# INFECTIOUS DISEASES OF MOLDOVA





Stephen Berger, MD



2018 Edition

Infectious Diseases of Moldova - 2018 edition
Stephen Berger, MD
Copyright © 2018 by GIDEON Informatics, Inc. All rights reserved.

Published by GIDEON Informatics, Inc, Los Angeles, California, USA. www.gideononline.com

Cover design by GIDEON Informatics, Inc.

No part of this book may be reproduced or transmitted in any form or by any means without written permission from the publisher. Contact GIDEON Informatics at ebook@gideononline.com.

ISBN: 978-1-4988-1833-9

Visit www.gideononline.com/ebooks/ for the up to date list of GIDEON ebooks.

#### **DISCLAIMER**

Publisher assumes no liability to patients with respect to the actions of physicians, health care facilities and other users, and is not responsible for any injury, death or damage resulting from the use, misuse or interpretation of information obtained through this book. Therapeutic options listed are limited to published studies and reviews. Therapy should not be undertaken without a thorough assessment of the indications, contraindications and side effects of any prospective drug or intervention. Furthermore, the data for the book are largely derived from incidence and prevalence statistics whose accuracy will vary widely for individual diseases and countries. Changes in endemicity, incidence, and drugs of choice may occur. The list of drugs, infectious diseases and even country names will vary with time.

#### **Scope of Content**

Disease designations may reflect a specific pathogen (ie, Adenovirus infection), generic pathology (Pneumonia - bacterial) or etiologic grouping (Coltiviruses - Old world). Such classification reflects the clinical approach to disease allocation in the Infectious Diseases Module of the GIDEON web application. Similarly, a number of diseases which are generally diagnosed and treated outside of the field of Infectious Diseases are not included, despite the fact that a clear infectious etiology exists. Examples include Peptic ulcer, Creutzfeldt-Jakob disease, Human papillomavirus infections, etc. In contrast, a number of other entities of unknown etiology which do present to Infectious Diseases specialists have been included: Kawasaki's disease, Chronic fatigue syndrome, Kikuchi and Kimura diseases. Several minor infections having minimal relevance to the field of Infectious Diseases are not covered: Paronychia, Otitis externa, etc.

#### Introduction: The GIDEON e-book series

*Infectious Diseases of Moldova* is one in a series of GIDEON ebooks which summarize the status of Infectious diseases, Drugs, Vaccines and Pathogens in every country of the world.

Chapters are arranged alphabetically, by disease name. Each section is divided into three sub-sections:

- 1. Descriptive epidemiology
- 2. Status of the disease in Moldova
- 3. References

The initial items in the first section, Descriptive epidemiology, are defined as follows:

**Agent** Classification (e.g., virus, parasite) and taxonomic designation.

**Reservoir** Any animal, arthropod, plant, soil or substance in which an infectious agent normally lives

and multiplies, on which it depends primarily for survival, and where it reproduces itself in

such a manner that it can be transmitted to a susceptible host.

**Vector** An arthropod or other living carrier which transports an infectious agent from an infected

organism or reservoir to a susceptible individual or immediate surroundings.

**Vehicle** The mode of transmission for an infectious agent. This generally implies a passive and

inanimate (i.e., non-vector) mode.

A chapter outlining the routine vaccination schedule of Moldova follows the diseases chapters.

#### Content

There are 357 generic infectious diseases in the world today. 209 of these are endemic, or potentially endemic, to Moldova. A number of other diseases are not relevant to Moldova and have not been included in this book.

In addition to endemic diseases, we have included all published data regarding imported diseases and infection among expatriates from Moldova.

#### Sources

Data are based on the GIDEON web application (www.gideononline.com) which relies on standard text books, peer-review journals, Health Ministry reports and ProMED, supplemented by an ongoing search of the medical literature.

The availability and quality of literature regarding specific infectious diseases vary from country to country. As such, you may find that many of the sections in this book are limited to a general discussion of the disease itself - with no data regarding Moldova.

This is a book about the geography and epidemiology of Infection. Comprehensive and up-to-date information regarding the causes, diagnosis and treatment of each disease is available in the GIDEON web application. Many of the diseases are generic. For example, such designations as Pneumonia bacterial and Urinary tract infection include a number of individual diseases. These appear under the subheading, Synonyms, listed under each disease.

#### **Exploring Outbreaks and Surveys**

Outbreak and survey charts are designed to allow users to quickly scan and compare publications according to year, setting, number of cases / deaths, affected population and other parameters. Linked references are displayed where available.

Parallel charts in the GIDEON web app allow for sorting within columns. In the following example, data are displayed alphabetically by outbreak setting or region.

	/												
Years	Region	Setting	Cases	Deaths	Source	Pathogen	Years	Region	Setting	Cases	Deaths	Source	Pathogen
1990	Alberta						2013*		airplane			eggs	Heidelberg
1999	Alberta		12		pet food	infantis	1966		bar	34		fish	Java
2004	Alberta	restaurant	31			Heidelberg	1900		mitzvah	27		listi	Java
2010 to	Alberta		91		food	enteritidis	1984	Ontario	day nursery	22			typhimurium
2011							1992*	Ontario	hospital				enteritidis
1960	British Columbia		65				1997*	Montreal	hotel				enteritidis PT 8
1985							1982	Quebec	nursery			milk	typhimurium
to 1986	British Columbia		13		chocolate	nima	1983 to	Halifax	nursing home	51			Newport
1995 to 1996	British Columbia		133		sprouts	Newport	1986	New Brunswick	nursing home	7	1		
2000	British		47		baked goods	enteritidis	1999	Edmonton	restaurant	27			typhimurium
2000	Columbia		-77		baked goods	ententidis	2001	multiple sites	restaurant	12		sprouts	enteritidis PT 11b
2000	British Columbia		62		eggs		2004	Alberta	restaurant	31			Heidelberg
2005*	British				baked goods		2005	Ontario	restaurant	81			
2005	Columbia				Tanta grada	P	2016	Toronto	restaurant	43			
2008	British Columbia		64				2012	Ontario	school	46		catered food	
2011	British Columbia		8			agbeni	2007	Ontario	university	85		food	typhimurium PT 108

We welcome feedback, and will be pleased to add any relevant, sourced material. Email us at ebook@gideononline.com

For more information about GIDEON see the section **About GIDEON** and visit www.gideononline.com

Last updated: February 14, 2018



# **Table of Contents**

Introduction: The GIDEON e-book series	3	Dientamoeba fragilis infection	66
Acanthocephalan infections	8	Diphtheria <sup>+</sup>	67
Actinomycosis	9	Diphyllobothriasis	70
Adenovirus infection <sup>+</sup>	10	Dipylidiasis	71
Aeromonas and marine Vibrio infx	11	Dirofilariasis <sup>+</sup>	72
Amoeba - free living	12	Echinococcosis - unilocular <sup>+</sup>	73
Amoebiasis	13	Ehrlichiosis - human monocytic*	
Amoebic abscess		Endocarditis - infectious	
Anaplasmosis <sup>+</sup>	15	Enterobiasis	
Animal bite-associated infection		Enterovirus infection	
Anisakiasis		Epidural abscess	
Anthrax <sup>+</sup>		Erysipelas or cellulitis	
Ascariasis		Erysipeloid <sup>+</sup>	
Aspergillosis		Erythrasma	
Babesiosis <sup>†</sup>		Escherichia coli diarrhea	
Bacillary angiomatosis		Fascioliasis <sup>+</sup>	
Bacillus cereus food poisoning		Fungal infection - invasive	
Bacterial vaginosis		Gastroenteritis - viral +	
Bartonellosis - cat borne		Gianotti-Crosti syndrome	
Bartonellosis - other systemic			
Blastocystis hominis infection		Giardiasis <sup>†</sup>	
Borna virus encephalitis		Glanders*	
Botulism <sup>+</sup>		Gonococcal infection +	
Brain abscess		Granuloma inguinale	
Brucellosis <sup>+</sup>		Hantaviruses - Old World <sup>+</sup>	
		Hepatitis A <sup>+</sup>	
Bunyaviridae infections - misc.*		Hepatitis B <sup>+</sup>	
Campylobacteriosis <sup>+</sup>		Hepatitis C <sup>+</sup>	
Candidiasis		Hepatitis D <sup>+</sup>	
Chancroid		Hepatitis E <sup>+</sup>	. 101
Chlamydia infections, misc. +		Herpes B infection	
Chlamydophila pneumoniae infection		Herpes simplex encephalitis	. 103
Cholecystitis and cholangitis		Herpes simplex infection +	. 104
Cholera <sup>*</sup>		Herpes zoster	. 105
Chromomycosis		Histoplasmosis	. 106
Chronic meningococcemia		HIV infection - initial illness <sup>+</sup>	. 107
Clostridial food poisoning		HIV/AIDS <sup>+</sup>	. 108
Clostridial myonecrosis		Hookworm	
Clostridium difficile colitis		HTLV Infections	. 115
Common cold		Human herpesvirus 6 infection	
Conjunctivitis - inclusion	54	Human Pegivirus infection	
Conjunctivitis - viral		Hymenolepis diminuta infection	
Crimean-Congo hemorrhagic fever		Hymenolepis nana infection	
Cryptococcosis	57	Infection of wound, puncture, IV line, etc	
Cryptosporidiosis		Infectious mononucleosis or EBV infection	
Cutaneous larva migrans		Influenza <sup>+</sup>	
Cyclosporiasis	60	Intestinal spirochetosis	
Cysticercosis		Intra-abdominal abscess	
Cytomegalovirus infection		Intracranial venous thrombosis	
Dengue <sup>*</sup>	63	Isosporiasis	
Dermatophytosis		Kawasaki disease	
Dicrocoeliasis	65	Kikuchi's disease and Kimura disease	
			_

Kingella infection	129	Pleurodynia	196
Laryngotracheobronchitis	130	Pneumocystis pneumonia	197
Legionellosis <sup>+</sup>	131	Pneumonia - bacterial	198
Leishmaniasis - visceral <sup>+</sup>	132	Poliomyelitis and acute flaccid paralysis*	199
Leprosy	133	Protothecosis and chlorellosis	202
Leptospirosis <sup>+</sup>	134	Pseudocowpox	203
Listeriosis <sup>+</sup>	136	Pyodermas (impetigo, abscess, etc)	204
Liver abscess - bacterial	137	Pyomyositis	205
Lyme disease <sup>+</sup>	138	Q-fever <sup>+</sup>	206
Lymphocytic choriomeningitis	140	Rabies <sup>+</sup>	208
Lymphogranuloma venereum		Rat bite fever - spirillary	212
Malaria <sup>+</sup>		Rat bite fever - streptobacillary	213
Malignant otitis externa		Relapsing fever <sup>+</sup>	214
Measles <sup>+</sup>		Respiratory syncytial virus infection	215
Melioidosis		Respiratory viruses - miscellaneous	
Meningitis - aseptic (viral)		Reye's syndrome	217
Meningitis - bacterial +		Rheumatic fever	218
Microsporidiosis		Rhinoscleroma and ozena	219
Molluscum contagiosum		Rhinosporidiosis	220
Mumps <sup>+</sup>		Rhodococcus equi infection	221
Myalgic encephalomyelitis		Rotavirus infection +	
Mycetoma		Rubella <sup>+</sup>	224
Mycobacteriosis - M. marinum		Salmonellosis <sup>+</sup>	
Mycobacteriosis - M. scrofulaceum		Sarcocystosis	
Mycobacteriosis - miscellaneous nontuberculous		Scabies +	
Mycoplasma (miscellaneous) infection		Scarlet fever	
Mycoplasma pneumoniae infection		Septic arthritis	
Myiasis		Septicemia - bacterial +	
Necrotizing skin/soft tissue infx		Shigellosis <sup>+</sup>	
Neutropenic typhlitis		Sindbis	
Nocardiosis		Sinusitis	
Onchocerciasis - zoonotic		Sporotrichosis	
Orbital and eye infection		Spotted fevers - Old World <sup>+</sup>	
Orf		Staphylococcal food poisoning +	
Ornithosis		Staphylococcal scalded skin syndrome	
Osteomyelitis		Streptococcus suis infection	
Otitis media <sup>†</sup>		Strongyloidiasis	
Parainfluenza virus infection		Subdural empyema	
Parvovirus B19 infection		Suppurative parotitis	
Pediculosis <sup>+</sup>		Syphilis <sup>+</sup>	
Pentastomiasis - Linguatula		Taeniasis	
Pericarditis - bacterial		Tetanus <sup>+</sup>	
Perinephric abscess		Thelaziasis	
Perirectal abscess		Tick-borne encephalitis <sup>+</sup>	
Peritonitis - bacterial		Toxic shock syndrome	
Pertussis <sup>+</sup>		Toxic shock syndrome	
Pharyngeal and cervical space infx		Toxoclariasis **  Toxoplasmosis **	
Pharyngitis - bacterial		Trachoma	
Philophthalmosis		Trichinosis +	
Pityriasis rosea		Trichinosis	
Plague <sup>*</sup>		Trichuriasis	
Plesiomonas infection		Tuberculosis <sup>+</sup>	
		TUDELCUIOSIS	204

Tularemia <sup>+</sup>	268	West Nile fever <sup>+</sup>	279
Typhoid and enteric fever +			
Typhus - endemic	273	Yellow fever*	281
Urinary tract infection	274	Yersiniosis <sup>+</sup>	282
Vaccinia and cowpox	275	Zygomycosis	283
Varicella <sup>+</sup>			
Vibrio parahaemolyticus infection	278	About GIDEON	286

<sup>\*</sup> Not endemic. Imported, expatriate or other context reported.

<sup>&</sup>lt;sup>+</sup> Country specific note exists for disease

# Acanthocephalan infections

Agent	PARASITE - Archiacanthocephala. Moniliformida: <i>Moniliformis moniliformis</i> , Oligocanthorhynchida: <i>Maracanthorhynchus hirudinaceus</i> .
Reservoir	Pig ( <i>Maracanthorhynchus</i> ), rat and fox ( <i>Moniliformis</i> ),
Vector	None
Vehicle	Insect ingestion
Incubation Period	Unknown - presumed 15 to 40 days
Diagnostic Tests	Identification of worm in stool.
Typical Adult Therapy	Infection is usually self-limited.  Pyrantel pamoate has been used against Moniliformis moniliformis - 11 mg/kg PO - repeat once in 2 weeks
Typical Pediatric Therapy	Infection is usually self-limited.  Pyrantel pamoate has been used against Moniliformis moniliformis - 11 mg/kg PO - repeat once in 2 weeks
Clinical Hints	<ul> <li>Most infections are characterized by asymptomatic passage of a worm</li> <li>In some cases, only vague complaints such as 'periumbilical discomfort' and 'giddiness' have been described</li> </ul>
Synonyms	Corynosoma, Macracanthorhynchus, Moniliform acanthocephalan, Moniliformis moniliformis. ICD9: 128.9 ICD10: B83.8

# Actinomycosis

Agent	BACTERIUM. Actinomycetes, <i>Actinomyces</i> spp. Anaerobic gram-positive bacillus
Reservoir	Human (oral, fecal and vaginal flora)
Vector	None
Vehicle	Endogenous
Incubation Period	Unknown
Diagnostic Tests	Gram stain and bacteriological culture using strict anaerobic technique. Growth is apparent in 3-7 days.
Typical Adult Therapy	Ampicillin 50 mg/kg/day IV X 4 to 6 weeks - then Amoxicillin 1.5 g/d PO X 6 months.  OR Penicillin G 10 to 20 million units/day X 4 to 6w; then Penicillin V X 6 to 12m.  Alternatives: Doxycycline, Ceftriaxone, Erythromycin  Excision/drainage
Typical Pediatric Therapy	Ampicillin 50 mg/kg/day IV X 4 to 6 weeks - then Amoxicillin 20 mg/kg/day PO X 6 months.  Penicillin G 100,000 units/kg/day X 4 to 6w; then Penicillin V 25,000 units/day X 6 to 12m.  Excision/drainage
Clinical Hints	<ul> <li>Mandibular osteomyelitis with fistulae (sulfur granules) in the setting of poor dental hygiene</li> <li>Pelvic abscesses in a women with intra-uterine device</li> <li>Fever, right lower quadrant mass and fistulae</li> <li>Suppurative pleuropulmonary infection with fistulae</li> </ul>
Synonyms	Actinomyces, Aktinomykose, Lumpy jaw. ICD9: 039. ICD10: A42

### **Adenovirus infection**

Agent	VIRUS - DNA. Adenoviridae, Adenovirus Enteric strains are classified in genus Mastadenovirus
Reservoir	Human, Non-human primates
Vector	None
Vehicle	Droplet, Water, Respiratory of pharyngeal acquisition
Incubation Period	4d - 12d
Diagnostic Tests	Viral culture/serology or antigen assay. Direct fluorescence of secretions. Nucleic acid amplification.
Typical Adult Therapy	Enteric/secretion precautions.  Cidofovir has been used in some cases.  Symptomatic therapy
Typical Pediatric Therapy	As for adult
Vaccine	Adenovirus vaccine
Clinical Hints	- Generally, an uncomplicated illness lasting 3 to 5 days - Atypical pneumonia, upper respiratory infection, tracheitis, bronchiolitis - Keratoconjunctivitis with preauricular adenopathy - Gastroenteritis or hemorrhagic cystitis
Synonyms	Adenovirus gastroenteritis, Epidemic keratoconjunctivitis, Pharyngoconjunctival fever. ICD9: 047.9,077.1,077.2,008.62,480.0 ICD10: A08.2,B30.1,B34.0,J12.0

### Adenovirus infection in Moldova

**Prevalence surveys** 

Total chiec but toys							
Years	Study Group	%	Notes				
	children	4	Rotavirus-negative fecal specimens from children below age 5 years				

### Aeromonas and marine Vibrio infx.

Agent	BACTERIUM.  Aeromonas hydrophila, Vibrio vulnificus, et al Facultative gram-negative bacilli
Reservoir	Salt or brackish water, Fish
Vector	None
Vehicle	Water, Shellfish, Contact
Incubation Period	Range 2d - 7d
Diagnostic Tests	Culture. Notify laboratory if these organisms are suspected in stool.
Typical Adult Therapy	Fluoroquinolone or Sulfamethoxazole / Trimethoprim . Other antimicrobial agent as determined by susceptibility testing
Typical Pediatric Therapy	Sulfamethoxazole / Trimethoprim . Or other antimicrobial agent as determined by susceptibility testing
Clinical Hints	<ul> <li>Disease follows marine injury or ingestion of raw oysters / contaminated fresh or brackish water</li> <li>Diarrhea, fever, vomiting or sepsis</li> <li>Fecal leukocytes present</li> <li>Severe or fatal in immunosuppressed or alcoholic patients</li> </ul>
Synonyms	Aeromonas, Aeromonas hydrophila, Vibrio mimicus, Vibrio vulnificus. ICD9: 005.81,027.9 ICD10: A48.8

# Amoeba - free living

Agent	PARASITE - Protozoa. Centramoebida, Acanthamoebidae: <i>Acanthamoeba</i> and <i>Balamuthia</i> Schizopyrenida, Vahkampfidae: <i>Naegleria</i>
Reservoir	Water, Soil
Vector	None
Vehicle	Water (diving, swimming), Contact
Incubation Period	5d - 6d (range 2d - 14d) Granulomatous ? to 2m
Diagnostic Tests	Wet preparation. Specialized cultures. Serology available in reference centers.
Typical Adult Therapy	CNS Naegleria: Ampho. B to 1 mg/kg/d IV + 1.5 mg intrathec. X 8 days; + Miconazole 350 mg/sq m/d IV + 10 mg intrathec. qod X 8d  Acanthamoeba: Sulfonamides + Flucytosine  Miltefosine some cases of Acanthamoeba / Balamuthia
Typical Pediatric Therapy	CNS Naegleria: Amphotericin B to 1 mg/kg/d IV + 1.5 mg intrathecal X 8 days; plus Miconazole 350 mg/sq m/d IV + 10 mg intrathecal qod X 8d  Acanthamoeba: Sulfonamides + Flucytosine  Miltefosine successful in some cases of Acanth. / Balamuthia enceph.
Clinical Hints	- Severe, progressive meningoencephalitis ( <i>Naegleria</i> , <i>Acanthamoeba</i> or <i>Balamuthia</i> ) after swimming or diving in fresh water - Keratitis ( <i>Acanthamoeba</i> ), associated with contaminated solutions used to clean contact lenses
Synonyms	Acanthamoben, Acanthamoeba, Allovahlkampfia, Amebic keratitis, Balamuthia, Balmuthia, Dictyostelium, Free-living ameba, Leptomyxid ameba, Naegleria, Paravahlkampfia, Primary amebic meningoencephalitis, Sappinia, Vahlkampfia. ICD9: 136.2 ICD10: B60.1,B60.2

# **Amoebiasis**

Agent	PARASITE - Protozoa. Sarcomastigota, Entamoebidea: <i>Entamoeba histolytica</i> (must be distinguished from non-invasive, <i>Entamoeba dispar</i> )
Reservoir	Human
Vector	Fly (Musca) - occasionally
Vehicle	Food, Water, Sexual contact, Fly
Incubation Period	1w - 3w (range 3d - 90d)
Diagnostic Tests	Fresh stool/aspirate for microscopy. Stool antigen assay. Stool PCR. Note: serological tests usually negative.
Typical Adult Therapy	Metronidazole 750 mg PO TID X 10d  Follow with: Paromomycin 500 mg PO TID X 7d OR Iodoquinol 650 mg PO TID X 20d
Typical Pediatric Therapy	Metronidazole 15 mg/kg TID X 10d  Follow with: Paromomycin 10 mg/kg PO TID X 7d OR Iodoquinol 10 mg/kg PO TID X 20d
Clinical Hints	- Dysentery, abdominal pain, tenesmus. - Unlike shigellosis, hyperemia of the rectal mucosa and fecal pus are absent. - Liver abscess and dysentery rarely coexist in a given patient
Synonyms	Amebiasis, Amebiasis intestinal, Amebic colitis, Amebic dysentery, Amoebenruhr, Entamoeba bangladeshi, Entamoeba gingivalis, Entamoeba moshkovskii. ICD9: 006.0,006.1,006.2 ICD10: A06.0,A06.1,A06.2

### **Amoebic abscess**

Agent	PARASITE - Protozoa. Sarcomastigota, Entamoebidea: Entamoeba histolytica (must be distinguished from non-invasive, Entamoeba dispar)
Reservoir	Human
Vector	Fly (Musca) - occasionally
Vehicle	Food, Water, Sexual contact, Fly
Incubation Period	2w - 6m (rarely years; 95% within 6m)
Diagnostic Tests	Imaging. Serology. Nucleic acid amplification. Note: Amoebae are usually not present in stool at this stage.
Typical Adult Therapy	Metronidazole 750 mg TID X 10d OR Tinidazole 800 mg TID X 5d
Typical Pediatric Therapy	Metronidazole 15 mg/kg TID X 10d OR Tinidazole 15 to 20 mg/kg TID X 5d
Clinical Hints	<ul> <li>Fever, local pain and weight loss</li> <li>Concurrent amebic colitis is usually not present.</li> <li>Typically a single abscess in the right hepatic lobe (bacterial abscesses may be multiple)</li> </ul>
Synonyms	Absceso amebiano, Amebic liver abscess. ICD9: 006.3,006.4,006.5,006.6,006.8 ICD10: A06.4,106.5,A06.7,106.8

### **Anaplasmosis**

Agent	BACTERIUM. Anaplasmataceae <i>Anaplasma phagocytophilum. (E. phagocytophila, E. equi</i> "HE agent" merged into this species) Intracellular <i>Rickettsia-</i> like		
Reservoir	Rodent, Rabbit, Deer, Tick, Primate, Cattle, Horse, Goat, Sheep		
Vector	Tick (Ixodes scapularis, Ix. pacificus, Ix. ricinus)		
Vehicle	Blood or secretions (rare)		
Incubation Period	Unknown; mean 8d		
Diagnostic Tests	Intraleucocytic inclusions ('morulae') seen in blood smear. Serology. Nucleic acid amplification/		
Typical Adult Therapy	Doxycycline 100 mg PO BID X 7 to 14 days OR Tetracycline 500 mg PO QID X 7 to 14 days		
Typical Pediatric Therapy	Above age 8 years: Doxycycline 2 mg/kg PO BID X 7 to 14 days OR Tetracycline 500 mg PO QID X 7 to 14 days OR Rifampin 10 mg/kg/day PO		
Clinical Hints	<ul> <li>Fever, headache and myalgia following tick bite or exposure</li> <li>Arthralgia or macular rash may be present</li> <li>Leukopenia, thrombocytopenia or hepatic dysfunction are common</li> <li>Inclusions may be seen in granulocytes</li> <li>Case-fatality rate is 5%</li> </ul>		
Synonyms	Anaplasma capra, Anaplasma ovis, Anaplasma phagocytophilum, Anaplasma platys, Anaplasmosis - human granulocytic, Ehrlichia equi, Ehrlichia ewingii, Ehrlichia microti, Ehrlichia phagocytophila, Ehrlichiosis - human granulocytic, Human granulocytic anaplasmosis, Human granulocytic ehrlichiosis. ICD9: 082.4 ICD10: B28.8		

### **Anaplasmosis in Moldova**

#### **Prevalence surveys**

Years	Region	Study Group	%	Notes	
1960		ticks	2.4	2.4% of archived <i>Ixodes ricinus</i> <sup>1</sup>	
2006	Central Region	ticks	5.1	5.1% of Ix. ricinus <sup>2</sup>	
2007*	Chisinau	ticks	ı u	9% of <i>Ixodes ricinus</i> ticks in Chisinau city. In 2.5%, the ticks were co-infected with <i>Borrelia burgdorferi</i> <sup>3</sup>	

<sup>\*</sup> indicates publication year (not necessarily year of survey)

#### References

- Ticks Tick Borne Dis 2013 Jun ;4(4):359-61.
   Clin Microbiol Infect 2009 Dec ;15 Suppl 2:32-3.
   Exp Appl Acarol 2007 ;41(1-2):147-52.

### **Animal bite-associated infection**

Agent	BACTERIUM.  Pasteurella multocida, and other zoonotic bite pathogens		
Reservoir	Cat, Dog, Marsupial, Other mammal, Rarely bird		
Vector	None		
Vehicle	Bite (cat in 60%, dog in 30%), No obvious source in 10%		
Incubation Period	3h - 3d		
Diagnostic Tests	Gram stain/culture. Hold specimen for 2 weeks to discount Capnocytophaga & other genera.		
Typical Adult Therapy	Penicillin, a Tetracycline or Cefuroxime.  Dosage and duration appropriate for nature and severity of infection		
Typical Pediatric Therapy	Penicillin or Cefuroxime.  Dosage and duration appropriate for nature and severity of infection		
Clinical Hints	<ul> <li>Infection of cat- dog- or other bite wound; however, as many as 10% do not recall the bite</li> <li>Symptoms appear within 3 to 72 hours</li> <li>Systemic infection (meninges, bone, lungs, joints, etc) may occur</li> </ul>		
Synonyms	Bacteroides pyogenes, Bacteroides tectus, Bergeyella zoohelcum, Bisgaard's taxon 16, Capnocytophaga canimorsus, Capnocytophaga cynodegmi, CDC EF-4, CDC NO-1, Coryebacterium kutscheri, Corynebacterium canis, Corynebacterium freiburgense, Fusobacterium canifelinum, Halomonas venusta, Kingella potus, Moraxella canis, Mycobacterium vulneris, Neisseria animaloris, Neisseria canis, Neisseria weaveri, Neisseria zoodegmatis, Pasteurella caballi, Pasteurella canis, Pasteurella dagmatis, Pasteurella multocida, Pasteurella stomatis, Psychrobacter immobilis, Seal finger, Staphylococcus intermedius, Vibrio harveyi. ICD9: 027.2 ICD10: A28.0		

# Anisakiasis

Agent	PARASITE - Nematoda. Secernentea: <i>Anisakis simplex</i> and <i>Pseudoterranova decipiens</i>
Reservoir	Marine mammals Fish
Vector	None
Vehicle	Undercooked fish
Incubation Period	Hours - 14d
Diagnostic Tests	Endoscopic identification of larvae.
Typical Adult Therapy	Endoscopic removal of larvae; surgery for complications
Typical Pediatric Therapy	As for adult
Clinical Hints	Follows ingestion of undercooked fish (e.g., sushi), squid or octopus May present as - Generalized allergic reaction, or - Acute and chronic abdominal pain, often with "peritoneal signs" or hematemesis
Synonyms	Anasakis, Bolbosoma, Cod worm disease, Contracaecum, Eustrongylides, Herring worm disease, Hysterothylacium, Pseudoterranova, Whaleworm. ICD9: 127.1 ICD10: B81.0

# Anthrax

Agent	BACTERIUM.  Bacillus anthracis An aerobic gram positive bacillus				
Reservoir	Soil, Goat, Cattle, Sheep, Water, Horse				
Vector	Fly (rare)				
Vehicle	Hair, Wool, Hides, Bone products, Air, Meat, Contact, Respiratory or pharyngeal acquisition				
Incubation Period	1d-7d; 1-12 cutaneous, 1-7 GI; 1-43 pulmonary				
Diagnostic Tests	Bacteriological culture. Alert laboratory that organism may be present. Serology and rapid tests by Ref. Centers.				
Typical Adult Therapy	Isolation (secretions). Ciprofloxacin (or Penicillin if susceptible).  If systemic infection, add Meropenem (or Imipenem) + Linezolid (or Rifampin or Clindamycin)  Dosage/route/duration as per severity If inhalational anthrax, add Raxibacumab				
Typical Pediatric Therapy	As for adult				
Vaccine	Anthrax vaccine				
Clinical Hints	Acquired from contact with large mammals or their products (meat, wool, hides, bone).  Anthrax may present at dermal, pulmonary, gastrointestinal or other forms depending of site of inoculation.  - Edematous skin ulcer covered by black eschar - satellite vesicles may be present  - Fulminant gastroenteritis or pneumonia  - Necrotizing stomatitis  - Hemorrhagic meningitis				
Synonyms	Antrace, Antrax, Antraz, Bacillus cereus biovar anthracis, Carbunco, Carbunculo, La fievre charbonneuse, Malcharbon, Malignant pustule, Miltbrann, Miltvuur, Milzbrand, Mjaltbrand, Siberian plague, Siberian ulcer, Splenic fever, Wool-sorter's disease. ICD9: 022 ICD10: A22				

# **Anthrax in Moldova**



Graph: Moldova. Anthrax, cases

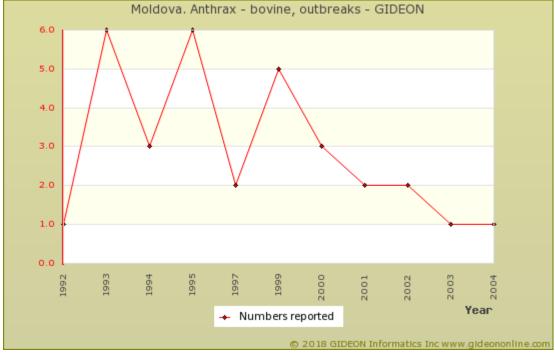
#### Notes:

Individual years:

2013 - A case of suspected anthrax was reported in Transnistria. <sup>1</sup>

2014 - Included one fatal case. <sup>2</sup>

2015 - Cutaneous anthrax was reported in a resident of Gagauzia <sup>3</sup> and shepherd in Telenesti <sup>4</sup>

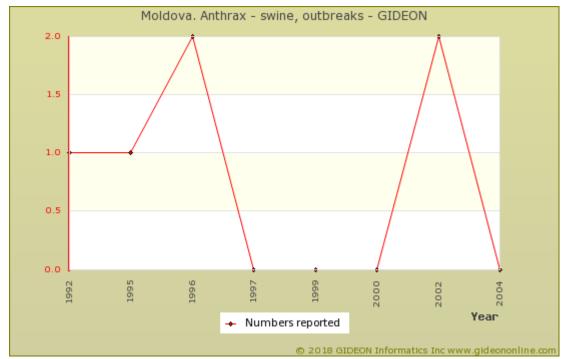


Graph: Moldova. Anthrax - bovine, outbreaks



Graph: Moldova. Anthrax - bovine

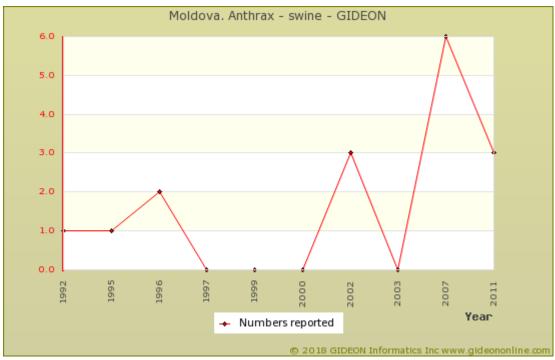
No outbreaks of ovine / caprine anthrax were reported in 1996; 1997; 0 in 1999; 0 in 2000; 1 (1 case) in 2004. No outbreaks of equine anthrax were reported in 1996; 0 in 1997; 0 in 1999.



Graph: Moldova. Anthrax - swine, outbreaks

#### Notes:

1. 1996 - Outbreaks in Ermokliye (Stefan Vode) and Kazakliye (Chadyr-Lung)



Graph: Moldova. Anthrax - swine

#### Notable outbreaks

MOLADIE	totable outbreaks					
Years	Region	Cases	Deaths	Source	Population	Notes
2004	Chenak	2		sheep		5
2010	Transnistria				pigs	6
2013	Soroca	4		meat		7
2014	Cahul	9	1	cattle		Outbreak associated with slaughtering a bull. 8 9 10

#### References

- 1. ProMED romedmail.org> archive: 20130625.1790916
  2. ProMED cpromedmail.org> archive: 20150118.3101017

- 4. ProMED romedmail.org archive: 20150822.3596207
  5. ProMED romedmail.org archive: 20040725.2038

- 10. ProMED romedmail.org> archive: 20140910.2764327

# **Ascariasis**

Agent	PARASITE - Nematoda. Secernentea: Ascaris lumbricoides		
Reservoir	Human, Dog		
Vector	None		
Vehicle	Vegetables, Fly		
Incubation Period	10d - 14d (range 7d - >200d)		
Diagnostic Tests	Stool microscopy.		
Typical Adult Therapy	Mebendazole 500 mg BID X 1 dose OR Albendazole 400 mg X 1 dose		
Typical Pediatric Therapy	Albendazole 200 mg PO single dose OR Mebendazole 100 mg BID X 3 d (> age 2).		
Clinical Hints	<ul> <li>Highest rates among children and in areas of crowding and poor sanitation</li> <li>Acute illness characterized by cough, wheezing and eosinophilia</li> <li>Adult worms are associated with abdominal pain (occasionally obstruction), pancreatic or biliary disease</li> <li>Passage of a roundworm longer than 5 cm is virtually pathognomonic</li> </ul>		
Synonyms	Ascaris, Ascaris lumbricoides, Askariasis. ICD9: 127.0 ICD10: B77		

# Aspergillosis

Agent	FUNGUS. Ascomycota, Euascomycetes, Eurotiales: <i>Aspergillus</i> . A hyaline hyphomycete		
Reservoir	Compost, Hay, Cereal, Soil		
Vector	None		
Vehicle	Air, Respiratory or pharyngeal acquisition		
Incubation Period	3d - 21d		
Diagnostic Tests	Fungal culture. Biopsy. Nasal culture or serologic testing may be useful in select cases.		
Typical Adult Therapy	Voriconazole 6 mg/kg IV Q12h, day 1; follow with 4 mg/kg IV OR Amphotericin B - if invasive, rapidly increase to max dose 0.6 mg/kg/d and to total 2.5g. OR Itraconazole		
Typical Pediatric Therapy	Voriconazole 3 to 9 mg/kg IV Q12h OR Amphotericin B - if invasive, rapidly increase to max dose 0.6 mg/kg/d X 6w. OR Itraconazole		
Clinical Hints	<ul> <li>Pulmonary "fungus ball" or adult-onset asthma</li> <li>Pulmonary consolidation or infected "pulmonary infarct" in the setting of immune suppression (e.g., AIDS, leukemia, etc)</li> <li>May progress to widespread hematogenous dissemination if not treated promptly</li> </ul>		
Synonyms	Aspergillose, Aspergillus. ICD9: 117.3 ICD10: B44		

### **Babesiosis**

Agent	PARASITE - Protozoa. Apicomplexa: <i>Babesia microti, Babesia duncani</i> (U.S.); or <i>B. divergens, Babesia</i> EU1 and <i>B. bigemina</i> (Europe)		
Reservoir	Rodent (usually white-footed mouse = <i>Peromyscus leucopus</i> ), Rabbit, Deer, Cattle, Tick		
Vector	Tick (Ixodes scapularis for Babesia microti; Ixodes ricinus for B. divergens)		
Vehicle	Blood		
Incubation Period	1w - 2w (range 1w - 9w)		
Diagnostic Tests	Microscopy of stained blood smears. Animal inoculation. Serology. Nucleic acid amplification.		
Typical Adult Therapy	Atovaquone 750 mg BID + Azithromycin 500 mg daily X 7 to 10 days.  OR Clindamycin 600 mg PO TID + Quinine 650 mg PO TID X 7d.  Exchange transfusion has been used in some cases		
Typical Pediatric Therapy	Atovaquone 10 mg/kg BID + Azithromycin 12 mg/kg daily X 7 to 10 days.  OR Clindamycin 13 mg/kg PO TID + Quinine 10 mg/kg TID X 7to 10 days.		
Clinical Hints	<ul> <li>Fever, rigors, myalgia, hepatomegaly and hemolysis - mimics malaria</li> <li>Multiple relapses are common</li> <li>Severe disease among asplenic patients - jaundice, renal failure and death</li> <li>European (<i>Babesia divergens</i>) infection is restricted to splenectomized patients is usually fatal</li> </ul>		
Synonyms	Babesia, Babesia bigemina, Babesia bovis, Babesia divergens, Babesia duncani, Babesia EU1, Babesia microti, Babesia sp. XXB/HangZhou, Babesia venatorum, Babesiose, Colpodella. ICD9: 088.82 ICD10: B60.0		

### **Babesiosis in Moldova**

**Prevalence surveys** 

Years	Study Group	%	Notes
1960	ticks	0.8	0.8% of archived <i>Ixodes ricinus</i> ( <i>Babesia microti</i> ) <sup>1</sup>

#### References

1. Ticks Tick Borne Dis 2013 Jun; 4(4):359-61.

# **Bacillary angiomatosis**

Agent	BACTERIUM.  Bartonella henselae or Bartonella quintana.  Rickettsia-like bacteria		
Reservoir	Human, Tick, Cat		
Vector	Cat flea,Tick (Ixodid)		
Vehicle	None		
Incubation Period	Unknown		
Diagnostic Tests	Histology with special stains. Specialized culture techniques. Serology. Nucleic acid amplification.		
Typical Adult Therapy	Clarithromycin 500 mg BID X 3 months Alternatives Azithromycin 250 mg QD Ciprofloxacin 500 mg BID OR Doxycycline 100 mg BID Erythromycin 500 mg po QID		
Typical Pediatric Therapy	Clarithromycin 7.5 mg/kg PO BID X 8 months. OR Gentamicin 2 mg/kg IMq12h		
Clinical Hints	<ul> <li>Virtually all cases occur in the setting of AIDS or other immune deficiency</li> <li>Hemangiomatous papules and nodules of skin, spleen, liver (peliosis hepatis), bone or other tissues</li> <li>Rare instances are reported following tick bite in immune-competent individuals</li> </ul>		
Synonyms	Bacillary peliosis, Peliosis hepatis. ICD9: 757.32,083.8 ICD10: K76.4,A44.0		



# **Bacillus cereus food poisoning**

Agent	BACTERIUM.  Bacillus cereus (toxin).  An aerobic gram-positive bacillus		
Reservoir	Soil, Processed & dried foods		
Vector	None		
Vehicle	Food		
Incubation Period	2h - 9h (range 1h - 24h)		
Diagnostic Tests	No practical test available. Isolation of organism from suspect food.		
Typical Adult Therapy	Supportive		
Typical Pediatric Therapy	As for adult		
Clinical Hints	<ul> <li>Usually follows ingestion of rice or other vegetables</li> <li>Vomiting within 1 to 6 hours and/or diarrhea within 6 to 24 hours</li> <li>Fecal leukocytes are not seen</li> </ul>		
Synonyms	Bacillus cytotoxicus. ICD9: 005.89 ICD10: A05.4		

# **Bacterial vaginosis**

Agent	BACTERIUM.  Gardnerella vaginalis (facultative gram-negative bacillus), Mobiluncus curtisii, Mobiluncus mulieris, Prevotella, et al
Reservoir	Human
Vector	None
Vehicle	Sexual contact, Normal flora in 14% (girls) to 70% (women)
Incubation Period	Unknown
Diagnostic Tests	Identification of "clue cells" or positive KOH test in vaginal discharge. Culture.
Typical Adult Therapy	Metronidazole 500 mg BID X 7d OR Tinidazole 2 g PO daily X 3d OR Secnidazole 2 g PO X 1 dose OR Clindamycin 300 mg BID X 7d + intravaginal Clindamycin or Metronidazole ? Also treat sexual partner
Typical Pediatric Therapy	Metronidazole 7.5 mg/kg BID X 7d
Clinical Hints	- Thin vaginal discharge - "fishy" odor when mixed with KOH - Mild to moderate pruritis - Urethritis may be present in sexual partner
Synonyms	Gardnerella, Gardnerella vaginalis, Mobiluncus. ICD9: 041.89,616,10,099.8 ICD10: N76.1

### **Bartonellosis - cat borne**

Agent	BACTERIUM.  Afipia felis, Bartonella henselae, Bartonella clarridgeiae, Bartonella grahamii, et al.  A facultative gram-negative coccobacillus
Reservoir	Cat, Possibly tick
Vector	Cat flea (Ctenocephalides)
Vehicle	Cat scratch, Plant matter (thorn, etc)
Incubation Period	3d - 14d
Diagnostic Tests	Visualization of organisms on Warthin Starry stain. Culture. Serology. Nucleic acid amplification.
Typical Adult Therapy	Aspiration of nodes as necessary.  Azithromycin 500 mg day 1, then 250 daily X 4 days  Alternatives: Clarithromycin, Ciprofloxacin, Sulfamethoxazole / Trimethoprim
Typical Pediatric Therapy	Aspiration of nodes as necessary. Azithromycin 10 mg/kg day 1, then 5 mg/kg daily X 4 days
Clinical Hints	<ul> <li>Tender suppurative regional adenopathy following a cat scratch (usually kitten)</li> <li>Fever present in 25%</li> <li>Systemic infection (liver, brain, endocardium, bone, etc) occasionally encountered</li> <li>Most cases resolve within 6 weeks.</li> </ul>
Synonyms	Afipia felis, Bartonella clarridgeiae, Bartonella grahamii, Bartonella henselae, Bartonella koehlerae, Cat scratch disease, Debre's syndrome, Foshay-Mollaret cat-scratch fever, Katszenkratz-Krankheit, Petzetakis' syndrome, SENLAT. ICD9: 078.3 ICD10: A28.1



# Bartonellosis - other systemic

Agent	BACTERIUM.  Bartonella quintana, B. koehlerae, B. elizabethae, B. tamiae, B. washoensis, etc  A fastidious gram-negative coccobacillus
Reservoir	Human, Louse, Rat Cat Dog Sheep
Vector	Louse ( <i>Pediculus</i> ) Flea ( <i>Ctenocephalides, Pulex</i> ), Mite ( <i>Dermanyssus</i> )
Vehicle	Wound or eye contact with secretions/louse feces
Incubation Period	9d - 25d (range 4d - 35d)
Diagnostic Tests	Serology. Culture. Nucleic acid amplification.
Typical Adult Therapy	Doxycycline 100 mg PO BID X 3 to 5 days (if endocarditis, add Gentamicin 3 mg/kg daily X 28 days) Alternatives: Clarithromycin, Azithromycin, Gentamicin, Fluoroquinolone (Levofloxacin, Trovafloxacin, Pefloxacin, Sparfloxacin or Moxifloxacin)
Typical Pediatric Therapy	Erythromycin 10 mg/kg PO QID X 3 to 5 days. OR Gentamicin 2 mg/kg IM q12h. Alternatives: Clarithromycin, Azithromycin
Clinical Hints	- Often associated with poor hygiene and crowding - Headache, myalgias, shin pain, macular rash and splenomegaly - Endocarditis and bacteremia in some cases - Relapse is common
Synonyms	Bartonella alsatica, Bartonella bovis, Bartonella capreoli, Bartonella doshiae, Bartonella elizabethae, Bartonella melophagi, Bartonella quintana, Bartonella rochalimae, Bartonella schoenbuchensis, Bartonella tamiae, Bartonella taylorii, Bartonella tribocorum, Bartonella vinsonii, Bartonella vinsonii berkhoffii, Bartonella volans, Bartonella washoensis, Candidatus Bartonella mayotimonensis, Candidatus Bartonella merieuxii, Candidatus Bartonella rochalimae, Five day fever, His-Werner disease, Meuse fever, Quintan fever, Quintana fever, Shank fever, Shin fever, Shinbone fever, Trench fever, Volhynian fever.  ICD9: 083.1 ICD10: A44.0,A44.8,A79.0



