

Systemic infections with manifestations in mucosal layer of oral cavity (varicella-zoster virus, cytomegalovirus, Epstein-Barr virus, enteroviruses, measles). Differential diagnosis with non-infectious stomatitis (systemic diseases of connective tissues, chemotherapy-induced mucositis).

Plan of diagnostic work-up in patients with infections of oral cavity. Principles of etiotropic and pathogenetic therapy.

9. HIV-infection

HIV-infection. Etiology. Epidemiology. Pathogenesis. Modern WHO stages classification. Early and late clinical manifestations. Laboratory diagnostics. Differential diagnosis. Treatment indications. Principles of antiretroviral therapy.

Clinical manifestations of HIV in oral cavity: causes, diagnostics, differential diagnosis, treatment.

HIV transmission prevention (primary, pre-exposure, post-exposure, vertical transmission).

10. Healthcare-associated infections

Definition of healthcare-associated infections, main causes, laboratory diagnostics, modern etiotropic therapy

Infectious control in modern hospital: definition, organization principles.

Prevention of infective endocarditis during dental manipulations: indications, choice of antibiotics, dosing regimens.

Anaphylactic shock: causes, principles of urgent medical help.

EDUCATIONAL DISCIPLINE CURRICULAR CHART

Section, topic number	Section (topic) name	number of hours		Self-studies	Other (literature, manuals etc.)	Form of control
		lectures	practical (<i>seminars</i>)			
1.	General questions of infectology	2	1	1	[1-3], 1p	Interviews. Electronic tests. Electronic situational tasks and tests
2.	Diarrheal diseases	-	2	1	[1-2], [4]	Interviews. Individual reports on seminars
3.	Infectious diseases of central nervous system	2	1	2	[1-3], 2p	Interviews. Individual reports on seminars
4.	Viral hepatitis	1	2	2	[1-4], 3p	Interviews. Individual reports on seminars
5.	Acute respiratory viral diseases	-	1	2	[1-3]	Interviews. Individual reports on seminars
6.	Odontogenic sepsis	2	2	1	[1], [3], 4p	Interviews. Individual reports on seminars.
7.	Infectious complications in maxillofacial surgery	1	2	2	[1], [3], 5p	Interviews. Individual reports on seminars.

Section, topic number	Section (topic) name	number of hours		Self-studies	Literature, manuals	Form of control
		lectures	practical (<i>seminars</i>)			
8.	Infections of oral cavity	1	1	1	[1], [3], 5p	Interviews. Individual reports on seminars.
9.	HIV-infection	2	2	2	[1-3], [5], 6p	Interviews. Individual reports on seminars. Situational tasks and tests.
10.	Healthcare-associated infections	1	1	1	[1-2], [4], 3p	Tests. Interviews. Situational tasks and tests. Credit.
Totally:		12	15	15		

INFORMATION AND INSTRUCTIONAL UNIT

LITERATURE

Basic (relevant):

1. Electronic Education and Methodological complex of Infectious Diseases for foreign students (University Intranet site for students).
2. Infectious diseases: tutorial / I.A. Karpov, Yu.L. Gorbich, N.V. Solovey, D.E. Danilov, A.I. Vasilenko, I.O. Stoma. – Minsk: BSMU, 2015. – 188 p.

Additional:

3. Mandell, Douglas, and Bennett's Principles and Practice Of Infectious Diseases / ed. by J.E. Bennett, R. Dolin, M.J. Blaser — 8th ed. – Elsevier, 2015. – 4909 p.
4. Infectious Diseases: A Clinical Short Course / F. Southwick. – McGraw-Hill, 2013. – 480 p.
5. HIV 2015/2016 / M.Altfeld [et al.]; edited by C.Hoffmann, J.K.Rockstroh. – Hamburg: Medizin Fokus Verlag, 2015. – 776 p.

LIST OF ASSESSMENT TOOLS

The following forms are used for assessment of competencies:

1. Oral form:
 - interviews;
 - oral reports;
 - credits.
2. Written form:
 - tests;
 - control questions;
 - situational tasks;
 - essays.
3. Oral-written form:
 - oral-written credits;
 - projects with oral defense.
4. Technical form:
 - electronic tests;
 - electronic situational tasks.