# **Blastocystis hominis infection**

Agent	PARASITE - Protozoa. Chromista, Bigyra, Blastocystea: Blastocystis hominis. (taxonomic status remains uncertain)
Reservoir	Human
Vector	None
Vehicle	Fecal-oral, Water
Incubation Period	Unknown
Diagnostic Tests	Stool microscopy. Nucleic acid amplification.
Typical Adult Therapy	Nitazoxanide 500 mg BID X 3 d. OR Metronidazole 750 mg TID X 10d. OR Iodoquinol 650 mg TID X 20 d. OR Sulfamethoxazole / Trimethoprim
Typical Pediatric Therapy	Nitazoxanide - Age 1 to 3 years: 5 ml (100 mg) PO Q12h X 3 days - Age 4 to 11 years: 10 mg (200 mg) PO Q12h X 3 days; OR Metronidazole 15 mg/kg/d X 10d. Sulfamethoxazole / Trimethoprim
Clinical Hints	The precise role of this organism in disease is controversial  - Diarrhea and flatulence, usually without fever  - The illness is similar to giardiasis  - Increased risk among immune-suppressed patients
Synonyms	Apoi, Blastocystiose, Blastocystis hominis, Zierdt-Garavelli disease. ICD9: 007.8 ICD10: A07.8

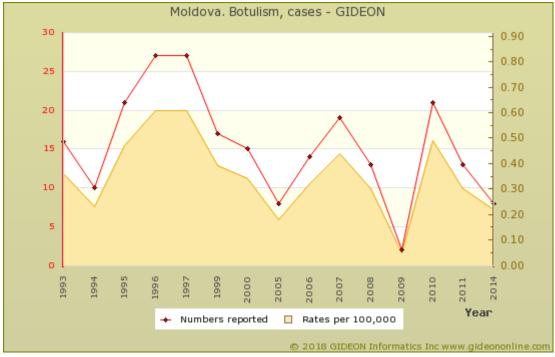
# Borna virus encephalitis

Agent	VIRUS - RNA Mononegavirales Bornavirus
Reservoir	Squirrel, Horse, Sheep
Vector	None
Vehicle	Unknown
Incubation Period	Unknown
Diagnostic Tests	Metagenomic analysis of brain tissue and cerebrospinal fluid Culture on specialized cell lines Serology
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>May follow animal (horse, squirrel) contact</li> <li>Most infections are subclinical</li> <li>Manifested in some cases by mood disorders or possibly schizophrenia</li> <li>Overt and fatal encephalitis has been reported, with fever, gait disturbance and ocular palsy</li> </ul>
Synonyms	Borna disease, Heated head disease, Sad horse disease, Staggering disease of cats, Variegated squirrel 1 bornavirus, VSBV-1. ICD9: 323.9 ICD10: A83.9

### **Botulism**

Agent	BACTERIUM.  Clostridium botulinum. An anaerobic gram-positive bacillus
Reservoir	Soil, Animal, Fish
Vector	None
Vehicle	Food, Soil (contamination of wound or injected drug)
Incubation Period	1d - 2d
Diagnostic Tests	Electrophysiologic (EMG) pattern. Isolation of organism from food (occ. from infant stomach). Mouse toxin assay
Typical Adult Therapy	Heptavalent (types A-G) or trivalent (types A, B, E) antitoxin (following test dose) 10 ml in 100 ml saline over 30 min Additional 10 ml at 2 and 4 hours if necessary. Respiratory support
Typical Pediatric Therapy	As for adult
Vaccine	Botulism antitoxin
Clinical Hints	<ul> <li>Clinical manifestations similar to those of atropine poisoning</li> <li>Dysarthria, diplopia, dilated pupils, dry mouth, constipation, flaccid paralysis</li> <li>Onset approximately 36 hrs after ingestion of poorly-preserved food</li> <li>May follow contaminated injection (ie, illicit drug) or other wound</li> <li>Infant botulism associated with infant formula containing honey contaminated by bacterial spores</li> </ul>
Synonyms	Botulisme, Botulismo, Botulismus, Kerner's disease. ICD9: 005.1 ICD10: A05.1

### **Botulism in Moldova**



Graph: Moldova. Botulism, cases

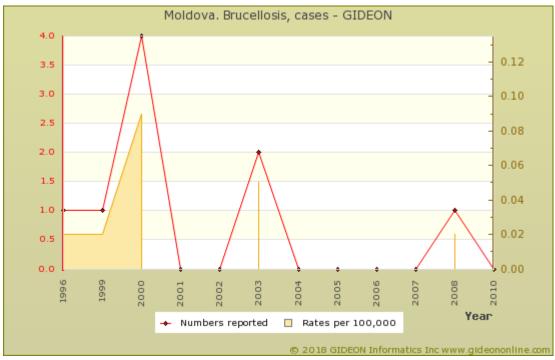
### **Brain abscess**

Agent	BACTERIUM OR FUNGUS. Mixed oral anaerobes / streptococci, <i>Staphylococcus aureus</i> (from endocarditis), etc.
Reservoir	Human
Vector	None
Vehicle	None
Incubation Period	Variable
Diagnostic Tests	Imaging techniques (CT, scan, etc).
Typical Adult Therapy	Antibiotic(s) appropriate to likely pathogens + drainage Typical empiric therapy: Intravenous Ceftriaxone 2 gm + Metronidazole 15 mg/kg, Q12h
Typical Pediatric Therapy	Typical empiric therapy: Intravenous Ceftriaxone 50 mg/kg + Metronidazole 15 mg/kg IV, Q12h
Clinical Hints	<ul> <li>Headache, vomiting and focal neurological signs</li> <li>Often associated with chronic sinusitis or otitis media, pleural or heart valve infection</li> <li>Patients are often afebrile</li> </ul>
Synonyms	Ascesso cerebrale, Cerebral abscess. ICD9: 324.0 ICD10: G06.0

### **Brucellosis**

Agent	BACTERIUM.  Brucella abortus, Brucella melitensis, Brucella suis, Brucella canis
Agent	An aerobic gram-negative bacillus
Reservoir	Pig, Cattle, Sheep, Goat, Dog, Coyote, Caribou
Vector	None
Vehicle	Food, Air, Dairy products, Animal excretions, Breastfeeding
Incubation Period	10d - 14d (range 5d - 60d)
Diagnostic Tests	Culture of blood or bone marrow. Serology. Note: Alert laboratory to possibility of Brucella.
Typical Adult Therapy	Doxycycline 100 mg BID + Rifampin 600 mg BID X 6 weeks. Alternatives Tetracycline + Gentamicin
Typical Pediatric Therapy	Rifampin 20 mg/kg/day (maximum 600 mg) plus: >age 8 years: Doxycycline 2 mg/kg BID PO X 6w age < 8 years Sulfamethoxazole / Trimethoprim 4/20 mg/kg BID X 4 to 6w Add Gentamicin if severe
Clinical Hints	<ul> <li>Prolonged fever, hepatosplenomegaly, lymphadenopathy</li> <li>Arthritis, osteomyelitis or chronic multisystem infection</li> <li>Follows ingestion of unpasteurized dairy products, contact with farm animals or meat processing</li> </ul>
Synonyms	Bang's disease, Bangsche Krankheit, Brucella, Brucellemia, Brucelliasis, Brucellose, Brucellosen, Brucellosi, Brucelose, Brucelosis, Cyprus fever, Febris melitensis, Febris sudoralis, Febris undulans, Fievre caprine, Gibraltar fever, Goat fever, Malta fever, Maltafieber, Melitococcosis, Neapolitan fever, Rock fever, Typhomalarial fever, Undulant fever. ICD9: 023 ICD10: A23

### **Brucellosis in Moldova**



Graph: Moldova. Brucellosis, cases

### Bunyaviridae infections - misc.

Agent	VIRUS - RNA. Bunyaviridae, Orthobunyavirus. Over 30 strains have been associated with human disease (see Synonyms)
Reservoir	Rat, Bird, Marsupial, Chipmunk, Cattle, Sheep, Horse, Bat
Vector	Mosquito (exceptions: Shuni is transmitted by culicoid flies; Bhanja, Tamdy, Wanowrie and Zirqa by ticks)
Vehicle	None
Incubation Period	3d - 12d
Diagnostic Tests	Serology and virus isolation. Nucleic acid amplification. Biosafety level 2 or 3.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Abrupt onset of fever, chills, headache; photophobia, rash arthralgia or myalgia</li> <li>Vomiting, diarrhea or cough may be present</li> <li>Meningitis or myocarditis may occur with Bwamba virus</li> <li>Illness resolves within two-to-seven days</li> </ul>
Synonyms	Avalon, Bangui, Batai, Bhanja, Bunyamwera, Bwamba, Cache Valley, Calovo, Catu, Fort Sherman, Garissa, Germiston, Guama, Hartland virus, Ilesha, Ingwavuma, Issyk-Kul, Kairi, Lumbo, Maguari, Ngari, Northway, Nyando, Pongola, Shokwe, Shuni, Tacaiuma, Tamdy, Tataguine, Tensaw, Wanowrie, Wyeomyia, Zirqa.  ICD9: 066.3 ICD10: A93.8

Although Bunyaviridae infections - misc. is not endemic to Moldova, imported, expatriate or other presentations of the disease have been associated with this country.

### Bunyaviridae infections - misc. in Moldova

The ecosystem of Moldova could possibly support the presence of Bhanja virus. 1

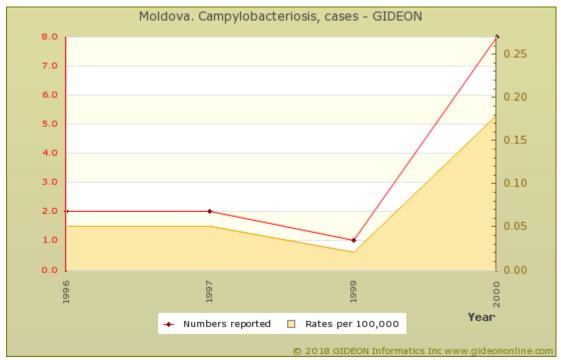
#### References

1. Interdiscip Perspect Infect Dis 2009;2009:372691.

## Campylobacteriosis

Agent	BACTERIUM. <i>Campylobacter jejuni</i> subsp <i>jejuni</i> , et al A microaerophilic gram-negative bacillus
Reservoir	Human, Mammal, Bird
Vector	None
Vehicle	Water, Food
Incubation Period	2d - 4d (range 1d - 10d)
Diagnostic Tests	Stool (rarely blood, CSF) culture. Nucleic acid amplification. Alert laboratory when these organisms are suspected.
Typical Adult Therapy	Stool precautions. Azithromycin 500 mg QD X 3 days Alternatives Erythromycin, Fluoroquinolone (Ciprofloxacin, Levofloxacin, Trovafloxacin, Pefloxacin, Sparfloxacin or Moxifloxacin), Gentamicin
Typical Pediatric Therapy	Stool precautions. Azithromycin 10 mg/kg QD X 3 days Alternatives - Erythromycin, Gentamicin
Clinical Hints	<ul> <li>Febrile diarrhea or dysentery</li> <li>Vomiting or bloody stool often noted</li> <li>Severe abdominal pain may mimic appendicitis</li> <li>Disease is most common among children and lasts for one-to-four days</li> </ul>
Synonyms	Campylobacter. ICD9: 008.43 ICD10: A04.5

## Campylobacteriosis in Moldova



Graph: Moldova. Campylobacteriosis, cases

# Candidiasis

Agent	FUNGUS - Yeast. Ascomycota, Hemiascomycetes, Saccharomycetales. Candida albicans, and other species.
Reservoir	Human
Vector	None
Vehicle	Contact, Catheter
Incubation Period	Variable
Diagnostic Tests	Culture. Serology and assays for cell-specific antigens are performed in some centers,
Typical Adult Therapy	Topical, oral, systemic antifungal agent depending on clinical presentation and species (in Drugs module, scroll through upper left box)
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Dermal erythema with satellite pustules</li> <li>"Cheesy" mucosal discharge</li> <li>Candidemia in the setting of intravenous catheter or endocarditis</li> <li>Severe, widespread or intractable disease may suggest underlying diabetes, AIDS or other form of immune suppression</li> </ul>
Synonyms	Candida, Candida-Mykosen, Candidiase, Candidiasi, Candidose, Monilia, Moniliasis, Salmonella, Thrush. ICD9: 112 ICD10: B37

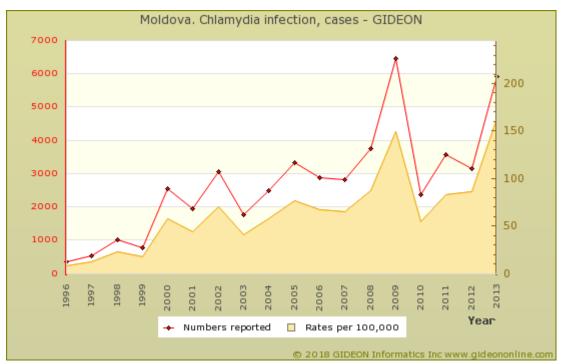
# Chancroid

Agent	BACTERIUM.  Haemophilus ducreyi.  A facultative gram-negative bacillus
Reservoir	Human
Vector	None
Vehicle	Sexual contact
Incubation Period	3d - 10d (2d - 21d)
Diagnostic Tests	Culture (inform laboratory when this diagnosis is suspected). Fluorescent staining under development
Typical Adult Therapy	Azithromycin 1.0 g PO X 1 dose. OR Ceftriaxone 250 mg IM X 1 dose. OR Ciprofloxacin 500 mg PO BID X 3 days OR Erythromycin 500 mg PO TID X 7d.
Typical Pediatric Therapy	Azithromycin 12 mg/kg PO X 1 dose OR Erythromycin 10 mg/kg PO TID X 7d. OR Ceftriaxone 10 mg/kg IM X 1
Clinical Hints	- Soft, painful and tender chancre on erythematous base - Regional lymphadenopathy - generally unilateral and painful - Onset three-to-ten days following sexual exposure
Synonyms	Blot sjanker, Chancre mou, Chancro blando, Haemophilus ducreyi, Nkumunye, Soft chancre, Ulcera mole, Ulcus molle, Weeke sjanker, Weicher Schanker. ICD9: 099.0 ICD10: A57

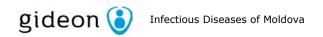
# Chlamydia infections, misc.

Agent	BACTERIUM. Chlamydiaceae, Chlamydiae, Chlamydia trachomatis; Simkania negevensis; Waddlia chondrophila
Reservoir	Human
Vector	None
Vehicle	Sexual contact
Incubation Period	5d - 10d
Diagnostic Tests	Microscopy and immunomicroscopy of secretions. Serology. Tissue culture. Nucleic acid amplification.
Typical Adult Therapy	Azithromycin 1g as single dose OR Doxycycline 100 mg BID X 7d. OR Levofloxacin 500 mg daily X 7 days OR Ofloxacin 300 mg BID X 7 days
Typical Pediatric Therapy	Weight <45 kg: Erythromycin 12.5 mg/kg QID X 14d Weight >=45 kg, but age <8 years: Azithromycin 1 g as single dose Age >= 8 years: Azithromycin 1 g as single dose OR Doxycycline 100 mg BID X 7 d
Clinical Hints	<ul> <li>Thin, scant penile discharge</li> <li>Cervicitis, with overt pelvic inflammatory disease in some cases</li> <li>Conjunctivitis or neonatal pneumonia</li> <li>Concurrent gonorrhea may be present</li> </ul>
Synonyms	Bedsonia, Chlamydia felis, Chlamydia gallinacea, Chlamydia suis, Chlamydia trachomatis, Chlamydien-Urethritis, Chlamydien-Zervizitis, Chlamydophila, Inclusion blenorrhea, Non-gonococccal urethritis, Nonspecific urethritis, Parachlamydia, Parachlamydia acanthamoebae, Prachlamydia, Protochlamydia, Protochlamydia naegleriophila, Rhabdochlamydia, Simkania negevensis, Waddlia chondrophila. ICD9: 099.41,099.5 ICD10: A56,A55

Chlamydia infections, misc. in Moldova

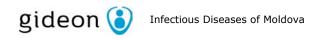


Graph: Moldova. Chlamydia infection, cases



# Chlamydophila pneumoniae infection

	BACTERIUM.
Agent	Chlamydiaceae, Chlamydiae, Chlamydophila (Chlamydia) pneumoniae
Reservoir	Human
Vector	None
Vehicle	Droplet, Respiratory or pharyngeal acquisition
Incubation Period	7d - 28d
Diagnostic Tests	Direct fluorescence of sputum. Serology and culture in specialized laboratories. Nucleic acid amplification.
Typical Adult Therapy	Respiratory isolation. Azithromycin 500 mg day 1, then 0.25 g daily X 4 days OR Levofloxacin 750 mg po BID X 7d. OR Alternatives: Doxycycline 100 mg BID X 7d. Erythromycin 500 mg QID X 10d. Clarithromycin 0.5 g BID X 7d
Typical Pediatric Therapy	Respiratory isolation Azithromycin 10 mg/kg PO day 1; 5 mg/kg PO days 2 to 5
Clinical Hints	- Atypical pneumonia, often associated with pharyngitis and myalgia - Consider this diagnosis when <i>Mycoplasma, Legionella</i> and influenza are discounted
Synonyms	Chlamydia pneumoniae, Chlamydia TWAR, Chlamydophila pneumoniae, TWAR. ICD9: 078.88 ICD10: J16.0



# Cholecystitis and cholangitis

Agent	BACTERIUM.  Escherichia coli, Klebsiella pneumoniae, enterococci, et al.
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Roentgenograms/imaging (cholecystogram, ultrasound, CT, etc).
Typical Adult Therapy	Antibiotics and surgical intervention as required
Typical Pediatric Therapy	As for adult
Clinical Hints	- Fever, chills and right upper quadrant abdominal pain; - Often "female, fat and forty" - May be associated with gallstones or pancreatitis, or present as "fever of unknown origin"
Synonyms	Acute cholecystitis, Angiocholite, Ascending cholangitis, Cholangitis, Cholecystite, Cholecystitis, Cholecystitis, Colangitis, Colecistite, Gall bladder. ICD9: 575.0,576.1 ICD10: K81,K83.0

### Cholera

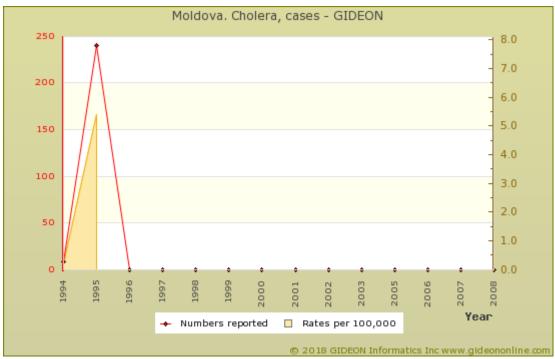
Agent	BACTERIUM.  Vibrio cholerae  A facultative gram-negative bacillus
Reservoir	Human
Vector	None
Vehicle	Water, Fecal-oral, Seafood (oyster, ceviche), Vegetables, Fly
Incubation Period	1d - 5d (range 9h - 6d)
Diagnostic Tests	Stool culture. Advise laboratory when this organism is suspected.
Typical Adult Therapy	Stool precautions.  Doxycycline 100 mg BID X 5d, or Fluoroquinolone (Levofloxacin, Trovafloxacin, Pefloxacin, Sparfloxacin or Moxifloxacin), or Azithromycin Fluids (g/l): NaCl 3.5, NaHCO3 2.5, KCl 1.5, glucose 20
Typical Pediatric Therapy	Stool precautions.  Age >=8 years: Doxycycline 2 mg/kg BID X 5d.  Age <8 years: Sulfamethoxazole / Trimethoprim  Fluids (g/I): NaCl 3.5, NaHCO3 2.5, KCl 1.5, glucose 20
Vaccines	Cholera - injectable vaccine Cholera - oral vaccine
Clinical Hints	<ul> <li>Massive, painless diarrhea and dehydration</li> <li>Occasionally vomiting</li> <li>Apathy or altered consciousness are common</li> <li>Rapid progression to acidosis, electrolyte imbalance and shock</li> <li>Fever is uncommon</li> </ul>
Synonyms	Colera, Kolera. ICD9: 001 ICD10: A00

Although Cholera is not endemic to Moldova, imported, expatriate or other presentations of the disease have been associated with this country.

#### Cholera in Moldova

As of 1996, activity was reported in Chisinev Raion, Slobozajskiy Raion, Stefan-Voda Raion and Tiraspol Raion.

• These areas were removed from the W.H.O. "infected areas" list as of November 1997.



Graph: Moldova. Cholera, cases

#### Notes:

- 1. Water-borne outbreaks were reported during 1970 to 1972. 1
- 2. 72 cases were reported during 1965 to 1989 <sup>2</sup> Individual years:

1995 - Included 8 imported cases <sup>3</sup>

No fatal cases were reported in 1994, and 2 in 1995.

### References

- 1. Zh Mikrobiol Epidemiol Immunobiol 1993 Mar-Apr;(2):52-7.
- 2. Bull World Health Organ 1993;71(2):189-96.

## Chromomycosis

Agent	FUNGUS. Ascomycota, Euascomycetes, Chaetothyriales. Dematiaceous molds: <i>Phialophora, Cladiophialophora, Fonsecaea, Rhinocladiella</i>
Reservoir	Wood, Soil, Vegetation
Vector	None
Vehicle	Minor trauma
Incubation Period	14d - 90d
Diagnostic Tests	Biopsy and fungal culture.
Typical Adult Therapy	Itraconazole 100 mg PO QID X (up to) 18 m. OR (for late disease) Flucytosine 25 mg/kg QID X 4m. OR Posaconazole 400 mg PO BID Terbinafine has been used in some cases. Local heat; excision as necessary
Typical Pediatric Therapy	Itraconazole 1 mg/kg PO BID X (up to) 18 m. OR Ketoconazole (if age >2) 5 mg/kg/d X 3 to 6m. Local heat; excision as necessary
Clinical Hints	<ul><li>Violaceous, verrucous, slowly-growing papule(s) or nodules</li><li>Most commonly on lower extremities</li><li>Usually follows direct contact with plant matter in tropical regions</li></ul>
Synonyms	Chromoblastomycosis, Chromomykose, Phoma insulana, Veronaea, Verrucous dermatitis. ICD9: 117.2 ICD10: B43.0



## Chronic meningococcemia

Agent	BACTERIUM.  Neisseria meningitidis An aerobic gram-negative coccus
Reservoir	Human
Vector	None
Vehicle	Air, Infected secretions
Incubation Period	Unknown
Diagnostic Tests	Blood culture. Test patient for complement component deficiency.
Typical Adult Therapy	Intravenous Penicillin G 20 million units daily X 7 days
Typical Pediatric Therapy	Intravenous Penicillin G 200,000 units daily X 7 days
Clinical Hints	<ul> <li>Recurrent episodes of low-grade fever, rash, arthralgia and arthritis</li> <li>May persist for months</li> <li>Rash is distal and prominent near joints and may be maculopapular, petechial or pustular</li> <li>In some cases, associated with complement component-deficiency</li> </ul>
Synonyms	Meningococcemia, chronic. ICD9: 036.2 ICD10: A39.3

## **Clostridial food poisoning**

Agent	BACTERIUM.  Clostridium perfringens An anaerobic gram-positive bacillus
Reservoir	Soil, Human, Pig, Cattle, Fish, Poultry
Vector	None
Vehicle	Food
Incubation Period	8h - 14h (range 5h - 24h)
Diagnostic Tests	Laboratory diagnosis is usually not practical. Attempt culture of food for C. perfringens.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Abdominal pain and watery diarrhea</li> <li>Usually no fever or vomiting</li> <li>Onset 8 to 14 hours after ingestion of meat, fish or gravy</li> <li>Fecal leukocytes not seen</li> <li>Most cases resolve within 24 hours</li> </ul>
Synonyms	

## **Clostridial myonecrosis**

Agent	BACTERIUM.  Clostridium perfringens An anaerobic gram-positive bacillus
Reservoir	Soil, Human
Vector	None
Vehicle	Soil, Trauma
Incubation Period	6h - 3d
Diagnostic Tests	Gram stain of exudate. Wound and blood cultures. Presence of gas in tissue (not specific).
Typical Adult Therapy	Prompt, aggressive debridement.  Penicillin G 3 million units IV Q3h + Clindamycin 900 mg IV Q8h.  Hyperbaric oxygen
Typical Pediatric Therapy	Prompt, aggressive debridement.  Penicillin G 50,000 units/kg IV Q3h + Clindamycin 10 mg/kg IV Q6h.  Hyperbaric oxygen
Vaccine	Gas gangrene antitoxin
Clinical Hints	- Rapidly progressive tender and foul-smelling infection of muscle - Local gas present - crepitus or visible on X-ray - Hypotension, intravascular hemolysis and obtundation
Synonyms	Anaerobic myonecrosis, Clostridial gangrene, Gas gangrene. ICD9: 040.0 ICD10: A48.0

## **Clostridium difficile colitis**

Agent	BACTERIUM.  Clostridium difficile  An anaerobic gram-positive bacillus
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Assay of stool for C. difficile toxin.
Typical Adult Therapy	Metronidazole 500 mg PO TID X 10d. OR Vancomycin 125 mg (oral preparation) QID X 10d OR Fidaxomicin 200 mg PO BID X 10d Fecal transplantation (PO or by enema) has been effective in some cases.
Typical Pediatric Therapy	Vancomycin 2 mg/kg (oral preparation) QID X 10d
Clinical Hints	<ul> <li>Fever, leukocytosis and abdominal pain</li> <li>Mucoid or bloody diarrhea during or following antibiotic therapy</li> <li>Fecal leucocytes are seen</li> <li>Suspect this diagnosis even when mild diarrhea follows antibiotic intake</li> </ul>
Synonyms	Klebsiella oxytoca colitis, Pseudomembranous colitis. ICD9: 008.45 ICD10: A04.7

# Common cold

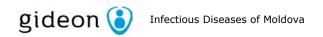
Agent	VIRUS - RNA. Picornaviridae. Rhinoviruses, Coronavirus, et al.
Reservoir	Human
Vector	None
Vehicle	Droplet, Contact, Respiratory or pharyngeal acquisition
Incubation Period	1d - 3d
Diagnostic Tests	Viral culture and serology are available, but not practical.
Typical Adult Therapy	Supportive; Pleconaril under investigation
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Nasal obstruction or discharge, cough and sore throat are common</li> <li>Fever above 38 C is common in children, but unusual in adults</li> <li>Illness typically persists for one week, occasionally two</li> </ul>
Synonyms	Acute coryza, Raffreddore. ICD9: 079,460 ICD10: J00

# **Conjunctivitis - inclusion**

Agent	BACTERIUM. Chlamydiae, Chlamydia trachomatis
Reservoir	Human
Vector	None
Vehicle	Infected secretions, Sexual contact, Water (swimming pools)
Incubation Period	5d - 12d
Diagnostic Tests	Demonstration of chlamydiae on direct fluorescence or culture of exudate.
Typical Adult Therapy	Secretion precautions. Topical Erythromycin. Erythromycin 250 mg PO QID. X 14 days OR Doxycycline 100 mg PO BID X 14 days
Typical Pediatric Therapy	Secretion precautions. Topical Erythromycin. Azithromycin 1 g PO as single dose. Alternative If age >8 years, Doxycycline 100 mg PO BID X 7 days.
Clinical Hints	- Ocular foreign body sensation, photophobia and discharge - Illness can persist for months, to as long as 2 years
Synonyms	Inclusion conjunctivitis, Paratrachoma. ICD9: 077.0 ICD10: P39.1,A74.0

# Conjunctivitis - viral

Agent	VIRUS. Picornavirus, Adenovirus
Reservoir	Human
Vector	None
Vehicle	Contact
Incubation Period	1d - 3d
Diagnostic Tests	Viral isolation is available but rarely practical.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	- Watery discharge, generalized conjunctival injection and mild pruritus - May be associated with an upper respiratory infection
Synonyms	Apollo conjunctivitis, Apollo eye, Congiuntivite virale, Hemorrhagic conjunctivitis, Viral conjunctivitis. ICD9: 077.1,077.2,077.3,077.4,077.8,372.0 ICD10: B30,B30.3,H10



# Crimean-Congo hemorrhagic fever

Agent	VIRUS - RNA. Bunyaviridae, Nairovirus: CCHF virus. Infections also ascribed to related agents (Nairobi sheep and Dugbe viruses)
Reservoir	Hare, Bird, Tick, Cattle, Sheep, Goat
Vector	Tick ( <i>Hyalomma</i> - over 30 potential vectors in this genus)
Vehicle	Infected secretions from patient or livestock, Respiratory or pharyngeal acquisition
Incubation Period	1d - 6d (range 2d - 53d)
Diagnostic Tests	Viral culture (blood, CSF, tissue). Serology. Nucleic acid amplification. Biosafety level 4.
Typical Adult Therapy	Isolation. Supportive therapy. Ribavirin: 1g PO QID X 4d, then 0.5g QID X 6d
Typical Pediatric Therapy	Isolation. Supportive therapy Ribavirin (dosage not established)
Clinical Hints	<ul> <li>Headache, chills, myalgia, abdominal pain and photophobia</li> <li>Conjunctivitis and pharyngitis are often present</li> <li>Petechiae, thrombocytopenia and leukopenia are common</li> <li>Onset 3 to 7 days following a tick bite or exposure to infected patient</li> <li>Case-fatality rate is approximately 30%</li> </ul>
Synonyms	Acute infectious capillary toxinosis, CCHF, Crimea Congo hemorrhagic fever, Dugbe, Erve, Ganjam, Kemerovo, Nairobi sheep, Orungo, Tribec, Xinjiang hemorrhagic fever. ICD9: 065.0 ICD10: A98.0

# Cryptococcosis

Agent	FUNGUS - Yeast. Basidiomycota, Hymenomycetes, Sporidiales: <i>Cryptococcus neoformans</i> and other species
Reservoir	Pigeon, Soil
Vector	None
Vehicle	Air, Respiratory or pharyngeal acquisition
Incubation Period	Variable
Diagnostic Tests	Fungal culture and stains. Latex test for fungal antigen in CSF and serum. Nucleic acid amplification.
Typical Adult Therapy	Amphotericin B 0.3 mg/kg/d X 6w (+/- Flucytosine); then 0.8 mg/kg qod X 8w. OR Fluconazole 200 mg/d
Typical Pediatric Therapy	Amphotericin B 0.3 mg/kg/d X 6w (+/- Flucytosine); then 0.8 mg/kg qod X 8w. OR Fluconazole 3 mg/kg/d
Clinical Hints	<ul> <li>Chronic lymphocytic meningitis or pneumonia in an immune-suppressed patient</li> <li>Meningitis may be subclinical, or "wax and wane"</li> <li>Nuchal rigidity is absent or minimal;</li> <li>Bone, skin, adrenals, liver, prostate and other sites may be infected hematogenously</li> </ul>
Synonyms	Busse-Buschke disease, Cryptococcus, European blastomycosis, Torulosis. ICD9: 117.5,321.0 ICD10: B45

# Cryptosporidiosis

Agent	PARASITE - Protozoa. Apicomplexa, Eimeriida: <i>Cryptosporidium hominis</i> and <i>C. parvum</i> (rarely <i>C. muris</i> , <i>C. felis</i> , <i>C.</i>
	meleagridis, et al).
Reservoir	Mammal (over 150 species)
Vector	None
Vehicle	Water, Feces, Oysters, Fly
Incubation Period	5d - 10d (range 2d - 14d)
Diagnostic Tests	Stool/duodenal aspirate for acid-fast, direct fluorescence staining, or antigen assay. Nucleic acid amplification
Typical Adult Therapy	Stool precautions.  Nitazoxanide 500 mg PO BID X 3 days
Typical Pediatric Therapy	Stool precautions.  Nitazoxanide: 1 to 3 years: 100 mg PO BID X 3 days 4 to 11 years: 200 mg PO BID X 3 days >12 years: 500 mg PO BID X 3 days
Clinical Hints	<ul> <li>Watery diarrhea, vomiting, abdominal pain</li> <li>Self-limited disease in healthy subjects</li> <li>Immunosuppressed (e.g., AIDS) patients experience chronic, wasting illness (may be associated with pulmonary disease)</li> </ul>
Synonyms	Cryptosporidium, Cryptosporidium andersoni, Cryptosporidium chipmunk genotype, Cryptosporidium cunulicus, Cryptosporidium fayeri, Cryptosporidium felis, Cryptosporidium hedgehog genotype, Cryptosporidium hominis, Cryptosporidium meleagridis, Cryptosporidium parvum, Cryptosporidium pestis, Cryptosporidium suis, Cryptosporidium tyzzeri, Cryptosporidium ubiquitum, Cryptosporidium viatorum, Kryptosporidiose. ICD9: 007.4 ICD10: A07.2



## **Cutaneous larva migrans**

Agent	PARASITE - Nematoda. Secernentea: Ancylostoma braziliense, A. caninum, Bunostomum phlebotomum, Strongyloides myopotami
Reservoir	Cat, Dog, Cattle
Vector	None
Vehicle	Soil, Contact
Incubation Period	2d - 3d (range 1d - 30d)
Diagnostic Tests	Biopsy is usually not helpful.
Typical Adult Therapy	Albendazole 200 mg BID X 3d OR Ivermectin 200 micrograms/kg as single dose. OR Thiabendazole topical, and oral 25 mg/kg BID X 5d (max 3g).
Typical Pediatric Therapy	Albendazole 2.5 mg/kg BID X 3d OR Ivermectin 200 micrograms/kg once OR Thiabendazole topical, and oral 25 mg/kg BID X 5d (max 3g).
Clinical Hints	<ul> <li>Erythematous, serpiginous, intensely pruritic and advancing lesion(s) or bullae</li> <li>Usually involves the feet</li> <li>Follows contact with moist sand or beach</li> <li>May recur or persist for months.</li> </ul>
Synonyms	Creeping eruption, Pelodera, Plumber's itch. ICD9: 126.2,126.8,126.9 ICD10: B76.9

# Cyclosporiasis

Agent	PARASITE - Protozoa. Apicomplexa, Eimeriida: <i>Cyclospora cayetanensis</i>
Reservoir	Human, Non-human primate
Vector	None
Vehicle	Water, Vegetables
Incubation Period	1d - 11d
Diagnostic Tests	Identification of organism in stool smear. Cold acid fast stains and ultraviolet microscopy may be helpful.
Typical Adult Therapy	Sulfamethoxazole / Trimethoprim 800/160 mg BID X 7d Ciprofloxacin 500 mg PO BID X 7 d (followed by 200 mg TIW X 2 w) has been used in sulfa-allergic patients
Typical Pediatric Therapy	Sulfamethoxazole / Trimethoprim 10/2 mg/kg BID X 7d
Clinical Hints	<ul> <li>Most cases follow ingestion of contaminated water in underdeveloped countries</li> <li>Large outbreaks have been associated with ingestion of contaminated fruit</li> <li>Watery diarrhea (average 6 stools daily)</li> <li>Abdominal pain, nausea, anorexia and fatigue</li> <li>May persist for up to 6 weeks (longer in AIDS patients)</li> </ul>
Synonyms	Cryptosporidium muris, Cyanobacterium-like agent, Cyclospora. ICD9: 007.5 ICD10: A07.8

# Cysticercosis

Agent	PARASITE - Platyhelminthes, Cestoda. Cyclophyllidea, Taeniidae: <i>Taenia solium</i>
Reservoir	Pig, Human
Vector	None
Vehicle	Soil (contaminated by pigs), Fecal-oral, Fly
Incubation Period	3m - 3y
Diagnostic Tests	Serology (blood or CSF) and identification of parasite in biopsy material.
Typical Adult Therapy	Albendazole 400 mg PO BID X 30d.  OR Praziquantel 30 mg/kg TID X 14d (15 to 30d for neurocysticercosis).  Combination of Albendazole + Praziquantel may be superior for neurocysticercosis.  Surgery as indicated  Add corticosteroids if brain involved.
Typical Pediatric Therapy	Albendazole 15 mg/kg PO BID X 30d.  OR Praziquantel 30 mg/kg TID X 14d (15 to 30d for neurocysticercosis).  Combination of Albendazole + Praziquantel may be superior for neurocysticercosis.  Surgery as indicated  Add corticosteroids if brain involved.
Clinical Hints	- Cerebral, ocular or subcutaneous mass - Usually no eosinophilia - Calcifications noted on X-ray examination - Associated with regions where pork is eaten - 25% to 50% of patients have concurrent tapeworm infestation
Synonyms	Taenia crassiceps, Taenia martis. ICD9: 123.1 ICD10: B69



# Cytomegalovirus infection

Agent	VIRUS - DNA.
	Herpesviridae, Betaherpesvirinae: Human herpesvirus 5 (Cytomegalovirus)
Reservoir	Human
Vector	None
Vehicle	Droplet (respiratory), Urine, Dairy products, Tears, Stool, Sexual, contact (rare), Transplacental, Breastfeeding
Incubation Period	3w - 5w (range 2w - 12w)
Diagnostic Tests	Viral culture (blood, CSF, urine, tissue). Serology. Direct viral microscopy. Nucleic acid amplification
Typical Adult Therapy	(Most cases self-limited).  Ganciclovir 5 mg/kg q12h IV X 2 to 3w.  OR Foscarnet 90 mg/kg Q12h IV  OR Cidofovir 5 mg/kg IV weekly
Typical Pediatric Therapy	(Most cases self-limited) Ganciclovir 5 mg/kg q12h IV X 2 to 3w
Vaccine	Cytomegalovirus immunoglobulin
Clinical Hints	<ul> <li>Heterophile-negative "mononucleosis"</li> <li>Mild pharyngitis, without exudate</li> <li>Variable degree of lymphadenopathy and splenomegaly</li> <li>Retinitis in AIDS patients</li> <li>Pneumonia in setting of immune suppression</li> <li>Congenital infection characterized by multisystem disease in newborns</li> </ul>
Synonyms	Cytomegalovirus, Zytomegalie. ICD9: 078.5 ICD10: B25

### Dengue

Agent	VIRUS - RNA. Flaviviridae, Flavivirus: Dengue virus
Reservoir	Human, Mosquito, Monkey (in Malaysia and Africa)
Vector	Mosquito - Stegomyia (Aedes) aegypti, S. albopictus, S. polynesiensis, S. scutellaris
Vehicle	Blood, Breastfeeding
Incubation Period	5d - 8d (range 2d - 15d)
Diagnostic Tests	Viral isolation (blood). Serology. Nucleic acid amplification. Biosafety level 2.
Typical Adult Therapy	Supportive; IV fluids to maintain blood pressure and reverse hemoconcentration
Typical Pediatric Therapy	As for adult
Vaccine	Dengue vaccine
Clinical Hints	<ul> <li>Headache, myalgia, arthralgia</li> <li>Relative bradycardia, leukopenia and macular rash</li> <li>Severe dengue (DHF or dengue-shock syndrome) defined by thrombocytopenia, hemoconcentration and hypotension</li> </ul>
Synonyms	Bouquet fever, Break-bone fever, Dandy fever, Date fever, Dengue Fieber, Duengero, Giraffe fever, Petechial fever, Polka fever. ICD9: 061 ICD10: A90,A91

Although Dengue is not endemic to Moldova, imported, expatriate or other presentations of the disease have been associated with this country.

#### **Dengue in Moldova**

Moldova. Dengue, cases: None reported between 2005 and 2008

## **Dermatophytosis**

Agent	FUNGUS. Ascomycota, Euascomyces, Onygenales: Epidermophyton, Microsporum, Trichophyton, Trichosporon spp., Arthroderma, et al		
Reservoir	Human, Dog, Cat, Rabbit, Marsupial, Other mammal		
Vector	None		
Vehicle	Contaminated soil/flooring, Animal Contact		
Incubation Period	2w - 38w  Fungal culture and microscopy of skin, hair or nails. Nucleic acid amplification.  Skin - topical Clotrimazole, Miconazole, etc. Hair/nails - Terbinafine, Griseofulvin, Itraconazole or Fluconazole PO  As for adult		
Diagnostic Tests			
Typical Adult Therapy			
Typical Pediatric Therapy			
Clinical Hints	- Erythematous, circinate, scaling or dyschromic lesions of skin, hair or nails - Pruritus, secondary infection or regional lymphadenopathy may be present		
Synonyms	Arthroderma, Dermatomicose, Dermatomycose, Dermatomycosis, Dermatomykose, Dermatomykosen, Emericella, Favus, Granuloma trichophyticum, Gruby's disease, Kodamaea, Leukonychia trichophytica, Microsporum, Nattrassia, Onychocola, Onychomycosis, Pityriasis versicolor, Ringworm, Saint Aignan's disease, Scopulariopsis, Scytalidium, Tinea, Tinea barbae, capitis, Tinea corporis, Tinea cruris, Tinea favosa, Tinea imbricata, Tinea manum, Tinea pedis, Tunguinum, Tokelau ringworm, Triadelphia pulvinata, Trichomycosis, Trichophytosis, Trichophytosis, ICD9: 110,111 ICD10: B35,B36		

# Dicrocoeliasis

Agent	PARASITE - Platyhelminthes, Trematoda. Plagiorchiida, Dicrocoeliidae: Dicrocoelium dendriticum and D. hospes			
Reservoir	Sheep, Cattle, Pig, Goat, Snail, Ant			
Vector	None Ingested ant			
Vehicle				
Incubation Period	Unknown			
Diagnostic Tests	Identification of ova in stool, bile or duodenal aspirate.  Praziquantel 25 mg/kg PO TID X 1d (investigational)			
Typical Adult Therapy				
Typical Pediatric Therapy	As for adult			
Clinical Hints	- Acquired in sheep-raising areas - Abdominal pain, often accompanied by eosinophilia - Follows inadvertent ingestion of ants (with raw vegetables or fruit)			
Synonyms	Dicrocoelium dendriticum, Dicrocoelium hospes, Halzoun, Lancet liver fluke. ICD9: 121.8 ICD10: B66.2			



# Dientamoeba fragilis infection

	PARASITE - Protozoa.			
Agent	Metamonada, Parabasala, Trichomonadea. Flagellate: <i>Dientamoeba fragilis</i>			
Reservoir	Human, Gorilla, Pig			
Vector	None			
Vehicle	Fecal-oral (ingestion of pinworm ova)			
Incubation Period	8d - 25d			
Diagnostic Tests	Identification of trophozoites in stool. Nucleic acid amplification. Alert laboratory if this diagnosis is suspected.			
Typical Adult Therapy	Stool precautions.  Iodoquinol 650 mg PO TID X 20d.  OR Tetracycline 500 mg QID X 10d.  OR Paromomycin 10 mg/kg TID X 7d  OR Metronidazole 750 mg PO TID X 10d			
Typical Pediatric Therapy	Stool precautions.  Iodoquinol 13 mg/kg PO TID X 20d. OR (age >8) Tetracycline 10 mg/kg QID X 10d OR Paromomycin 10 mg/kg TID X 7d OR Metronidazole 15 mg/kg PO TID X 10d			
Clinical Hints	<ul> <li>Abdominal pain with watery or mucous diarrhea</li> <li>Eosinophilia may be present</li> <li>Concurrent enterobiasis (pinworm) is common</li> <li>Infestation may persist for more than one year</li> </ul>			
Synonyms	nonyms			

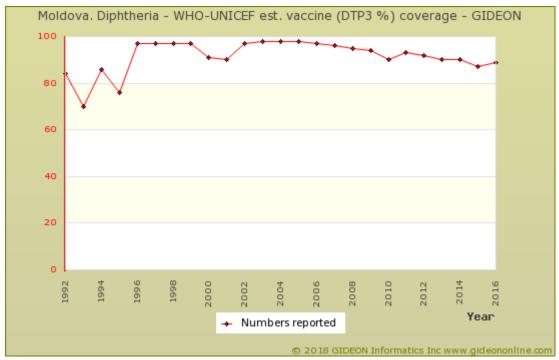
### Diphtheria

Agent	BACTERIUM.  Corynebacterium diphtheriae A facultative gram-positive bacillus		
Reservoir	Human		
Vector	None		
Vehicle	Droplet, Contact, Dairy products, Clothing  2d - 5d (range 1d - 10d)  Culture on special media. Advise laboratory when this diagnosis is suspected.		
Incubation Period			
Diagnostic Tests			
Typical Adult Therapy	Respiratory isolation. Equine antitoxin 20,000 to 80,000 units IM. (first perform scratch test) Erythromycin 500 mg QID (or Penicillin preparation) X 14d		
Typical Pediatric Therapy	Respiratory isolation. Equine antitoxin 1,000 units/kg IM. (first perform scratch test) Erythromycin 10 mg/kg QID (or penicillin preparation) X 14d		
Vaccines	DI vaccine DTaP vaccine Td vaccine Td vaccine  - Pharyngeal membrane with cervical edema and lymphadenopathy		
Clinical Hints			
Synonyms	Corynebacterium diphtheriae, Difteri, Difteria, Difterie, Difterite, Diphterie. ICD9: 032 ICD10: A36		

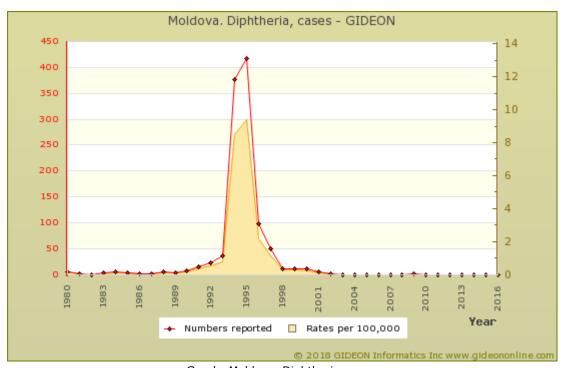
### Diphtheria in Moldova

### Vaccine Schedule:

BCG - 2 days
DT - 7 years
DTwP - 2 years
DTwPHibHepB - 2,4,6 months
HepB - birth; adults in risk groups
IPV - 6 months
MMR - 12 months; 7,15 years
OPV - 2,4,6 months; 2,7,15 years
Pneumo conj - 2,4,12 months
Rotavirus - 2,4 months
Td - 15, 20, 25, 30, 35, 40, 50, 60 years



Graph: Moldova. Diphtheria - WHO-UNICEF est. vaccine (DTP3 %) coverage



Graph: Moldova. Diphtheria, cases

#### Notes:

1. 1994 to 1996 - 91.3% of isolates were *C. diphtheriae* biotype gravis. <sup>1</sup>

#### **Notable outbreaks**

Years	Cases	Notes
1991 - 1997	1,011	

#### References

1. J Infect Dis 2000 Feb ;181 Suppl 1:S47-54.

# Diphyllobothriasis

Agent	PARASITE - Platyhelminthes, Cestoda. Pseudophyllidea, Diphyllobothriidae: <i>Diphyllobothrium latum</i> , et al		
Reservoir	Human, Dog, Bear, Fish-eating mammal		
Vector	None		
Vehicle	Fresh-water fish - notably (for <i>D. latum</i> ) perch, burbot and pike		
Incubation Period	4w - 6w (range 2w - 2y)		
Diagnostic Tests	Identification of ova or proglottids in feces.		
Typical Adult Therapy	Praziquantel 10 mg/kg PO as single dose OR Niclosamide 2 g PO once  Praziquantel 10 mg/kg PO as single dose OR Niclosamide 50 mg/kg PO once		
Typical Pediatric Therapy			
Clinical Hints	<ul> <li>Abdominal pain, diarrhea and flatulence</li> <li>Vitamin B12 deficiency is noted in 0.02% of patients</li> <li>Rare instances of intestinal obstruction have been described</li> <li>Worm may survive for decades in the human intestine</li> </ul>		
Synonyms	Adenocephalus pacificus, Bandwurmer [Diphyllobothrium], Bothriocephalus acheilongnathi, Bothriocephalus latus, Broad fish tapeworm, Dibothriocephalus infection, Diphyllobothrium cordatum, Diphyllobothrium dalliae, Diphyllobothrium dendriticum, Diphyllobothrium klebanovskii, Diphyllobothrium latum, Diphyllobothrium nihonkaiense, Diphyllobothrium stemmacephalum, Diphyllobothrium ursi, Diplogonoporiasis, Fish tapeworm. ICD9: 123.4 ICD10: B70.0		

# Dipylidiasis

Agent	PARASITE - Platyhelminthes, Cestoda. Cyclophyllidea, Dipylidiidae: <i>Dipylidium caninum</i>			
Reservoir	Dog, Cat			
Vector	None			
Vehicle	Ingested flea (Ctenocephalides spp.)			
Incubation Period	21d - 28d  Identification of proglottids in feces.  Praziquantel 10 mg/kg PO as single dose OR Niclosamide 2 g PO once			
Diagnostic Tests				
Typical Adult Therapy				
Typical Pediatric Therapy	Praziquantel 10 mg/kg PO as single dose OR Niclosamide 50 mg/kg PO once			
Clinical Hints	- Diarrhea, abdominal distention and restlessness (in children) - Eosinophilia present in some cases - Proglottids may migrate out of the anus			
Synonyms	Cucumber tapeworm, Dipylidium caninum, Dog tapeworm, Double-pored dog tapeworm. ICD9: 123.8 ICD10: B71.1			

## Dirofilariasis

Agent	PARASITE - Nematoda. Secernentea: Dirofilaria (Nochtiella) immitis (pulmonary); D. tenuis & D. repens (subcutaneous infection) & D. ursi		
Reservoir	Mammal, Dog, Wild carnivore ( <i>D. tenuis</i> in raccoons; <i>D. ursi</i> in bears)		
Vector	Mosquito		
Vehicle	None		
Incubation Period	60d - 90d		
Diagnostic Tests	Identification of parasite in tissue. Serology. Nucleic acid amplification.		
Typical Adult Therapy	Not available; excision is often diagnostic and curative		
Typical Pediatric Therapy	As for adult		
Clinical Hints	<ul> <li>Most patients are asymptomatic</li> <li>Cough and chest pain in some cases</li> <li>Solitary pulmonary coin lesion seen on imaging</li> <li>Multiple tender subcutaneous nodules may be present</li> <li>Eosinophilia is usually absent</li> </ul>		
Synonyms	Candidatus Dirofilaria hongkongensis, Dirofilariosis, Dirofiliaria, Dog heartworm, Filaria conjunctivae, Loaina. ICD9: 125.6 ICD10: B74.8		

#### **Dirofilariasis in Moldova**

#### **Prevalence surveys**

Frevalence surveys				
Years	Region	Study Group	%	Notes
2010 - 2015	Multiple locations	mosquitoes	8.65-26.51	Dirofilaria repens was found in 26.51% of mosquito pools, and $\it D.$ immitis in 8.65% $^{1}$

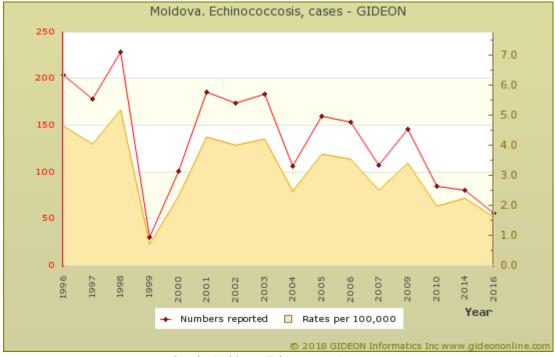
#### References

1. Parasit Vectors 2016 Dec 03;9(1):627.

### Echinococcosis - unilocular

Agent	PARASITE - Platyhelminthes, Cestoda. Cyclophyllidea, Taeniidae: <i>Echinococcus granulosus</i> , <i>Echinococcus canadensis</i>		
Reservoir	Dog, Wolf, Dingo, Sheep, Horse, Pig		
Vector	None		
Vehicle	Soil, Dog feces, Fly		
Incubation Period	1y - 20y		
Diagnostic Tests	Serology. Identification of parasite in surgical specimens.		
Typical Adult Therapy	Albendazole 400 mg BID X 28d. Repeat X 3, with 2 week hiatus between cycles.  Praziquantel has been used preoperatively to sterilize cyst.  Follow by surgery as indicated.  PAIR (puncture-aspiration-injection-reaspiration) is also used		
Typical Pediatric Therapy	Albendazole 10 mg/kg/day X 28d. Repeat X 3, with 2 week hiatus between cycles.  Praziquantel has been used preoperatively to sterilize cyst.  Follow by surgery as indicated.  PAIR (puncture-aspiration-injection-reaspiration) also used		
Clinical Hints	- Calcified hepatic cyst or mass lesions in lungs and other organs - Brain and lung involvement are common in pediatric cases		
Synonyms	Echinococcus canadensis, Echinococcus granulosus, Echinococcus ortleppi, Hydatid cyst, Unilocular echinococcosis. ICD9: 122.0,122.1,122.2,122.3,122.4 ICD10: B67.0,B67.1,B67.2,B67.3,B67.4		

#### Echinococcosis - unilocular in Moldova



Graph: Moldova. Echinococcosis, cases

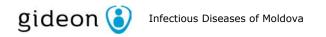
#### **Prevalence surveys**

	Years	Study Group	%	Notes
	2012	ruminants	59.3-61.9	61.9% of sheep and 59.3% of cattle at slaughter <sup>1</sup>
Ī	2014*	ruminants	78.9-82.5	82.5% of sheep and 78.9% of cattle <sup>2</sup>

<sup>\*</sup> indicates publication year (not necessarily year of survey)

#### References

- 1. J Helminthol 2016 May ;90(3):279-83. 2. Parasitol Res 2014 Dec ;113(12):4371-6.



### Ehrlichiosis - human monocytic

Agent	BACTERIUM. Anaplasmataceae Ehrlichia chaffeensis Ehrlichia canis Neoehrlichia mikurensis, et al. Intracellular Rickettsia-like bacteria
Reservoir	Dog, Tick, Deer, Coyote
Vector	Tick (Dermacentor variabilis or Amblyomma americanum)
Vehicle	None
Incubation Period	7d - 21d
Diagnostic Tests	Intramonocytic inclusions seen in blood smear. Serology. Nucleic acid amplification. Cell culture (HL60 cells).
Typical Adult Therapy	Doxycycline 100 mg PO BID X 7 to 14 days OR Rifampin 600 mg daily
Typical Pediatric Therapy	Above age 8 years: Doxycycline 2 mg/kg PO BID X 7 to 14 days. OR Rifampin 10 mg/kg/day PO
Clinical Hints	<ul> <li>Headache, myalgia and vomiting 1 to 2 weeks following tick bite</li> <li>Arthralgia or macular rash may be present</li> <li>Leukopenia, thrombocytopenia or hepatic dysfunction are common</li> <li>Inclusions may be visible in monocytes</li> </ul>
Synonyms	Candidatus Neoehrlichia mikurensis, Cowdria ruminantium, Ehrlichia canis, Ehrlichia chaffeensis, Ehrlichia muris, Ehrlichia runinantium, Ehrlichia sp. Panola Mountain, Human monocytic ehrlichiosis, Human monocytotropic ehrlichiosis, Neoehrlichia mikurensis, Panola Mountain Ehrlichia. ICD9: 082.41 ICD10: B28.8

Although Ehrlichiosis - human monocytic is not endemic to Moldova, imported, expatriate or other presentations of the disease have been associated with this country.

### Ehrlichiosis - human monocytic in Moldova

**Prevalence surveys** 

Years	Study Group	%	Notes
1960	ticks	0.8	0.8% of archived Ixodes ricinus (Candidatus Neoehrlichia mikurensis) 1

#### References

1. Ticks Tick Borne Dis 2013 Jun; 4(4):359-61.

### **Endocarditis - infectious**

Agent	BACTERIUM OR FUNGUS. viridans streptococci, <i>Staphylococcus aureus</i> , enterococci, <i>Candida albicans</i> , et al.
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Blood culture, clinical findings, ultrasonography of heart valves.
Typical Adult Therapy	Bactericidal antibiotic appropriate to species
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Consider in any patient with prolonged and unexplained fever,</li> <li>Multisystem disease and a preexisting cardiac valvular lesion may be present</li> <li>Skin lesions, hematuria, neurological symptoms, single or multiple abscesses or bone, brain, lung (etc)</li> </ul>
Synonyms	Bacterial endocarditis, Endocardite, Endocarditis, Endokarditis, Fungal endocarditis, Infectious endocarditis, S.B.E ICD9: 421 ICD10: 133

## **Enterobiasis**

Agent	PARASITE - Nematoda. Secernentea: <i>Enterobius vermicularis</i>
Reservoir	Human
Vector	None
Vehicle	Fecal-oral, Air, Clothing, Sexual contact
Incubation Period	14d - 42d
Diagnostic Tests	Apply scotch tape to anal verge in a.m. & paste onto glass slide for microscopy.
Typical Adult Therapy	Albendazole 400 mg PO as single dose - repeat in 2w. OR Mebendazole 100 mg PO as single dose - repeat in 2w. OR Pyrantel pamoate 11 mg/kg (max 1g) PO as single dose; or
Typical Pediatric Therapy	Mebendazole 100 mg PO as single dose (>age 2) - repeat in 2w. OR Pyrantel pamoate 11 mg/kg (max 1g) PO X 1
Clinical Hints	<ul> <li>Nocturnal anal pruritus</li> <li>Occasionally presents with vaginitis or abdominal pain</li> <li>Eosinophilia is rarely, if ever, encountered</li> </ul>
Synonyms	Enterobio, Enterobius vermicularis, Oxyuriasis, Oxyuris, Pinwom, Seatworm. ICD9: 127.4 ICD10: B80

## **Enterovirus infection**

Agent	VIRUS - RNA. Picornaviridae: Coxsackievirus, ECHO virus, Enterovirus, Parechovirus
Reservoir	Human
Vector	None
Vehicle	Droplet, Fecal-oral, Breastfeeding, Respiratory or pharyngeal acquisition
Incubation Period	2d-7d
Diagnostic Tests	Viral culture (stool, pharynx, CSF). Serology. Nucleic acid amplification.
Typical Adult Therapy	Supportive.  Pleconaril 200 to 400 mg PO TID X 7d has been used for severe infections
Typical Pediatric Therapy	Supportive.  Pleconaril 5 mg/kg PO BID has been used for severe infections
Clinical Hints	<ul> <li>Summer-to-autumn sore throat</li> <li>Specific forms present with conjunctivitis, chest pain, macular or vesicular rash, meningitis, myopericarditis, etc</li> </ul>
Synonyms	Boston exanthem [Caxsackie. A 16], Coxsackie, Coxsackievirus, ECHO, Echovirus, Enteroviruses, Hand, foot and mouth disease, Hand-foot-and-mouth disease, Herpangina [Coxsackievirus A], HEV 68, HPeVs, Human Enterovirus 68, Human Parechovirus, Ljungan virus, Myocarditis, enteroviral, Parechovirus, Pericarditis, enteroviral. ICD9: 049,079.2,008.67,074.0,074.8,074.3,070.4,078.89 ICD10: A88.0,A87.0,B08.4,B08.5,B08.8,B30.3,B34.1

## **Epidural abscess**

Agent	BACTERIUM.  Staphylococcus aureus, facultative gram negative bacilli, etc
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Imaging (CT scan, MRI). Gram-stain and culture of blood or pus.
Typical Adult Therapy	Intravenous antibiotic(s) appropriate to identified or suspected pathogens.  Drainage as indicated
Typical Pediatric Therapy	Intravenous antibiotic(s) appropriate to identified or suspected pathogen. Drainage as indicated
Clinical Hints	- Frontal bone abscess; or spinal cord compression with signs of infection - Often in setting of injecting drug abuse or preexisting staphylococcal infection
Synonyms	

## Erysipelas or cellulitis

Agent	BACTERIUM. Erysipelas: Streptococcus pyogenes Cellulitis: Staphylococcus aureus, Streptococcus pyogenes, occasionally others
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	1d - 7d
Diagnostic Tests	Clinical diagnosis is usually sufficient. Aspiration of lesion for smear and culture may be helpful in some cases.
Typical Adult Therapy	Antibiotic directed at likely pathogens (Group A Streptococcus and Staphylococcus aureus)
Typical Pediatric Therapy	As for adult
Clinical Hints	- Erysipelas is well-circumscribed, tender, edematous (peau d'orange), warm and painful - Cellulitis is less painful, flat and without a distinct border
Synonyms	Cellulite, Cellulitis, Celulite, Celulitis, Erisipela, Erysipelas, St. Anthony's fire (erysipelas), St. Francis' fire (erysipelas), Zellulitis. ICD9: 035,681,682 ICD10: A46,L03

## Erysipeloid

Agent	BACTERIUM.  Erysipelothrix rhusiopathiae A facultative gram-positive bacillus
Reservoir	Mammal, Bird, Fish
Vector	None
Vehicle	Contact with meat (mammal, poultry or fish)
Incubation Period	1d - 4d
Diagnostic Tests	Culture.
Typical Adult Therapy	Oral therapy for 10 days: Penicillin V, Ampicillin, third-generation cephalosporin, Fluoroquinolone (Levofloxacin, Trovafloxacin, Pefloxacin, Sparfloxacin or Moxifloxacin), Erythromycin, Clindamycin or Tetracycline are generally adequate
Typical Pediatric Therapy	Oral therapy for 10 days:  Penicillin V, Ampicillin, third-generation cephalosporin or Erythromycin, Clindamycin are generally adequate
Clinical Hints	- Typically follows contact with raw animal or fish products - Annular erythema or "target lesion" on hand - Fever is present in only 10% of cases. - Local pain and swelling, without discharge
Synonyms	Erysipelothrix rhusiopathiae, Rutlauf. ICD9: 027.1 ICD10: A26

## **Erysipeloid in Moldova**

Moldova. Erysipeloid, cases: None reported between 1999 and 2004

## **Erythrasma**

Agent	BACTERIUM.  Corynebacterium minutissimum A facultative gram-positive bacillus
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Unknown
Diagnostic Tests	Coral fluorescence of skin lesion under Wood's lamp. Culture (alert lab regarding diagnosis).
Typical Adult Therapy	Erythromycin 250 mg PO QID X 14d. Topical Clindamycin 2% and topical Fusidic acid have also been used
Typical Pediatric Therapy	Erythromycin 10 mg/kg PO QID X 14d. Topical Clindamycin 2% and topical Fusidic acid have also been used
Clinical Hints	- Common in obese or diabetic males - Pruritic, scaling, slowly-progressive red-brown patch - Usually affects the groin - occasionally in toe webs - Coral fluorescence under Wood's light.
Synonyms	Corynebacterium minutissimum, Eritrasma. ICD9: 039.0 ICD10: L08.1

### Escherichia coli diarrhea

Agent	BACTERIUM.  Escherichia coli A facultative gram-negative bacillus		
Reservoir	Human, Mammal		
Vector	None		
Vehicle	Food, Water, Fecal-oral		
Incubation Period	1d - 3d (range 12h - 10d)		
Diagnostic Tests	Stool culture. Request characterization of E. coli isolates.		
Typical Adult Therapy	Supportive therapy. If EHEC, avoid anti-motility drugs and antimicrobial agents. Plasma exchange may be effective in HUS  Note that antimicrobial agents may increase risk for hemolytic-uremic syndrome when used in cases of E. coli O157:H7 infection		
Typical Pediatric Therapy	Supportive therapy. If EHEC, avoid anti-motility drugs and antimicrobial agents. Plasma exchange may be effective in HUS  Note that antimicrobial agents may increase risk for hemolytic-uremic syndrome when used in cases of E. coli O157:H7 infection		
Clinical Hints	<ul> <li>Watery diarrhea or dysentery</li> <li>Common among travelers and infants</li> <li>Hemorrhagic colitis and hemolytic uremic syndrome with type O157, and occasionally other strains</li> </ul>		
Synonyms	DAEC (Diffusely Adherent E. coli), E. coli diarrhea, EAEC (Enteroadherent E. coli), EAggEC (Enteroaggregative E. coli), EHEC (Enterohemorrhagic E. coli), EIEC (Enteroinvasive E. coli), EPEC (Enteropathogenic E. coli), Escherichia albertii, ETEC (Enterotoxic E. coli), Hamolytisch-uramisches Syndrom, Hemolytic Uremic Syndrome, HUS. ICD9: 008.0 ICD10: A04.0,A04.1,A04.2,A04.3,A04.4		

### **Fascioliasis**

Agent	PARASITE - Platyhelminthes, Trematoda. Echinostomatida, Fasciolidae: Fasciola hepatica or Fasciola gigantica
Reservoir	Sheep, Cattle, Snail ( <i>Lymnaea</i> , <i>Galba</i> , <i>Fossaria</i> )
Vector	None
Vehicle	Food, Aquatic plants, Watercress (Nasturtium officinale)
Incubation Period	2w - 3m
Diagnostic Tests	Identification of ova in stool or duodenal aspirates (adult parasite in tissue). Serology. PCR. CT scan.
Typical Adult Therapy	Triclabendazole 10 mg/kg PO X 2 doses.  OR Bithionol 50 mg/kg every other day X 10 doses  OR Nitazoxanide 500 mg PO BID X 7d
Typical Pediatric Therapy	Triclabendazole 10 mg/kg PO X 2 doses. OR Bithionol 50 mg/kg every other day X 10 doses OR Nitazoxanide: Age 1 to 3y 100 mg BID X 7 d Age 4 to 11y 200 mg BID X 7d
Clinical Hints	<ul> <li>Fever, hepatomegaly, cholangitis, jaundice and eosinophilia</li> <li>Urticaria occasionally observed during the acute illness</li> <li>Parasite may survive more than 10 years in the biliary tract</li> </ul>
Synonyms	Eurytrema, Fasciola gigantica, Fasciola hepatica, Hepatic distomiasis, Lederegelbefall, Sheep liver fluke. ICD9: 121.3 ICD10: B663.

#### **Fascioliasis in Moldova**

Note for former U.S.S.R.:

Fasciola hepatica has been identified in elk (Alces alces), red deer (Cervus elaphus) and roe deer (Capreolus capreolus) from the Belorussian Polesie. <sup>1</sup>

• 131 cases were reported from the former U.S.S.R. in the literature during 1969 to 1989 - most from Tajikistan.

#### References

1. Parasitol Res 2003 Jan;89(1):75-6.



## Fungal infection - invasive

Agent	FUNGUS.  Various (major syndromes such as Candidiasis, Blastomycosis, etc are discussed separately in this module)
Reservoir	Human
Vector	None
Vehicle	Endogenous, Respiratory or pharyngeal acquisition
Incubation Period	Variable
Diagnostic Tests	Culture of blood, urine, biopsy material. Serum antigen or antibody assay in some cases.
Typical Adult Therapy	Antifungal agent(s) directed at known or likely pathogen
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Fungal etiology should be suspected in any patient with evidence of severe local or multisystem infection</li> <li>Commonly encountered in the setting of immune suppression</li> </ul>
Synonyms	Acremonium, Acrophialophora, Adiaspiromycosis, Allescheriasis, Alternaria, Arthrographis kalrae, Athopsis, Aureobasidium, Bipolaris, Blastobotrys proliferans, Chaetomium, Chrysosporium, Cladophialophora, Cladosporium, Curvularia, Cyphellophora, Dactylaria, Debaryomyces, Dreschslera, Emergomyces, Emmonsia, Exophiala, Exserohilum, Fonsecaea, Fungal meningitis, Fungal sepsis, Fusarium, Geosmithia, Geosmithia argillacea, Geotrichosis, Graphium, Hansenula, Haplomycosis, Hendersonula, Humicola, Hyalophycomycosis, Kluyveromyces, Lasiodiplodia, Lasiodiplodia, Lecythophora, Magnusiomyces, Malassezia furfur, Monascus, Monosporiosis, Mycocentrospora, Neocosmospora vasinfecta, Neosartorya hiratsukae, Neosartorya udagawae, Ochroconis, Oidiodendron, Paecilomyces, Paraconiothyrium, Pestalotiopsis, Phaeoacremonium, Phaeohyphomycosis, Phialemoniopsis, Phialophora, Phoma, Pichia, Pseudallescheria, Pseudallescheriasis, Pseudochaetosphaeronema martinelli, Purpureocillium, Pyrenochaeta, Ramichloridium, Rhinocladiella, Rhytidhysteron, Saccharomyces, Saprochaete, Sarcopodium, Sarocladium, Scedosporium, Septicemia - fungal, Taeniolella, Thielavia, Trichoderma, Truncatella, Ulocladium, Veronacea, Verruconis, Wallemia. ICD9: 117.6,117.8,117.9,118 ICD10: B43.1,B43.2,B43.8,B48.2,B48.3,B48.7,B48.8

### Gastroenteritis - viral

Agent	VIRUS - RNA Calicivirus (Norwalk, Hawaii, Sapporo, Snow Mountain, Norovirus); Torovirus; or Astrovirus
Reservoir	Human
Vector	None
Vehicle	Food, Water, Shellfish, Vegetables
Incubation Period	Norwalk 1d - 2d; Astrovirus 3d - 4d
Diagnostic Tests	Demonstration of virus (electron microscopy or stool antigen analysis). Serology. Nucleic acid amplification.
Typical Adult Therapy	Stool precautions; supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Vomiting (less common with Astrovirus) and abdominal pain</li> <li>Loose, watery diarrhea lasting 1 to 3 days</li> <li>Fecal leucocytes not present</li> <li>Fever in 50%</li> <li>Headache or myalgia in some cases</li> </ul>
Synonyms	Aichi, Astroviridae, Astrovirus, Bufavirus, Calicivirus gastroenteritis, Chiba, Cosavirus, Cyclovirus, Diarrhea, Gastroenterite virale, Hawaii agent gastroenteritis, Klassevirus, Mexico virus, Mini-reovirus, Minireovirus, Norovirus gastroenteritis, Norwalk agent gastroenteritis, Norwalk-like, Parkville virus gastroenteritis, Picobirnavirus, Recovirus, Roskilde disease, Saffold Cardiovirus, Salivirus, Salivirus, Sapovirus, Sapporo, Sapporo-like, Snow Mountain, SRSV gastroenteritis, STL polyomavirus, STLPyV, Toronto virus, Torovirus, Tusavirus, Vinterkraksjuka, Viral gastroenteritis, Winter vomiting disease. ICD9: 008.8,008.69,008.62,008.63,008.64,008.65,008.66,008.67

### Gastroenteritis - viral in Moldova

#### **Prevalence surveys**

Years	Region	Study Group	%	Notes
2014*	Multiple locations	children	21.8	Norovirus was identified in 21.8% of Rotavirus-negative fecal specimens from children below age 5 years, Adenovirus 4.0%, Sapovirus 3.2% and Astrovirus 1.4% (Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova and Ukraine) $^{1}$

<sup>\*</sup> indicates publication year (not necessarily year of survey)

#### References

1. Infect Genet Evol 2014 Dec ;28:283-8.

## Gianotti-Crosti syndrome

Agent	UNKNOWN
Reservoir	Unknown
Vector	None
Vehicle	Unknown
Incubation Period	Unknown
Diagnostic Tests	Clinical features and skin biopsy findings.
Typical Adult Therapy	None
Typical Pediatric Therapy	None
Clinical Hints	<ul> <li>History of recent viral illness or vaccination</li> <li>Generalized skin eruption involving the extremities, face and buttocks</li> <li>Lymphadenopathy of the axillae and inguinal region</li> <li>Anicteric hepatitis may occur</li> <li>Illness resolves in 15 to 42 days</li> <li>Rare outbreaks have been reported</li> </ul>
Synonyms	Acrodermatitis papulosa infantilis, Papular acrodermititis of childhood, Papulovesicular acrolocated syndrome. ICD9: 693.0 ICD10: L27.8

### **Giardiasis**

Agent	PARASITE - Protozoa. Sarcomastigophora, Metamonada, Trepomonadea. Flagellate: <i>Giardia lamblia (G. intestinalis, G. duodenalis</i> )
Reservoir	Human, Beaver, Muskrat, Dog, Cat, Carnivores, Sheep, Goat, Horse, Cattle
Vector	None
Vehicle	Food, Water, Fecal-oral, Fly
Incubation Period	1w - 3w (range 3d - 6w)
Diagnostic Tests	String test (gelatin capsule containing string). Stool microscopy or antigen assay. Nucleic acid amplification.
Typical Adult Therapy	Tinidazole 2 g PO X1. OR Nitazoxanide 500 mg PO BID X 3d Alternatives: Metronidazole 250 mg PO TID X 5d. OR Furazolidone 100 mg PO QID X 7d. OR Paromomycin 10 mg/kg PO TID X 7d OR Quinacrine 100 mg PO TID X 5d
Typical Pediatric Therapy	Tinidazole 50 mg PO X 1 (maximum 2g).  OR Nitazoxanide: Age 1 to 3y 100 mg BID X 7 d Age 4 to 11y 200 mg BID X 7d Alternatives: Metronidazole 5 mg/kg PO TID X 5d. OR Furazolidone 1.5 mg/kg QID X 7d
Clinical Hints	<ul> <li>Foul smelling, bulky diarrhea</li> <li>Nausea and flatulence</li> <li>Upper abdominal pain is common</li> <li>Illness may "wax and wane"</li> <li>Weight loss and low-grade fever are common</li> <li>Severe or intractable infection may suggest underlying IgA deficiency</li> </ul>
Synonyms	Beaver fever, Giardia duodenalis, Giardia intestinalis, Giardia lamblia, Lambliasis. ICD9: 007.1 ICD10: A07.1

## Giardiasis in Moldova

13 cases were reported in 2005

### **Glanders**

Agent	BACTERIUM.  Burkholderia mallei An aerobic gram negative bacillus
Reservoir	Horse, Mule, Donkey
Vector	None
Vehicle	Infected secretions, Contact, Respiratory or pharyngeal acquisition
Incubation Period	5d - 14d (range 1d - 21d)
Diagnostic Tests	Culture of blood or exudate. Serology.
Typical Adult Therapy	Sulfonamides 25 mg/kg QID (up to 6g) X 3w
Typical Pediatric Therapy	As for adult
Clinical Hints	- Ulcerating skin nodule with lymphangitis - Fever, myalgia, pneumonia and pleuritis in some cases - Usually follows contact with equines
Synonyms	Burkholderia mallei, Farcy, Mormo, Rotz. ICD9: 024 ICD10: A24.0

Although Glanders is not endemic to Moldova, imported, expatriate or other presentations of the disease have been associated with this country.

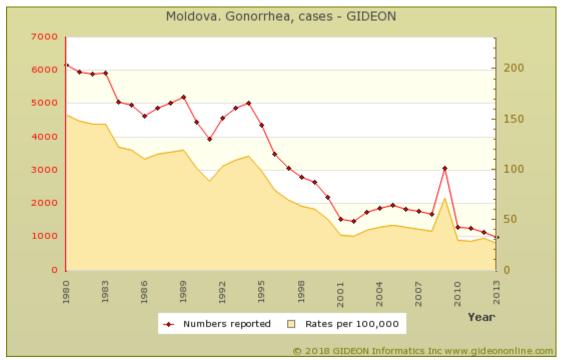
#### Glanders in Moldova

The last cases of glanders in this country were reported in 1957.

### **Gonococcal infection**

Agent	BACTERIUM.  Neisseria gonorrhoeae  An aerobic gram-negative coccus
Reservoir	Human
Vector	None
Vehicle	Sexual, contact, Childbirth, Exudates, Respiratory or pharyngeal acquisition
Incubation Period	2d - 7d
Diagnostic Tests	Smear (male), culture. Consult laboratory for proper acquisition & transport. Nucleic acid amplification.
Typical Adult Therapy	Ceftriaxone 250 mg IM X 1. PLUS Azithromycin 1 g PO as single dose.
Typical Pediatric Therapy	Weight <=45 kg: Ceftriaxone 25 - 50 mg/kg IM or IV X 1 (max. 125 mg IM) Weight >45 kg: as for adult. PLUS Azithromycin
Clinical Hints	<ul> <li>Onset 2 to 7 days after sexual exposure</li> <li>Copious urethral discharge (male) or cervicitis</li> <li>Pelvic inflammatory disease</li> <li>Systemic disease associated with fever, painful pustules and suppurative arthritis (primarily encountered in postmenstrual females)</li> </ul>
Synonyms	Blennorragie, Blenorragia, Gonococcemia, Gonore, Gonorre, Gonorrea, Gonorrhea, Gonorrhee, Gonorrho, Gonorrhoe, Infeccion gonococica, Infeccoes gonococicas, Neisseria gonorrhoeae. ICD9: 098 ICD10: A54

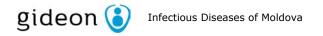
#### **Gonococcal infection in Moldova**



Graph: Moldova. Gonorrhea, cases

## Granuloma inguinale

Agent	BACTERIUM.  Klebsiella granulomatis (formerly Calymmatobacterium granulomatis)  A gram-negative bacillus
Reservoir	Human
Vector	None
Vehicle	Sexual, contact, Direct contact
Incubation Period	7d - 30d (range 3d - 1 year)
Diagnostic Tests	Identification of organism in stained smears. Culture in specialized laboratories (HEp-2 cells).
Typical Adult Therapy	Azithromycin 1 g weekly X 3 w. Alternatives: Doxycycline 100 mg BID PO X 3w. Sulfamethoxazole / Trimethoprim 800/160 mg BID X 3w Erythromycin 500 mg QID X 3w.
Typical Pediatric Therapy	Azithromycin 10 mg / kg po day 1; then 250 mg / kg daily days 2 to 5 Alternatives: Sulfamethoxazole / Trimethoprim , Erythromycin or Doxycyeline
Clinical Hints	<ul> <li>Slowly expanding, ulcerating skin nodule with friable base</li> <li>Usually painless</li> <li>May be complicated by edema or secondary infection</li> <li>Rarely spreads to bone or joints</li> </ul>
Synonyms	Calymmatobacterium granulomatis, Donovanosis, Granuloma genitoinguinale, Granuloma inguinale tropicum, Granuloma venereum, Sixth venereal disease. ICD9: 099.2 ICD10: A58



### Hantaviruses - Old World

Agent	VIRUS - RNA. Bunyaviridae, Hantavirus - Old world : Hantaan, Puumala, Dobrava/Belgrade, Saaremaa & Seoul viruses
Reservoir	Field mouse ( <i>Apodemus agrarius</i> -Hantaan), Vole ( <i>Myodes glareolus</i> -Puumala), Rat ( <i>Rattus norvegicus</i> -Seoul), Bat, Bird
Vector	None
Vehicle	Animal excreta, Respiratory or pharyngeal acquisition
Incubation Period	12d - 21d (range 4d - 42d)
Diagnostic Tests	Serology. Viral culture. Nucleic acid amplification. Biosafety level 3.
Typical Adult Therapy	Supportive. Suggest Ribavirin: 1g IV q6h X 4d, then 0.5g q6h X 6d
Typical Pediatric Therapy	Supportive. Suggest Ribavirin
Vaccine	Hantavirus vaccine
Clinical Hints	<ul> <li>- Headache, backache, myalgia, diarrhea, vomiting, conjunctivitis</li> <li>- Hemorrhage and azotemia</li> <li>- Proteinuria and thrombocytopenia are common</li> <li>- History of local rodent infestation may be elicited</li> <li>- Case-fatality rates 0.1% (Puumala virus) to 15% (Belgrade virus)</li> </ul>
Synonyms	Acute epidemic hemorrhagic fever, Bosnian hemorrhagic fever, Churilov disease, Dobrava/Belgrade, Endemic benign nephropathy, Epidemic hemorrhagic fever, Far eastern hemorrhagic fever, Haemorrhagic nephrosonephritis, Hantaan, Hemorrhagic fever & renal syndrome, Infectious hemorrhagic fever, Khabarovsk, Korean hemorrhagic fever, Mouse fever, Muju, Muroid virus nephropathy, Nephropathia epidemica, Puumala, Rodent-borne viral nephropathy, Saaremaa, Sandinavian epidemic nephropathy, Sangassou, Seoul, Sochi virus, Songo fever, Sorkfeber, Thailand virus, Thottapalayam, Topografov, Tula, Viral hemorrhagic fever, Viral hemorrhagic fevers. ICD9: 078.6 ICD10: A98.5

### Hantaviruses - Old World in Moldova

Moldova. Hantavirus infection - Old World, cases: None reported between 1998 and 2006

7.8% of healthy blood donors are seropositive. <sup>1</sup>

Evidence for Puumala and Hantaan virus infection is found in gray voles.

See note for Russian Federation.

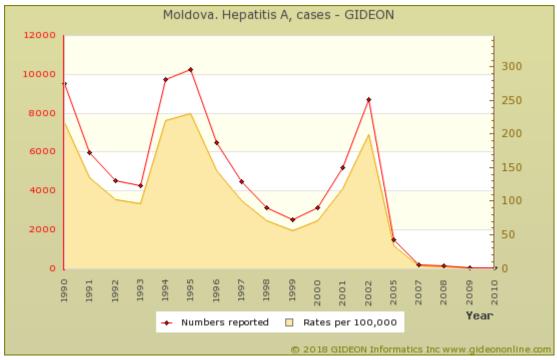
#### References

1. Vopr Virusol 1994 Nov-Dec;39(6):260-2.

### **Hepatitis A**

Agent	VIRUS - RNA. Picornaviridae, Hepatovirus: Hepatitis A virus
Reservoir	Human, Non-human primate
Vector	None
Vehicle	Fecal-oral, Food, Water, Milk, Fly, Breastfeeding
Incubation Period	21d - 30d (range 14d - 60d)
Diagnostic Tests	Serology. Nucleic acid amplification.
Typical Adult Therapy	Stool precautions; supportive
Typical Pediatric Therapy	As for adult
Vaccines	Hepatitis A vaccine Hepatitis A + Hepatitis B vaccine Immune globulin
Clinical Hints	<ul> <li>Vomiting, anorexia, dark urine, light stools and jaundice</li> <li>Rash and arthritis occasionally encountered</li> <li>Fulminant disease, encephalopathy and fatal infections are rare</li> <li>Case-fatality rate 0.15% to 2.7%, depending on age</li> </ul>
Synonyms	Botkin's disease, Epatite A, HAV, Hepatite per virus A, Infectious hepatitis. ICD9: 070.0 ICD10: B15.0, B15.9

## **Hepatitis A in Moldova**



Graph: Moldova. Hepatitis A, cases

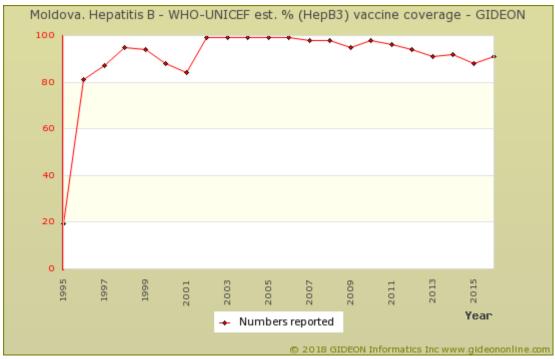
### **Hepatitis B**

Agent	VIRUS - DNA. Hepadnaviridae, Orthohepadnavirus: Hepatitis B virus
Reservoir	Human Non-human primate
Vector	None
Vehicle	Blood, Infected secretions, Sexual contact, Transplacental
Incubation Period	2m - 3m (range 1m - 13m)
Diagnostic Tests	Serology. Nucleic acid amplification.
Typical Adult Therapy	Needle precautions. For chronic infection: Peginterferon alfa-2a or Peginterferon alfa-2b OR Entecavir OR Tenofovir
Typical Pediatric Therapy	As for adult
Vaccines	Hepatitis A + Hepatitis B vaccine Hepatitis B + Haemoph. influenzae vaccine Hepatitis B immune globulin Hepatitis B vaccine
Clinical Hints	<ul> <li>Vomiting and jaundice</li> <li>Rash or arthritis occasionally noted</li> <li>Fulminant and fatal infections are encountered</li> <li>Risk group (drug abuse, blood products, sexual transmission)</li> <li>Hepatic cirrhosis or hepatoma may follow years after acute illness</li> </ul>
Synonyms	Epatite B, HBV, Hepatite per virus B, Serum hepatitis. ICD9: 070.1 ICD10: B16.2,B16.9, B16.1

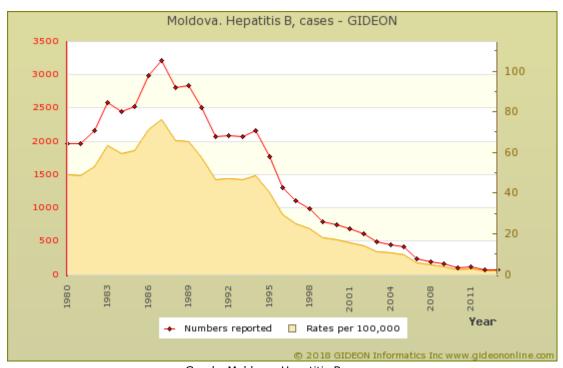
#### **Hepatitis B in Moldova**

#### **Vaccine Schedule:**

BCG - 2 days
DT - 7 years
DTwP - 2 years
DTwPHibHepB - 2,4,6 months
HepB - birth; adults in risk groups
IPV - 6 months
MMR - 12 months; 7,15 years
OPV - 2,4,6 months; 2,7,15 years
Pneumo conj - 2,4,12 months
Rotavirus - 2,4 months
Td - 15, 20, 25, 30, 35, 40, 50, 60 years



Graph: Moldova. Hepatitis B - WHO-UNICEF est. % (HepB3) vaccine coverage



Graph: Moldova. Hepatitis B, cases

**HBsAg-positivity surveys** 

isong positivity surveys							
Years	Region	Study Group	%	Notes			
100/	Multiple locations	blood donors	14.5-17.51	12.5% of blood donors in the south, and 4.5% in the north (1994 publication) $^{1}$			
1994*		children	6.8	6.8% of children			

Years	Region	Study Group	%	Notes
	Multiple locations	pregnant women	6.8-9.7	6.8 to 9.7% of pregnant women (1994) <sup>2</sup>

<sup>\*</sup> indicates publication year (not necessarily year of survey)

#### References

- Vopr Virusol 1994 Mar-Apr;39(2):93-4.
   Epidemiol Infect 1999 Dec;123(3):463-7.

## **Hepatitis C**

Agent	VIRUS - RNA. Flaviviridae, Hepacivirus: Hepatitis C virus			
Reservoir	Human			
Vector	None			
Vehicle	Blood, Sexual contact, Transplacental			
Incubation Period	5w - 10w (range 3w - 16w)			
Diagnostic Tests	Serology. Nucleic acid amplification.			
Typical Adult Therapy	Needle precautions. For chronic infection: Ledipasvir / Sofusbuvir OR Ombitasvir-Paritaprevir-Ritonavir + Dasabuvir + Ribavirin OR Sofusbuvir + Simeprevir + Ribavirin  (Regimen / Duration dependent on viral genotype)			
Typical Pediatric Therapy	Agents recommended for adult disease are not currently licensed for use in children  Peginterferon alfa-2b 3 MU/m2 SC x1 weekly  AND Ribavirin 15mg/kg			
Clinical Hints	<ul> <li>Vomiting and jaundice</li> <li>May be history of transfusion or injection within preceding 1 to 4 months</li> <li>Chronic hepatitis and fulminant infections are encountered</li> <li>Hepatic cirrhosis or hepatoma may follow years after acute illness</li> </ul>			
Synonyms	Epatite C, HCV, Hepatite per virus C, Non-A, non-B parenteral hepatitis. ICD9: 070.2,070.3,070.44,070.51,070.54,070.7 ICD10: B17.1			

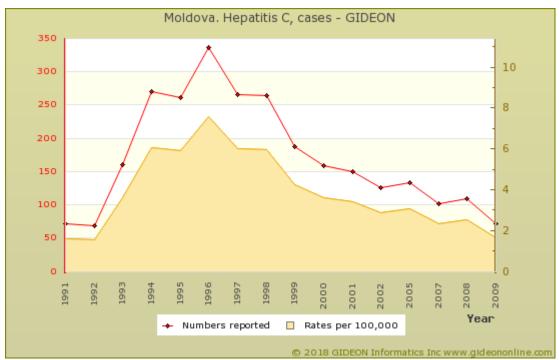
## **Hepatitis C in Moldova**

The carriage rate was estimated at 4.90% in 1997; 4.9% in 1999.

Seroprevalence surveys

Scropicvan	er oprevalence surveys					
Years	Region	Study Group	%	Notes		
1994*	1994* Multiple locations blood donors		3.6-6.2	6.2% of blood donors in the south, and 3.6% in the north (1994 publication)		
1994*		children	1.4	1.4% of children		
2010	Multiple locations	MSM	1.2-3.7	3.7% of MSM in Chisinau and 1.2% in Balti (2010) <sup>2</sup>		
1994 - 1995	Multiple locations	pregnant women	2.3	2.3% of pregnant women (1994) <sup>3</sup>		
2009 - 2010	Multiple locations	sex workers	18-23.7	18% of CSW in Chisinau and 23.7% in Balti (2009 to 2010) 4		

<sup>\*</sup> indicates publication year (not necessarily year of survey)



Graph: Moldova. Hepatitis C, cases

#### References

- Vopr Virusol 1994 Mar-Apr;39(2):93-4.
   Int J STD AIDS 2013 May ;24(5):357-64.

- Epidemiol Infect 1999 Dec ;123(3):463-7.
   AIDS Behav 2013 Oct ;17(8):2588-96.