LIST OF VISUAL AIDS

Presentations

1p.	General questions of infectology
2p.	Infectious diseases of central nervous system
3p.	Viral hepatitis Healthcare-associated infections
4p.	Odontogenic sepsis
5p.	Infections of oral cavity Infectious complications in maxillofacial surgery
6p.	HIV-infection

LIST OF LECTURES

N	Lecture topic	hours
8 semester		
1	General questions of infectology	2 hours
2	Infectious diseases of central nervous system	2 hours
3	Viral hepatitis Healthcare-associated infections	2 hours
4	Odontogenic sepsis	2 hours
5	Infections of oral cavity Infectious complications in maxillofacial surgery	2 hours
6	HIV-infection	2 hours

LIST OF LABORATORY (*PRACTICAL*) SEMINARS

N	Topic of practical seminar	hours
8 semester		
1	General questions of infectology Viral hepatitis Diarrheal diseases	5 hours
2	Infectious diseases of central nervous system Acute respiratory viral diseases Infections of oral cavity HIV-infection	5 hours
3	Healthcare-associated infections Odontogenic sepsis Infectious complications in maxillofacial surgery	5 hours

LIST OF PRACTICAL SKILLS

- clinical talk with a patient, based on their personal characteristics and individual reaction;
- clinical examination (percussion, auscultation, palpation) in case of infectious diseases;
- determining the indications for additional diagnostic methods and discussing the obtained data;
- differential diagnosis of infectious diseases from non-infectious conditions;
- discussion of the clinical diagnosis according to modern classifications;
- prescription of etiotropic and pathogenetic therapy in typical cases of infectious diseases;
- urgent medical help in case of hypovolemic shock, anaphylactic shock.

**PROTOCOL OF THE CURRICULUM APPROVAL
BY OTHER DEPARTMENTS**

Title of the discipline requiring approval	Department	Amendments to the curriculum of the academic discipline	Decision of the department, which designed the curriculum (date, protocol number)
Microbiology, virology, immunology	Microbiology, virology, immunology	No amendments made	Approved: protocol № 4 of 09.11.2016
Pathological physiology	Pathological physiology	No amendments made	Approved: protocol № 4 of 09.11.2016
Pharmacology	Pharmacology	No amendments made	Approved: protocol № 4 of 09.11.2016
Orthodontics	Orthodontics	No amendments made	Approved: protocol № 4 of 09.11.2016
Surgical Dentistry	Surgical Dentistry	No amendments made	Approved: protocol № 4 of 09.11.2016
Therapeutic Dentistry	Therapeutic Dentistry	No amendments made	Approved: protocol № 4 of 09.11.2016

AUTHORS:

Head of the Infectious Diseases
Department of the Educational
Institution "Belarusian State Medical
University", Ph.D., D.Sc., Professor

I.A. Karpov

Assistant Professor of the Infectious
Diseases Department of the
Educational Institution "Belarusian
State Medical University", Ph.D.

I.O. Stoma

Associate Professor of the Infectious
Diseases Department of the
Educational Institution "Belarusian
State Medical University", Ph.D.

E.N. Yagovdik-Telezhnaia

Curriculum content, composition and accompanying documents comply with established requirements.

Dean of the Medical Faculty of
International Students

28.12 2016

V.V. Davidov

Methodologist of Educational
Institution
"Belarusian State Medical
University"

28.12 2016




S.A. Kharytonava

Head of the Foreign Languages
Department

28.12 2016

M.N. Petrova

Information about the authors of the curriculum

Name	Igor Aleksandrovich Karpov
Position, scientific degree, title	Head of the Infectious Diseases Department at Belarusian State Medical University, Ph.D., D.Sc., Professor
 work	(017) 334 95 64
Fax:	(017) 334 14 43
<i>E-mail:</i>	igor.karpov57@mail.ru
Name	Igor Olegovich Stoma
Position, scientific degree, title	Assistant Professor of the Infectious Diseases Department at Belarusian State Medical University, Ph.D.
 work	(017) 334 14 62
Fax:	(017) 334 14 43
<i>E-mail:</i>	igor.stoma@gmail.com
Name	Elena Nikolaevna Yagovdik-Telezhnaia
Position, scientific degree, title	Associate Professor of the Infectious Diseases Department at Belarusian State Medical University, Ph.D.
 work	(017) 334 14 62
Fax:	(017) 334 14 43
<i>E-mail:</i>	sergei-telegin@mail.ru