## **Hepatitis D**

	VIRUS - RNA.
Agent	Deltavirus: Hepatitis D virus - a 'satellite' virus which is encountered as infection with a co-virus (Hepatitis B)
Reservoir	Human
Vector	None
Vehicle	Infected secretions, Blood, Sexual contact
Incubation Period	4w - 8w (range 2w - 20w)
Diagnostic Tests	Serology. Nucleic acid amplification.
Typical Adult Therapy	Needle precautions; supportive Interferon alfa 2-a has been used.
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Vomiting and jaundice</li> <li>Biphasic course often noted</li> <li>Occurs as a coinfection or superinfection of hepatitis B</li> <li>May be chronic or fulminant</li> <li>Hepatitis D coinfection worsens prognosis of Hepatitis B</li> </ul>
Synonyms	Epatite D, Hepatitis delta. ICD9: 070.41,070.52 ICD10: B17.0

## **Hepatitis D in Moldova**

Seroprevalence surveys

<u> </u>	er oprevalence but veyb						
Years	Region	Study Group	%	Notes			
1994 - 1995	Multiple locations	HBsAg-positives	18.3	18.3% of hepatitis B antigen-positive pregnant women (1994) <sup>1</sup>			

### References

1. Epidemiol Infect 1999 Dec; 123(3):463-7.

## **Hepatitis E**

Agent	VIRUS - RNA. Hepeviridae: Hepatitis E virus
Reservoir	Human, Rodent, Pig, Rabbit
Vector	None
Vehicle	Fecal-oral, Water, Shellfish, Blood, Meat
Incubation Period	30d - 40d (range 10d - 70d)
Diagnostic Tests	Identification of virus by immune electron microscopy (stool). Serology. Nucleic acid amplification.
Typical Adult Therapy	Stool precautions; supportive Ribavirin has been used successfully in high-risk patients.
Typical Pediatric Therapy	As for adult
Vaccine	Hepatitis E vaccine
Clinical Hints	- Clinically similar to hepatitis A - Chronic residua are rare - Severe or fatal if acquired during pregnancy (10% to 24% case-fatality rate).
Synonyms	Epatite E, Non-A, non-B enteric hepatitis. ICD9: 070.43,070.53 ICD10: B17.2

### **Hepatitis E in Moldova**

Seroprevalence surveys

Years	Study Group	%	Notes
1997 - 1998	animal contact	51.1	51.1% of persons having swine contact, and 24.7% of persons without swine contact (1997 to 1998). $^{1}$

#### References

1. J Infect Dis 2001 Dec 15;184(12):1594-7.

## **Herpes B infection**

Agent	VIRUS - DNA. Herpesviridae, Alphaherpesviridae, Simplexvirus: Cercopithecine herpesvirus 1 (Herpes B virus)
Reservoir	Monkey ( <i>Macaca species</i> and <i>Cynomolgus</i> )
Vector	None
Vehicle	Contact or bite, Respiratory or pharyngeal acquisition
Incubation Period	10d - 20d (range 2d - 60d)
Diagnostic Tests	Viral culture (skin exudates). Nucleic acid amplification. Biosafety level 4.
Typical Adult Therapy	Therapy: Acyclovir 12 mg/kg IV q8h. OR Ganciclovir 5 mg/kg IV q12h. Follow with prolonged Acyclovir 800 mg PO 5X daily. Postexposure prophylaxis: Valacyclovir 1g PO q8h X 14 days. OR Acyclovir 800 mg PO X 5 X 14 days
Typical Pediatric Therapy	Acyclovir or Ganciclovir as for adult.
Clinical Hints	- Skin vesicles, lymphadenopathy, myalgia, singultus, major neurological signs - Usually onset within one month of contact with monkey - Case-fatality rates exceed 80% - Permanent neurological residua are common
Synonyms	Cercopithecine herpesvirus 1, Herpes B, Herpesvirus simiae, Macacine herpesvirus 1, McHV-1. ICD9: 078.89 ICD10: B00.4

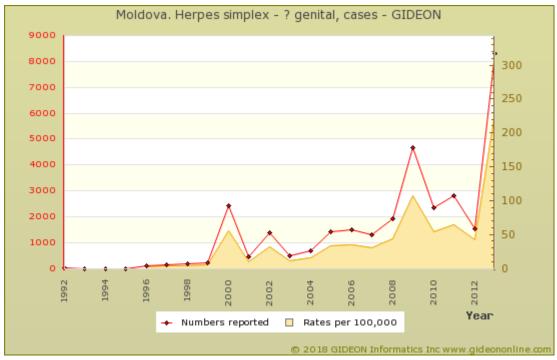
# Herpes simplex encephalitis

Amount	VIRUS - DNA.
Agent	Herpesviridae, Alphaherpesvirinae, Simplexvirus: Human herpesvirus (usually type I)
Reservoir	Human
Vector	None
Vehicle	Infected secretions, Sexual contact
Incubation Period	Unknown
Diagnostic Tests	Viral culture CSF usually negative. CT brain. Compare CSF/blood antibody levels. Nucleic acid amplification.
Typical Adult Therapy	Acyclovir 10 mg/kg IV Q8h
Typical Pediatric Therapy	Acyclovir 10 mg/kg IV Q8h
Clinical Hints	<ul> <li>Rapidly-progressive severe encephalitis</li> <li>Exanthem not evident in most cases</li> <li>Often unilateral, with temporal and parietal lobe predominance</li> <li>Permanent residua and high case-fatality rate in untreated cases</li> </ul>
Synonyms	

### **Herpes simplex infection**

Agent	VIRUS - DNA. Herpesviridae, Alphaherpesvirinae, Simplexvirus: Human herpesvirus I and II
Reservoir	Human
Vector	None
Vehicle	Infected secretions, Sexual contact, Breastfeeding, Respiratory or pharyngeal acquisition
Incubation Period	1d - 14d
Diagnostic Tests	Viral culture or microscopy of lesions. Serology. Nucleic acid amplification.
Typical Adult Therapy	Famciclovir 250 mg PO TID X 7d. OR Valacyclovir 1 g PO BID X 7d OR Acyclovir 400 mg PO X 3 per day X 7d  Dosage and duration may vary for first vs. recurrent vs. suppressive regimens.
Typical Pediatric Therapy	Acyclovir 10 mg/kg PO QID X 7 d
Clinical Hints	- Recurring localized crops of painful vesicles on a red base - Regional adenopathy often present - May follow a prodrome of neuropathy or hyperesthesia
Synonyms	Herpes gladiatorum, Herpes rugbiorum, Herpes simplex, Scrum pox. ICD9: 054.0,054.1,054.2,054.4,054.5,054.6,054.7,054.8,054.9 ICD10: A60,B00

### Herpes simplex infection in Moldova



Graph: Moldova. Herpes simplex - ? genital, cases

### **Herpes zoster**

Agent	VIRUS - DNA. Herpesviridae, Alphaherpesvirinae: Varicella-zoster virus
Reservoir	Human
Vector	None
Vehicle	Air, Direct contact
Incubation Period	Unknown
Diagnostic Tests	Viral culture (vesicles). Serology. Nucleic acid amplification.
Typical Adult Therapy	Acyclovir 800 mg PO X 5 daily X 7 to 10d. OR Famciclovir 500 PO TID. OR Valacyclovir 1 g PO TID
Typical Pediatric Therapy	Acyclovir 20 mg/kg PO QID X 7 to 10d
Vaccine	Herpes zoster vaccine
Clinical Hints	<ul> <li>Patients usually above age 50</li> <li>Unilateral dermatomal pain, tenderness and paresthesia</li> <li>Rash appears after 3 to 5 days - macular, erythematous lesions which evolve into vesicles</li> <li>Trunk and chest wall most commonly involved; but eyes, extremities and other areas also affected</li> <li>Recurrence is common</li> </ul>
Synonyms	Fuocodi Saint'Antonio, Shingles, Zona, Zoster. ICD9: 053 ICD10: B02

## Histoplasmosis

Agent	FUNGUS. Ascomycota, Euascomycetes, Onygenales: <i>Histoplasma capsulatum</i> var. <i>capsulatum</i> A dimorphic fungus
Reservoir	Soil, Caves, Chicken roosts, Bat
Vector	None
Vehicle	Air, Respiratory or pharyngeal acquisition
Incubation Period	10d - 14d (range 5d - 25d)
Diagnostic Tests	Fungal culture. Serologic tests less helpful. Antigen tests currently under study. Nucleic acid amplification.
Typical Adult Therapy	Itraconazole 200 mg daily X 9m  For severe or immunocompromised patients: Liposomal Amphotericin B 3 to 5 mg/kg/d X 2w, followed by Itraconazole as above
Typical Pediatric Therapy	Itraconazole 2 mg/kg daily X 9 m.  For severe or immunocompromised patients: Liposomal Amphotericin B 3 to 5 mg/kg/d X 2w, followed by Itraconazole as above
Clinical Hints	- Fever, cough, myalgia - Pulmonary infiltrates and calcifying hilar lymphadenopathy - Chronic multisystem infection is often encountered
Synonyms	Darling's disease, Histoplasma capsulatum, Histoplasmose, Ohio River Valley Fever, Ohio Valley disease, Reticuloendothelial cytomycosis. ICD9: 115.0 ICD10: B39.0,B39.1,B39.2,B39.3,B39.4

### **HIV** infection - initial illness

Agent	VIRUS - RNA. Retroviridae, Lentivirinae: Human Immunodeficiency Virus
Reservoir	Human
Vector	None
Vehicle	Blood, Semen, Sexual contact, Transplacental, Breastfeeding
Incubation Period	1w - 6w
Diagnostic Tests	HIV antibody (ELISA, Western blot). HIV or HIV antigen assays. Nucleic acid amplification.
Typical Adult Therapy	Antiretroviral therapy - most experts will initiate treatment even if no symptoms + normal CD4 count.
Typical Pediatric Therapy	Antiretroviral therapy - most experts will initiate treatment even if no symptoms + normal CD4 count.
Clinical Hints	<ul> <li>Most common among "high risk" patients (illicit drug use, commercial sex work, men who have sex with men, etc)</li> <li>Fever, diarrhea, sore throat and a mononucleosis-like illness</li> <li>Symptoms subside within two weeks; but may persist for as long as ten weeks</li> </ul>
Synonyms	HIV, HIV infection, HTLV-III infection. ICD9: 042 ICD10: B20,B21,B22,B23,B24

#### HIV infection - initial illness in Moldova

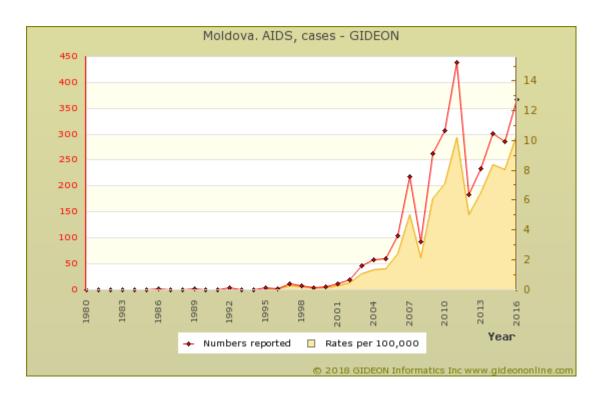
Data and background information regarding HIV infection are included in the note for **HIV/AIDS** 

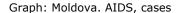
## HIV/AIDS

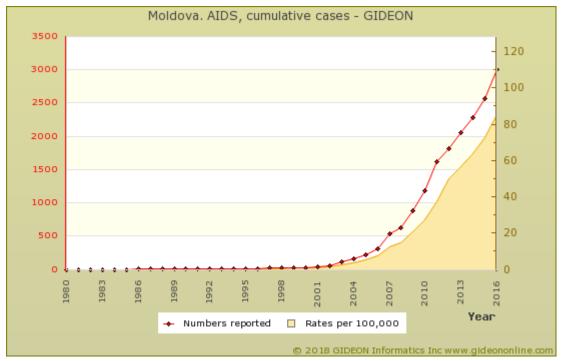
Agent	VIRUS - RNA. Retroviridae, Lentivirinae: Human Immunodeficiency Virus, HIV
Reservoir	Human
Vector	None
Vehicle	Blood, Semen, Sexual, Transplacental, Breastfeeding
Incubation Period	2m - 10y (50% within 10y)
Diagnostic Tests	HIV antibody (ELISA, Western blot). Nucleic acid amplification. Tests for HIV antigen & viral load as indicated.
Typical Adult Therapy	Nucleoside/-nucleotide reverse transcriptase inhibitor + A Non-nucleoside reverse transcriptase inhibitor OR a Protease Inhibitor OR a Strand-transfer integrase inhibitor
Typical Pediatric Therapy	Regimens vary - in general: 2 Non-nucleoside reverse transcriptase inhibitors + Ritonavir / Lopinavir OR Nevirapine OR Atazanavir
Clinical Hints	<ul> <li>Most often associated with drug abuse, blood products, men who have sex with men, hemophilia</li> <li>Severe and multiple episodes of infection (herpes simplex, moniliasis, candidiasis, etc)</li> <li>Chronic cough, diarrhea, weight loss, lymphadenopathy, retinitis, encephalitis or Kaposi's sarcoma</li> </ul>
Synonyms	AIDS, ARC, Gay cancer, GRID, HIV-1, HIV-2, HIV-AIDS, SIDA, Slim disease. ICD9: 042 ICD10: B20,B21,B22,B23,B24

#### **HIV/AIDS** in Moldova

The first cases of AIDS were officially reported in 1989.



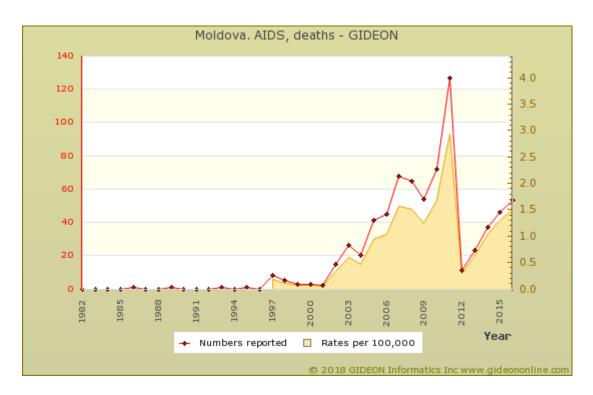




Graph: Moldova. AIDS, cumulative cases

#### Demography and risk factors:

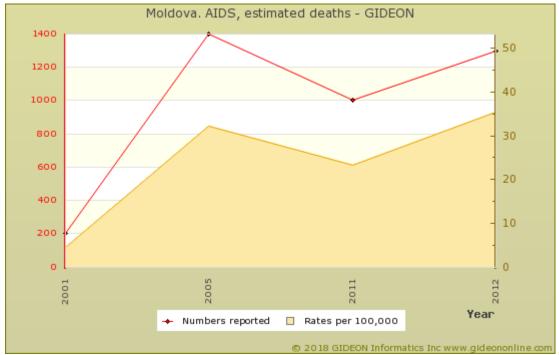
- Cases to June 1998: 11 or 17 were IDU.
- Cases during 1997 to 1999: 95% ages 15 to 49; 58% males; 11% heterosexual; 0% men who have sex with men; 84% IDU; 0% transfusion/hemophilia; 5% mother to infant.
- Cases during 1997 to 2001: 96% ages 15 to 49; 58% males; 12% heterosexual; 0% men who have sex with men 84% IDU; 0% transfusion/hemophilia; 4% mother to infant.



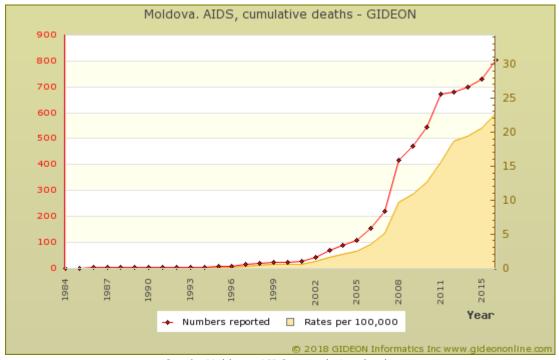
Graph: Moldova. AIDS, deaths

#### Notes:

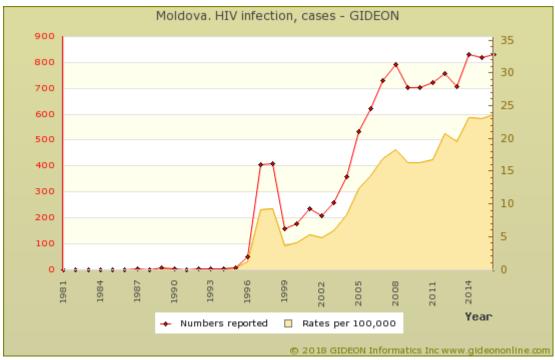
1. A total of 71 AIDS deaths were reported to December 2003; 88 to December 2004; 126 to December 2006; 146 to December 2007.



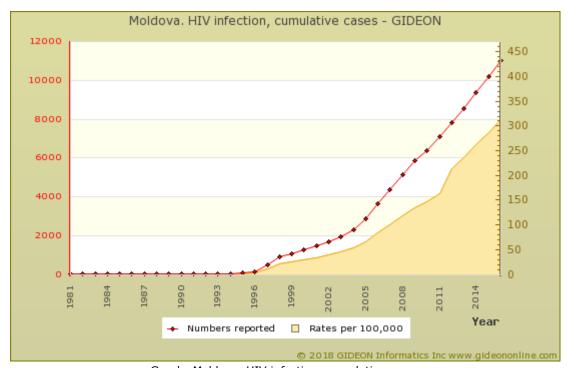
Graph: Moldova. AIDS, estimated deaths



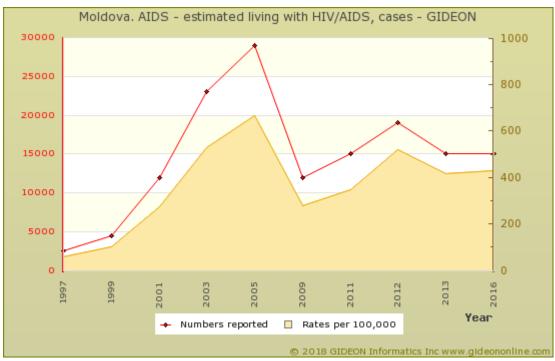
Graph: Moldova. AIDS, cumulative deaths



Graph: Moldova. HIV infection, cases



Graph: Moldova. HIV infection, cumulative cases



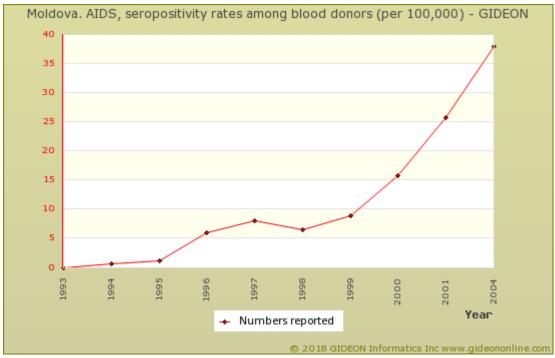
Graph: Moldova. AIDS - estimated living with HIV/AIDS, cases

#### Notes:

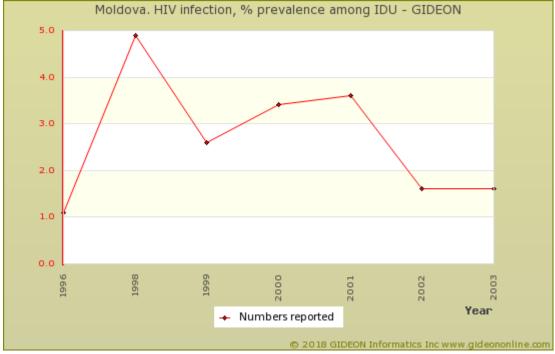
1. Figure for 1997 represented 0.11% of all adults; 0.2% in 2001; 0.2% in 2003.

Seroprevalence surveys

ci opi ci ai cii ci ci ci				
Years	Region	Study Group	%	Notes
2005		MSM	2.5	
2010	Multiple locations	MSM	1-2	2% of MSM in Chisinau and <1% in Balti <sup>1</sup>
1996		patients - STD	0.039	
1994		pregnant women	0.002	
2005		sex workers	8.5	
2009 - 2010	Chisinau	sex workers	6.9	2



Graph: Moldova. AIDS, seropositivity rates among blood donors (per 100,000)



Graph: Moldova. HIV infection, % prevalence among IDU

#### References

- 1. Int J STD AIDS 2013 May ;24(5):357-64.
- 2. AIDS Behav 2013 Oct ;17(8):2588-96.

# Hookworm

	DADACITE Nametodo
Agent	PARASITE - Nematoda. Secernentea: <i>Necator americanus, Ancylostoma duodenale, A. ceylonicum</i> (in Kolkata and the Philippines)
Reservoir	Human, Non-human primates
Vector	None
Vehicle	Soil, Contact
Incubation Period	7d - 2y
Diagnostic Tests	Examination of stool for ova.
Typical Adult Therapy	Albendazole 400 mg X 1 dose. OR Mebendazole 100 mg BID X 3d. OR Pyrantel pamoate 11 mg/kg (max 3g) X 3d
Typical Pediatric Therapy	Albendazole 200 mg PO single dose OR Mebendazole 100 mg BID X 3 d (> age 2).
Clinical Hints	<ul> <li>Pruritic papules, usually on feet</li> <li>Later cough and wheezing</li> <li>Abdominal pain and progressive iron-deficiency anemia</li> <li>Eosinophilia is common</li> <li>Dyspnea and peripheral edema in heavy infections</li> </ul>
Synonyms	Anchilostoma, Ancylostoma ceylanicum, Ancylostoma duodenale, Ancylostomiasis, Anquilostomiasis, Cyclodontostomum, Eosinophilis enteritis, Hakenwurmer-Befall, Miner's anemia, Necator americanus, Necator gorillae, Necatoriasis, Uncinariasis. ICD9: 126.0,126.1 ICD10: B76.0,B76.1,B76.8

# **HTLV Infections**

Agent	VIRUS - RNA Retroviridae. Deltaretrovirus Human T-lymphotrophic virus I to IV (disease limited to I and II)
Reservoir	Human Non-human primate
Vector	None
Vehicle	Blood, Needles, Semen, Sexualcontact, Transplacental, Breastfeeding, Meat (bush-meat)
Incubation Period	Variable
Diagnostic Tests	Serology Nucleic acid amplification
Typical Adult Therapy	Specific therapy not available.  Advanced symptomatic disease has been treated with combinations of Zidovudine and Interferon, Cyclosporine, or anti-neoplastic agents
Typical Pediatric Therapy	As of adult
Clinical Hints	<ul> <li>Overt disease is evident in only 1% to 5% of infections</li> <li>Increased susceptibility to pyodermas, sepsis, bronchiectasis</li> <li>Keratoconjunctivitis sicca or uveitis</li> <li>Late development of tropical spastic paraparesis or T-cell leukemia/lymphoma</li> </ul>
Synonyms	Adult T-cell leukemia / lymphoma, HTLV-1, HTLV-1/2, HTLV-2, HTLV-4, HTLV-I, HTLV-I/II, HTLV-II, HTLV-IV, Human T-cell lymphotropic virus, Human T-lymphotropic virus, Primate T-lymphotropic virus, PTLV-1, Tropical spastic paraparesis. ICD9: 204.0,208.9 ICD10: C83,C88,G04.1

### **Human herpesvirus 6 infection**

Agent	VIRUS - DNA. Herpesviridae, Betaherpesvirinae, Roseolovirus: Herpesvirus 6 (Herpesvirus 7 is also implicated)
Reservoir	Human
Vector	None
Vehicle	Droplet, Contact, Respiratory or pharyngeal acquisition
Incubation Period	10d - 15d
Diagnostic Tests	Viral isolation and serologic tests rarely indicated. Nucleic acid amplification has been used
Typical Adult Therapy	Supportive  Gancyclovir has been used in unusual and severe cases.
Typical Pediatric Therapy	As for adult
Clinical Hints	- High fever followed by sudden defervescence and fleeting rash - Most patients are below the age of 2 years - Note that only 10% to 20% of Herpesvirus 6 infections are associated with a rash
Synonyms	Dreitagefieber, Exanthem criticum, Exanthem subitum, Herpesvirus 6, HHV-6, Pseudorubella, Roseola, Roseola infantilis, Roseola subitum, Sixth disease, Zahorsky's disease. ICD9: 057.8 ICD10: B08.2

# **Human Pegivirus infection**

Agent	VIRUS - RNA. Flaviviridae, Pegivirus GB virus C (Hepatitis G virus)
Reservoir	Human
Vector	None
Vehicle	Blood, Vertical transmission, Sexual contact suspected
Incubation Period	Unknown
Diagnostic Tests	Serology. Nucleic acid amplification.
Typical Adult Therapy	Supportive. Alpha interferon has been shown to ? transiently eliminate the carrier state
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Acute or chronic hepatitis acquired from blood (needles, etc)</li> <li>Clinically milder than hepatitis C</li> <li>Most cases limited elevation of hepatic enzyme levels, without jaundice</li> <li>Viremia has been documented for as long as 10 years</li> </ul>
Synonyms	Epatite G, GB virus C, GBV-C, Hepatitis G, Hepatitis GB, HPgV, HPgV-2. ICD9: 070,59 ICD10: B17.8



# Hymenolepis diminuta infection

Agent	PARASITE - Platyhelminthes, Cestoda. Cyclophyllidea, Hymenolepididae: <i>Hymenolepis diminuta</i>
Reservoir	Rodent, Various insects
Vector	None
Vehicle	Arthropod ingestion
Incubation Period	2w - 4w
Diagnostic Tests	Identification of ova in stool
Typical Adult Therapy	Praziquantel 25 mg/kg as single dose. OR Niclosamide 2g, then 1g/d X 6d
Typical Pediatric Therapy	Praziquantel 25 mg/kg as single dose. OR Niclosamide 1g, then 0.5g/d X 6d (1.5g, then 1g for weight >34kg)
Clinical Hints	<ul> <li>Nausea, abdominal pain and diarrhea</li> <li>Eosinophilia may be present</li> <li>Primarily a disease of children, in rodent-infested areas</li> <li>Infestation resolves spontaneously within 2 months</li> </ul>
Synonyms	Hymenolepis diminuta, Mathevotaenia, Rat tapeworm. ICD9: 123.6 ICD10: B71.0



# Hymenolepis nana infection

Agent	PARASITE - Platyhelminthes, Cestoda. Cyclophyllidea, Hymenolepididae: <i>Hymenolepis</i> ( <i>Rodentolepis</i> ) <i>nana</i>
Reservoir	Human, Rodent (hamster)
Vector	None
Vehicle	Food, Water, Fecal-oral
Incubation Period	2w - 4w
Diagnostic Tests	Identification of ova in stool
Typical Adult Therapy	Praziquantel 25 mg/kg once. OR Nitazoxanide 500 mg daily for 3 days OR Niclosamide 2g/d X 1, then 1g/d X 6d
Typical Pediatric Therapy	Praziquantel 25 mg/kg once. OR Nitazoxanide 100 mg (age 1 to 3 years) to 200 mg (age 4 to 11 years) BID X 3d OR Niclosamide 1g/d X 1, then 0.5g/d X 6d (1.5g, then 1g for weight >34kg)
Clinical Hints	<ul> <li>Nausea, abdominal pain, diarrhea, irritability and weight loss</li> <li>Eosinophilia may be present</li> <li>Continued infestation maintained by autoinfection (worm reproduces within the intestinal lumen)</li> </ul>
Synonyms	Dwarf tapeworm, Hymenolepis nana, Rodentolepis microstoma, Rodentolepis nana, Rodentolepsiasis, Vampirolepis nana. ICD9: 123.6 ICD10: B71.0



# Infection of wound, puncture, IV line, etc

Agent	BACTERIUM.  Staphylococcus aureus, streptococci, facultative or aerobic gram negative bacilli, anaerobes, et al
Reservoir	Human, Soil, Water, Air (spores), Various animals and plants
Vector	None
Vehicle	Trauma, Water, Medications, Bandages, Autoinoculation
Incubation Period	Variable
Diagnostic Tests	Smear and culture of catheter, material from wound.
Typical Adult Therapy	Drainage, remove catheter, debridement and antibiotics appropriate to infecting species
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Source (ie, venous line, postoperative, marine, animal bite) may suggest species</li> <li>Onset within 24 hrs = group A Streptococcus or Cl. perfringens</li> <li>Onset within 2 to 7 days = S. aureus</li> <li>Onset after more than 7 days = gram negative bacilli</li> <li>Foul odor = mixed infection or anaerobic bacteria</li> </ul>
Synonyms	Intravenous catheter infection, Line infection, Surgical wound infection, Wound infection. ICD9: 686.9,451 ICD10: T79.3,I80.0, Y95

### Infectious mononucleosis or EBV infection

Agent	VIRUS - DNA. Herpesviridae. Gammaherpesvirinae, Lymphocryptovirus: Human herpesvirus 4 (Epstein Barr virus)
Reservoir	Human
Vector	None
Vehicle	Saliva, Blood transfusion, Breastfeeding, Respiratory or pharyngeal acquisition
Incubation Period	28d - 42d
Diagnostic Tests	Serology. Nucleic acid amplification.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Exudative pharyngitis</li> <li>Symmetrical cervical lymphadenopathy, splenomegaly and hepatic dysfunction</li> <li>Atypical lymphocytes and positive serology appear after 10 to 14 days</li> <li>Acute illness resolves in 2 to 3 weeks, but malaise and weakness may persist for months</li> </ul>
Synonyms	EBV, EBV, Epstein-Barr, Febbre ghiandolare, Filatov's disease, Glandular fever, Infectious mononucleosis, Monocytic angina, Mononucleose, Mononucleosi, Mononucleosis - infectious, Mononukleose, Pfeiffer's disease. ICD9: 075 ICD10: B27.0

### Influenza

Agent	VIRUS - RNA. Orthomyxoviridae, Orthomyxovirus: Influenza virus
Reservoir	Human, Ferret, Bird, Pig
Vector	None
Vehicle	Droplet, Respiratory or pharyngeal acquisition
Incubation Period	1d - 3d
Diagnostic Tests	Viral culture (respiratory secretions). Serology. Nucleic acid amplification techniques are available.
Typical Adult Therapy	Respiratory precautions. Influenza A or B: Oseltamivir 75 mg PO BID X 5d OR Zanamavir 10 mg BID X 5 days
Typical Pediatric Therapy	Respiratory precautions. Influenza A or B: Oseltamivir 2 mg/kg (max 75 mg) PO BID X 5d OR Zanamavir (age > 5 years) 10 mg BID X 5 days
Vaccines	Influenza - inactivated vaccine Influenza - live vaccine
Clinical Hints	<ul> <li>Myalgia, headache, cough and fever</li> <li>Pharyngitis and conjunctivitis often present</li> <li>Usually encountered in the setting of an outbreak</li> <li>Leucocytosis, chest pain and lobar infiltrate herald bacterial (pneumococcal or staphylococcal) pneumonia</li> </ul>
Synonyms	Asian flu, Aviaire influenza, Avian flu, Avian influenza, Bird flu, Epidemic catarrh, Grippe, H10N8, H1N1, H2N2, H3N2, H5N1, H7N9, Hong Kong flu, LPAI, Spanish influenza, Swine flu, Swine influenza. ICD9: 487 ICD10: J09,J10,J11

#### Influenza in Moldova

**GIDEON** does not follow routine country reports on human Influenza, since the scope and nature of these data are often diffuse, sporadic or inconsistent. See the "Worldwide" note for material regarding pandemic influenza, influenza vaccine, avian influenza in humans and other relevant subjects.

#### **Notable outbreaks**

Years	Deaths	Pathogen	Notes
2009 - 2010	35	H1N1	An outbreak was reported. For comprehensive analyses of the H1N1 pdm09 pandemic see the Worldwide note. <sup>1</sup>

#### References

 $\textbf{1. ProMED} < \! promedmail.org \!\! > archive: 20091110.3893$ 

### Intestinal spirochetosis

Agent	BACTERIUM.  Brachyspira pilosicoli and B. aalborgi Anaerobic gram-negative spirochetes
Reservoir	Human, Fowl, Pig
Vector	None
Vehicle	Endogenous
Incubation Period	Unknown
Diagnostic Tests	Spirochetes resemble "brush border' on bowel biopsy; identification of Brachyspira by PCR
Typical Adult Therapy	Metronidazole appears to be effective in some cases.
Typical Pediatric Therapy	As for adult.
Clinical Hints	- Chronic diarrhea and abdominal pain in the absence of other identifiable etiology
Synonyms	Human intestinal spirochetosis. ICD9: 009.1 ICD10: A04.8

#### **Intra-abdominal abscess**

Agent	BACTERIUM. Mixed anaerobic / aerobic, staphylococci, <i>Neisseria gonorrhoeae</i> , <i>Chlamydia trachomatis</i> , etc
Reservoir	Human
Vector	None
Vehicle	None
Incubation Period	Variable
Diagnostic Tests	Various imaging techniques (CT, Gallium scan, ultrasound, etc).
Typical Adult Therapy	Percutaneous or open drainage + antibiotics directed at known or suspected pathogen(s)
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Fever, chills and localizing pain (e.g., chest pain in subphrenic abscess)</li> <li>Setting of prior surgery, biliary or colonic disease, appendicitis, vaginal discharge (PID)</li> <li>FUO, subdiaphragmatic gas or limited diaphragmatic motion may be present</li> </ul>
Synonyms	Abscess - Abdominal, Acute appendicitis, Appendicitis, Intraabdominal abscess, Intraperitoneal abscess, P.I.D., Pancreatic abscess, Pelvic abscess, Pelvic inflammatory disease, Pylephlebitis, Subhepatic abscess, Subphrenic abscess, Suppurative pancreatitis, Tuboovarian abscess. ICD9: 614,577.0 ICD10: K35,N73,K75.1,K85



### Intracranial venous thrombosis

Agent	BACTERIUM. Oral anaerobes, streptococci, et al
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Culture (blood, CSF if indicated). Ophthalmoscopy. Roentgenographic studies of skull & sinuses.
Typical Adult Therapy	Antibiotic(s) directed at known or suspected pathogens
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>- Headache, seizures and fever</li> <li>- Cranial nerve dysfunction may be present</li> <li>- Usually occurs in the setting of ongoing facial, otic or sinus infection</li> </ul>
Synonyms	Cavernous sinus thrombosis, Cerebral sinus thrombosis, Cortical vein thrombosis, Internal cerebral vein thrombosis, Straight sinus thrombosis, Superior sinus thrombosis, Transverse sinus thrombosis.  ICD9: 325 ICD10: G08

### Isosporiasis

Agent	PARASITE - Protozoa. Apicomplexa, Eimeriida: <i>Isospora</i> ( <i>Cystoisospora</i> ) <i>belli</i>
Reservoir	Human
Vector	None
Vehicle	Food, Liquids, Fecal-oral, Sexual (homosexual) contact
Incubation Period	7d - 10d
Diagnostic Tests	Microscopy of stool or duodenal contents. Advise laboratory when this organism is suspected.
Typical Adult Therapy	Sulfamethoxazole / Trimethoprim 800/160 mg BID X 10 days - Then BID X 3 weeks (may be indefinite in AIDS patient)  Increase dosage / duration in immune-suppressed patients  Pyrimethamine 50 to 75 mg per day + leucovorin if allergic to sulfa
Typical Pediatric Therapy	Sulfamethoxazole / Trimethoprim 25/5 mg/kg BID X 10 days - Then BID X 3 weeks
Clinical Hints	<ul> <li>Myalgia, watery diarrhea, nausea and leukocytosis</li> <li>Eosinophilia may be present</li> <li>Illness is prolonged and severe in AIDS patients</li> </ul>
Synonyms	Cystoisospora belli, Isospora belli. ICD9: 007.2 ICD10: A07.3

### Kawasaki disease

Agent	UNKNOWN
Reservoir	Unknown
Vector	None
Vehicle	Unknown
Incubation Period	Unknown
Diagnostic Tests	Diagnosis is based on clinical criteria only.
Typical Adult Therapy	Intravenous gamma globulin 2.0 g/kg over 10 to 12h X 1 dose. Plus aspirin 100 mg/kg/day X 14d (or until defervescence) - then 5 to 10 mg/kg/day until normal ESR Infliximab (a chimeric monoclonal antibody) 5 mg/kg has been successful in some studies.
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Disease most common among children</li> <li>Fever, conjunctivitis, stomatitis and an erythematous rash which desquamates</li> <li>Occasionally complicated by coronary artery occlusion</li> <li>Case-fatality rates of 1% to 4% are reported</li> </ul>
Synonyms	Kawasaki's disease, Mucocutaneous lymph node syndrome. ICD9: 446.1 ICD10: M30.3



### Kikuchi's disease and Kimura disease

Agent	UNKNOWN
Reservoir	Unknown
Vector	None
Vehicle	Unknown
Incubation Period	Unknown
Diagnostic Tests	Biopsy.
Tomical Adult Thomas	Supportive
Typical Adult Therapy	Hydroxychloroquine and corticosteroids have been successful for Kikuchi's disease in some cases.
Typical Pediatric Therapy	As for adult
Clinical Hints	Most patients of Asian origin Kikuchi disease: - Prolonged (1 to 12 months) cervical lymphadenopathy (rubbery, non-matted - may be tender) - Fever (40%), weight loss, "sweats', leukopenia Kimura disease: - Similar to Kikuchi disease - Salivary gland involvement, glomerulitis, painless subcutaneous masses and eosinophilia suggest Kimura disease - May be misdiagnosed as filariasis
Synonyms	Angiolymphoid hyperplasia, Angiolymphoid hyperplasia-eosinophia, Eosinophilic follicular lymphadenitis, Histiocytic necrotizing lymphadenitis, Kikuchi's disease, Kikuchi-Fujimoto disease, Kimura disease.  ICD9: 289.3 ICD10: I89.8

# Kingella infection

Agent	BACTERIUM.  Kingella kingae, et al A facultative gram-negative coccobacillus
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Unknown
Diagnostic Tests	Culture of blood, joint fluid, CSF, etc. Alert laboratory if these organisms are suspected.
Typical Adult Therapy	Penicillin G or Penicillin V usually effective - dosage per severity/site
Typical Pediatric Therapy	As for adult
Clinical Hints	Most cases reported among young children     May present as septic arthritis, endocarditis, meningitis and other localized or systemic infections
Synonyms	



# Laryngotracheobronchitis

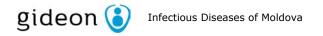
Agent	VIRUS OR BACTERIUM. Parainfluenza virus, Influenza virus, <i>Mycoplasma</i> , et al
Reservoir	Human
Vector	None
Vehicle	Droplet, Respiratory or pharyngeal acquisition
Incubation Period	3d - 8d
Diagnostic Tests	Viral culture (respiratory secretions). Serology. Nucleic acid amplification.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Most cases are in young children</li> <li>Usually encountered in the setting of bronchiolitis, laryngitis or croup following a minor upper respiratory infection</li> </ul>
Synonyms	Bronchitis, Croup, Laringitis, Laryngite, Laryngitis, Laryngotracheitis. ICD9: 464,466 ICD10: J04,J05,J20,J21

# Legionellosis

Agent	BACTERIUM. <i>Legionella pneumophila</i> , et al  An aerobic gram-negative bacillus
Reservoir	Water
Vector	None
Vehicle	Water, Aerosols, Droplet, Respiratory or pharyngeal acquisition
Incubation Period	5- 6d (range 2-12d); Pontiac fever = 1-2d
Diagnostic Tests	Serology. Culture. Urine antigen (certain types). Nucleic acid amplification. Alert lab if organism suspected.
Typical Adult Therapy	Fluoroquinolone (Levofloxacin, Trovafloxacin, Pefloxacin, Sparfloxacin or Moxifloxacin). OR Azithromycin. OR Erythromycin + Rifampin OR Clarithromycin
Typical Pediatric Therapy	Azithromycin. OR Erythromycin + Rifampin OR Clarithromycin
Clinical Hints	<ul> <li>Respiratory illness with extrapulmonary manifestations</li> <li>Diarrhea, confusion, renal or hepatic dysfunction, relative bradycardia, etc.</li> <li>Most cases reported during summer in temperate areas</li> <li>Case-fatality rates of 5% to 25% are reported</li> </ul>
Synonyms	Doenca dos legionarios, Legionarsjuka, Legionarssjuka, Legionella, Legionellose, Legionellosi, Legionnaire's disease, Pontiac fever. ICD9: 482.84 ICD10: A48.1,A48.2

### Legionellosis in Moldova

Moldova. Legionellosis, cases: None reported between 1998 and 2006



### Leishmaniasis - visceral

Agent	PARASITE - Protozoa. Euglenozoa, Kinetoplastea. Flagellate: <i>Leishmania donovani, L. infantum, L. cruzi</i> ; rarely, <i>L. tropica</i>
Reservoir	Human, Rodent, Dog, Fox, Hares
Vector	Sandfly ( <i>Phlebotomus</i> for Old-world; <i>Lutzomyia</i> for New-world)
Vehicle	Blood
Incubation Period	2m - 6m (10d - 12m)
Diagnostic Tests	Smear / culture of bone marrow, splenic aspirate, lymph nodes. Serology. Nucleic acid amplification.
Typical Adult Therapy	Pentavalent antimonials (Stibogluconate) 20 mg/kg/d X 28d. OR Amphotericin B 1 mg/kg/QOD X 8w (or lipid complex 3 mg/kg/d X 5d) OR Paromomycin 11 mg/kg IM QD X 21 days OR Miltefosine 50 to 150 mg PO daily X 4 to 6 weeks.
Typical Pediatric Therapy	Pentavalent antimonials (Stibogluconate) 20 mg/kg/d X 28d. OR Amphotericin B 1 mg/kg/QOD X 8w (or lipid complex 3 mg/kg/d X 5d) OR Paromomycin 11 mg/kg IM QD X 21 days OR Miltefosine 2.5 mg/kg daily (maximum 150 mg) X 28d
Clinical Hints	- Chronic fever, weight loss, diaphoresis - Hepatosplenomegaly, lymphadenopathy and pancytopenia - Grey pigmentation (Kala Azar = "black disease') may appear late in severe illness - Case-fatality rates vary from 5% (treated) to 90% (untreated)
Synonyms	Burdwan fever, Cachectic fever, Dum Dum fever, Kala azar, Leishmania donovani, Leishmania infantum, Leishmania siamensis, Leishmania tarentolae, Leishmaniose: Viszerale, Leishmaniosi viscerale, Ponos, Visceral leishmaniasis. ICD9: 085.0 ICD10: B55.0

#### Leishmaniasis - visceral in Moldova

#### **Time and Place**

Most cases in the former Soviet Union are reported from Azerbaijan, Kazakhstan, Georgia and Turkmenistan (the southeastern Kara-Kum, Murgab valley and low mountains of the Kopet-Dagh).

· Highest rates in Turkmenistan are reported during May to September, with a peak in Mid-July.

Moldova. Leishmaniasis - type unspecified, cases: None reported between 2005 and 2006

#### **Vectors:**

- Phlebotomus turanicus is the vector of Leishmania infantum in Turkmenistan
- Vectors west of Caspian Sea include *Phlebotomus (Larroussious) kandelakii* and *Ph. tobbi*
- Vectors east of Caspian Sea include Ph. smirnovi and Ph. (Paraphlebotomus) caucasicus. 1 2 3
- Ph. papatasi is also active in the region. 4

#### References

- 1. Med Parazitol (Mosk) 2001 Jul-Sep;(3):26-31.
- 2. Trans R Soc Trop Med Hyg 1985;79(1):34-6.

- 3. Med Parazitol (Mosk) 1983 Jan-Feb;52(1):33-7.
- 4. Med Parazitol (Mosk) 1992 Jul-Aug;(4):30-3.

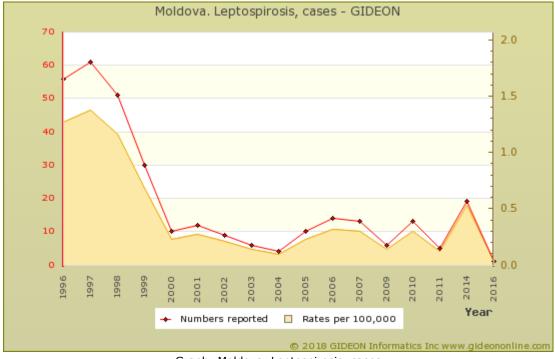
# Leprosy

Agent	BACTERIUM.  Mycobacterium leprae  Mycobacterium lepromatosis  An acid-fast bacillus
Reservoir	Human, Armadillo, Squirrel
Vector	None
Vehicle	Secretions
Incubation Period	3y - 5y (range 3m - 40y)
Diagnostic Tests	Visualization of organisms in exudate, scrapings or biopsy. Nucleic acid amplification.
Typical Adult Therapy	Multibacillary: One year therapy Dapsone 100 mg + Clofazimine 50 mg daily; and, Rifampin 600 mg + Clofazimine 300 mg once monthly  Paucibacillary: Six month therapy Dapsone 100 mg daily; and Rifampin 600 mg once monthly
Typical Pediatric Therapy	Multibacillary: One year therapy Dapsone 1 to 2 mg/kg + Clofazimine 1 mg/kg daily; and, Rifampin 10 mg/kg + Clofazimine 1 mg/kg once monthly  Paucibacillary: Six month therapy Dapsone 1 to 2 mg/kg daily; and Rifampin 10 mg/kg once monthly
Clinical Hints	<ul> <li>Anesthetic, circinate hypopigmented skin lesions</li> <li>Thickened peripheral nerves (tuberculoid leprosy)</li> <li>Diffuse, destructive papulonodular infection (lepromatous leprosy)</li> <li>Combined/intermediate forms are encountered</li> </ul>
Synonyms	Aussatz, Doence de Hansen, Hansen's disease, Lebbra, Lepra, Mycobacterium leprae, Mycobacterium lepromatosis. ICD9: 030 ICD10: A30

### Leptospirosis

Agent	BACTERIUM. <i>Leptospira interrogans</i> , et al.  An aerobic non-gram staining spirochete
Reservoir	Cattle, Dog, Horse, Deer, Rodent, Fox, Marine mammal, Cat, Marsupial, Frog
Vector	None
Vehicle	Water, Soil, Urine contact, Breastfeeding
Incubation Period	7d - 12d (range 2d - 26d)
Diagnostic Tests	Culture on specialized media. Dark field microscopy of urine, CSF. Serology.
Typical Adult Therapy	Penicillin 1.5 million units Q6h iv OR  Doxycycline 100 mg BID X 5 to 7d OR  Ceftriaxone 1g IV daily
Typical Pediatric Therapy	Penicillin G 50,000u/kg q6h iv X 5 to 7d Age >= 8y: Doxycycline 2.2 mg/kg BID X 5 to 7d may also be used
Clinical Hints	<ul> <li>Often follows recent skin contact with fresh water in rural or rodent-infested areas</li> <li>"Sterile" meningitis, nephritis, hepatitis, myositis and conjunctivitis</li> <li>Case-fatality rates of 5% to 40% are reported</li> </ul>
Synonyms	Andaman hemorrhagic fever, Canefield fever, Canicola fever, Field fever, Fish handler's disease, Fort Bragg fever, Japanese autumnal fever, Leptospira, Leptospirose, Leptospirosen, Leptospirosi, Mud fever, Pre-tibial fever, Rat fever, Rice field fever, Swamp fever, Swineherd disease, Weil's disease. ICD9: 100 ICD10: A27

### Leptospirosis in Moldova



Graph: Moldova. Leptospirosis, cases

### Listeriosis

Agent	BACTERIUM.  Listeria monocytogenes A facultative gram-positive bacillus
Reservoir	Mammal, Human, Bird, Soil, Water
Vector	None
Vehicle	Transplacental, Dairy products (eg, soft cheeses), Infected secretions, Vegetables, Poultry, Water, Fish, Shellfish
Incubation Period	3d - 21d (60d post-ingestion)
Diagnostic Tests	Culture of blood or CSF.
Typical Adult Therapy	Ampicillin 2g IV q6h X 2w (higher dosage in meningitis) + Gentamicin. Sulfamethoxazole / Trimethoprim recommended for Penicillin-allergic patients
Typical Pediatric Therapy	Ampicillin 50 mg/kg IV Q6h X 2w (higher dosage in meningitis). Sulfamethoxazole / Trimethoprim recommended for Penicillin-allergic patients
Clinical Hints	<ul> <li>Meningitis or sepsis, often in immune-suppressed patients (lymphoma, AIDS, etc)</li> <li>Gastroenteritis - may follow ingestion of "over-the-counter" foods</li> <li>Neonatal septicemia occasionally encountered</li> </ul>
Synonyms	Listeria monocytogenes, Listeriose, Listeriosi. ICD9: 027.0 ICD10: A32

#### **Listeriosis in Moldova**

Moldova. Listeriosis, cases: None reported between 1999 and 2005

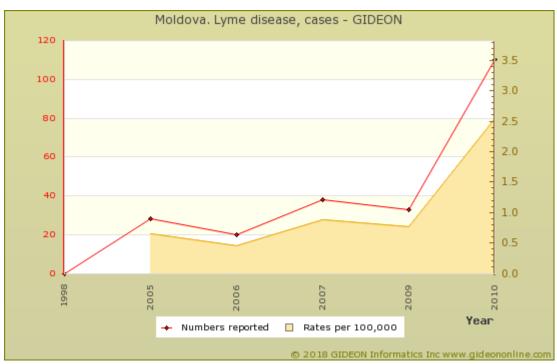
# Liver abscess - bacterial

Agent	BACTERIUM.  Various species from portal (Bacteroides, mixed aerobe-anaerobe) or biliary ( <i>Escherichia coli</i> , etc) source
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Ultrasonography, CT or radionucleotide scan. If amoebic abscess suspected, perform Entamoeba serology
Typical Adult Therapy	Intravenous antibiotic(s) directed at likely or suspected pathogens. Percutaneous or open drainage
Typical Pediatric Therapy	As for adult
Clinical Hints	- Tender liver and prolonged fever in a patient - Often associated with diverticulosis, cholecystitis, appendicitis, etc - Clinically similar to amoebic abscess, but often multiple
Synonyms	Ascesso fegato, Bacterial liver abscess, Hepatic abscess - bacterial, Liver abscess. ICD9: 572.0 ICD10: K75.0

# Lyme disease

Agent	BACTERIUM.  Borrelia spp.: Borrelia burgdorferi; B. afzelii and B. garinii are also encountered (in Eurasia)  A microaerophilic spirochete
Reservoir	Tick, Deer, Rodent, Bird
Vector	Tick (Ixodes, Amblyomma)
Vehicle	None
Incubation Period	7d - 14d (range 2d - 180d)
Diagnostic Tests	Serology. Nucleic acid amplification. Culture of blood and body fluids available in some laboratories.
Typical Adult Therapy	Doxycycline, Ceftriaxone, Amoxicillin or Cefuroxime Dosage, route and duration according to nature and severity of disease
Typical Pediatric Therapy	>= Age 8 years: As for adult < Age 8 years: Ceftriaxone, Cefuroxime or Amoxicillin. Dosage, route and duration according to nature and severity of disease
Vaccine	Lyme disease vaccine
Clinical Hints	- Patient may recall recent tick bite - Fever, circular erythematous skin lesion, arthralgia and lymphadenopathy - Later meningitis or myocarditis, and eventual destructive polyarthritis
Synonyms	Arcodermatitis chronica atrophicans, Baggio-Yoshinari syndrome, Borrelia A 14S, Borrelia afzelii, Borrelia americana, Borrelia bavariensis, Borrelia bissettii, Borrelia burgdorferi, Borrelia carolinensis, Borrelia garinii, Borrelia lonestari, Borrelia lusitaniae, Borrelia mayonii, Borrelia spielmanii, Borrelia valaisiana, Borrelial lymphocytoma, Doenca de Lyme, Erythema chronicum migrans, Erythema migrans, Garin-Bujadoux-Bannwarth syndrome, LD imitator syndrome, LD-like syndrome, Lyme borreliose, Lyme borreliosis, Master's disease, Neuroborreliosis, Southern tick-associated rash illness, STARI, TAPOS, Tick-associated poly-organic syndrome. ICD9: 088.81 ICD10: A69.2

### Lyme disease in Moldova



Graph: Moldova. Lyme disease, cases

A. phagocytophilum was found in 9% of *Ixodes ricinus* ticks in Chisinau city. <sup>1</sup> In 2.5%, the ticks were co-infected with *Borrelia burgdorferi* sensu lato.

• Borrelia (mostly B. garinii) was found in 25.2% of ticks in the region.

#### **Prevalence surveys**

Years	Study Group	%	Notes
1960	ticks	8.8	8.8% of archived Ixodes ricinus (B. burgdorferi $4.8%$ , B. garinii $1.6%$ , B. afzelii $0.8%$ , B. valaisiana $0.8%$ , B. lusitaniae $0.8%$ ) (1960) <sup>2</sup>
2008 <sup>*</sup>	ticks	15.5-14	14% of Ixodes ricinus and 5.5% of Ix. lividus (Borrelia burgdorferi, 2008 publication)

<sup>\*</sup> indicates publication year (not necessarily year of survey)

#### References

- 1. Exp Appl Acarol 2007;41(1-2):147-52.
- 2. Ticks Tick Borne Dis 2013 Jun; 4(4):359-61.



# Lymphocytic choriomeningitis

Agent	VIRUS - RNA. Arenaviridae, Mammarenavirus: Lymphocytic choriomeningitis virus
Reservoir	House mouse, Guinea pig, Hamster, Monkey
Vector	None
Vehicle	Urine, Saliva, Feces, Food, Dust, Respiratory or pharyngeal acquisition
Incubation Period	8d - 12d (range 6d - 14d)
Diagnostic Tests	Viral culture (blood, throat, CSF). Serology. Nucleic acid amplification. Biosafety level 3.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Headache, myalgia, meningitis and encephalitis</li> <li>Photophobia or pharyngitis may be present</li> <li>Preceding exposure to rodents</li> <li>Infection resolves within 2 weeks, however convalescence may require an additional 2 months</li> </ul>
Synonyms	



# Lymphogranuloma venereum

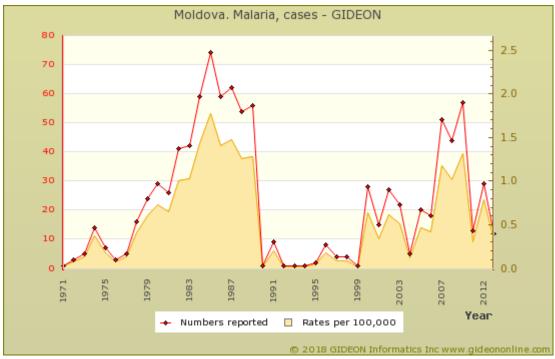
Agent	BACTERIUM. Chlamydiaceae, Chlamydiae, Chlamydia trachomatis, types L1, L2, L3
Reservoir	Human
Vector	None
Vehicle	Sexual contact
Incubation Period	7d - 12d (range 3d - 30d)
Diagnostic Tests	Serology. Culture of pus performed in specialized laboratories.
Typical Adult Therapy	Doxycycline 100 mg PO BID X 3w. OR Erythromycin 500 mg QID X 3w OR Azithromycin 1g po weekly X 3w
Typical Pediatric Therapy	Age < 8 years: Erythromycin 10 mg/kg PO QID X 2 to 4w. Age >= 8 years: Doxycycline 2 mg/kg PO BID X 2 to 4w
Clinical Hints	- Genital nodule or vesicle with large, suppurating regional nodes - Generalized lymphadenopathy or proctitis may be present - Late complications include genital edema, rectal strictures and perianal abscesses
Synonyms	Bubonulus, Durand-Nicolas-Favre disease, Linfogranuloma venereo, Lymphogranuloma inguinale, Lymphopathia venereum, Maladie de Nicolas et Favre, Tropical bubo, Venereal bubo, Venerisk lymfogranulom. ICD9: 099.1 ICD10: A55

### Malaria

Agent	PARASITE - Protozoa. Apicomplexa, Haemosporida: <i>Plasmodium</i> spp.
Reservoir	Human Primate ( <i>Plasmodium knowlesi</i> )
Vector	Mosquito (Anopheles)
Vehicle	Blood
Incubation Period	7d -30d
Diagnostic Tests	Examination of blood smear. Serology, antigen & microscopic techniques. Nucleic acid amplification.
Typical Adult Therapy	Resistant falcip: Lumefantrine / Artemether OR Quinine + Doxycycline or Clindamycin OR Atovaquone / Proguanil OR Artesunate IV (severe malaria) If sens., Chloroquine 1g, then 500 mg 6, 24 & 48 hrs. If P. ovale or P. vivax - follow with Primaquine
Typical Pediatric Therapy	Resistant falcip: Lumefantrine / Artemether OR Quinine + Clindamycin OR Atovaquone / Proguanil OR Artesunate (>age 8) IV (severe malaria) If sens, Chloroquine 10 mg/kg, then 5 mg/kg 6, 24, & 48 hrs. If P. ovale or P. vivax - follow with Primaquine
Clinical Hints	- Fever, headache, rigors ("shaking chills"), vomiting, myalgia, diaphoresis and hemolytic anemia - Fever pattern (every other or every third day) and splenomegaly may be present - Clinical disease may relapse after 7 ( <i>ovale</i> and <i>vivax</i> ) to 40 ( <i>malariae</i> ) years
Synonyms	Ague, Bilious remittent fever, Chagres fever, Estiautumnal fever, Marsh fever, Marsh fever, Paludism, Paludismo, Plasmodium brasilianum, Plasmodium falciparum, Plasmodium knowlesi, Plasmodium malariae, Plasmodium ovale, Plasmodium simium, Plasmodium vivax. ICD9: 084 ICD10: B50,B51,B52,B53,B54

Chloroquine resistant falciparum malaria endemic to 80 countries. Chloroquine-sensitive malaria endemic to 28 countries.

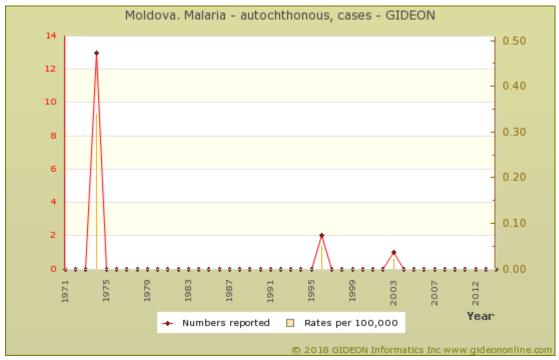
#### Malaria in Moldova



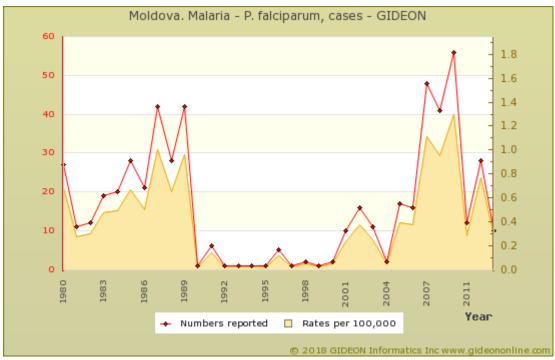
Graph: Moldova. Malaria, cases

#### Notes:

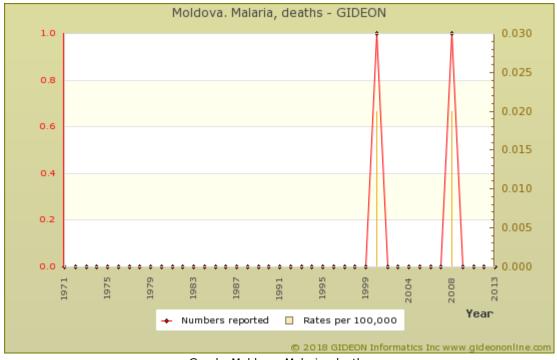
1. Cases reported during 1971 to 2001: 54.6% from Africa; 50.2% foreigners; 52.8% *Plasmodium falciparum*, 40.6% *P. vivax*.



Graph: Moldova. Malaria - autochthonous, cases



Graph: Moldova. Malaria - P. falciparum, cases



Graph: Moldova. Malaria, deaths

#### **Vectors:**

- The principal potential vector is Anopheles maculipennis. 1 2
- An. atroparvus is also present.

#### References

- Med Parazitol (Mosk) 1979 Nov-Dec;48(6):48-52.
   J Med Entomol 2015 Nov ;52(6):1299-308.



# Malignant otitis externa

Agent	BACTERIUM.
	Pseudomonas aeruginosa: aerobic gram-negative bacillus (virtually all cases)
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Culture of otic exudate and biopsy material. Careful roentgenographic and neurological examinations.
Typical Adult Therapy	Early debridement Ciprofloxacin 400 mg iv Q8h Alternatives: Imipenem, Meropenem, Ceftazidime, Cefepime Early debridement
Typical Pediatric Therapy	Early debridement Imipenem: Age 0 to 7 days: 25 mg/kg IV Q12h Age 8 to 28 days: 25 mg/kg IV Q8h Age > 28 days: 15 to 25 mg/kg IV Q6h (maximum 2 g/day) Alternatives: Meropenem, Ceftazidime, Cefepime
Clinical Hints	<ul> <li>Over 80% of patients are diabetics above age 50</li> <li>Otic pain, swelling and discharge</li> <li>Infection of bony and cartilaginous ear canal</li> <li>Cranial nerve (usually VII) signs in 50%</li> <li>Case-fatality rate &gt; 55%</li> </ul>
Synonyms	

## Measles

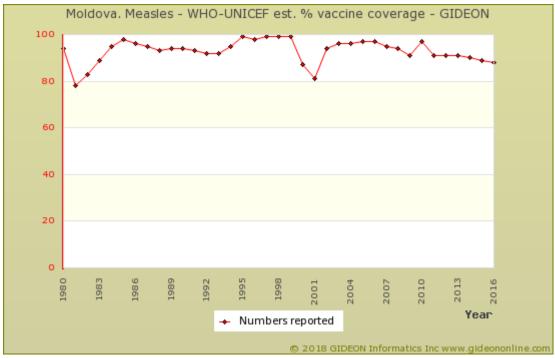
Agent	VIRUS - RNA. Mononegavirales Paramyxoviridae, Paramyxovirinae, Morbillivirus: Measles virus
Reservoir	Human
Vector	None
Vehicle	Droplet, Respiratory or pharyngeal acquisition
Incubation Period	8d - 14d
Diagnostic Tests	Viral culture (difficult and rarely indicated). Serology. Nucleic acid amplification.
Typical Adult Therapy	Respiratory isolation; supportive.  Ribavirin 20 to 35 mg/kg/day X 7 days has been used for severe adult infection
Typical Pediatric Therapy	As for adult
Vaccines	Measles vaccine Measles-Mumps-Rubella vaccine Measles-Rubella vaccine
Clinical Hints	- Coryza, fever, headache, conjunctivitis, photophobia and a maculopapular rash after 3 to 5 days - Koplik's spots (bluish-grey lesions on buccal mucosa, opposite second molars) often precede rash - Encephalitis or viral pneumonia occasionally encountered
Synonyms	Masern, Massling, Mazelen, Meslinger, Morbilli, Morbillo, Rubeola, Rugeole, Sarampion, Sarampo. ICD9: 055 ICD10: B05

#### **Measles in Moldova**

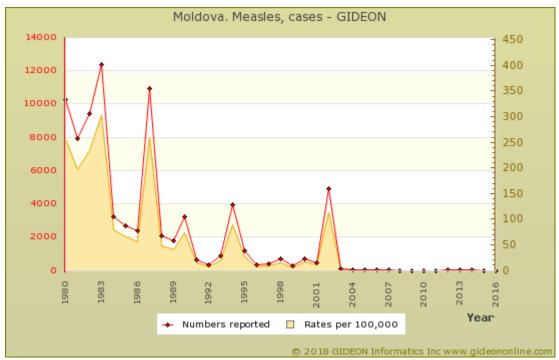
#### **Vaccine Schedule:**

BCG - 2 days
DT - 7 years
DTwP - 2 years
DTwPHibHepB - 2,4,6 months
HepB - birth; adults in risk groups
IPV - 6 months
MMR - 12 months; 7,15 years
OPV - 2,4,6 months; 2,7,15 years
Pneumo conj - 2,4,12 months
Rotavirus - 2,4 months
Td - 15, 20, 25, 30, 35, 40, 50, 60 years

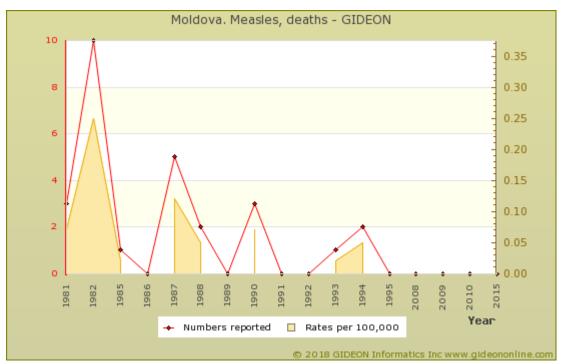
A 2-dose MMR schedule was introduced in 2002. 1



Graph: Moldova. Measles - WHO-UNICEF est. % vaccine coverage



Graph: Moldova. Measles, cases



Graph: Moldova. Measles, deaths

#### References

1. Pediatr Infect Dis J 2010 Aug ;29(8):703-6.

# Melioidosis

Agent	BACTERIUM.  Burkholderia pseudomallei  An aerobic gram-negative bacillus
Reservoir	Soil, Water, Sheep, Goat, Horse, Pig, Rodent, Monkey, Marsupial
Vector	None
Vehicle	Water (contact, ingestion, aerosol), Breastfeeding, Sexual contact, Respiratory or pharyngeal acquisition
Incubation Period	3d - 21d (range 2d - 1y)
Diagnostic Tests	Culture of blood, sputum, tissue. Serology. Nucleic acid amplification.
Typical Adult Therapy	Ceftazidime or Meropenem or Imipenem IV X at least 14 days May be combined with Sulfamethoxazole / Trimethoprim PO  Follow with Sulfamethoxazole / Trimethoprim +/- Doxycycline X at least 3 months.
Typical Pediatric Therapy	Ceftazidime or Meropenem or Imipenem IV X at least 14 days May be combined with Sulfamethoxazole / Trimethoprim PO  Follow with Sulfamethoxazole / Trimethoprim X at least 3 months.
Clinical Hints	<ul> <li>Lymphangitis with septicemia</li> <li>Fever, cough and chest pain</li> <li>Diarrhea or infection of bone, central nervous system, liver and parotid are occasionally encountered</li> <li>Chest roentgenogram findings and clinical course may mimic tuberculosis</li> <li>Case-fatality rate 10% to over 50% (septicemic form)</li> </ul>
Synonyms	Burkholderia pseudomallei, Burkholderia thailandensis, Melioidose, Nightcliff Gardeners' Disease, Whitmore disease. ICD9: 025 ICD10: A24.1,A24.2,A24.3,A24.4



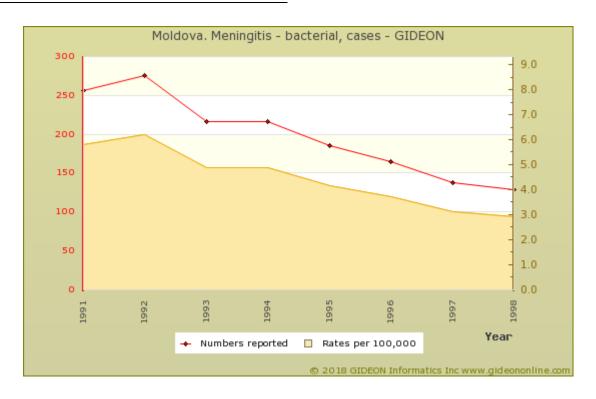
# Meningitis - aseptic (viral)

Agent	VIRUS - RNA. Picornaviridae, enteroviruses
Reservoir	Human
Vector	None
Vehicle	Fecal-oral, Droplet
Incubation Period	Variable
Diagnostic Tests	Viral isolation (stool, CSF, throat). Serology.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	- Lymphocytic meningitis, with normal CSF glucose level - Often follows sore throat - Typically occurs during late summer and early autumn in temperate regions
Synonyms	Aseptic meningitis, Encephalitis - viral, Meningite virale, Meningitis, viral, Meningo-encefalite virale, Viral encephalitis, Viral meningitis. ICD9: 047,048,049,320.2 ICD10: A87,G03.0

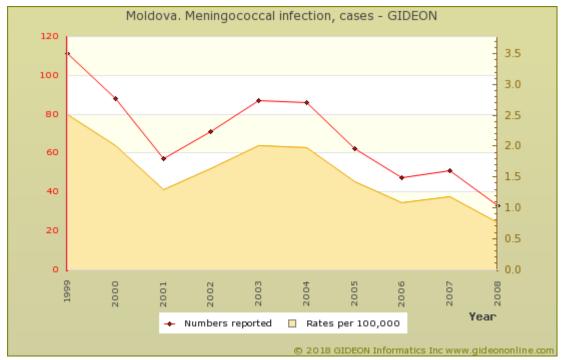
## Meningitis - bacterial

Agent	BACTERIUM. Neisseria meningitidis, Streptococcus pneumoniae, Haemophilus influenzae, et al	
Reservoir	Human	
Vector	None	
Vehicle	Air, Secretions	
Incubation Period	Variable	
Diagnostic Tests	CSF microscopy and culture. Blood culture.	
	Note: Antigen detection is non-specific and rarely useful.	
Typical Adult Therapy	Bactericidal agent(s) appropriate to known or suspected pathogen + dexamethasone	
Typical Pediatric Therapy	As for adult	
Vaccines	H. influenzae (HbOC-DTP or -DTaP) vaccine Haemophilus influenzae (HbOC) vaccine Haemophilus influenzae (PRP-D) vaccine Haemophilus influenzae (PRP-OMP) vaccine Haemophilus influenzae (PRP-T) vaccine Haemophilus influenzae (PRP-T) vaccine Meningococcal vaccine Hepatitis B + Haemoph. influenzae vaccine	
Clinical Hints	- Headache, stiff neck, obtundation, high fever and leukocytosis - Macular or petechial rash and preceding sore throat suggest meningococcal infection	
Synonyms	Bacterial meningitis, Enfermedad Meningococica, Haemophilus influenzae, Haemophilus influenzaes, HIB meningitis, HIBs, Infections a meningocoque, Meningite batterica, Meningite meningococcica, Meningococcal, Meningokokken Erkr., Meningokokkose. ICD9: 036.0,320 ICD10: A39,G00,G01,G02	

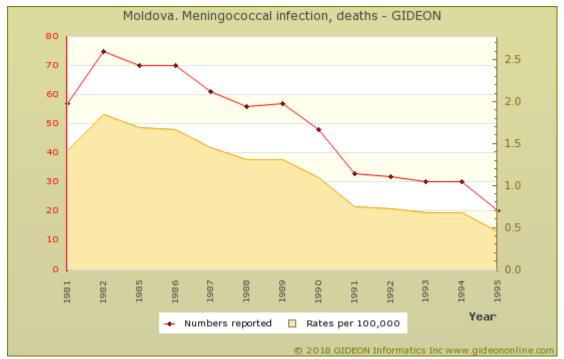
## Meningitis - bacterial in Moldova



Graph: Moldova. Meningitis - bacterial, cases



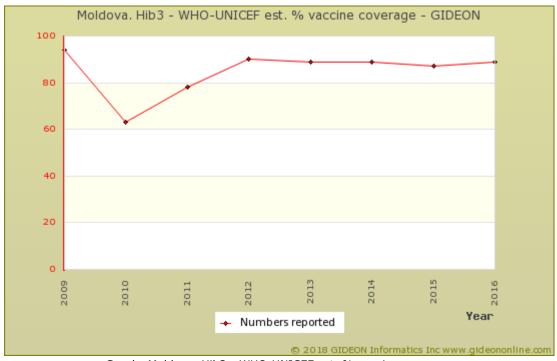
Graph: Moldova. Meningococcal infection, cases



Graph: Moldova. Meningococcal infection, deaths

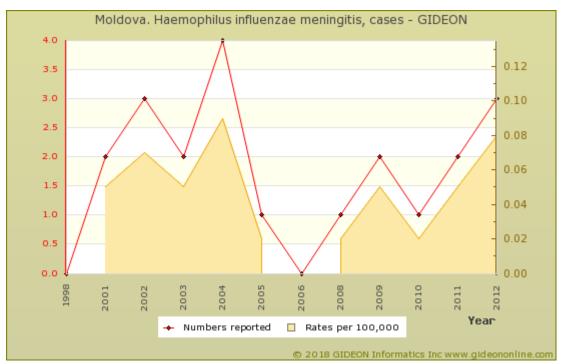
#### **Vaccine Schedule:**

BCG - 2 days DT - 7 years DTwP - 2 years
DTwPHibHepB - 2,4,6 months
HepB - birth; adults in risk groups
IPV - 6 months
MMR - 12 months; 7,15 years
OPV - 2,4,6 months; 2,7,15 years
Pneumo conj - 2,4,12 months
Rotavirus - 2,4 months
Td - 15, 20, 25, 30, 35, 40, 50, 60 years



Graph: Moldova. Hib3 - WHO-UNICEF est. % vaccine coverage

No cases of invasive Haemophilus influenzae b disease were reported in 1998.



Graph: Moldova. Haemophilus influenzae meningitis, cases

# Microsporidiosis

Agent	FUNGUS. Microsporidia: Enterocytozoon, <i>Encephalitozoon (Septata), Vittaforma (Nosema), Pleistophora,Trachipleistophora</i> , et al.
Reservoir	Rabbit, Rodent, Carnivore, Non-human primate, Fish, Dog, Bird
Vector	None
Vehicle	Fecal-oral
Incubation Period	Unknown
Diagnostic Tests	Microscopy of duodenal aspirates. Inform laboratory if this organism is suspected. Nucleic acid amplification.
Typical Adult Therapy	Albendazole 400 mg PO BID X 3 weeks. Add Fumagillin for ocular S. intestinalis may respond to Albendazole and Fumagillin Nitazoxanide has been used for E. bieneusi.
Typical Pediatric Therapy	Albendazole 200 mg PO BID X 3 weeks. Add Fumagillin for ocular S. intestinalis may respond to Albendazole and Fumagillin Nitazoxanide has been used for E. bieneusi.
Clinical Hints	<ul> <li>Self-limited diarrhea, traveler's diarrhea or asymptomatic carriage</li> <li>Immunocompromised patients present with chronic diarrhea, cholangitis, cholecystitis, sinusitis or pneumonia</li> <li>Ocular microsporidiosis is associated with keratoconjunctivitis</li> <li>Hepatitis or myositis are reported in some cases</li> </ul>
Synonyms	Anncaliia, Brachiola, Encephalitozoon, Enterocytozoon, Microsporidium, Nosema, Pleistophora, Trachipleistophora, Tubulinosema, Vittaforma. ICD9: 136.8 ICD10: A07.8

## Molluscum contagiosum

Agent	VIRUS - DNA. Poxviridae. Molluscipoxvirus. Molluscum contagiosum virus
Reservoir	Human
Vector	None
Vehicle	Contact, Sexual contact, Vertical transmission
Incubation Period	2-7 w (range 14 to 180d)
Diagnostic Tests	Histology of excised material. Nucleic acid amplification
Typical Adult Therapy	Topical therapy; excision
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>One or more raised, flesh-colored skin lesions with depressed center</li> <li>Lesions persist for 6 to 12 weeks</li> <li>Disseminated and indolent forms encountered, particularly in immune-suppressed patients</li> </ul>
Synonyms	Water warts. ICD9: 078.0 ICD10: B08.1

### Mumps

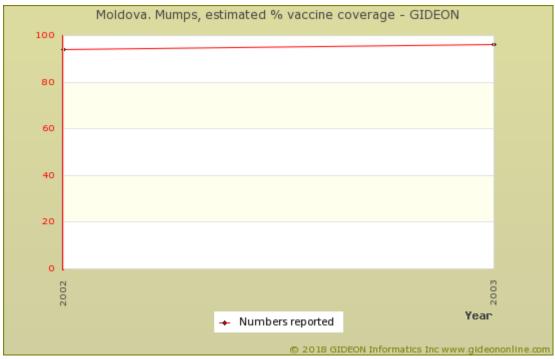
Agent	VIRUS - RNA. Mononegavirales Paramyxoviridae, Paramyxovirinae, Rubulavirus: Mumps virus
Reservoir	Human
Vector	None
Vehicle	Aerosol, Respiratory or pharyngeal acquisition
Incubation Period	14d - 24d (range 12d - 24d)
Diagnostic Tests	Viral culture (saliva, urine, CSF) indicated only in complicated cases. Serology. Nucleic acid amplification.
Typical Adult Therapy	Respiratory isolation; supportive
Typical Pediatric Therapy	As for adult
Vaccines	Measles-Mumps-Rubella vaccine Mumps vaccine Rubella - Mumps vaccine
Clinical Hints	- Fever and parotitis - Orchitis (20% of post-pubertal males) - Meningitis (clinically apparent in 1% to 10%) - Oophoritis, or encephalitis (0.1%) - Most cases resolve within 1 to 2 weeks
Synonyms	Bof, Epidemic parotitis, Fiebre urliana, Infectious parotitis, Kusma, Oreillons, Paperas, Parotidite epidemica, Parotiditis, Parotite epidemica, Passjuka. ICD9: 072 ICD10: B26

#### **Mumps in Moldova**

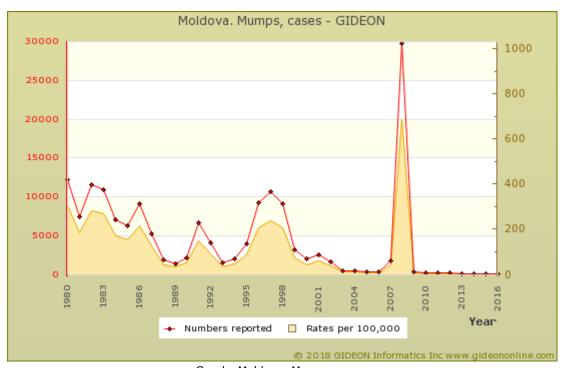
#### **Vaccine Schedule:**

BCG - 2 days DT - 7 years DTwP - 2 years DTwPHibHepB - 2,4,6 months HepB - birth; adults in risk groups IPV - 6 months MMR - 12 months; 7,15 years OPV - 2,4,6 months; 2,7,15 years Pneumo conj - 2,4,12 months Rotavirus - 2,4 months Td - 15, 20, 25, 30, 35, 40, 50, 60 years

Single-dose monovalent mumps vaccination at 15 to 18 months was introduced in 1983, replaced by a 2-dose MMR schedule in 2002.  $^{\mathbf{1}}$ 



Graph: Moldova. Mumps, estimated % vaccine coverage



Graph: Moldova. Mumps, cases

### **Notable outbreaks**

Years	Region	Cases	Notes
2007 - 200	Multiple locations	31,142	Outbreaks in Kishinev, Dubosar, the Gagauzsky autonomic district, Ungensky, Orgeevsky, and other districts <sup>2</sup> <sup>3</sup> <sup>4</sup> <sup>5</sup> <sup>6</sup>

#### References

- Pediatr Infect Dis J 2010 Aug ;29(8):703-6.
   Euro Surveill 2008 Mar 27;13(13)
   Pediatr Infect Dis J 2010 Aug ;29(8):703-6.



# Myalgic encephalomyelitis

Agent	UNKNOWN
Reservoir	Unknown
Vector	None
Vehicle	Unknown
Incubation Period	Unknown
Diagnostic Tests	Clinical diagnosis; ie, discount other diseases.
Typical Adult Therapy	Supportive; ? immune modulators (experimental)
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Unexplained depression, fatigue, cognitive disorders and sleep disturbance</li> <li>Recurrent bouts of pharyngitis and adenopathy</li> <li>Rheumatological symptoms and fever persist more than six months</li> </ul>
Synonyms	Akureyri disease, Atypical poliomyelitis, Chronic fatigue syndrome, Effort syndrome, Fabricula, Royal Free disease, Systemic exercise intolerance disease, Tapanui disease. ICD9: 780.71 ICD10: G93.3

# Mycetoma

Agent	BACTERIUM OR FUNGUS.  Nocardia spp, Madurella mycetomatis, Actinomadura pellitieri, Streptomyces somaliensis, et al
Reservoir	Soil, Vegetation
Vector	None
Vehicle	Contact, Wound, Soil
Incubation Period	2w - 2y
Diagnostic Tests	Bacterial and fungal culture of material from lesion.
Typical Adult Therapy	Antimicrobial or antifungal agent as determined by culture. Excision as indicated
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Most patients are males age 20 to 40 (ie, occupational exposure)</li> <li>Painless, chronic, draining, fistulous subcutaneous nodule - usually involving lower extremity</li> <li>Osteolytic lesions may be noted on x-ray</li> <li>Usually no fever</li> </ul>
Synonyms	Coelomycetes, Curvularia lunata, Cyphellophora, Diaporthe, Emarellia, Fusarium subglutinans, Gloniopsis, Lasiodiplodia, Leptosphaeria tompkinsii, Madura foot, Madura-Fuss, Madurella, Medicopsis, Mycetom, Paraconiothyrium, Peyronellaea, Pleurostomophora, White grain eumycetoma. ICD9: 039.4,117.4 ICD10: B47



## Mycobacteriosis - M. marinum

Agent	BACTERIUM. Actinomycetes, <i>Mycobacterium marinum</i> An aerobic acid-fast bacillus
Reservoir	Fresh and salt water (swimming pools, aquaria), Fish (ornamental, salmon, sturgeon, bass)
Vector	None
Vehicle	Water (per areas of minor skin trauma), Contact
Incubation Period	5d - 270d (median 21d)
Diagnostic Tests	Mycobacterial culture from lesion. Alert laboratory when this organism is suspected.
Typical Adult Therapy	Clarithromycin 500 mg BID X 3m Or Rifampicin 600 mg/day + Ethambutol 20 mg/kg/day X 6w. OR Minocycline 100 mg /day X 3m
Typical Pediatric Therapy	Sulfamethoxazole / Trimethoprim 5 mg-25 mg/kg BID X 6w. Alternative Minocycline (Age >= 8)
Clinical Hints	<ul> <li>Onset weeks after exposure to swimming pool, aquarium, other water source</li> <li>Violaceous papule, ulcer, plaque, psoriaform lesion</li> <li>Commonly involves the elbow, knee, hand or foot</li> </ul>
Synonyms	Aquarium granuloma, Fish fanciers' finger syndrome, Fish tank granuloma, Mariner's TB, Mycobacterium balnei, Mycobacterium marinum, Mycobacterium scrofulaceum, Spam, Swimming pool granuloma. ICD9: 031.1 ICD10: A31.1



## Mycobacteriosis - M. scrofulaceum

Agent	BACTERIUM. Actinomycetes, <i>Mycobacterium scrofulaceum</i> An aerobic acid-fast bacillus
Reservoir	Water (lakes, rivers), Soil, Raw milk, Plant material
Vector	None
Vehicle	Water, Soil, Areas of minor trauma, Contact
Incubation Period	Unknown
Diagnostic Tests	Culture of tissue or aspirates.
Typical Adult Therapy	Excision. Drugs (Isoniazid - Rifampin - streptomycin - Cycloserine) are rarely indicated
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Most common during early childhood.</li> <li>Painless lymphadenopathy, most commonly unilateral and submandibular</li> <li>In contrast, true tuberculosis involves the lower neck and produces a strongly positive tuberculin reaction and/or suggestive chest X ray</li> </ul>
Synonyms	



# Mycobacteriosis - miscellaneous nontuberculous

Agent	BACTERIUM. Actinomycetes, <i>Mycobacterium</i> spp over 130 species as of 2016 An aerobic acid-fast bacillus
Reservoir	Water, Soil, Fish, Mammal, Bird
Vector	None
Vehicle	Air, Water, Milk ( <i>M. bovis</i> ), Contact, Ingestion, Trauma, Respiratory or pharyngeal acquisition
Incubation Period	Variable
Diagnostic Tests	Microscopy & culture of tissue, secretions, blood. Nucleic acid amplification. Inform laboratory if suspected
Typical Adult Therapy	Drug, route and duration appropriate to clinical setting and species (in Therapy module, scroll through upper left box)
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Pneumonia, or chronic granulomatous infection of various tissues</li> <li>Systemic disease may complicate immune suppression</li> <li>Mycobacterium avium-intracellulare infection characterized by aggressive course and resistance to most antimycobacterial drugs</li> </ul>
Synonyms	Mycobacterium abscessus, Mycobacterium avium, Mycobacterium avium-intracellulare, Mycobacterium chimaera, Mycobacterium franklinii, Mycobacterium immunogenum, Mycobacterium jacussii, Mycobacterium kyorinense, Mycobacterium xenopi, Segniliparus. ICD9: 031.9,031.2 ICD10: A31.0,A31.1,A31.8



# Mycoplasma (miscellaneous) infection

Agent	BACTERIUM. Mycoplasmatales Mycoplasma genitalium, Mycoplasma hominis, Mycoplasma fermentans, Mycoplasma penetrans, Mycoplasma parvum, Ureaplasma urealyticum
Reservoir	Human
Vector	None
Vehicle	Secretion, Sexual contact, Respiratory or pharyngeal acquisition
Incubation Period	Unknown
Diagnostic Tests	Culture (urine, pharynx). Serology. Nucleic acid amplification.
Typical Adult Therapy	Doxycycline 100 mg PO BID X 7 days OR Azithromycin 500 g PO, then 250 mg PO X 4 days OR Levofloxacin 500 mg daily X 7 days OR Ofloxacin 300 mg BID X 7 days
Typical Pediatric Therapy	Erythromycin 10 mg/kg PO QID X 2w
Clinical Hints	- Urethritis, vaginitis - Neonatal pneumonia - Rarely stillbirth, prematurity or infertility
Synonyms	Acholeplasma laidlawii, Epirythrozoon, Hemotrophic Mycoplasma, Mycoplasma amphoriforme, Mycoplasma buccale, Mycoplasma faucium, Mycoplasma felis, Mycoplasma fermentans, Mycoplasma genitalium, Mycoplasma hominis, Mycoplasma lipophilum, Mycoplasma orale, Mycoplasma penetrans, Mycoplasma pirum, Mycoplasma primatum, Mycoplasma salivarium, Mycoplasma spermatophilum, T Mycoplasmas, T strains, Ureaplasma parvum, Ureaplasma urealyticum. ICD9: 041.81 ICD10: A49.3



## Mycoplasma pneumoniae infection

Agent	BACTERIUM. Mollicutes. <i>Mycoplasma pneumoniae</i>
Reservoir	Human
Vector	None
Vehicle	Droplet, Respiratory or pharyngeal acquisition
Incubation Period	6d - 23d
Diagnostic Tests	Culture (sputum, throat). Serology. Nucleic acid amplification.
Typical Adult Therapy	Erythromycin 500 mg PO BID X 2w. OR Azithromycin 1 g, followed by 500 mg PO daily X 5 days. OR Doxycycline 100 mg PO BID OR Levofloxacin 750 mg PO X 5d
Typical Pediatric Therapy	Azithromycin 10 mg/kg PO day 1; 5 mg/kg PO days 2 to 5 OR Erythromycin 10 mg/kg PO QID X 2w
Clinical Hints	<ul> <li>Coryza, "hacking" cough and subsegmental pulmonary infiltrate</li> <li>Bullous otitis media is often present</li> <li>Most patients below age 30</li> <li>Cold agglutinins neither sensitive nor specific, and appear only during second week</li> </ul>
Synonyms	Mycoplasma pneumoniae, Primary atypical pneumonia. ICD9: 041.81,483.0 ICD10: B96.0

# Myiasis

Agent	PARASITE - Insecta (Diptera) larvae
Reservoir	Mammal
Vector	Arthropod
Vehicle	Fly eggs deposited by biting arthropod
Incubation Period	1w - 3m
Diagnostic Tests	Identification of extracted maggot.
Typical Adult Therapy	Removal of maggot
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Fly larvae seen in various body regions</li> <li>Pruritic or painful draining nodule</li> <li>Fever and eosinophilia may be present</li> <li>Instances of brain, eye, middle ear and other deep infestations are described.</li> </ul>
Synonyms	Calliphora, Chrysomya, Chrysomyia, Clogmia, Cochliomyia, Cordylobia, Cuterebrosis, Dermatobia, Eristalis, Fannia, Furuncular myiasis, Gasterophilus, Hypoderma, Lucilia, Lund's fly, Maggot infestation, Megaselia, Musca, Muscina, Oedemagena, Oestrus, Ophthalmomyiasis, Parasarcophaga, Psychoda, Rectal myiasis, Sarcophaga, Screw worm, Telmatoscopus, Telmatoscopus, Urinary myiasis, Vaginal myiasis, Wohlfarthia. ICD9: 134.0 ICD10: B87

# Necrotizing skin/soft tissue infx.

Agent	BACTERIUM.  Streptococcus pyogenes, Clostridium perfringens, mixed anaerobic and/or gram-negative bacilli
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Clinical features. Smear and culture (including anaerobic culture) of exudate.
Typical Adult Therapy	Debridement and parenteral antibiotics directed by smear and culture results. Hyperbaric oxygen in more severe infections
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>At least seven distinct syndromes are described</li> <li>Local pain and swelling, skin discoloration or edema</li> <li>Gas formation, foul odor and variable degrees of systemic toxicity</li> </ul>
Synonyms	Anaerobic cellulitis, Chancrum oris, Clostridial cellulitis, Clostridium novyi, Fasciitis, Fournier's gangrene, Gangrenous cellulitis, Gangrenous stomatitis, Invasive group A strep. Infections, Meleney's synergistic gangrene, Necrotizing fasciitis, Noma, Streptococcal fasciitis, Synergistic necrotizing cellulitis.  ICD9: 686.8,528.1 ICD10: M72.6,A69.0

# **Neutropenic typhlitis**

Agent	BACTERIUM.  Clostridium septicum (occasionally Clostridium tertium, Clostridium sporogenes, Clostridium sordellii or Clostridium tertium)
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Unknown
Diagnostic Tests	Typical findings in the setting of neutropenia. Ultrasonography may be helpful.
Typical Adult Therapy	Broad spectrum antimicrobial coverage, which should include clostridia and <i>Pseudomonas aeruginosa</i> ; ie  Piperacillin / Tazobactam (or Imipenem or Meropenem) OR Cefepime + Metronidazole  Role of surgery is controversial
Typical Pediatric Therapy	As for adult
Clinical Hints	- Condition affects neutropenic (leukemic, genetic, etc) patients - Fever, abdominal pain, diarrhea (occasionally bloody) and right lower quadrant signs - Infection may spread hematogenously to the extremities - Case-fatality rate is 50% to 75%
Synonyms	Neutropenic enterocolitis. ICD9: 540.0 ICD10: A04.8

# **Nocardiosis**

Agent	BACTERIUM. Actinomycetes, <i>Nocardia</i> spp. An aerobic gram positive bacillus (acid-fast using special technique)
Reservoir	Soil
Vector	None
Vehicle	Air, Dust, Wound, Contact, Respiratory or pharyngeal acquisition
Incubation Period	Days to weeks
Diagnostic Tests	Culture and gram stain of exudates, sputa, tissue specimens. Advise laboratory when Nocardia suspected.
Typical Adult Therapy	Lymphadenitis or skin / soft tissue: Sulfamethoxazole / Trimethoprim OR Minocycline Pneumonia: Sulfamethoxazole / Trimethoprim + Imipenem; OR Imipenem + Amikacin Brain abscess: Sulfamethoxazole / Trimethoprim + Imipenem; OR Linezolid + Meropenem
Typical Pediatric Therapy	As for adult
Clinical Hints	- Pneumonia, lung abscess, brain abscess, or other chronic suppurative infection - Often occurs in the setting of immune suppression.
Synonyms	Nocardia, Nocardiose. ICD9: 039 ICD10: A43

### Onchocerciasis - zoonotic

Agent	PARASITE - Nematoda. Secernentea: <i>Onchocerca lupi</i> , et. al.
Reservoir	Cattle, Horse, Deer, Boar, Dog, Wolf
Vector	Black fly ( <i>Simulium</i> spp.)
Vehicle	None
Incubation Period	Unknown
Diagnostic Tests	Ideentification of excised worm
Typical Adult Therapy	Excision
Typical Pediatric Therapy	As of adult
Clinical Hints	- May be history of animal contact - Subcutaneous or subconjunctival nodule, or eye-worm
Synonyms	Dipetalonema arbuta, Dipetalonema sprenti, Onchocerca cervicalis, Onchocerca dewittei, Onchocerca guttarosa, Onchocerca jakutensis, Onchocerca lupi, Onchocerca retuculata, Pelecitus. ICD9: 123.8 ICD10: B71.1.

# Orbital and eye infection

Agent	BACTERIUM OR FUNGUS.  Streptococcus pyogenes, oral anaerobes, Aspergillus spp., facultative gram-negative bacilli, et al
Reservoir	Endogenous, Introduced flora (trauma, surgery)
Vector	None
Vehicle	Trauma, Surgery, Contiguous (sinusitis), Hematogenous
Incubation Period	Variable
Diagnostic Tests	Imaging techniques (CT or MRI). Culture of aspirates or surgical material.
Typical Adult Therapy	Local and systemic antimicrobial agents appropriate for species and severity
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Proptosis, chemosis, extraocular palsy, or hypopyon</li> <li>Associated with sinusitis, bacteremia, eye trauma or surgery</li> <li>Infection may involve the eye (endophthalmitis); periosteum (periorbital infection); orbit (orbital cellulitis); or multiple structures (panophthalmitis).</li> </ul>
Synonyms	Bacterial keratitis, Ceratite, Cheratite, Endophthalmitis, Eye infection, Keratite, Keratitis, Orbital infection, Panopthalmitis, Queratitis. ICD9: 360.0 ICD10: H05.0

# Orf

Agent	VIRUS - DNA. Poxviridae, Parapoxvirus: Orf virus
Reservoir	Sheep, Goat, Reindeer, Musk ox
Vector	None
Vehicle	Contact, Secretions, Fomite, Cat-scratch
Incubation Period	3d - 6d (range 2d - 7d)
Diagnostic Tests	Viral culture (skin lesion or exudate). Serology. Nucleic acid amplification. Biosafety level 3.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	- Skin pustule or ulcer following contact with sheep or goats - Most lesions are limited to finger or hand - Heals without scarring within 6 weeks
Synonyms	Contagious ecthyma, Contagious pustular dermatitis, Ecthyma contagiosum, Ovine pustular dermatitis, Scabby mouth. ICD9: 078.89 ICD10: B08.0

# Ornithosis

Agent	BACTERIUM. Chlamydiaceae, Chlamydiae, Chlamydophila (Chlamydia) psittaci
Reservoir	Parakeet, Parrot, Pigeon, Turkey, Duck, Cat, Sheep, Goat, Cattle, Dog
Vector	None
Vehicle	Bird droppings, Dust, Air, Aerosol from cat, Respiratory or pharyngeal acquisition
Incubation Period	7d - 14d (range 4d - 28d)
Diagnostic Tests	Serology. Culture (available in special laboratories) rarely indicated.
Typical Adult Therapy	Doxycycline 100 mg PO BID X 10d.  Alternatives: Azithromycin 1 g, then 0.5 g daily X 4 days. Clarithromycin 0.5 g BID Erythromycin 500 mg PO QID X 10d. Levofloxacin 750 mg PO X 7 days
Typical Pediatric Therapy	Azithromycin 10 mg/kg PO day 1; 5 mg/kg PO days 2 to 5 OR Erythromycin 10 mg/kg QID X 10d Alternative (Age >=8 years): Doxycycline 100 mg PO BID X 10d.
Clinical Hints	<ul> <li>Headache, myalgia and pneumonia</li> <li>Relative bradycardia is common</li> <li>Hepatomegaly or splenomegaly common</li> <li>Onset 1 to 4 weeks following contact with pigeons, psittacine birds or domestic fowl</li> <li>Case-fatality rate without treatment is 20%</li> </ul>
Synonyms	Chlamydophila abortus, Chlamydophila psittaci, Ornitose, Papegojsjuka, Parrot fever, Psitacosis, Psittacosis, Psittakose. ICD9: 073 ICD10: A70

# Osteomyelitis

Agent	BACTERIUM OR FUNGUS.  Staphylococcus aureus, facultative gram-negative bacilli, Candida albicans, etc
Reservoir	Endogenous
Vector	None
Vehicle	Trauma, Surgery, Hematogenous
Incubation Period	Variable
Diagnostic Tests	Radiography, including bone scan. Culture of biopsy material.
Typical Adult Therapy	Systemic antimicrobial agent(s) appropriate to known or suspected pathogen. Surgery as indicated
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Limb pain or gait disturbance, often associated with obscure fever</li> <li>May be preceded by infection of skin, soft tissues or joint; or result from bacteremia</li> <li>X-ray changes are not apparent for at least 10 days in acute infection</li> </ul>
Synonyms	Osteomielite, Osteomielitis, Osteomyelite, Paravertebral abscess. ICD9: 015,730.9 ICD10: M86

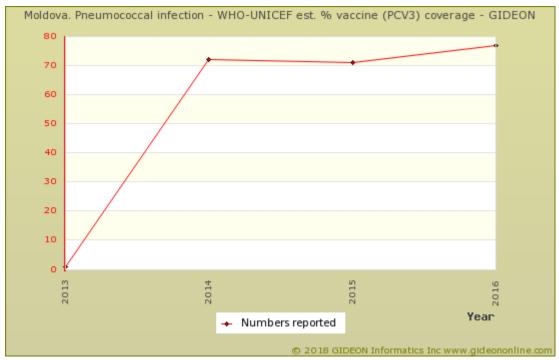
## Otitis media

Agent	BACTERIUM OR VIRUS.  Haemophilus influenzae & Streptococcus pneumoniae in most acute cases; RSV, Parainfluenza, et al
Reservoir	Human
Vector	None
Vehicle	None
Incubation Period	Variable
Diagnostic Tests	Clinical findings. Culture of middle ear fluid if available.
Typical Adult Therapy	If evidence of bacterial infection (severe otalgia >48 hours / fever >39 C):  Amoxicillin / Clavulanate 1000/62.5 mg BID X 3 days  Alternatives: Cefdinir, Cefpodoxime proxtil, Cefprozin, fluoroquinolone
Typical Pediatric Therapy	If evidence of bacterial infection (severe otalgia >48 hours / fever >39 C): Amoxicillin / Clavulanate 45/3.2 mg/kg BID X 3 days
Vaccine	Pneumococcal conjugate vaccine
Clinical Hints	<ul> <li>Acute bacterial otitis media often represents the final stage in a complex of anatomic, allergic or viral disorders of the upper airways</li> <li>Recurrent or resistant infections may require surgical intervention.</li> </ul>
Synonyms	Otitis media aguda. ICD9: 382.0 ICD10: H65,H66

#### Otitis media in Moldova

#### Vaccine Schedule:

BCG - 2 days
DT - 7 years
DTwP - 2 years
DTwPHibHepB - 2,4,6 months
HepB - birth; adults in risk groups
IPV - 6 months
MMR - 12 months; 7,15 years
OPV - 2,4,6 months; 2,7,15 years
Pneumo conj - 2,4,12 months
Rotavirus - 2,4 months
Td - 15, 20, 25, 30, 35, 40, 50, 60 years



Graph: Moldova. Pneumococcal infection - WHO-UNICEF est. % vaccine (PCV3) coverage

## Parainfluenza virus infection

Agent	VIRUS - RNA. Paramyxoviridae: Respirovirus - Human Parainfluenza virus 1 and 3. Rubulavirus - Human Parainfluenza virus 2 and 4.
Reservoir	Human
Vector	None
Vehicle	Droplet, Respiratory or pharyngeal acquisition
Incubation Period	3d - 8d
Diagnostic Tests	Viral culture (respiratory secretions). Serology. Nucleic acid amplification.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	- Upper respiratory infection - often croup or laryngitis - Most common during infancy - Older children develop a "cold-like" illness - Complicated by pneumonia in 7% to 17% of cases
Synonyms	Parainfluenza, Sendai. ICD9: 078.89,480.2 ICD10: J12.2

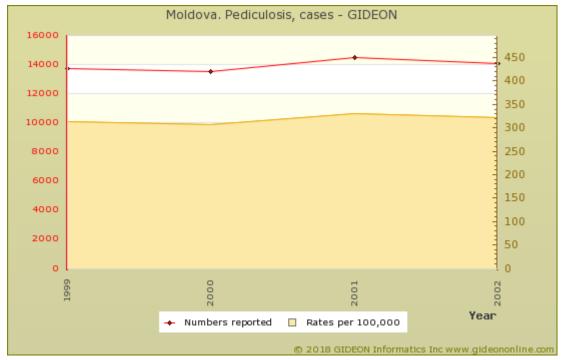
## **Parvovirus B19 infection**

Agent	VIRUS - DNA. Parvoviridae, Parvovirinae: Erythrovirus B19
Reservoir	Human
Vector	None
Vehicle	Droplet, Breastfeeding, Respiratory or pharyngeal acquisition
Incubation Period	4d - 14d (range 3d - 21d)
Diagnostic Tests	Serology.  Nucleic acid amplification (testing should be reserved for the rare instance of complicated infection).
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	- Erythema infectiosum (erythema of cheeks; lacelike or morbilliform rash on extremities) - Febrile polyarthralgia - Bone marrow aplasia/hypoplasia may be present
Synonyms	Duke's disease, Erythema infantum febrile, Erythema infectiosum, Erythema simplex marginatum, Erythrovirus B19, Erythrovirus B19, Fifth disease, Fourth disease, Funfte Krankheit, Parascarlatina, Parvovirus 4, Parvovirus B19, Sticker's disease. ICD9: 057.0 ICD10: B08.3

#### **Pediculosis**

Agent	PARASITE - Insecta. Anoplura: <i>Pediculus humanus, Phthirus pubis</i> .
Reservoir	Human
Vector	Louse
Vehicle	Contact
Incubation Period	7d
Diagnostic Tests	Identification of adults and "nits."
Typical Adult Therapy	Permethrin 1%; or malthion 0.5%; or lindane OR Ivermectin 200 mcg/kg PO
Typical Pediatric Therapy	Permethrin 1%; or malthion 0.5%; or lindane OR Ivermectin 200 mcg/kg PO (> 15 kg body weight)
Clinical Hints	<ul> <li>Pruritus in the setting of poor personal hygiene</li> <li>Adult insects or nits may be visible</li> <li>Body louse (rarely the head louse) transmits such diseases as epidemic typhus, trench fever and relapsing fever</li> </ul>
Synonyms	Crab louse, Lausebefall, Pediculose, Pediculus capitus, Pediculus corporis, Pedikulose, Phthirus pubis, Pidocci. ICD9: 132 ICD10: B85

#### Pediculosis in Moldova



Graph: Moldova. Pediculosis, cases

### Pentastomiasis - Linguatula

Agent	PARASITE - Pentastomid worm.  Linguatula serrata
Reservoir	Herbivore
Vector	None
Vehicle	Meat (liver or lymph nodes of sheep/goat)
Incubation Period	Unknown
Diagnostic Tests	Identification of larvae in nasal discharge.
Typical Adult Therapy	No specific therapy available
Typical Pediatric Therapy	As for adult
Clinical Hints	- May follow ingestion of undercooked liver. - Pharyngeal or otic itching - Cough, rhinitis or nasopharyngitis
Synonyms	Linguatula, Marrara syndrome. ICD9: 128.8 ICD10: B83.8



#### Pericarditis - bacterial

Agent	BACTERIUM. Streptococcus pneumoniae, Staphylococcus aureus, et al
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Ultrasonography and cardiac imaging techniques. Culture of pericardial fluid (include mycobacterial culture).
Typical Adult Therapy	Antimicrobial agent(s) appropriate to known or anticipated pathogen. Drainage as indicated
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Fever, chest pain and dyspnea</li> <li>Patients are acutely ill and have overt signs such as venous distention</li> <li>Enlarged cardiac "shadow"</li> <li>Concurrent pneumonia or upper respiratory infection may be present</li> <li>Case-fatality rate is 20%</li> </ul>
Synonyms	Bacterial pericarditis, Pericardite. ICD9: 074.23,074.2,115.03,420 ICD10: I30

### Perinephric abscess

Agent	BACTERIUM OR FUNGUS.  Escherichia coli, other facultative gram negative bacilli, Candida albicans, et al
Reservoir	Human
Vector	None
Vehicle	None
Incubation Period	Variable
Diagnostic Tests	Urine and blood culture. Renal imaging (CT, etc).
Typical Adult Therapy	Antimicrobial agent(s) appropriate to known or anticipated pathogen. Surgery as indicated
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Unexplained fever, leukocytosis and flank pain</li> <li>Patients are typically over age 50, and often diabetic</li> <li>Consider in the patient with nonresponsive "pyelonephritis" or a renal mass</li> </ul>
Synonyms	

#### Perirectal abscess

Agent	BACTERIUM. Various (often mixed anaerobic and aerobic flora)
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Culture of drainage material.
Typical Adult Therapy	Surgical drainage and antibiotics effective against fecal flora
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Anal or perianal pain with fever and a tender mass</li> <li>Granulocytopenic patients commonly develop small, soft and less overt abscesses - often due to Pseudomonas aeruginosa.</li> </ul>
Synonyms	

#### Peritonitis - bacterial

Agent	BACTERIUM. Various (often mixed anaerobic and aerobic flora)
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Culture of blood and peritoneal fluid. Peritoneal fluid cell count may also be useful.
Typical Adult Therapy	Antimicrobial agent(s) appropriate to known or anticipated pathogens. Surgery as indicated
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Abdominal pain and tenderness</li> <li>Vomiting, absent bowel sounds, guarding and rebound</li> <li>Diarrhea may be present in children</li> <li>Underlying visceral infection or perforation, trauma, hepatic cirrhosis (spontaneous peritonitis) etc.</li> </ul>
Synonyms	Acute peritonitis, Bacterial peritonitis, Peritonite. ICD9: 567 ICD10: K65

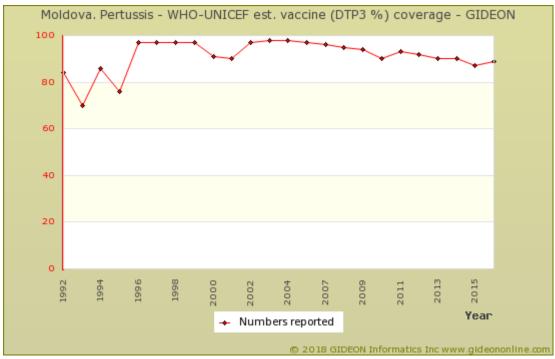
### <u>Pertussis</u>

Agent	BACTERIUM.  Bordetella pertussis An aerobic gram-negative coccobacillus
Reservoir	Human
Vector	None
Vehicle	Air, Infected secretions, Respiratory or pharyngeal acquisition
Incubation Period	7d - 10d (range 5d - 21d)
Diagnostic Tests	Culture & direct fluorescence (nasopharynx). Alert laboratory when suspected. Serology.
Typical Adult Therapy	Respiratory precautions.  Azithromycin 500 mg po X 1, then 250 mg daily X 4 days OR  Clarithromycin 500 mg po BID X 7 days OR  Sulfamethoxazole / Trimethoprim
Typical Pediatric Therapy	Respiratory precautions: Azithromycin 10mg /kg po daily for 5 days OR Clarithromycin 15/mg/kg BID X 7 days OR Sulfamethoxazole / Trimethoprim
Vaccines	DTaP vaccine DTP vaccine
Clinical Hints	- Coryza, paroxysmal cough - May be associated with pneumonia or otitis - Prominent lymphocytosis - Most often diagnosed in young children, but may present as indolent cough in adults - Epistaxis and subconjunctival hemorrhage often noted - Seizures (below age 2) - Case-fatality rate is 0.5%
Synonyms	Bordetella holmesii, Bordetella parapertussis, Bordetella pertussis, Chincofe, Chyncough, Coqueluche, Keichhusten, Keuchhusten, Kichhosta, Kikhosta, Kikhoste, Kinkhoest, Kinkhost, Kirkhosta, Parapertussis, Pertosse, Syndrome coqueluchoide, Tos convulsa, Tos farina, Tosse convulsa, Tussis convulsa, Whooping cough. ICD9: 033 ICD10: A37

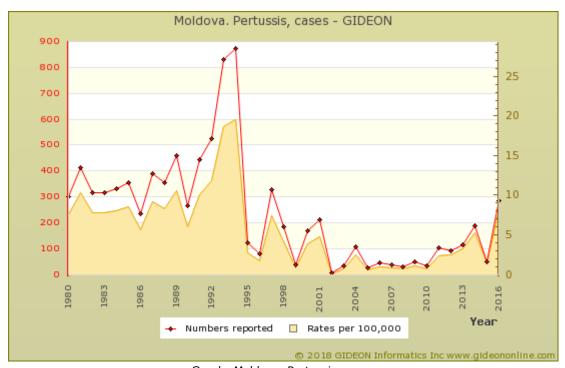
#### **Pertussis in Moldova**

#### **Vaccine Schedule:**

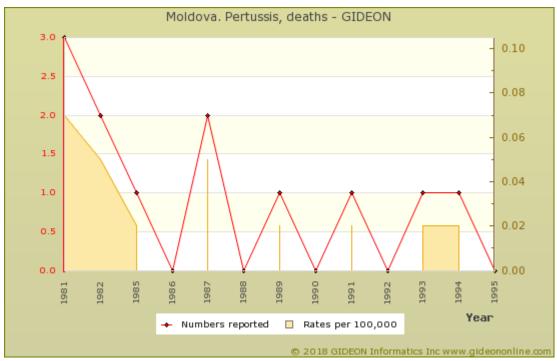
BCG - 2 days
DT - 7 years
DTwP - 2 years
DTwPHibHepB - 2,4,6 months
HepB - birth; adults in risk groups
IPV - 6 months
MMR - 12 months; 7,15 years
OPV - 2,4,6 months; 2,7,15 years
Pneumo conj - 2,4,12 months
Rotavirus - 2,4 months
Td - 15, 20, 25, 30, 35, 40, 50, 60 years



Graph: Moldova. Pertussis - WHO-UNICEF est. vaccine (DTP3 %) coverage



Graph: Moldova. Pertussis, cases



Graph: Moldova. Pertussis, deaths

### Pharyngeal and cervical space infx.

Agent	BACTERIUM.  Streptococcus pyogenes, mixed oral anaerobes, etc.
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Careful examination of region and X-ray (or CT scan). Smear and culture of pus if available.
Typical Adult Therapy	Surgical drainage and parenteral antibiotics effective against oral flora
Typical Pediatric Therapy	As for adult
Clinical Hints	- Fever, painful swelling and displacement of the tongue, fauces and other intraoral structures - Dysphagia, dyspnea or jugular phlebitis may ensue in more virulent infections
Synonyms	Cervical space infection, Descending necrotizing mediastinitis, Lemmier's syndrome, Ludwig's angina, Post-anginal septicemia, Quinsy. ICD9: 682.0,682.1 ICD10: J36,J39.0,J39.1

# Pharyngitis - bacterial

Agent	BACTERIUM. Most often Streptococcus pyogenes; Streptooccus groups B, C, F and G are occasionally isolated
Reservoir	Human
Vector	None
Vehicle	Droplet, Rarely food, Respiratory or pharyngeal acquisition
Incubation Period	1d - 5d
Diagnostic Tests	Throat swab for culture or antigen detection (group A Streptococcus) ASLO titer may not indicate current infection
Typical Adult Therapy	Penicillin G or Penicillin V or other antistreptococcal antibiotic to maintain serum level for 10 days
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Purulent pharyngitis and cervical lymphadenopathy usually indicate streptococcal etiology</li> <li>Viruses (mononucleosis, Enteroviruses) and other bacteria (gonorrhea, diphtheria) should also be considered</li> </ul>
Synonyms	Acute pharyngitis, Bacterial pharyngitis, Mal di gola batterica, Oral thrush, Streptococcal pharyngitis, Tonsillitis - bacterial, Vincent's angina. ICD9: 034.0,462 ICD10: J02,J03

### Philophthalmosis

Agent	PARASITE - Platyhelminthes, Trematoda.  Philophthalmus gralli, Ph. lucipetus, Ph. lacrimosus
Reservoir	Snail
Vector	None
Vehicle	Aquatic plants
Incubation Period	Unknown Less than 24 hours in birds
Diagnostic Tests	Identification of excised worm
Typical Adult Therapy	Removal of worm
Typical Pediatric Therapy	As for adult
Clinical Hints	- Conjunctivitis and lacrimation - Presence of an adult worm in the conjunctival sac
Synonyms	Oriental avian eye fluke, Oriental eye fluke, Philophthalmus. ICD9: 121.8 ICD10: b66.8

### Pityriasis rosea

Agent	UNKNOWN.
	Human herpesvirus 7 has been implicated
Reservoir	Unknown
Vector	Unknown
Vehicle	Unknown
Incubation Period	Unknown
Diagnostic Tests	Clinical features.
Typical Adult Therapy	Supportive; ultraviolet B exposure is suggested Acyclovir 400 mg PO TID X 7 days has been used in severe cases
Typical Pediatric Therapy	Supportive; ultraviolet B exposure is suggested
Clinical Hints	<ul> <li>Herald patch followed by crops of pruritic, salmon-colored macules and papules</li> <li>Systemic symptoms are rare</li> <li>Illness resolves after 3 to 8 weeks</li> </ul>
Synonyms	

#### **Plague**

Agent	BACTERIUM. <i>Yersinia pestis</i> A facultative gram-negative bacillus
Reservoir	Rodent, Rabbit, Cat, Dog, Wild carnivore
Vector	Flea ( <i>Pulex</i> ; <i>Xenopsylla</i> )
Vehicle	Air, Contact, Respiratory or pharyngeal acquisition
Incubation Period	2d - 7d (range 1d - 14d)
Diagnostic Tests	Culture (blood, sputum, pus). Fluorescent (DFA) staining of pus. Nucleic acid amplification.
Typical Adult Therapy	Strict isolation.  Gentamicin 2 mg/kg IV loading dose, then 1.7 mg/kg Q8h.  OR Streptomycin 15 mg/kg q12h X 10d.  OR Doxycycline 100 mg PO BID X 10d.  OR Chloramphenicol 20 mg/kg PO QID
Typical Pediatric Therapy	Gentamicin 2 mg/kg IV loading dose, then 1.7 mg/kg Q8h OR Streptomycin 10 mg/kg q8h X 10d. OR Chloramphenicol 15 mg/kg PO QID X 10d
Vaccine	Plague vaccine
Clinical Hints	<ul> <li>History of rodent contact or exposure to other cases</li> <li>Suppurative lymphadenitis with septicemia</li> <li>Hemorrhagic pneumonia in some cases</li> <li>Case-fatality rates for bubonic plague without therapy are 50% to 60%</li> </ul>
Synonyms	Black death, Black plague, Bubonic plague, Glandular plague, Hemorrhagic plague, Peste, Pneumonic plague, Saint Roch's disease, Yersinia pestis. ICD9: 020 ICD10: A20

Although Plague is not endemic to Moldova, imported, expatriate or other presentations of the disease have been associated with this country.

#### Plague in Moldova

Moldova. Plague, cases: None reported between 1987 and 2015

### **Plesiomonas infection**

Agent	BACTERIUM.  Plesiomonas shigelloides A facultative gram-negative bacillus
Reservoir	Fish Animal, Soil, Reptile, Bird
Vector	None
Vehicle	Water, Food
Incubation Period	1d - 2d
Diagnostic Tests	Stool culture - alert laboratory when this organism is suspected. Nucleic acid amplification.
Typical Adult Therapy	Stool precautions. Ciprofloxacin 400 mg IV or 750 mg PO, BID Alternatives: Sulfamethoxazole / Trimethoprim, Amoxicillin / Clavulanate, Ceftriaxone
Typical Pediatric Therapy	Stool precautions. Sulfamethoxazole / Trimethoprim, Amoxicillin / Clavulanate, Ceftriaxone
Clinical Hints	<ul> <li>In many cases, follows ingestion of shellfish or recent travel to developing countries</li> <li>Fever, abdominal pain, vomiting and severe diarrhea</li> <li>Symptoms often persist for 2 to 4 weeks</li> </ul>
Synonyms	Plesiomonas shigelloides. ICD9: 008.8 ICD10: A04.8

### Pleurodynia

Agent	VIRUS - RNA.
	Picornaviridae: Coxsackievirus
Reservoir	Human
Vector	None
Vehicle	Air, Fecal-oral, Fomite, Respiratory or pharyngeal acquisition
Incubation Period	3d - 5d
Diagnostic Tests	Viral culture (throat, stool). Serology. Nucleic acid amplification.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	- A late summer illness in temperate regions - Sore throat followed by pleuritic chest pain - Pain is often recurrent and appears in "waves" - local pressure on affected area may elicit the pain - Usually resolves within one week.
Synonyms	Balme disease, Bamble disease, Bamie disease, Bornholm disease, Devil's grip, Drangedal disease, Epidemic benign dry pleurisy, Epidemic myalgia, Sylvest's disease. ICD9: 074.1 ICD10: B33.0



### Pneumocystis pneumonia

Agent	FUNGUS. Ascomycota, Archiascomycetes, Pneumocystidales: <i>Pneumocystis jiroveci</i> (now distinct from <i>Pneumocystis carinii</i> )
Reservoir	Human
Vector	None
Vehicle	Air, Respiratory or pharyngeal acquisition
Incubation Period	4d - 8w
Diagnostic Tests	Identification of organisms in induced sputum, bronchial washings, tissue. Serology. Nucleic acid amplification.
Typical Adult Therapy	Therapy: Sulfamethoxazole / Trimethoprim 25 mg/5 mg/kg QID X 14d. OR Pentamidine 4 mg/kg/d X 14d. OR Dapsone + Trimethoprim. OR Atovaquone OR Primaquine + Clindamycin  Prophylaxis - similar, but at altered dosage. Dapsone also used.
Typical Pediatric Therapy	Therapy: Sulfamethoxazole / Trimethoprim 25 mg/5 mg/kg QID X 14d. OR Pentamidine 4 mg/kg/d X 14d. OR Dapsone + Trimethoprim. OR Atovaquone OR Primaquine + Clindamycin  Prophylaxis - similar, but at altered dosage.
Clinical Hints	- Dyspnea, hypoxia and interstitial pneumonia - Usually encountered in the setting of severe immune suppression (AIDS, leukemia, etc) - Roentgenographic findings (typically bilateral alveolar pattern) may appear after several days
Synonyms	PCP, Pneumocystis carinii, Pneumocystis jiroveci. ICD9: 136.3 ICD10: B59



### Pneumonia - bacterial

Agent	BACTERIUM.  Streptococcus pneumoniae, Klebsiella pneumoniae ssp pneumoniae, other aerobic and facultative gram negative bacilli, etc.
Reservoir	Human
Vector	None
Vehicle	Droplet, Endogenous, Respiratory or pharyngeal acquisition
Incubation Period	1d - 3d
Diagnostic Tests	Culture of sputum, blood. Analyze ("grade") sputum cytology to assess significance of culture.
Typical Adult Therapy	Antimicrobial agent(s) appropriate to known or suspected pathogen
Typical Pediatric Therapy	As for adult
Vaccine	Pneumococcal vaccine
Clinical Hints	- Rigors, pleuritic pain, hemoptysis, lobar infiltrate and leukocytosis - Empyema and lung abscess suggest etiology other than pneumococcus - Foul sputum with mixed flora may herald anaerobic (aspiration) pneumonia
Synonyms	Bacterial pneumonia, Empiema, Empyeem, Empyem, Empyema, Empyeme, Lung abscess, Neumonia, Pleurisy, Pneumococcal infection - invasive, Pneumococcal pneumonia, Polmonite batterica, Streptococcus pneumoniae, Streptococcus pneumoniae - invasive. ICD9: 481,482,483,484 ICD10: J13,J14,J15,J17,J18,J85,J86



#### Poliomyelitis and acute flaccid paralysis

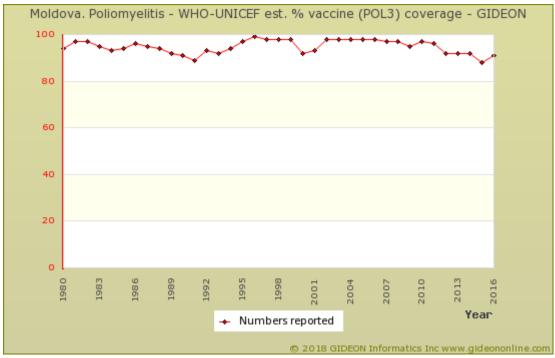
Agent	VIRUS - RNA. Picornaviridae, Picornavirus: Polio virus
Reservoir	Human
Vector	None
Vehicle	Fecal-oral, Dairy products, Food, Water, Fly, Respiratory or pharyngeal acquisition
Incubation Period	7d - 14d (range 3d - 35d)
Diagnostic Tests	Viral culture (pharynx, stool). Serology. Nucleic acid amplification.
Typical Adult Therapy	Stool precautions; supportive
Typical Pediatric Therapy	As for adult
Vaccines	Poliomyelitis - injectable vaccine Poliomyelitis - oral vaccine
Clinical Hints	- Sore throat, headache, vomiting and myalgia followed by flaccid paralysis - Meningeal involvement in $1\%$ of cases - Paralysis in only $0.1\%$ of cases - Paralysis tends to be more extensive in adult patients
Synonyms	Acute flaccid paralysis, Heine-Medin disease, Infantile paralysis, Kinderlahmung, Kinderverlamming, Paralisi infantile, Paralisis flaccida, Paralisis flacida aguda, PFA (Paralisis Flacidas Agudas), Polio, Poliomyelite, Poliomyelitt. ICD9: 045 ICD10: A80

Although Poliomyelitis and acute flaccid paralysis is not endemic to Moldova, imported, expatriate or other presentations of the disease have been associated with this country.

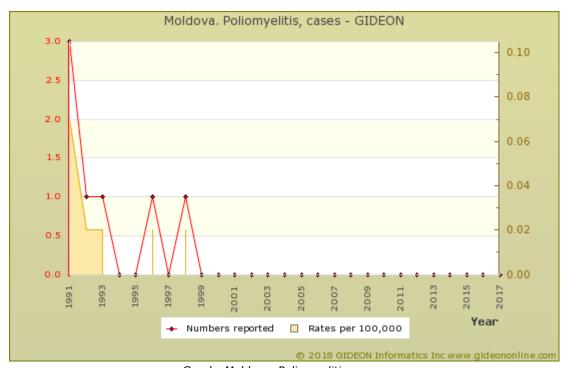
# Poliomyelitis and acute flaccid paralysis in Moldova

#### **Vaccine Schedule:**

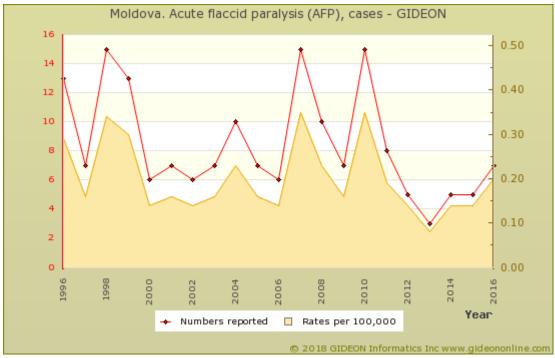
BCG - 2 days
DT - 7 years
DTwP - 2 years
DTwPHibHepB - 2,4,6 months
HepB - birth; adults in risk groups
IPV - 6 months
MMR - 12 months; 7,15 years
OPV - 2,4,6 months; 2,7,15 years
Pneumo conj - 2,4,12 months
Rotavirus - 2,4 months
Td - 15, 20, 25, 30, 35, 40, 50, 60 years



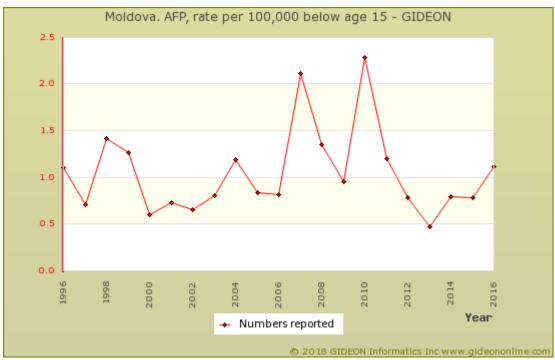
Graph: Moldova. Poliomyelitis - WHO-UNICEF est. % vaccine (POL3) coverage



Graph: Moldova. Poliomyelitis, cases



Graph: Moldova. Acute flaccid paralysis (AFP), cases



Graph: Moldova. AFP, rate per 100,000 below age 15

#### **Protothecosis and chlorellosis**

Agent	ALGA.  Prototheca wickerhamii; rarely Pr. zopfii, Pr. cutis Achloric algae  Chlorella spp. contain chloroplasts
Reservoir	Rare animal pathogens (cat, dog, cattle wild mammals).
Vector	None
Vehicle	Water, Sewage, Food, Skin trauma
Incubation Period	Unknown
Diagnostic Tests	Culture on fungal media. Biopsy. Nucleic acid amplification.
Typical Adult Therapy	Surgical excision. There are anecdotal reports of successful therapy with Amphotericin B, Ketoconazole and Itraconazole (latter 200 mg/day X 2 months) or voriconazole
Typical Pediatric Therapy	As for adult (Itraconazole 2 mg/kg/day X 2 months)
Clinical Hints	- May follow immune suppression or skin trauma - Dermal papules, plaques, eczematoid or ulcerated lesions - Olecranon bursitis is common - Systemic infection reported in some cases
Synonyms	Chlorellosis, Prototheca, Protothecosis. ICD9: 136.8 ICD10: B99

### **Pseudocowpox**

Agent	VIRUS - DNA. Poxviridae, Parapoxvirus: Pseudocowpox virus
Dan samuria	
Reservoir	Cattle
Vector	None
Vehicle	Contact
Incubation Period	5d - 14d
Diagnostic Tests	Viral culture (skin lesion or exudate). Serology. Nucleic acid amplification. Biosafety level 3.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	- Umbilicated nodule on the hand following contact with cattle - Mild regional lymphadenopathy
Synonyms	Bovine papular stomatitis, Farmyard pox, Milker's nodule, Noduli mulgentinum, Paravaccinia, Sealpox. ICD9: 051.1 ICD10: B08.0

### Pyodermas (impetigo, abscess, etc)

	BACTERIUM.
Agent	Various (Staphylococcus aureus & Streptococcus pyogenes predominate)
Reservoir	Human
Vector	None
Vehicle	Endogenous, Secretions, Contact, Trauma
Incubation Period	Variable
Diagnostic Tests	Clinical diagnosis usually sufficient. Aspiration of lesion for smear and culture may be helpful in some cases.
Typical Adult Therapy	Antibiotic directed at likely pathogens (Group A Streptococcus and Staphylococcus aureus)
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Impetigo is characterized by vesicles which progress to pustules ("honey-colored pus"')</li> <li>Highly contagious</li> <li>May be complicated by acute glomerulonephritis</li> </ul>
Synonyms	Acne vulgaris, Carbonchio, Carbuncle, Folicolite, Follicolite, Folliculite, Folliculitis, Foroncolosi, Foroncolose, Foruncolosi, Furunculosis, Furunkulose, Furunulose, Hydradenitis, Impetigine, Impetigo, Paronychia, Pyoderma. ICD9: 680,684,686 ICD10: L01,L02,L08.0,L73.2

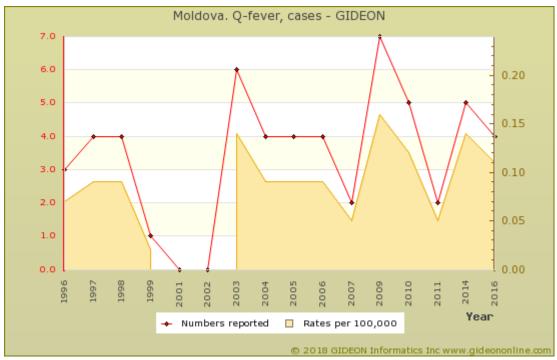
### **Pyomyositis**

Agent	BACTERIUM. Usually <i>Staphylococcus aureus</i>
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Ultrasonography or CT scan.
Typical Adult Therapy	Antibiotic directed at confirmed or suspected pathogen (usually Staphylococcus aureus); drainage
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Pain, swelling and "woody" induration of a large muscle (usually lower limb or trunk)</li> <li>Associated with fever and leukocytosis</li> <li>Often follows trauma to the involved region</li> <li>Lymphadenopathy uncommon; leucocytosis in most cases.</li> </ul>
Synonyms	Tropical pyomyositis. ICD9: 040.81 ICD10: M60.0

#### Q-fever

Agent	BACTERIUM.  Coxiella burnetii  Intracellular organism related to Rickettsiae
Reservoir	Cattle, Sheep, Goat, Bird, Fish, Rodent, Rabbit, Tick, Bandicoot, Marsupial, Dog, Cat
Vector	None
Vehicle	Air, Dust, Secretions, Dairy products, Respiratory or pharyngeal acquisition
Incubation Period	18d - 21d (range 4d - 40d)
Diagnostic Tests	Serology. Culture possible in specialized laboratories. Nucleic acid amplification.
Typical Adult Therapy	Doxycycline 100 mg BID X 2w OR Fluoroquinolone Add Hydroxychloroquine 600 mg per day if endocarditis
Typical Pediatric Therapy	Age < 8 years: Erythromycin 10 mg/kg QID X 2 weeks Age >= 8 years: Doxycycline 100 mg BID X 2 weeks
Vaccine	Q fever vaccine
Clinical Hints	<ul> <li>Proximity to farming or animals during 2 to 4 weeks preceding illness</li> <li>Headache, myalgia, cough and hepatic dysfunction</li> <li>Hepatosplenomegaly, "F.U.O." and endocarditis are encountered</li> <li>Most infections resolve in 1 to 2 weeks</li> <li>Case-fatality rate is 1.5%</li> </ul>
Synonyms	Balkan grippe, Candidatus Coxiella massiliensis, Coxiella burnetii, Febbre australiana, Febre Q, Nine Mile fever, Q-Fieber, Q-koorts, Query fever, Red River fever. ICD9: 083.0 ICD10: A78

#### Q-fever in Moldova

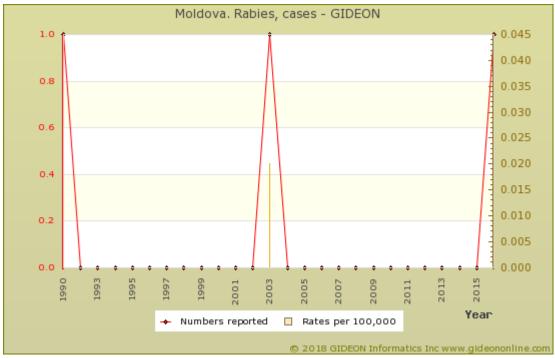


Graph: Moldova. Q-fever, cases

#### Rabies

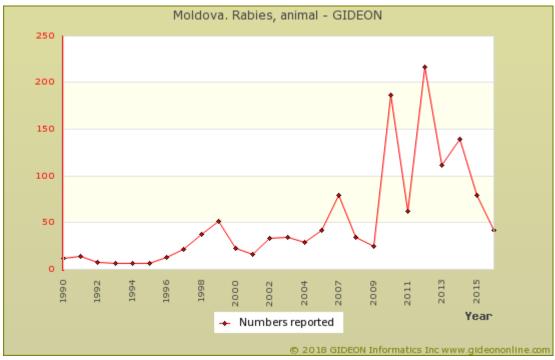
Agent	VIRUS - RNA. Rhabdoviridae, Mononegavirales, Lyssavirus: Rabies virus. Other human Lyssaviruses = Mokola, Duvenhage, European Bat (EBL)
Reservoir	Dog, Fox, Skunk, Jackal, Wolf, Cat, Raccoon, Mongoose, Bat, Rodent, Rabbit
Vector	None
Vehicle	Saliva, Bite, Transplants, Air (bat aerosol), Respiratory or pharyngeal acquisition
Incubation Period	1m - 3m (range 4d to 19 years !)
Diagnostic Tests	Viral culture & direct immunofluorescence of saliva, CSF, corneal smears. Serology. Nucleic acid amplification.
Typical Adult Therapy	Strict isolation; supportive. The Milwaukee protocol (prolonged deep sedation and support) has been successful in some cases.  See Vaccines module for pre- and post-exposure schedules
Typical Pediatric Therapy	As for adult
Vaccines	Rabies vaccine Rabies immune globulin
Clinical Hints	- Follows animal bite (rarely lick) - often after months - Agitation, confusion, seizures, painful spasms of respiratory muscles - Progressive paralysis, coma and death - Case-fatality rate exceeds 99.9%
Synonyms	Aravan, Australian bat lyssavirus, Ballina, BBLV, Bokeloh bat lyssavirus, Duvenhage, EBL, European bat Lyssavirus, Hondsdolheid, Hydrophobia, Ikoma lyssavirus, Irkut, Khujand, Lyssa, Mokola, Pteropus lyssavirus, Rabia, Rage, Raiva, Saint Hubert's disease, Shimoni bat virus, Tollwut, West Caucasian bat, Wutkrankheit. ICD9: 071 ICD10: A82

### Rabies in Moldova



Graph: Moldova. Rabies, cases

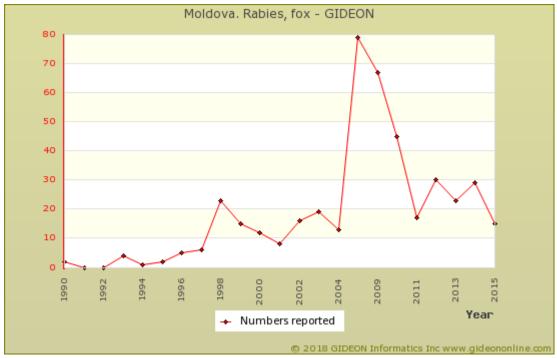
Notes: Individual years: 1990 - From a fox



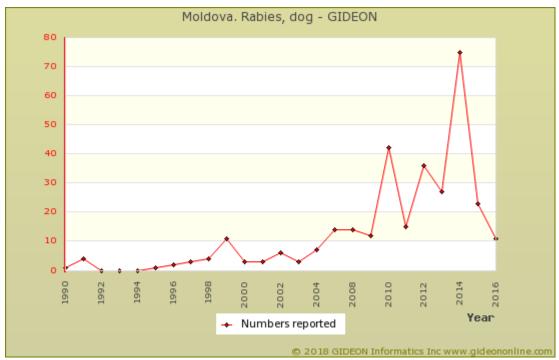
Graph: Moldova. Rabies, animal

#### Notes:

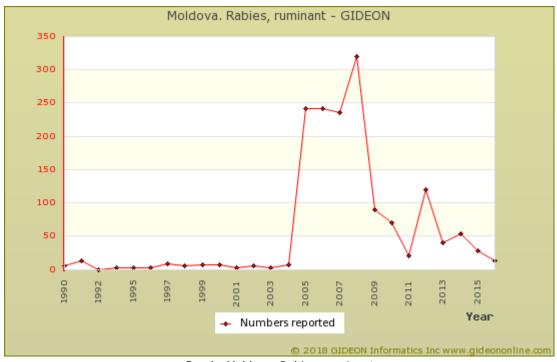
1. No rabid bats were reported during 2001 to 2003.



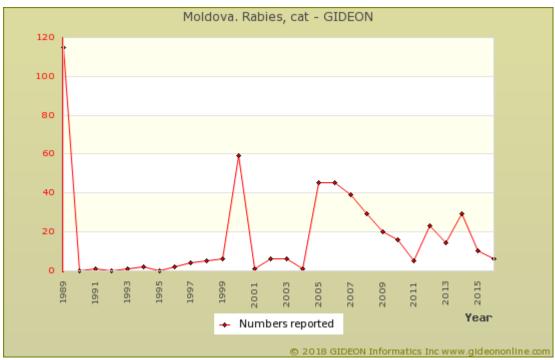
Graph: Moldova. Rabies, fox



Graph: Moldova. Rabies, dog



Graph: Moldova. Rabies, ruminant



Graph: Moldova. Rabies, cat

5,105 postexposure treatment courses were administered in 1997.



# Rat bite fever - spirillary

Agent	BACTERIUM.  Spirillum minus  An aerobic gram-negative spirochete
Reservoir	Rat, Mouse, Cat
Vector	None
Vehicle	Bite
Incubation Period	7d - 21d (range 5d - 40d)
Diagnostic Tests	Dark-field exam of wound. Animal inoculation.
Typical Adult Therapy	Amoxicillin / Clavulanate 875 / 125 mg PO BID X 7d. OR Procaine Penicillin G 600,000u IM q12h X 7d. OR Doxycycline 200 mg BID X 7d
Typical Pediatric Therapy	Amoxicillin / Clavulanate 10 mg/kg PO BID X 7d OR Procaine Penicillin G 25,000u/kg IM q12h X 7d
Clinical Hints	- Symptoms begin 1 to 3 weeks following rat bite - Lymphadenopathy, myalgia, maculopapular rash and recurrent fever - Infection resolves after 3 to 6 days - Case-fatality rate is 6%
Synonyms	Sodoku, Spirillosis, Spirillum minor, Spirillum minus. ICD9: 026.0 ICD10: A25.0



### Rat bite fever - streptobacillary

Agent	BACTERIUM.  Streptobacillus moniliformis A facultative gram-negative bacillus
Reservoir	Rat, Squirrel, Weasel, Turkey
Vector	None
Vehicle	Secretions, Bite, Dairy products
Incubation Period	3d - 10d (range 1d - 22d)
Diagnostic Tests	Culture of blood or joint fluid. Nucleic acid amplification.
Typical Adult Therapy	Amoxicillin / Clavulanate 875 /1 25 mg PO BID X 7d. OR Doxycycline 100 mg PO BID X 7d
Typical Pediatric Therapy	Amoxicillin / Clavulanate 10 mg/kg TID X 7d. OR (if age>8 years) Doxycycline 2 mg/kg PO BID X 7 days (maximum 200 mg/day)
Clinical Hints	<ul> <li>History of a rat bite during the preceding 1 to 3 weeks in most cases</li> <li>Headache, myalgia, maculopapular rash and arthralgia or arthritis</li> <li>Infection has also been acquired from contaminated milk</li> <li>The case-fatality rate is 10%.</li> </ul>
Synonyms	Haverhill fever, Streptobacillosis, Streptobacillus moniliformis. ICD9: 026.1 ICD10: A25.1

### Relapsing fever

Agent	BACTERIUM.  Borrelia spp. A microaerophilic spirochete
Reservoir	Human, Tick, Rodent
Vector	Tick (Ornithodoros), Louse (Pediculus)
Vehicle	Blood, Blood products
Incubation Period	7d - 8d (range 2d - 18d)
Diagnostic Tests	Examination of blood smears (thick and thin smears). Some species (B. hermsii) may grow in BSK II medium.
Typical Adult Therapy	Doxycycline 100 mg PO BID X 7d. OR Erythromycin 500 mg QID X 7d
Typical Pediatric Therapy	A single dose of Tetracycline 500 mg or erythromycin 500 mg may suffice for louse-borne infection  Chloramphenicol 12.5 mg/kg PO QID X 7d. OR Erythromycin 10 mg/kg QID X 7d
Clinical Hints	<ul> <li>- Headache, myalgia, hepatosplenomegaly and rash</li> <li>- Relapsing illness</li> <li>Louse-borne (vs. tick borne) infection characterized by:</li> <li>- higher case-fatality rate</li> <li>- fewer relapses</li> <li>- higher incidence of hepatosplenomegaly, jaundice and neurological complications</li> </ul>
Synonyms	Bilious typhoid, Borrelia anserina, Borrelia braziliensis, Borrelia caucasica, Borrelia coriaceae, Borrelia crocidurae, Borrelia dipodilli, Borrelia duttonii, Borrelia graingeri, Borrelia hispanica, Borrelia latyschewii, Borrelia mazzottii, Borrelia merionesi, Borrelia microti, Borrelia miyamotoi, Borrelia parkeri, Borrelia persica, Borrelia queenslandica, Borrelia recurrentis, Borrelia theileri, Borrelia turicatae, Borrelia uzbekistana, Borrelia venezuelensis, Borreliosis, Candidatus Borrelia algerica, Candidatus Borrelia kalaharica, Famine fever, Febbre recidiva, Febbre ricorrente, Febris recurrens, Fiebre recurrente, Lauseruckfallfieber, Mianeh fever, Ruckfall fieber, Tilbakefallsfeber, Tilbakefallsfever, Vagabond fever, Yellow famine fever, Yellow plague. ICD9: 087.9,087.0,087.1 ICD10: A68

#### Relapsing fever in Moldova

See note for Russian Federation.



### Respiratory syncytial virus infection

Agent	VIRUS - RNA. Paramyxoviridae, Pneumovirinae: Human respiratory syncytial virus
Reservoir	Human
Vector	None
Vehicle	Droplet, Infected secretions (hands), Respiratory or pharyngeal acquisition
Incubation Period	2d - 8d
Diagnostic Tests	Viral culture or DFA (nasal and other respiratory secretions). Serology. Nucleic acid amplification.
Typical Adult Therapy	Ribavirin aerosol 20 mg/ml for 12h/d X 3 to 5d (severe infections). Effectiveness not proven
Typical Pediatric Therapy	As for adult
Vaccine	RSV immune globulin
Clinical Hints	- Most cases occur during infancy - Rhinorrhea, cough, wheezing, bronchiolitis and respiratory distress
Synonyms	Chimpanzee coryza agent, Respiratory syncytial virus, RSV. ICD9: 079.6,480.1 ICD10: B97.4,J12.1

# Respiratory viruses - miscellaneous

Agent	VIRUS - RNA and DNA Paramyxoviridae: Mononegavirales Human Metapneumovirus  Coronaviridae: New Haven Coronavirus, HKU1  Parvovirinae: Human Bocavirus
Reservoir	Human
Vector	None
Vehicle	Droplet, Secretions (on hands), Respiratory or pharyngeal acquisition
Incubation Period	Unknown
Diagnostic Tests	Viral culture. Serology. Nucleic acid amplification.
Typical Adult Therapy	NA
Typical Pediatric Therapy	NA
Clinical Hints	<ul> <li>Rhinorrhea, cough, wheezing, bronchiolitis and respiratory distress</li> <li>Age distribution and prominence of specific signs / symptoms vary among the specific viruses in this category</li> </ul>
Synonyms	Acanthamoeba polyphaga mimivirus, Bat reovirus, Bocaparvovirus, Bocavirus, Bradford coccus, Cardiovirus, Coronavirus HKU1, Coronavirus NL63, Encephalomyocarditis Virus, HCoV-HKU1, HCoV-NL63, HK23629/07, HKU1, HRV-A, HRV-B, HRV-C, Human Bocavirus, Human Coronavirus NL63, Human CoV 229E, Human CoV OC43, Human metapneumovirus, Human rhinovirus, Kampar, Karolinska Institutet virus, KI virus, Melaka, Metapneumovirus, Mimivirus, New Haven coronavirus, Pulau, Rhinovirus, Small Anellovirus, Sosuga, Tioman virus, Torque tenovirus, Torquetenovirus, Washington University virus, WU polyomavirus, WU virus. ICD9: 079.89 ICD10: B34.2,J12.8

## Reye's syndrome

Agent	UNKNOWN
Reservoir	Unknown
Vector	None
Vehicle	Unknown
Incubation Period	Unknown
Diagnostic Tests	Clinical diagnosis.
Typical Adult Therapy	Electrolyte & glucose management, ? enemas, ? dialysis
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Follows viral infection; aspirin ingestion is often implicated.</li> <li>Vomiting, lethargy, coma, seizures</li> <li>Hepatomegaly, hypoglycemia and elevated blood ammonia concentration</li> <li>Patients are usually anicteric</li> </ul>
Synonyms	Reye syndrome. ICD9: 331.81 ICD10: G93.7

### Rheumatic fever

Agent	BACTERIUM.  Streptococcus pyogenes A facultative gram-positive coccus
Reservoir	Human
Vector	None
Vehicle	Droplet
Incubation Period	1w - 5w
Diagnostic Tests	Clinical diagnosis.
Typical Adult Therapy	Supportive; salicylates
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>In most cases, illness follows overt pharyngitis, after 1 to 5 weeks</li> <li>Migratory arthritis, fever, carditis, chorea</li> <li>Subcutaneous nodules, erythema marginatum and leukocytosis</li> <li>An attack of rheumatic fever will persist for approximately 3 months</li> </ul>
Synonyms	Febbre reumatica. ICD9: 390,391 ICD10: I00,I01,I02

### Rhinoscleroma and ozena

Agent	BACTERIUM.  Klebsiella pneumoniae ssp ozaenae and Klebsiella pneumoniae ssp rhinoscleromatis Facultative gram-negative bacilli
Reservoir	Human
Vector	None
Vehicle	Secretions, Contact, Respiratory or pharyngeal acquisition
Incubation Period	Unknown
Diagnostic Tests	Culture. Biopsy. Nucleic acid amplification. Advise laboratory when this diagnosis is suspected.
Typical Adult Therapy	Rhinoscleroma: Ciprofloxacin 750 mg PO BID X 3 months  Ozena: Ciprofloxacin 750 mg PO BID X 3 months or Sulfamethoxazole / Trimethoprim X 3 months
Typical Pediatric Therapy	Rhinoscleroma: Streptomycin, often with systemic or topical Rifampin - for 3 to 6 weeks  Ozena: Ciprofloxacin or Sulfamethoxazole / Trimethoprim for 3 months
Clinical Hints	Rhinoscleroma: - Chronic fetid nasal discharge - A crusting mass may develop in the nose - Infection may extend to the larynx, trachea of paranasal sinuses  Ozena: - Chronic rhinitis progressing to atrophy of the nasal mucosa - Extension to the larynx and systemic infection have been reported
Synonyms	Klebsiella pneumoniae ssp ozaenae, Ozena, Rhinoscleroma. ICD9: 040.1 ICD10: J31.0

## Rhinosporidiosis

Agent	PROTOCTISTA  Rhinosporidium seeberi (may in fact be Microcystis, a cyanobacterium)
Reservoir	Water, Soil, Vegetation
Vector	None
Vehicle	Aerosol from soil or water, Respiratory or pharyngeal acquisition
Incubation Period	2w - 6m
Diagnostic Tests	Histology of resected material (organism does not grow in-vitro).
Typical Adult Therapy	Excision  Dapsone has been used in cases of disseminated disease, in some cases combined with cycloserine and ketoconazole
Typical Pediatric Therapy	As for adult
Clinical Hints	- Friable, painless vascular masses of nose, conjunctivae and larynx - Recurrence is common
Synonyms	Rhinosporidium seeberi. ICD9: 117.0 ICD10: B48.1

## Rhodococcus equi infection

Agent	BACTERIUM.  Rhodococcus equi An aerobic gram-positive coccobacillus
Reservoir	Farm animal, Farm soil
Vector	None
Vehicle	Inhalation, Contact, Ingestion
Incubation Period	Unknown
Diagnostic Tests	Culture of blood, body fluids and secretions. Advise laboratory when these organisms are suspected.
Typical Adult Therapy	Two drugs from the following, administered for two months: Levofloxacin, Rifampin, Azithromycin, Ciprofloxacin, Imipenem, Vancomycin
Typical Pediatric Therapy	Two drugs from the following, administered for two months: Levofloxacin, Rifampin, Azithromycin, Imipenem, Vancomycin
Clinical Hints	- 40% of patients recall recent contact with farm or farm animals - Most often presents as pleuropulmonary infection in an immune-suppressed individual
Synonyms	Rhodococcus. ICD9: 027.9 ICD10: A92.8

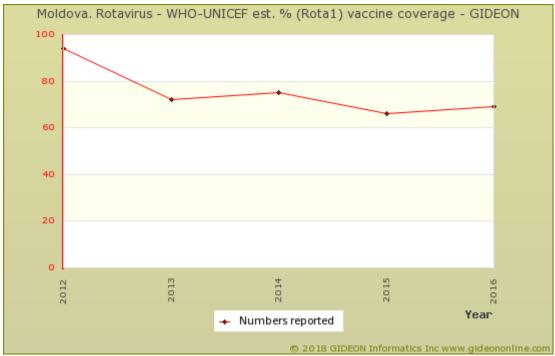
### **Rotavirus infection**

Agent	VIRUS - RNA. Reoviridae: Rotavirus
Reservoir	Human, Pig
Vector	None
Vehicle	Fecal-oral, Water
Incubation Period	2.0 d (range 12h - 3d)
Diagnostic Tests	Stool assay for viral antigen. Serology. Nucleic acid amplification.
Typical Adult Therapy	Stool precautions; supportive
Typical Pediatric Therapy	As for adult
Vaccine	Rotavirus vaccine
Clinical Hints	<ul> <li>Vomiting, diarrhea and mild fever</li> <li>The illness lasts approximately 1 week, and is most severe in infancy</li> <li>Fatal cases are associated with dehydration and electrolyte imbalance</li> </ul>
Synonyms	Rotavirus. ICD9: 008.61 ICD10: A08.0

#### **Rotavirus infection in Moldova**

#### **Vaccine Schedule:**

BCG - 2 days
DT - 7 years
DTwP - 2 years
DTwPHibHepB - 2,4,6 months
HepB - birth; adults in risk groups
IPV - 6 months
MMR - 12 months; 7,15 years
OPV - 2,4,6 months; 2,7,15 years
Pneumo conj - 2,4,12 months
Rotavirus - 2,4 months
Td - 15, 20, 25, 30, 35, 40, 50, 60 years



Graph: Moldova. Rotavirus - WHO-UNICEF est. % (Rota1) vaccine coverage

Routine vaccination in 2012, and was associated with reduced hospitalization rates for Rotavirus disease. <sup>1</sup>

Rotavirus - WHO-UNICEF est. % (Rota1) vaccine coverage

Rotavirus infection accounts for 16.3% of gastroenteritis requiring hospitalization (1992 to 2004)

No cases were reported in 2005.

#### References

1. Clin Infect Dis 2016 May 01;62 Suppl 2:S140-6.

### Rubella

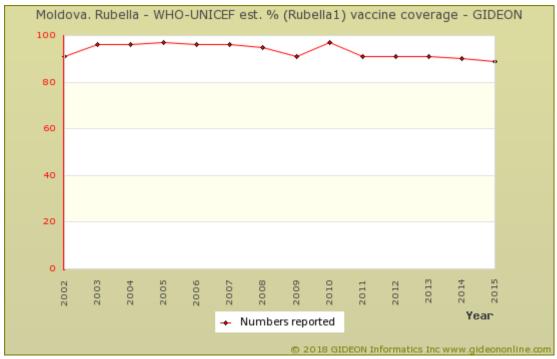
Agent	VIRUS - RNA. Togaviridae: Rubivirus, Rubella virus
Reservoir	Human
Vector	None
Vehicle	Contact, Air, Transplacental, Breastfeeding, Respiratory or pharyngeal acquisition
Incubation Period	16d - 18d (range 14d - 23d)
Diagnostic Tests	Viral culture (throat, urine). Serology. Nucleic acid amplification.
Typical Adult Therapy	Respiratory precautions. Supportive
Typical Pediatric Therapy	As for adult
Vaccines	Rubella vaccine Rubella - Mumps vaccine Measles-Mumps-Rubella vaccine Measles-Rubella vaccine
Clinical Hints	<ul> <li>Maculopapular rash following a one-day prodrome of coryza and headache</li> <li>Post auricular lymphadenopathy</li> <li>Arthralgia and arthritis are encountered in adults</li> <li>Severe thrombocytopenia or encephalitis may follow acute infection</li> <li>Congenital rubella characterized by hearing loss, congenital heart disease, cataracts, mental retardation and other abnormalities</li> </ul>
Synonyms	Epidemic roseola, German measles, Roda hund, Rode hond, Rode hunder, Rodehond, Rosolia, Roteln, Rubeola [Spanish], Three-day measles. ICD9: 056 ICD10: B06

#### Rubella in Moldova

#### **Vaccine Schedule:**

BCG - 2 days
DT - 7 years
DTwP - 2 years
DTwPHibHepB - 2,4,6 months
HepB - birth; adults in risk groups
IPV - 6 months
MMR - 12 months; 7,15 years
OPV - 2,4,6 months; 2,7,15 years
Pneumo conj - 2,4,12 months
Rotavirus - 2,4 months
Td - 15, 20, 25, 30, 35, 40, 50, 60 years

A 2-dose MMR schedule was introduced in 2002. <sup>1</sup>



Graph: Moldova. Rubella - WHO-UNICEF est. % (Rubella1) vaccine coverage



Graph: Moldova. Rubella, cases

Moldova. Rubella - CRS, cases: None reported between 1990 and 2016

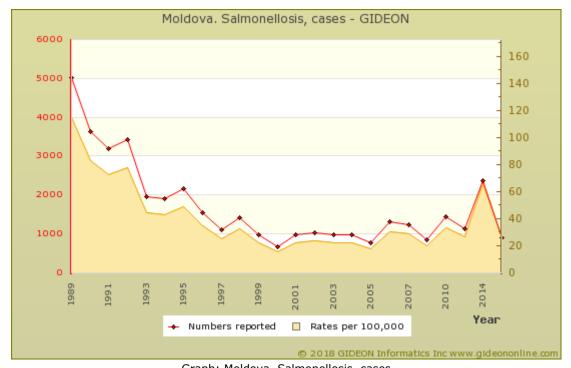
#### References

1. Pediatr Infect Dis J 2010 Aug ;29(8):703-6.

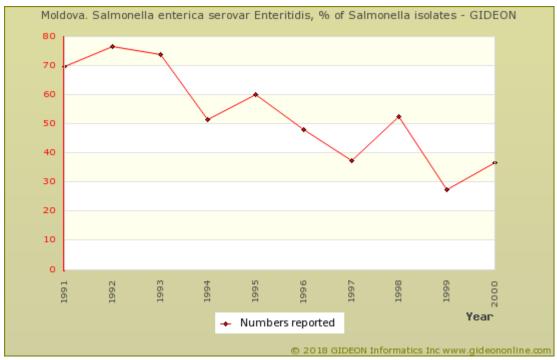
### Salmonellosis

Agent	BACTERIUM. Salmonella A facultative gram-negative bacillus
Reservoir	Mammal, Bird, Reptile
Vector	None
Vehicle	Food, Milk, Eggs, Poultry Shellfish, Meat, Vegetables, Fruit, Fecal-oral Breastfeeding, Fly
Incubation Period	12h - 36h (range 6h - 6d)
Diagnostic Tests	Culture (stool, blood, infected tissue). Serology.
Typical Adult Therapy	Stool precautions. Therapy not indicated for uncomplicated diarrhea; if necessary, treat per antibiogram
Typical Pediatric Therapy	As for adult
Clinical Hints	- Onset 12 to 24 hours after ingestion of eggs, meat, poultry - Fever, chills and watery diarrhea - Fecal leucocytes present - Fever resolves in 2 days; but diarrhea may persist for up to 7 days (occasionally weeks)
Synonyms	Salmonellosen, Salmonellosi. ICD9: 003 ICD10: A02

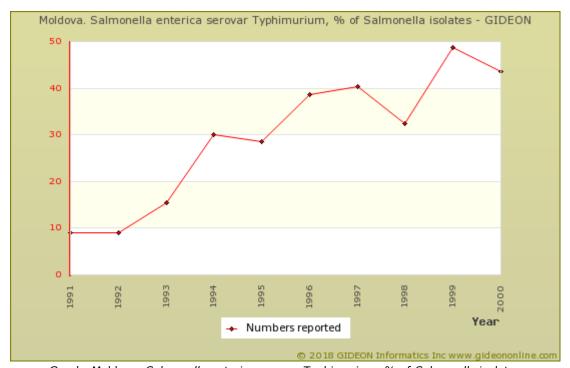
#### Salmonellosis in Moldova



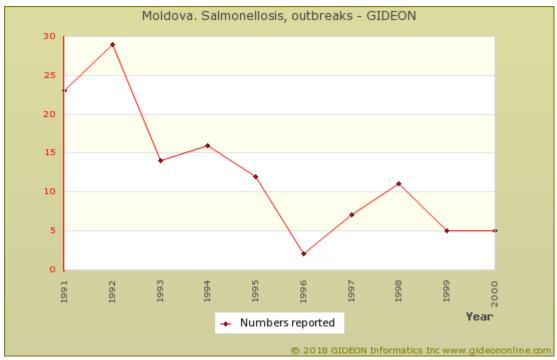
Graph: Moldova. Salmonellosis, cases



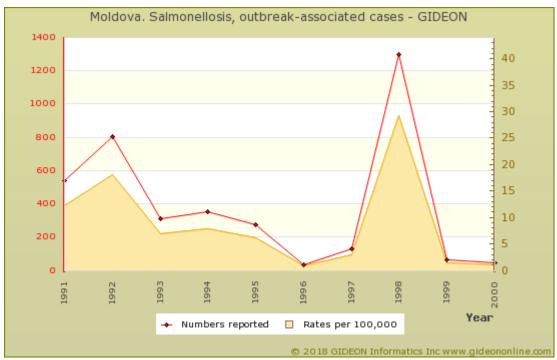
Graph: Moldova. Salmonella enterica serovar Enteritidis, % of Salmonella isolates



 ${\it Graph: Moldova.}\ {\it Salmonella\ enterica\ serovar\ Typhimurium,\ \%\ of\ {\it Salmonella\ isolates}$ 



Graph: Moldova. Salmonellosis, outbreaks



Graph: Moldova. Salmonellosis, outbreak-associated cases

### Sarcocystosis

Agent	PARASITE - Protozoa. Coccidea, Eimeriida: <i>Sarcocystis bovihominis</i> or <i>S. suihominis</i>
Reservoir	Cattle, Pig
Vector	None
Vehicle	Meat, Water
Incubation Period	9d - 39d
Diagnostic Tests	Identification of cysts in stool.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	- Diarrhea and abdominal pain of varying severity - Muscle pain and eosinophilia occasionally encountered
Synonyms	Isospora hominis, Kudoa, Sarcocystiasis, Sarcocystis, Sarcosporidiosis. ICD9: 136.5 ICD10: A07.8

### **Scabies**

Agent	PARASITE - Arthropod. Arachnid, Acarina (Mite), Sarcoptiae: <i>Sarcoptes (Acarus) scabiei</i>
Reservoir	Human
Vector	Mite
Vehicle	Contact, Sexual contact
Incubation Period	3d - 42d
Diagnostic Tests	Identification of mites in skin scrapings.
Typical Adult Therapy	Permethrin 5%. OR Lindane. OR Crotamiton 10% OR Ivermectin 150 to 200 mcg/kg PO as single dose
Typical Pediatric Therapy	Permethrin 5%. OR Lindane. OR Crotamiton 10% OR Ivermectin 200 mcg/kg PO (> 15 kg body weight)
Clinical Hints	<ul> <li>Intensely pruritic papules, vesicles and burrows</li> <li>Lesions prominent at interdigital webs, wrists, elbows, axillae, perineal region, buttocks and penis</li> <li>Pruritus is most intense at night</li> <li>Severe psoriaform infestation (Norwegian scabies) may affect debilitated individuals</li> </ul>
Synonyms	Cheyletiella, Cheyletiella infestation, Escabiose, Escabiosis, Histiostomatid mites, Kratze, Mange, Ornithonyssus, Pyemotes, Sarcoptes scabiei, Sarna, Scabbia, Skabies, Tropical rat mite. ICD9: 133 ICD10: B86

### Scabies in Moldova



Graph: Moldova. Scabies, cases

## Scarlet fever

Agent	BACTERIUM.  Streptococcus pyogenes A facultative gram-positive coccus
Reservoir	Human
Vector	None
Vehicle	Secretions, Food, Respiratory or pharyngeal acquisition
Incubation Period	1d - 4d
Diagnostic Tests	Typical clinical features associated with group A streptococcal pharyngitis.
Typical Adult Therapy	Benzathine Penicillin G 1.2 million units IM as single dose
Typical Pediatric Therapy	Benzathine Penicillin G: Weight <14kg: 300,000 units IM Weight 14 to 28kg: 600,000 units IM Weight >28kg: 1.2 million units IM
Clinical Hints	<ul> <li>Overt exudative pharyngitis</li> <li>Appearance of a florid desquamative erythematous rash within 24 to 48 hours</li> <li>Facial flushing and circum-oral pallor</li> <li>Lingual desquamation ("strawberry tongue")</li> </ul>
Synonyms	Escarlatina, Lanhousha, Scarlattina, Scharlach. ICD9: 034.1 ICD10: A38

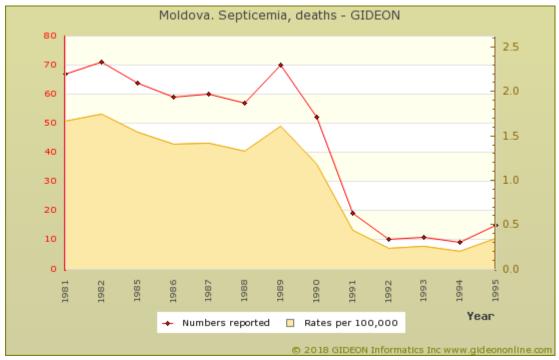
## Septic arthritis

Agent	BACTERIUM or FUNGUS. Gram positive cocci most common; gram negative bacilli, gonococci, mycobacteria, fungi, et al
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Smear and culture of joint fluid. Cytological and chemical analysis of joint fluid also useful.
Typical Adult Therapy	Antimicrobial agent(s) directed at known or likely pathogen
Typical Pediatric Therapy	As for adult
Clinical Hints	- Fever (60% to 80%) associated with swelling, erythema and tenderness - Usually involves a single joint, most commonly knee (elbow or ankle in children) - Mean fluid leukocyte count in acute bacterial forms is 50,000 per cu mm
Synonyms	

#### Septicemia - bacterial

Agent	BACTERIUM.  Escherichia coli, Staphylococcus aureus, facultative gram negative bacilli, et al		
Reservoir	Human		
Vector	None		
Vehicle	Endogenous		
Incubation Period	Variable		
Diagnostic Tests	Culture of blood and sepsis source.		
Typical Adult Therapy	Antimicrobial agent(s) directed at known or likely pathogen		
Typical Pediatric Therapy	As for adult		
Clinical Hints	<ul> <li>Fever, rigors, leukocytosis, tachypnea, mental changes</li> <li>Hypotension, acidosis and bleeding diathesis herald septic shock</li> <li>Additional signs (eg, urinary infection, phlebitis, etc) may point to the source of infection</li> </ul>		
Synonyms	Sepsis, Septicaemia, Septicemia, Septicemie, Septikemie, Setticemia. ICD9: 036.2,036.3,038 ICD10: A40,A41		

### Septicemia - bacterial in Moldova

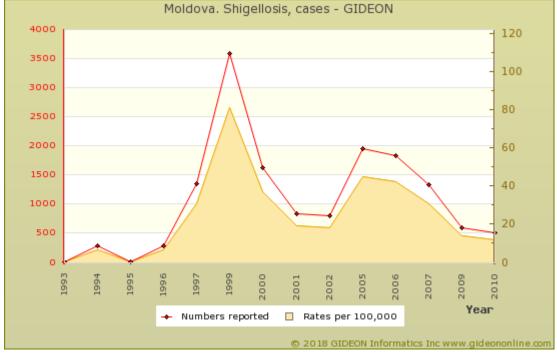


Graph: Moldova. Septicemia, deaths

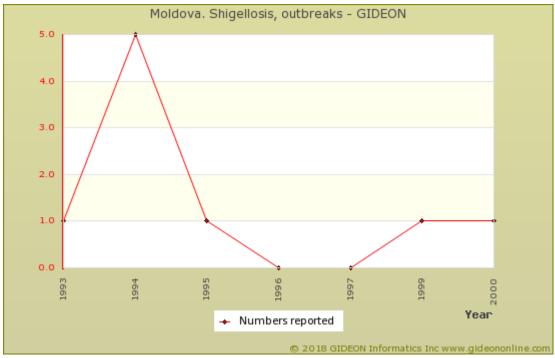
## **Shigellosis**

Agent	BACTERIUM. Shigella sonnei, Shigella flexneri, Shigella boydii or Shigella dysenteriae A facultative gram-negative bacillus			
Reservoir	Human, Non-human primate			
Vector	None			
Vehicle	Fecal-oral, Water, Dairy products, Fomite, Fly, Vegetables			
Incubation Period	48h - 72h (range 7h - 1w)			
Diagnostic Tests	Stool culture.			
Typical Adult Therapy	Stool precautions. Choice of antimicrobial agent based on regional susceptibility patterns. Continue treatment for five days			
Typical Pediatric Therapy	As for adult			
Clinical Hints	<ul> <li>Watery or bloody diarrhea, tenesmus, abdominal pain and headache</li> <li>Colonic hyperemia and abundant fecal leucocytes are present</li> <li>Usually resolves in 3 days, but may persist for up to 14</li> <li>Reported case fatality rate is 1% - severity and mortality highest with Shigella dysenteriae infection</li> </ul>			
Synonyms	Bacillaire dysenterie, Bacillary dysentery, Dissenteria batterica, Dysenteria bacillaris, Leptospirenerkrankung, Ruhr, Shigella, Shigellose, Shigelose, Ubertragbare Ruhr. ICD9: 004 ICD10: A03			

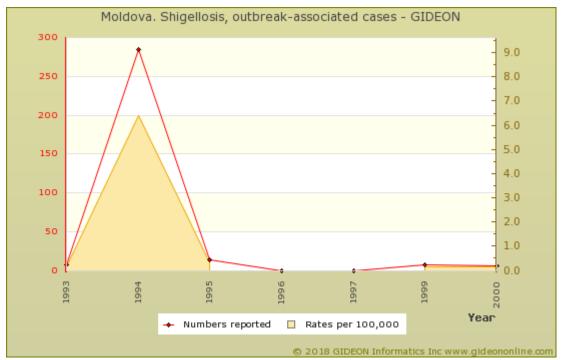
## Shigellosis in Moldova



Graph: Moldova. Shigellosis, cases



Graph: Moldova. Shigellosis, outbreaks



Graph: Moldova. Shigellosis, outbreak-associated cases

#### **Notable outbreaks**

	Years	Region	Setting	Cases	Notes
	2007	Cahul	boarding school	33	1
Ī	2007	Ceadir-Lunga		27	27 hospitalized cases. <sup>2</sup>

#### References

- 1. ProMED romedmail.org> archive: 20071015.3377
  2. ProMED romedmail.org> archive: 20071015.3377

## Sindbis

Agent	VIRUS - RNA. Togaviridae, Alphavirus: Sindbis virus			
Reservoir	Wild bird			
Vector	Mosquito (Culex univittatus and Cx. tritaeniorhyncus)			
Vehicle	None			
Incubation Period	3d - 6d			
Diagnostic Tests	Viral culture (blood, vesicle fluid). Serology. Nucleic acid amplification. Biosafety level 2.			
Typical Adult Therapy	Supportive			
Typical Pediatric Therapy	As for adult			
Clinical Hints	- Fever, myalgia and arthritis - Papular-to-vesicular rash - Arthralgias may persist for more than three years - Fatality not reported			
Synonyms	Babanki, Whataroa. ICD9: 078.89 ICD10: A92.8			

## Sinusitis

Agent	BACTERIUM. Various ( <i>Haemophilus influenzae</i> & <i>Streptococcus pneumoniae</i> in most acute cases)			
Reservoir	Human			
Vector	None			
Vehicle	None			
Incubation Period	Variable			
Diagnostic Tests	Imaging techniques. Culture of sinus drainage.			
Typical Adult Therapy	Amoxicillin / Clavulanate 2000 / 125 mg BID X 7 days Drainage as indicated Alternatives: Levofloxacin, Cllindamycin, Cefuroxime, Cefdinir			
Typical Pediatric Therapy	Amoxicillin / Clavulanate 90 / 6.4 mg/kg BID X 7 days Drainage as indicated Alternatives: Cllindamycin, Cefuroxime, Cefdinir			
Clinical Hints	- Sinusitis often follows upper respiratory infections - Headache, fever and local tenderness are common - The precise presentation varies with patient age and anatomic localization			
Synonyms	Acute sinusitis, Mastoidite, Mastoiditis, Rhinosinusitis, Sinusite. ICD9: 473.9,383.0,461 ICD10: H70,J01			

## **Sporotrichosis**

Agent	FUNGUS. Ascomycota, Euascomycetes, Ophiostomatales: <i>Sporothrix schenckii</i> , <i>S. brasiliensis</i> and <i>S. globosa</i> A dimorphic dematiaceous fungus		
Reservoir	Soil, Vegetation, Wood		
Vector	None		
Vehicle	Trauma, Contact, Air, Respiratory or pharyngeal acquisition		
Incubation Period	1w - 3m		
Diagnostic Tests	Fungal culture. Serologic tests available in some centers.		
Typical Adult Therapy	Itraconazole 100 to 200 mg PO daily X 3 to 6 months.  OR Fluconazole 400 mg PO daily X 6 months.  OR Potassium iodide 1 to 5 ml PO TID X 3 to 6 months		
Typical Pediatric Therapy	Itraconazole 2 mg/kg PO daily X 3 to 6 months. OR Fluconazole 3 mg/kg PO daily X 6 months.		
Clinical Hints	<ul> <li>Recent contact with flowers, thorns, trees or other plant material (occasionally cats)</li> <li>Draining nodules which appear along the course of lymphatics</li> <li>Eye, brain, testis, bone and other tissues may be involved</li> </ul>		
Synonyms	Rose gardener's disease, Schenck's disease, Sporothrix brasiliensis, Sporothrix chiensis, Sporothrix globosa, Sporothrix mexicana, Sporothrix schenckii, Sporotrichose. ICD9: 117.1 ICD10: B42		

#### **Spotted fevers - Old World**

Agent	BACTERIUM. Rickettsia conorii subsp. conorii, R. aeschlimannii, R. helvetica, R. massiliae, R. monacensis, R. slovaka			
Reservoir	Dog, Rodent, Tick			
Vector	Tick ( <i>Rhipicephalus sanguineus, Hyalomma</i> spp, <i>Boophilus</i> spp, <i>Dermacentor</i> spp, et al)			
Vehicle	None			
Incubation Period	6d - 7d (range 3d - 18d)			
Diagnostic Tests	Serology. Demonstration of rickettsiae by immunofluorescence or culture. Nucleic acid amplification.			
Typical Adult Therapy	Doxycycline 100 mg PO BID X 3 to 5d. OR Chloramphenicol 500 mg PO QID X 3 to 5d			
Typical Pediatric Therapy	Doxycycline 2 mg/kg PO BID X 3 to 5d (maximum 200 mg/day). OR Chloramphenicol 10 mg/kg PO QID X 3 to 5d			
Clinical Hints	<ul> <li>Patient may recall tick bite or dog contact during the preceding 1 to 3 weeks</li> <li>Headache, myalgia, maculopapular rash</li> <li>An eschar may be identifiable</li> <li>Untreated disease resolves within two weeks</li> <li>Case-fatality rates of 2% to 3% are reported</li> </ul>			
Synonyms	Boutonneuse fever, Candidatus Rickettsia kellyi, Candidatus Rickettsia tarasevichiae, DEBONEL, Febre escaro-nodular, Febre escaronodular, Indian tick typhus, Kenya tick typhus, Marseilles fever, Mediterranean spotted fever, R. aeschlimannii, Rickettsia aeschlimannii, Rickettsia conorii subsp conorii, Rickettsia conorii subsp indica, Rickettsia gravesii, Rickettsia helvetica, Rickettsia massiliae, Rickettsia monacensis, Rickettsia raoultii, Rickettsia slovaca, Rickettsia sp. XY99, Thai spotted fever, TIBOLA, Tick-borne lymphadenopathy. ICD9: 082.1 ICD10: A77.1			

### **Spotted fevers - Old World in Moldova**

#### **Prevalence surveys**

Years	Region	Study Group	%	Notes
1960		ticks	4.8	4.8% of archived <i>Ixodes ricinus</i> ( <i>Rickettsia helvetica</i> 2.4% and <i>R. monacensis</i> 2.4%) (1960) <sup>1</sup>
2006	Central Region	ticks		17.3% of <i>Ix. ricinus</i> (1.9% <i>Rickettsia helvetica</i> and 15.4% <i>R. monacensis</i> ) (central region, 2006) <sup>2</sup>

#### References

- Ticks Tick Borne Dis 2013 Jun ;4(4):359-61.
   Clin Microbiol Infect 2009 Dec ;15 Suppl 2:32-3.

### Staphylococcal food poisoning

Agent	BACTERIUM. Staphylococcus aureus exotoxins		
Reservoir	Human (nares, hands), Cattle (udder), Dog/Cat (nasopharyngeal)		
Vector	None		
Vehicle	Food (creams, gravies, sauces)		
Incubation Period	2h - 4h (range 30 min - 9h)		
Diagnostic Tests	Identification of bacterium in food.		
Typical Adult Therapy	Supportive		
Typical Pediatric Therapy	As for adult		
Clinical Hints	- Onset 1 to 6 hours after food ingestion - "Explosive" diarrhea and vomiting - Usually no fever - No fecal leucocytes - Resolves within 1 to 2 days - Fatality is rarely reported		
Synonyms	Staphylococcus aureus food poisoning. ICD9: 005.0 ICD10: A05.0		

### Staphylococcal food poisoning in Moldova

Five outbreaks (48 cases) were reported in 1999; 2 (12 cases) in 2000.

493 individual cases were reported in 1999; 456 in 2000.



### Staphylococcal scalded skin syndrome

Agent	BACTERIUM.  Staphylococcus aureus phage group 2 A facultative gram-positive coccus			
Reservoir	Human			
Vector	None			
Vehicle	Contact, Secretions			
Incubation Period	1d - 4d			
Diagnostic Tests	Typical clinical features; Recovery of S. aureus from localized wound or blood; skin biopsy may be helpful			
Typical Adult Therapy	Fluid replacement (as for burn); Intravenous Nafcillin or Oxacillin, in addition to application of anti-staphylococcal drug to local source infection; Vancomycin if MRSA Clindamycin used to interfere with toxin production.			
Typical Pediatric Therapy	Fluid replacement (as for thermal burn); Intravenous Nafcillin or Oxacillin, in addition to application of anti-staphylococcal drug to local source infection; Vancomycin if MRSA			
Clinical Hints	<ul> <li>Acute, generalized exfoliative dermatitis which occurs primarily in infants and young children</li> <li>A pre-existing localized skin infection is present in most cases</li> </ul>			
Synonyms	Lyell disease, Ritter disease, Ritter von Ritterschein disease, Scalded skin syndrome, SSSS. ICD9: 695.81 ICD10: L00			

# Streptococcus suis infection

Agent	BACTERIUM.  Streptococcus suis I and Streptococcus suis II A facultative gram-positive coccus		
Reservoir	Pig		
Vector	None		
Vehicle	Air, Secretions, Meat, Wound, Contact		
Incubation Period	Unknown. Probably hours to few days		
Diagnostic Tests	Culture of blood, tissue, body fluids		
Typical Adult Therapy	Systemic antibiotic. Usually susceptible in vitro to Penicillin, Amoxicillin, Chloramphenicol and Gentamicin		
Typical Pediatric Therapy	Systemic antibiotic		
Clinical Hints	- Disease appears hours to a few days after contact with pigs or pig products - Severe multisystem illness, hemorrhagic diatheses, deafness or meningitis		
Synonyms	Streptococcus suis. ICD9: 027.8 ICD10: A48.8		

## Strongyloidiasis

Agent	PARASITE - Nematoda. Secernentea: Strongyloides stercoralis (Strongyloides fulleborni is occasionally implicated in systemic disease)		
Reservoir	Human, Dog, Monkey (for Strongyloides fulleborni)		
Vector	None		
Vehicle	Skin contact, Soil, Feces, Autoinfection, Sexual contact		
Incubation Period	14d - 30d		
Diagnostic Tests	Identification of larvae (or ova, for Strongyloides fulleborni) in stool or duodenal aspirate. Serology.		
Typical Adult Therapy	Ivermectin 200 micrograms/kg/d PO daily X 2d OR Thiabendazole 25 mg/kg BID (max 3g) X 2d OR Albendazole 400 mg/d X 3d (7 days for hyperinfection syndrome)		
Typical Pediatric Therapy	Ivermectin 200 micrograms/kg/d PO daily X 2d OR Thiabendazole 25 mg/kg BID (max 3g) X 2d. OR Albendazole 200 mg/d X 3d (7 days for hyperinfection syndrome)		
Clinical Hints	- Diarrhea - Gluteal or perineal pruritus and rash - Eosinophilia often present - Widespread dissemination encountered among immune-suppressed patients (case-fatality rate for this complication = 80%)		
Synonyms	Anguilluliasis, Anguillulosis, Cochin China gastroenteritis, Diploscapter, Halicephalobus, Larva currens, Leptodera intestinals, Leptodera stercoralis, Lungworm, Metastrongylus, Micronema, Pseudo-rhabdis stercoralis, Rhabditis stercoralis, Rhabdonema intestinale, Rhabdonema stercoralis, Strongyloides fulleborni, Strongyloides stercoralis, Strongyloidose, Threadworm, Turbatrix. ICD9: 127.2 ICD10: B78		

### Subdural empyema

Agent	BACTERIUM. <i>Haemophilus influenzae</i> , oral anaerobes, streptococci, et al
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Imaging techniques (CT scan, etc).
Typical Adult Therapy	Antimicrobial agent(s) directed at known or likely pathogen
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Fever, severe headache, vomiting</li> <li>Signs of meningeal irritation and increased cerebrospinal fluid pressure</li> <li>May follow head trauma, meningitis, otitis or sinusitis</li> <li>Case-fatality rates vary from 15% (patient alert) to 60% (comatose)</li> </ul>
Synonyms	

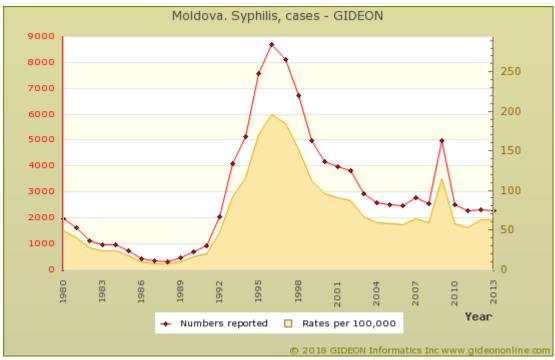
## Suppurative parotitis

Agent	BACTERIUM. Most commonly <i>Staphylococcus aureus</i>
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Unknown
Diagnostic Tests	Clinical features (local swelling and purulent discharge from salivary ducts). Stain and culture of discharge.
Typical Adult Therapy	Surgical drainage and aggressive parenteral antistaphylococcal therapy
Typical Pediatric Therapy	As for adult
Clinical Hints	- Consider in patient with unexplained fever in the setting of malnutrition, dehydration and obtundation - Local swelling and discharge of pus from salivary duct
Synonyms	Parotitis, bacterial. ICD9: 527.2 ICD10: K11.3

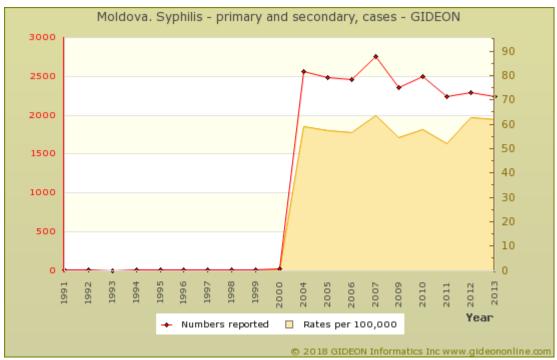
# Syphilis

Agent	BACTERIUM.  Treponema pallidum subsp. pallidum A microaerophilic gram-negative spirochete			
Reservoir	Human			
Vector	None			
Vehicle	Sexual contact, Secretions, Respiratory or pharyngeal acquisition			
Incubation Period	2w - 4w (range 10d - >8w)			
Diagnostic Tests	Dark field microscopy (chancre). VDRL confirmed by antitreponemal test (FTA, MHTP). Nucleic acid amplification.			
Typical Adult Therapy	Primary, secondary or early (< 1 year) latent: Benzathine Penicillin G 2.4 million units IM  Other stages: Repeat dosage at one and two weeks  Alternatives: Tetracycline, Ceftriaxone			
Typical Pediatric Therapy	Primary, secondary or early (< 1 year) latent: Benzathine Penicillin G: Weight <14 kg: 600,000u IM Weight 14 to 28 kg: 1,200,000u IM Other stages: Repeat dosage at one and two weeks			
Clinical Hints	<ul><li>Firm, painless chancre (primary syphilis)</li><li>Fever, papulosquamous rash and multisystem infection (secondary syphilis)</li><li>Late necrotic lesions of brain, aorta, bone or other organs (tertiary syphilis)</li></ul>			
Synonyms	Canton rash, Chinese ulcer, Christian disease, French disease, German sickness, Harde sjanker, Lues, Neopolitan itch, Polish sickness, Sifilide, Sifilis, Spanish pockes, Syfilis, Treponema pallidum. ICD9: 090,091,092,093,094,095,096,097 ICD10: A50,A51,A52,A53			

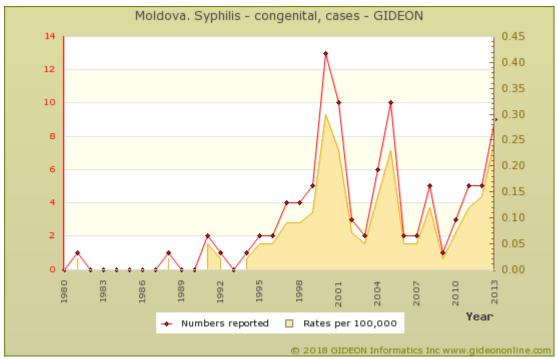
## Syphilis in Moldova



Graph: Moldova. Syphilis, cases



Graph: Moldova. Syphilis - primary and secondary, cases



Graph: Moldova. Syphilis - congenital, cases

ser oprevalence surveys				
Years	Region	Study Group	%	Notes
2010	Multiple locations	MSM	12.1	12.1% of MSM in Chisinau and 0.5% in Balti (2010) <sup>1</sup>
2009 - 2010	Multiple locations	sex workers	6.1-8.4	8.4% of CSW in Chisinau and 6.1% in Balti (2009 to 2010) <sup>2</sup>

#### **Notable outbreaks**

Years	Cases	Notes
1996	8,686	3

#### References

- Int J STD AIDS 2013 May ;24(5):357-64.
   AIDS Behav 2013 Oct ;17(8):2588-96.
   Sex Transm Infect 1998 Jun ;74(3):165-6.

### **Taeniasis**

Agent	PARASITE - Platyhelminthes, Cestoda. Cyclophyllidea, Taeniidae: <i>Taenia solium</i> & <i>T. saginata</i> (other species occasionally encountered)
Reservoir	Cattle, Pig
Vector	None
Vehicle	Meat
Incubation Period	6w - 14w
Diagnostic Tests	Identification of ova or proglottids in feces.
Typical Adult Therapy	Praziquantel 10 mg/kg PO as single dose OR Niclosamide 2 g PO once
Typical Pediatric Therapy	Praziquantel 10 mg/kg PO as single dose OR Niclosamide 50 mg/kg PO once
Clinical Hints	<ul> <li>Vomiting and weight loss</li> <li>Often symptomatic or first recognized due to passage of proglottids</li> <li>Parasite may survive for over 25 years in the human intestine</li> </ul>
Synonyms	Bandwurmer [Taenia], Drepanidotaenia, Gordiid worm, Hair snake, Mesocestoides, Raillietina, Taenia asiatica, Taenia longihamatus, Taenia saginata, Taenia saginata asiatica, Taenia solium, Taenia taeniaformis, Taeniarhynchiasis, Tapeworm (pork or beef), Tenia. ICD9: 123.0,123.2 ICD10: B68

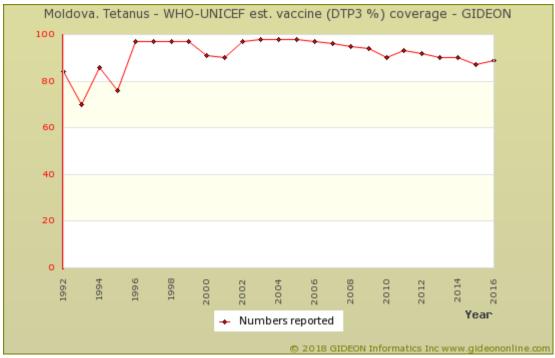
### **Tetanus**

Agent	BACTERIUM. <i>Clostridium tetani</i> An anaerobic gram-positive bacillus			
Reservoir	Animal feces, Soil			
Vector	None			
Vehicle	Trauma			
Incubation Period	6d - 8d (range 1d - 90d)			
Diagnostic Tests	Isolation of C. tetani from wound is rarely helpful. Serology (specimen taken before administration of antitoxin).			
Typical Adult Therapy	Human antitoxin (see Vaccine module).  Metronidazole (2 g daily) or Penicillin G (24 million u daily) or Doxycycline (200 mg daily).  Diazepam (30 to 240 mg daily).  Tracheostomy, hyperalimentation			
Typical Pediatric Therapy	Human antitoxin (see Vaccine module).  Metronidazole (30 mg/kg daily); or Penicillin G (300,000 units/kilo daily).  Diazepam.  Tracheostomy, hyperalimentation			
Vaccines	DT vaccine DTaP vaccine DTP vaccine Td vaccine Tetanus immune globulin Tetanus vaccine			
Clinical Hints	<ul> <li>Trismus, facial spasm, opisthotonus and tachycardia</li> <li>Recurrent tonic spasms of skeletal muscle</li> <li>Sensorium is clear</li> <li>Disease may persist for 4 to 6 weeks</li> <li>Case fatality rates of 10% to 40% are reported</li> </ul>			
Synonyms	Lockjaw, Starrkrampf, Stelkramp, Tetano, Tetanos. ICD9: 037,771.3 ICD10: A33,A34,A35			

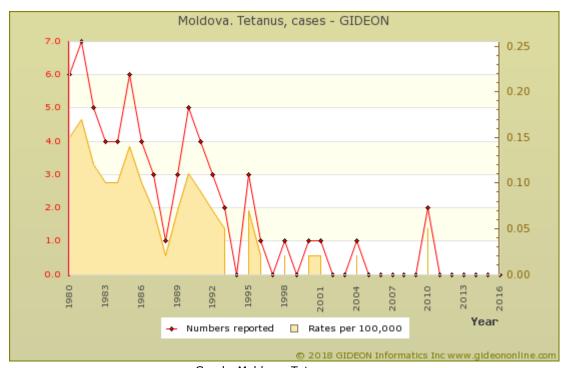
#### **Tetanus in Moldova**

#### **Vaccine Schedule:**

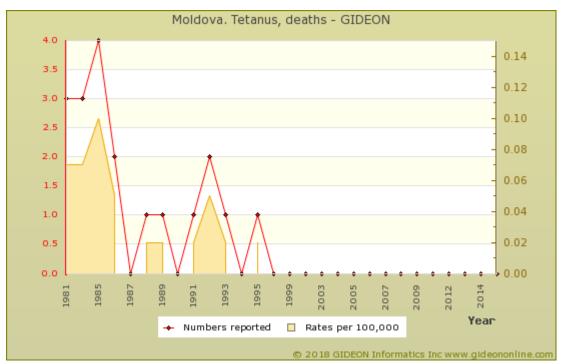
BCG - 2 days
DT - 7 years
DTwP - 2 years
DTwPHibHepB - 2,4,6 months
HepB - birth; adults in risk groups
IPV - 6 months
MMR - 12 months; 7,15 years
OPV - 2,4,6 months; 2,7,15 years
Pneumo conj - 2,4,12 months
Rotavirus - 2,4 months
Td - 15, 20, 25, 30, 35, 40, 50, 60 years



Graph: Moldova. Tetanus - WHO-UNICEF est. vaccine (DTP3 %) coverage



Graph: Moldova. Tetanus, cases



Graph: Moldova. Tetanus, deaths

Moldova. Tetanus - neonatal, cases: None reported between 1991 and 2016

## **Thelaziasis**

Agent	PARASITE - Nematoda. Secernentea: <i>Thelazia callipaeda</i> (rarely <i>T. californiensis</i> )
Reservoir	Dog, Rabbit, Deer, Cat
Vector	Fly (Musca and Fannia species)
Vehicle	None
Incubation Period	not known
Diagnostic Tests	Identification of parasite.
Typical Adult Therapy	Extraction of parasite
Typical Pediatric Therapy	As for adult
Clinical Hints	- Conjunctivitis and lacrimation - Sensation of an ocular foreign body - Worm seen in conjunctival sac
Synonyms	Conjunctival spirurosis, Oriental eye worm, Rictularia, Thelazia californiensis, Thelazia callipaeda, Thelaziosis. ICD9: 372.15 ICD10: B83.8



#### Tick-borne encephalitis

Agent	VIRUS - RNA. Flaviviridae, Flavivirus: Central European encephalitis virus
Reservoir	Rodent (Apodemus flavicollis, A. sylvaticus, Microtus arvalis), Tick, Bird, Cattle
Vector	Tick (Ixodes ricinus)
Vehicle	Dairy products
Incubation Period	7d - 14d (range 4d - 20d)
Diagnostic Tests	Viral culture (blood, brain tissue, CSF). Serology. Nucleic acid amplification. Biosafety level 4.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Vaccines	Tick-borne encephalitis vaccine Tick-borne encephalitis globulin
Clinical Hints	<ul> <li>Biphasic illness</li> <li>Headache and myalgia followed by encephalitis</li> <li>Onset 1 to 2 weeks after tick bite</li> <li>Symptoms may persist for weeks following the acute infection</li> <li>Case-fatality rate less than 2%</li> </ul>
Synonyms	Central European tick encephalitis, Diphasic meningoencephalitis, Diphasic milk fever, Encephalite a tiques, European tick-borne encephalitis, Forest encephalitis, Fruhsommer-Meningoenzephalitis, FSME, Hanzlova, Hypr, Kumlinge, Langat, Neudorfl, Skogflattencefalitt, Tick-borne encephalitis: Central European, Zeckenzephalitis. ICD9: 063.2 ICD10: A84.1

## Tick-borne encephalitis in Moldova

Moldova. Tick-borne encephalitis, cases: None reported between 1999 and 2006

## **Toxic shock syndrome**

	BACTERIUM.
Agent	Staphylococcus aureus, Streptococcus pyogenes, et al - (toxins) Facultative gram-positive cocci
Reservoir	Human
Vector	None
Vehicle	Tampon (Bandage, etc)
Incubation Period	Unknown
Diagnostic Tests	Isolation of toxigenic Staphylococcus aureus. Toxin assay available in specialized laboratories.
Typical Adult Therapy	The role of topical (eg, vaginal) and systemic antistaphylococcal antibiotics is unclear; however, most authorities suggest intravenous administration of an anti-staphylococcal (anti-MRSA, anti-streptococcal as indicated) antibiotic.
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Most cases associated with "super absorbent" tampon use or staphylococcal wound infection</li> <li>Fever (&gt;38.9), hypotension (&lt;90 mm Hg) and dermal erythema with desquamation</li> <li>Respiratory, cardiac or other disease present</li> <li>Case-fatality rates of 5% to 10% are reported</li> </ul>
Synonyms	Streptococcal toxic shock syndrome, TSS. ICD9: 040.82 ICD10: A48.3

## **Toxocariasis**

Agent	PARASITE - Nematoda. Secernentea: <i>Toxocara cati</i> and <i>T. canis</i>
Reservoir	Cat, Dog, Mouse
Vector	None
Vehicle	Soil ingestion
Incubation Period	1w - 2y
Diagnostic Tests	Identification of larvae in tissue. Serology.
Typical Adult Therapy	Albendazole 400 mg BID X 5d. OR Mebendazole 100 to 200 mg PO bid X 5 days  Add corticosteroids if eye, brain, heart or lung involvement is present.
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Cough, myalgia, seizures and urticaria</li> <li>Hepatomegaly, pulmonary infiltrates or retrobulbar lesions may be present</li> <li>Marked eosinophilia is common</li> <li>Symptoms resolve after several weeks, but eosinophilia may persist for years</li> </ul>
Synonyms	Ascaris suum, Toxocara canis, Toxocara cati, Toxocarose, Toxocarosis, Visceral larva migrans. ICD9: 128.0 ICD10: B83.0

## **Toxoplasmosis**

Agent	PARASITE - Protozoa. Apicomplexa, Eimeriida: <i>Toxoplasma gondii</i>
Reservoir	Rodent, Pig, Cattle, Sheep, Chicken, Bird, Cat, Marsupial
Vector	None
Vehicle	Transplacental, Meat, Soil ingestion, Water , Milk, Filth flies
Incubation Period	1w - 3w (range 5d - 21d)
Diagnostic Tests	Serology. Cultivation or identification of organisms per specialized laboratories. Nucleic acid amplification.
Typical Adult Therapy	Pyrimethamine 25 mg/d + Sulfonamides 100 mg/kg (max 6g)/d X 4w - give with folinic acid. Alternatives: Clindamycin, Azithromycin, Dapsone. Spiramycin (in pregnancy) 4g/d X 4w
Typical Pediatric Therapy	Pyrimethamine 2 mg/kg/d X 3d, then 1 mg/kg/d + Sulfonamides 100 mg/kg/d X 4w - give with folinic acid. Alternatives: Clindamycin, Azithromycin, Dapsone.
Clinical Hints	<ul> <li>Fever, lymphadenopathy, hepatic dysfunction or chorioretinitis</li> <li>Cerebral cysts often encountered in patients with AIDS</li> <li>Congenital hydrocephalus associated with mental retardation</li> <li>Seizures or blindness</li> </ul>
Synonyms	Toxoplasma, Toxoplasmose, Toxoplasmosi. ICD9: 130 ICD10: B58

## **Toxoplasmosis in Moldova**

8 cases were reported in 2005

## Trachoma

Agent	BACTERIUM.  Chlamydia trachomatis, type A
Reservoir	Human
Vector	Fly
Vehicle	Secretions, Contact, Fly, Fomite
Incubation Period	5d - 12d
Diagnostic Tests	Culture or direct immunofluorescence of secretions. Serology. Nucleic acid amplification.
Typical Adult Therapy	Azithromycin 1 g po as single dose. OR Doxycycline 100 mg/day PO X 21 days. Also administer topical Tetracycline
Typical Pediatric Therapy	Azithromycin 20 mg/kg as single dose. Also administer topical Tetracycline
Clinical Hints	<ul> <li>Keratoconjunctivitis with follicular hypertrophy, palpebral scarring and pannus formation</li> <li>In later stages, eyelashes may protrude inward or outward</li> <li>0.5% of infections result in blindness</li> </ul>
Synonyms	Egyptian ophthalmia, Granular conjunctivitis, Kornerkrankheit, Trachom, Tracoma. ICD9: 076 ICD10: A71

## **Trichinosis**

Agent	PARASITE - Nematoda. Trichinella spiralis (occasionally T. nativa, T. britovi, T. pseudospiralis, T. nelsoni, et al)
Reservoir	Wild carnivore, Omnivore, Marine mammal
Vector	None
Vehicle	Meat
Incubation Period	10d - 20d (range 1w - 10w)
Diagnostic Tests	Identification of larvae in tissue. Serology.
Typical Adult Therapy	Albendazole 400 mg PO BID X 14d.  OR Mebendazole 200 to 400 mg PO tid X 3 days, then 400 to 500 mg PO. tid X 10 days.  Give with prednisone 50 mg PO daily X 3 to 5 days (then 'taper' dosage)
Typical Pediatric Therapy	Albendazole 7 mg/kg BID X 14 d. OR Mebendazole 200 to 400 mg PO tid X 3 days, then 400 to 500 mg PO. tid X 10 days. Give with prednisone 50 mg PO daily X 3 to 5 days (then 'taper' dosage)
Clinical Hints	<ul> <li>Onset 1 to 4 weeks following ingestion of undercooked meat</li> <li>Early diarrhea and vomiting</li> <li>Subsequent myalgia, facial edema and eosinophilia</li> <li>Symptoms may persist for two months</li> <li>Reported case-fatality rate for symptomatic infection is 2%</li> </ul>
Synonyms	Haycocknema, Trichinellose, Trichinellosis, Trichinose, Trikinose, Triquiniase, Triqunosis. ICD9: 124 ICD10: B75

#### **Trichinosis in Moldova**

Moldova. Trichinosis, cases: None reported between 1999 and 2007

## **Trichomoniasis**

Agent	PARASITE - Protozoa. Metamonada, Parabasala, Trichomonadea. Flagellate: <i>Trichomonas vaginalis</i>
Reservoir	Human
Vector	None
Vehicle	Sexual contact
Incubation Period	4d - 28d
Diagnostic Tests	Microscopy of vaginal discharge. ELISA, culture, antigen detection tests available. Nucleic acid amplification.
Typical Adult Therapy	Metronidazole or Tinidazole 2g PO as single dose to both sexual partners
Typical Pediatric Therapy	Metronidazole 5 mg/kg PO TID X 7d. OR Tinidazole 50 mg/kg PO X 1 (maximum 2 grams)
Clinical Hints	- Vaginal pruritus, erythema and thin or frothy discharge - Mild urethritis may be present in male or female
Synonyms	Pentatrichomonas, Tetratrichomonas, Trichomonaden, Trichomonas, Trichomonas vaginalis, Tricomoniasis, Tritrichomonas. ICD9: 131 ICD10: A59

## **Trichuriasis**

Agent	PARASITE - Nematoda. Trichuris trichiura
Reservoir	Human
Vector	None
Vehicle	Soil ingestion, Sexual contact, Flies
Incubation Period	2m - 2y
Diagnostic Tests	Stool microscopy or visualization of adult worms (adults are approximately 3 cm long).
Typical Adult Therapy	Mebendazole 100 mg PO BID X 3d. OR Albendazole 400 mg PO daily X 3 to 7 days OR Ivermectin 200 mg/kg PO daily X 3 days
Typical Pediatric Therapy	Albendazole 200 mg PO single dose OR Mebendazole 100 mg BID X 3 d (> age 2). OR Ivermectin 200 mg/kg PO daily X 3 days
Clinical Hints	- Abdominal pain, bloody diarrhea - Rectal prolapse or intestinal obstruction are occasionally encountered - The parasite may survive for as long as five years in the human host
Synonyms	Trichocephaliasis, Trichuris trichiura, Tricuriasis, Whipworm. ICD9: 127.3 ICD10: B79

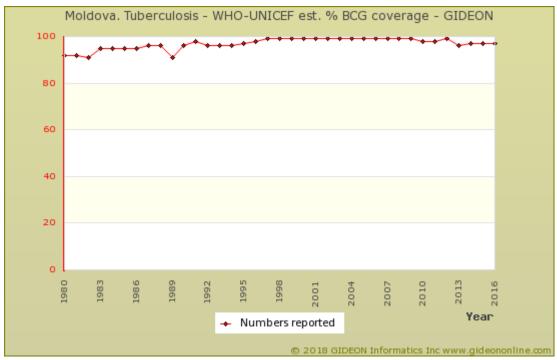
### **Tuberculosis**

Agent	BACTERIUM. Actinomycetes, <i>Mycobacterium tuberculosis</i> An aerobic acid-fast bacillus
Reservoir	Human, Cattle
Vector	None
Vehicle	Air, Dairy products, Respiratory or pharyngeal acquisition
Incubation Period	4w - 12w (primary infection)
Diagnostic Tests	Microscopy. Culture. Nucleic acid amplification. Inform laboratory when this diagnosis is suspected.
Typical Adult Therapy	Respiratory isolation. Typical pulmonary infection is treated with 6 months of Isoniazid, Rifampin & Pyrazinamide MDR tuberculosis - 5 drugs (including pyrazinamide if possible) intially, followed by 4 drugs.
Typical Pediatric Therapy	As for adult
Vaccine	BCG vaccine
Clinical Hints	<ul> <li>Cough, "night sweats" and weight loss</li> <li>Most infections represent reactivation of old foci in lungs, brain, bone, kidneys etc</li> <li>Often presents as prolonged fever (FUO) or infection of bone, meninges, kidneys or other organs</li> </ul>
Synonyms	Consumption, Mycobacterium africanum, Mycobacterium bovis, Mycobacterium caprae, Mycobacterium orygis, Mycobacterium tuberculosis, Oryx bacillus, Phthisis, TB, TB meningitis, Tuberculose, Tuberculose miliar, Tuberculosi, Tuberculous meningitis, Tuberkulose, White plague. ICD9: 010,012,013,014,015,016,017,018 ICD10: A15,A16,A17,A18,A19

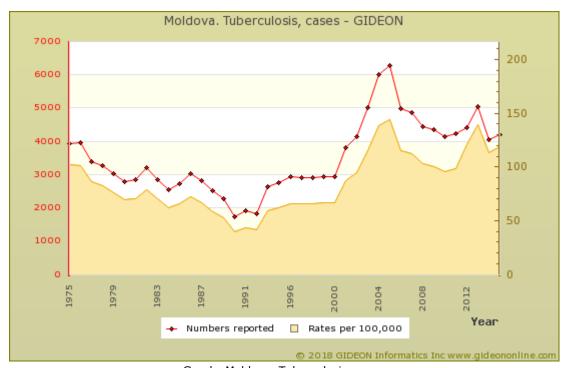
#### **Tuberculosis in Moldova**

#### **Vaccine Schedule:**

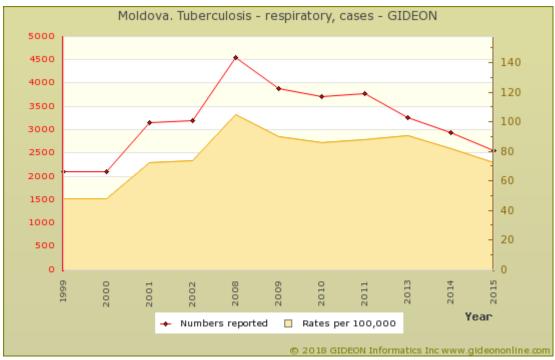
BCG - 2 days DT - 7 years DTwP - 2 years DTwPHibHepB - 2,4,6 months HepB - birth; adults in risk groups IPV - 6 months MMR - 12 months; 7,15 years OPV - 2,4,6 months; 2,7,15 years Pneumo conj - 2,4,12 months Rotavirus - 2,4 months Td - 15, 20, 25, 30, 35, 40, 50, 60 years



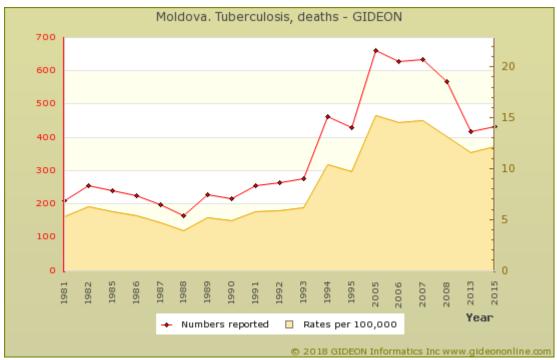
Graph: Moldova. Tuberculosis - WHO-UNICEF est. % BCG coverage



Graph: Moldova. Tuberculosis, cases



Graph: Moldova. Tuberculosis - respiratory, cases

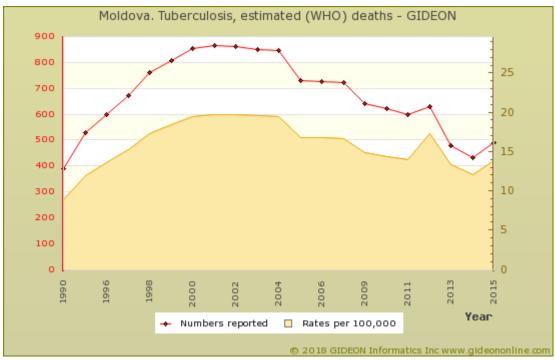


Graph: Moldova. Tuberculosis, deaths

#### Notes:

Individual years:

1976 - Mortality rates were 7.5 per 100,000.



Graph: Moldova. Tuberculosis, estimated (WHO) deaths

#### Drug susceptibility:

- 20.3% of M. tuberculosis isolates were resistant to at least one drug in 1995; 41.6% in 1999. 1
- 2.7% of isolates were multi drug-resistant in 1995; 11.2% in 1999; 19.4% during 2002 to 2006. 2
- In 2010 INH resistance / MDR-TB was identified in 74.0% / 65.1% of previously-treated cases.

No cases of bovine tuberculosis were reported in cattle 2000 to 2004. 4

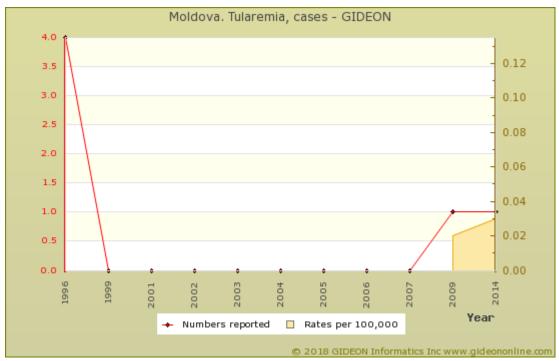
#### References

- 1. Int J Tuberc Lung Dis 2003 Apr; 7(4):336-42.

## Tularemia

Agent	BACTERIUM.  Francisella tularensis  An aerobic gram-negative bacillus
Reservoir	Rabbit, Hare, Muskrat, Beaver, Tick, Wild bird
Vector	Deer fly ( <i>Chrysops</i> spp), Tick, Mosquito
Vehicle	Bite, Contact, Meat, Eye inoculation, Air, Dust, Water, Respiratory or pharyngeal acquisition
Incubation Period	3d - 5d (range 1d - 14d)
Diagnostic Tests	Culture or direct fluorescent staining of exudates. Serology. Nucleic acid amplification.
Typical Adult Therapy	Gentamicin or Tobramycin 1.7 mg/kg q8h X 7 to 10d.  Add Chloramphenicol if evidence for central nervous system infection.
Typical Pediatric Therapy	Gentamicin or Tobramycin 1.7 mg/kg q8h X 7-10d.  Add Chloramphenicol if evidence for central nervous system infection.
Vaccine	Tularemia vaccine
Clinical Hints	<ul> <li>Often follows contact with small mammals (usually rabbits) or tick-bite</li> <li>Fever, dermal eschar, lymphadenopathy, myalgia and diarrhea</li> <li>May present as overwhelming septicemia or pneumonia</li> <li>Case-fatality rates are 1% (treated) to 6% (untreated)</li> </ul>
Synonyms	Conjunctivitis tularensis, Deerfly fever, Francisella hispanensis, Francisella novocida, Francisella philomiragia, Francisella tularensis, Harpest, Hasenpest, Lemming fever, Market men's disease, Ohara's disease, Pahvant Valley plague, Rabbit fever, Tularamie, Water rat trapper's disease, Yaobyo disease, Yatobyo. ICD9: 021 ICD10: A21

## Tularemia in Moldova



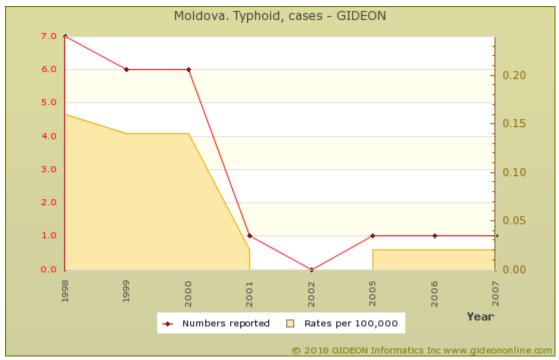
Graph: Moldova. Tularemia, cases



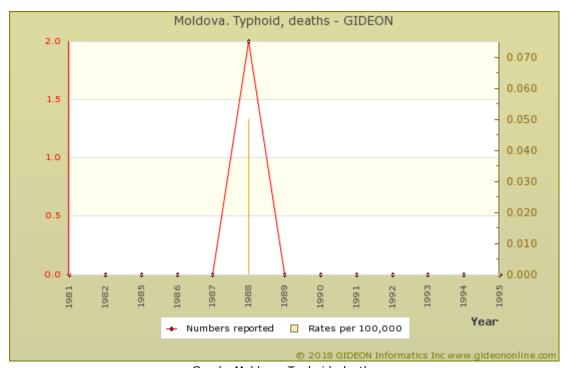
## Typhoid and enteric fever

Agent	BACTERIUM.  Salmonella serotype Typhi (certain other Salmonella species cause 'paratyphoid' fever)  A facultative gram-negative bacillus
Reservoir	Human
Vector	None
Vehicle	Fecal-oral, Food, Fly, Water
Incubation Period	15d - 21d (range 5d - 34d)
Diagnostic Tests	Culture (blood, urine, sputum culture). Stool usually negative unless late, untreated infection. Serology.
Typical Adult Therapy	Ceftriaxone 2 g IV q12h to q 24h X 5 to 7d. OR Azithromycin 1 gram PO on day 1; then 500 mg days 2 to 7. Fluoroquinolones resistance common - not recommended for empiric therapy. Add corticosteroids if evidence of shock or decreased mental status.
Typical Pediatric Therapy	Ceftriaxone 50 to 80 mg/kg IV daily X 5 to 7d. OR Azithromycin 15 mg/kg PO on day 1; then 7.5 mg/kg on days 2 to 7.
Vaccines	Typhoid - injectable vaccine Typhoid - oral vaccine
Clinical Hints	- Transient diarrhea followed by fever, splenomegaly and obtundation - Rose spots (during second week of illness), leukopenia and relative bradycardia are common - Intestinal perforation or hemorrhage may occur in third to fourth week of illness - Case-fatality rates are 0.8% (treated) to 15% (untreated)
Synonyms	Abdominal typhus, Abdominaltyphus, Buiktyphus, Enteric fever, Febbre tifoide, Febbre tifoidea, Fiebre tifoidea, Paratifoidea, Paratyfus, Paratyphoid, Salmonella serotype Typhi, Tyfoid, Typhoid, Typhoide. ICD9: 002 ICD10: A01

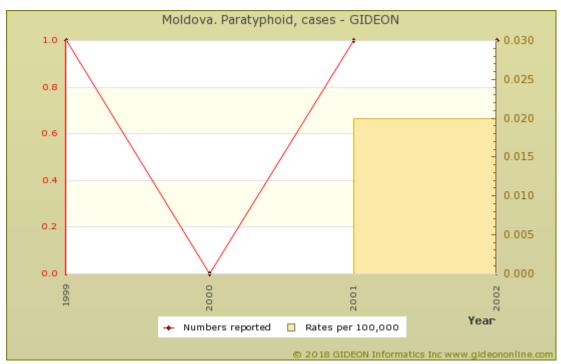
# Typhoid and enteric fever in Moldova



Graph: Moldova. Typhoid, cases



Graph: Moldova. Typhoid, deaths



Graph: Moldova. Paratyphoid, cases

# Typhus - endemic

Agent	BACTERIUM. Rickettsia typhi
Reservoir	Rat
Vector	Flea ( <i>Xenopsylla</i> or <i>Nosopsyllus</i> spp.)
Vehicle	None
Incubation Period	10d - 12d (range 4d - 18d)
Diagnostic Tests	Serology. Identification of rickettsiae in smear or culture of skin lesions. Nucleic acid amplification.
Typical Adult Therapy	Doxycycline 100 mg BID X 7d
Typical Pediatric Therapy	Doxycycline 2 mg/kg BID X 7d (maximum 200 mg/day); or Chloramphenicol 12.5 mg/kg QID X 7d
Clinical Hints	- Fever, headache and myalgia - Truncal maculopapular rash (present in 60%) appears on days 3 to 5 and persists for 4 to 8 days - Fever resolves after 12 to 16 days - Case fatality rate (untreated) is 2%
Synonyms	Endemic typhus, Murine typhus, Rickettsia typhi, Ship typhus, Tifo murino, Tifus pulgas, Vlektyphus. ICD9: 081.0 ICD10: A75.2

## **Urinary tract infection**

Agent	BACTERIUM OR FUNGUS.  Escherichia coli, other facultative gram negative bacilli, enterococci, et al
Reservoir	Human
Vector	None
Vehicle	Endogenous
Incubation Period	Variable
Diagnostic Tests	Urine culture and leucocyte count.
Typical Adult Therapy	Antimicrobial agent(s) directed at known or likely pathogen
Typical Pediatric Therapy	As for adult
Clinical Hints	- Fever, dysuria, frequency, flank pain and vomiting - Infection in children or men - and infection which relapses in women - may warrant radiological studies to rule out underlying obstruction or calculus
Synonyms	Cistite, Cistitis, Cystite, Cystitis, Pielite, Pielitis, Pielonefrite, Pielonefritis, Prostatite, Pyelitis, Pyelonephrite, Pyelonephritis, Trigonitis, Tubulointerstitial nephritis, Urethritis, Uretrite, Zystitis. ICD9: 791.9,136.9,599.0,590,601.0 ICD10: N10,N30,N41

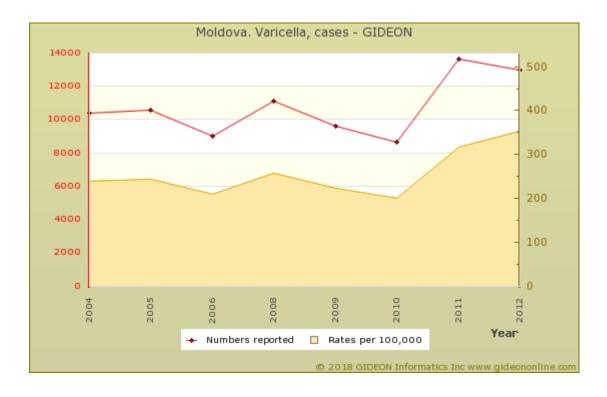
## Vaccinia and cowpox

Agent	VIRUS - DNA. Poxviridae, Orthopoxvirus. Cowpox virus
Reservoir	Cattle, Cat Rodent
Vector	None
Vehicle	Cattle, Cat
Incubation Period	2d - 4d
Diagnostic Tests	Viral isolation from skin exudate or biopsy. Nucleic acid amplification.
	Biosafety level 3.
Typical Adult Therapy	Secretion precautions; supportive.
Typical Adult Therapy	In severe cases, Tecovirimat, 400 to 600 mg PO OD X 14 d.
Typical Pediatric Therapy	As for adult
Vaccine	Vaccinia immune globulin
Clinical Hints	<ul><li>Vesicles or pustules (usually on hand) progressing to crusts</li><li>Painful regional lymphadenopathy</li><li>Follows contact with infected animals or smallpox vaccination</li></ul>
Synonyms	Akhmeta poxvirus, Aracatuba, Buffalopox, Camelpox, Cantagalo, Cowpox, Passatempo, Vaccinia, Vaiolo. ICD9: 051.0 ICD10: B08.0

## Varicella

Agent	VIRUS - DNA. Herpesviridae, Alphaherpesvirinae: Human Herpesvirus 3 (Varicella-zoster virus)
Reservoir	Human
Vector	None
Vehicle	Air, Contact, Breastfeeding, Respiratory or pharyngeal acquisition
Incubation Period	2w - 3w
Diagnostic Tests	Viral culture (vesicles). Serology. Nucleic acid amplification.
Typical Adult Therapy	Respiratory isolation.  Severe/complicated cases: Acyclovir 10 to 12 mg/kg IV q8h X 7d  Adolescent / young adult: 800 mg PO X 5 per day X 7 d. Alternatives: Valacyclovir 1 g PO TID; or Famciclovir 500 mg PO TID
Typical Pediatric Therapy	Respiratory isolation. Acyclovir (severe/complicated cases) 150 mg/sq m IV q8h X 7d
Vaccines	Varicella vaccine Varicella-Zoster immune globulin
Clinical Hints	- Cough and fever followed by a pruritic papulovesicular rash after 1 to 2 days - Pneumonia is often encountered - Case fatality rate is 4.3 per 100,000 cases (7% in immune-suppressed patients)
Synonyms	Chickenpox, Lechina, Skoldkopper, Vannkopper, Varicela, Varizellen, Vattenkoppor, Waterpokken, Windpocken. ICD9: 052 ICD10: B01

#### Varicella in Moldova



Graph: Moldova. Varicella, cases



## Vibrio parahaemolyticus infection

Agent	BACTERIUM <i>Vibrio parahaemolyticus</i> A facultative gram-negative bacillus
Reservoir	Marine water, Seafood, Fish
Vector	None
Vehicle	Seafood
Incubation Period	10h - 20h (range 2h - 4d)
Diagnostic Tests	Stool culture - alert laboratory when this organism is suspected.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Onset 4 to 24 hours following ingestion of seafood (often steamed crabs)</li> <li>Vomiting and explosive diarrhea</li> <li>Diarrhea may persist for 7 to 10 days</li> <li>Case fatality rate is 0.1%</li> </ul>
Synonyms	Vibrio parahaemolyticus. ICD9: 005.4 ICD10: A05.3

### **West Nile fever**

Agent	VIRUS - RNA. Flaviviridae, Flavivirus: West Nile virus A subtype of West Nile virus, Kunjin virus, is associated with human disease in Oceania and Asia
Reservoir	Bird, Horse, Bat, Tick
Vector	Mosquito (Culex univittatus. Cx. pipiens, Cx. vishnui, Cx. naevei, Coquillettidia, Aedes and Anopheles spp.)
Vehicle	Blood, Breastfeeding
Incubation Period	3d - 6d (range 1d - 14d)
Diagnostic Tests	Viral culture (blood, CSF). Serology. Nucleic acid amplification. Biosafety level 3.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Clinical Hints	<ul> <li>Myalgia, arthralgia, lymphadenopathy, headache, conjunctivitis and a macular rash</li> <li>Sporadic instances of encephalitis, meningitis and myocarditis are reported</li> <li>Kunjin virus is similar, but often associated with arthralgia, myalgia and rash</li> <li>Illness resolves within one week in most cases</li> </ul>
Synonyms	Bagaza, Fiebre del Oeste del Nilo, Kunjin, Lourdige, Near Eastern equine encephalitis, Ntaya, Usutu, WNF. ICD9: 066.4 ICD10: A92.3

#### West Nile fever in Moldova

Moldova. West Nile fever, cases: None reported between 2005 and 2007

See note for Russian Federation.

## Whipple's disease

Agent	BACTERIUM. Actinomycetes, <i>Tropheryma whipplei</i> A gram positive bacillus
Reservoir	Unknown
Vector	None
Vehicle	None
Incubation Period	Unknown
Diagnostic Tests	Identification of inclusions in lamina propria (other tissues). Tissue culture. Nucleic acid amplification.
Typical Adult Therapy	Ceftriaxone 2.0 g IV daily X 14 days.  OR Penicillin G 12 million u + Streptomycin 1 g daily X 14d.  Then, Sulfamethoxazole / Trimethoprim X 1 year  OR:  Doxycycline 100 mg PO BID + Hydroxychloroquine X 1 year, followed by Doxycycline for life
Typical Pediatric Therapy	Disease is rarely, if ever, encountered in children
Clinical Hints	<ul> <li>Chronic multisystem disorder characterized by weight loss, diarrhea, abdominal and joint pain</li> <li>Dermal hyperpigmentation, fever and lymphadenopathy are often present</li> <li>Tropheryma whipplei has recently been recovered from the blood of patients with fever, headache or cough.</li> </ul>
Synonyms	Intestinal lipodystrophy, Lipophagic granulomatosis, Mesenteric chyladenectasis, Steatorrhea arthropericarditica, Tropheryma whipplei. ICD9: 040.2 ICD10: K90.8

### Yellow fever

Agent	VIRUS - RNA. Flaviviridae, Flavivirus: Yellow fever virus
Reservoir	Human, Mosquito, Monkey, Marsupial
Vector	Mosquito (Stegomyia (Aedes), Haemagogus, Sabethes)
Vehicle	None
Incubation Period	3d - 6d (range 2.5d - 14d)
Diagnostic Tests	Viral culture (blood, liver). Serology. Nucleic acid amplification. Biosafety level 3.
Typical Adult Therapy	Supportive
Typical Pediatric Therapy	As for adult
Vaccine	Yellow fever vaccine
Clinical Hints	<ul> <li>- Headache, backache, vomiting, myalgias, jaundice and hemorrhagic diathesis</li> <li>- Relative bradycardia and leukopenia are present</li> <li>- Illness is often biphasic</li> <li>- Case fatality rate is 10% to 60%, occurring within 7 days of disease onset</li> </ul>
Synonyms	Bulan fever, Febbre gialla, Febre amarela, Fever of Fernando Po, Fever of the blight of Benin, Fiebre amarilla, Fievre jaune, Gelbfieber, Gele koorts, Gul feber, Gula febern, Inflammatory fever, Kendal's disease, Magdalena fever, Maladie de Siam, Pest of Havana, Stranger's fever. ICD9: 060 ICD10: A95

Although Yellow fever is not endemic to Moldova, imported, expatriate or other presentations of the disease have been associated with this country.

#### Yellow fever in Moldova

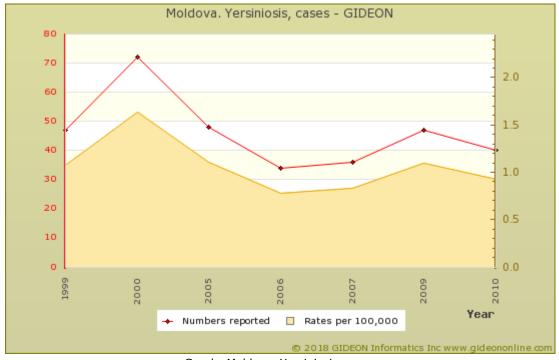
Yellow fever does not occur in this country.

 $Proof of \ vaccination \ is \ \textbf{NOT} \ required \ for \ travelers \ arriving \ from \ countries \ with \ risk \ for \ YFV \ transmission.$ 

### Yersiniosis

Agent	BACTERIUM.  Yersinia enterocolitica and Yersinia pseudotuberculosis  A facultative gram-negative bacillus
Reservoir	Pig, Rodent, Rabbit, Sheep, Goat, Cattle, Horse, Dog, Cat, Bat
Vector	None
Vehicle	Food, Water, Meat, Dairy products, Vegetables, Fecal-oral, Blood
Incubation Period	4d - 7d (range 1d - 11d)
Diagnostic Tests	Culture stool, blood. Alert laboratory when these organisms are suspected.
Typical Adult Therapy	Stool precautions; diarrhea is self-limited. If severe disease - Ciprofloxacin 500 mg BID X 5 to 7d. OR Sulfamethoxazole / Trimethoprim
Typical Pediatric Therapy	Stool precautions; diarrhea is self-limited. If severe disease - Sulfamethoxazole / Trimethoprim 20 mg-4 mg/kg BID X 5 to 7d
Clinical Hints	<ul> <li>Fever, diarrhea, and right lower quadrant pain</li> <li>Fecal leucocytes present</li> <li>May be associated with rheumatologic manifestations such as erythema multiforme, Reiter's syndrome and chronic arthritis</li> </ul>
Synonyms	Far East scarlet-like fever, FESLF, Yersinia enterocolitica, Yersinia pseudotuberculosis, Yersiniose. ICD9: 008.44 ICD10: A04.6,A28.2

#### Yersiniosis in Moldova



Graph: Moldova. Yersiniosis, cases

## Zygomycosis

Agent	FUNGUS. Zygomycota, Zygomycetes, Mucorales: <i>Mucor</i> spp., <i>Rhizopus</i> spp., <i>Lichtheimia</i> (formerly <i>Absidia</i> ) spp, <i>Saksenaea</i> spp, et al
Reservoir	Saprophytes
Vector	None
Vehicle	Air, Bandages, Contact, Respiratory or pharyngeal acquisition
Incubation Period	Variable
Diagnostic Tests	Fungal smear and culture.
Typical Adult Therapy	Amphotericin B to maximum dose 0.8 mg/kg/d; and to total dose of 3g. Excision as indicated
Typical Pediatric Therapy	Amphotericin B max dose 0.8 mg/kg/d; and to total dose of 40 mg/kg. Excision as indicated
Clinical Hints	- Occurs in the setting of preexisting acidosis (diabetes, uremia) - Periorbital pain, sinusitis, and palatal, nasal or cerebral infarcts - Pulmonary infection may complicate leukemia
Synonyms	Absidia, Actinomucor, Apophysomyces, Cokeromyces, Cunninghamella, Hormographiella, Lichtheimia, Lichtheimia, Mucor, Mucormycosis, Mycocladus, Phycomycosis, Rhizomucor, Rhizopus, Saksenaea, Syncephalastrum. ICD9: 117.7 ICD10: B46

#### Vaccine Schedule and coverage for Moldova

BCG - 2 days
DT - 7 years
DTwP - 2 years
DTwPHibHepB - 2,4,6 months
HepB - birth; adults in risk groups
IPV - 6 months
MMR - 12 months; 7,15 years
OPV - 2,4,6 months; 2,7,15 years
Pneumo conj - 2,4,12 months
Rotavirus - 2,4 months
Td - 15, 20, 25, 30, 35, 40, 50, 60 years



A given generic vaccine may have multiple designations in this list due to variations in terminology used by individual countries. Vaccination policies evolve rapidly in response to changes in disease occurrence and the introduction of new vaccines. Every effort has been made to update these lists accordingly.

#### **Vaccine Abbreviations**

aP - Attenuated pertussis ap - Attenuated pertussis BCG - Bacillus Calmette Guerin CBAW - Childbearing age women D - Diphtheria HCW - Health-care workers Hep - Hepatitis B HEP - Hepatitis B HepA - Hepatitis A HepB - Hepatitis B Hib - Haemophilus influenzae type B HPV - Human papillomavirus IPV - Injectable polio vaccine MenACWY - Meningococcus types A,C,Y and W MenA-conj - Meningococcus type C conjugate MenC-conj - Meningococcus type C conjugate MR - Measles, Rubella MMR - Measles, Mumps, Rubella MMRV - Measles, Mumps, Rubella, Varicella NA - Details not available OPV - Oral polio vaccine P - Pertussis Pneumo - Pneumococcal vaccine

Pneumo conj - Pneumococcal conjugate Pneumo ps - Pneumococcal polysaccharide T - Tetanus TBE - Tick-borne encephalitis

Td - Tetanus lower dose diphtheria

TT - Tetanus toxoid wP - Whole-cell pertussis YF - Yellow fever Zoster - Herpes zoster

#### **About GIDEON**

GIDEON Informatics produces the GIDEON web application and the GIDEON ebooks series.

#### GIDEON online

GIDEON online is the world's premier global infectious disease knowledge management tool. GIDEON (Global Infectious Diseases and Epidemiology Online Network) is an easy to use, interactive and comprehensive web based tool that helps overcome information overload, save time and access a vast knowledge database. GIDEON is used for diagnosis and reference in the fields of Tropical and Infectious Diseases, Epidemiology, Microbiology and Antimicrobial Therapy.

#### Content

GIDEON is made up of two modules, which are updated continually: Infectious Diseases and Microbiology. The Infectious Diseases module encompasses 347 diseases, 231 countries, and 500+ anti-infective drugs and vaccines. Microbiology includes over 1,500 microbial taxa. GIDEON's worldwide data sources access the entire world's literature and adhere to the standards of Evidence Based Medicine. Over 20,000 notes outline the status of specific infections within each country. Also featured are over 35,000 images, graphs, and interactive maps and more than 400,000 linked references.

#### Users

GIDEON is used in hospitals, universities (colleges and medical schools), private practice, Public Health departments and Military installations - by physicians (emergency room, infectious diseases, pediatrics and hospitalists), teachers, clinical microbiologists and health professionals. It is an ideal teaching tool for health care and microbiology students, residents and fellows.

#### **Accuracy**

The Infectious Diseases Diagnosis module has been tested in a blinded multi-center field trial of 495 patients. The correct diagnosis was displayed in over 94% of cases, and was listed first in over 75%. GIDEON has been reviewed in numerous journals and is continually updated daily to maintain content and accuracy.

#### GIDEON ebooks

GIDEON ebooks complement the GIDEON web application by expanding easy access to the GIDEON's vast content without a subscription or continual internet access. Ebooks can be downloaded to a variety of devices and can be read anywhere. These ebooks summarize the status of individual infectious diseases, drugs, vaccines and pathogens, in every country of the world.

To learn more about GIDEON online, visit www.gideononline.com and follow our blog at www.gideononline.com/blog. For the latest list of GIDEON ebooks, visit www.gideononline.com/ebooks