Porcine Anthrax

JUNE 2015

Cause	*Bacillus anthracis* bacteria
Risk of Exposure in Illinois	Rare
Risk of Transmission to Exposed People	High
Mode of Transmission	Ingestion or inhalation of spores; handling contaminated carcass
Incubation Period	Human: Cutaneous form: 3-10 days Inhalation form: 1-5 days Gastrointestinal form: 2-5 days Animal: 3-7 days with a range of 1-20 days
Clinical Signs-Human	***Cutaneous form*** accounts for most human cases-red, raised lesion; blister ***Pulmonary form***- fever; vague sense of ill-being; muscle pain; cough; respiratory distress; sweating; shock; death ***Gastrointestinal form***- fever; vomiting; bloody diarrhea; general ill-being
Clinical Signs-Animal	***Pharyngeal***- cervical edema; dyspnea; depression; inappetence; vomiting; asymptomatic carriers possible; *death ***Intestinal form*** – inappetence, bloody diarrhea; lethargy; vomiting; asymptomatic carriers possible; *sudden death ***Septicemic form-*** sudden death *Failure to achieve rigor mortis after death
Control and Prevention	Vaccinate livestock in endemic areas; vaccinate individuals in high risk occupations; deep burial/burn infected carcass
Comments	Reportable disease in Illinois; if anthrax is suspected, do ***NOT*** perform a necropsy; potential bioterrorist agent
Additional Information	http://www.cfsph.iastate.edu/Factsheets/pdfs/anthrax.pdf http://emergency.cdc.gov/agent/anthrax/index.asp

Porcine Bordetella

JUNE 2015

Cause	*Bordetella* spp. bacteria
Risk of Exposure in Illinois	Unknown
Risk of Transmission to Exposed People	Unknown
Mode of Transmission	Aerosol or direct contact with infected droplets
Incubation Period	Human: Unknown Animal: 3-10 days
Clinical Signs-Human	Pertussis-like disease in immunocompromised patients; many cases asymptomatic
Clinical Signs-Animal	Respiratory disease; primarily commensal organism of respiratory tract
Control and Prevention	Good personal hygiene
Comments	Person to person transmission has been observed.
Additional Information	http://www.vetmed.wisc.edu/pbs/zoonoses/Bordetella/bordetellaindex.html

Porcine Brucellosis

JUNE 2015

Cause	*Brucella* spp. bacteria
Risk of Exposure in Illinois	Low (Illinois is currently Brucellosis free)
Risk of Transmission to Exposed People	High
Mode of Transmission	Contact with infected animals especially aborted fetuses, uterine fluids or membranes and urine. Accidental injection with vaccine strain; inhalation or ingestion; contact with objects capable of harboring bacteria
Incubation Period	Human: 1 week- several months after infection Animal: Variable; 14-21 days average (range from 3-120 days)
Clinical Signs-Human	Fever; headache; chills; generalized weakness; nausea; weight loss; enlarged lymph nodes and spleen. Asymptomatic infections can occur. Symptoms may persist for years either intermittently or continuously.
Clinical Signs-Animal	Abortion at any time during gestation; stillbirths; weak piglets; inflammation of the testis in boars; swollen joints; fertility may be impaired
Control and Prevention	Wear protective clothing around suspect animals; use cautious vaccination techniques; avoid undercooked meat.
Comments	Reportable disease in Illinois; potential bioterrorist agent
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/brucellosis_F.pdf http://www.cdc.gov/brucellosis/

Porcine Campylobacteriosis

JUNE 2015

Cause	*Campylobacter* spp. bacteria
Risk of Exposure in Illinois	High
Risk of Transmission to Exposed People	Moderate
Mode of Transmission	Ingestion (contaminated food/water, fecal-oral); direct contact
Incubation Period	Human: 1-11 days (range of 3-5 days most common) Animal: 3-25 days (although most cases are asymptomatic)
Clinical Signs-Human	***System Form*** (C. fetus)- chills; sweats; fever; cough; weight loss; anorexia; vomiting; diarrhea; late term abortion ***Intestinal Form*** (C. jejuni)- acute diarrhea +/- blood; abdominal pain; vomiting; headache; vague sense of ill-being
Clinical Signs-Animal	Abortion, enteritis and infertility may be seen; asymptomatic carriers are common
Control and Prevention	Dispose of aborted fetuses and placentas promptly; good personal hygiene
Comments	Person to person transmission has been observed.
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/campylobacterosis_F.pdf http://www.cdc.gov/nczved/divisions/dfbmd/diseases/campylobacter/

Porcine Colibacillosis

JUNE 2015

E. COLI

Cause	*E. Coli 0157:H7* bacteria
Risk of Exposure in Illinois	Moderate
Risk of Transmission to Exposed People	Variable
Mode of Transmission	Ingestion (undercooked meat; contaminated water); direct contact less often
Incubation Period	Human: 2-9 days (3-4 days most common) Animal: Uncertain; fecal shedding weeks to months
Clinical Signs-Human	Acute bloody diarrhea; cramps with little or no fever; vomiting (commonly lasts about one week). Occasionally hemolytic uremic syndrome (HUS) which is a combination of symptoms that includes kidney failure, anemia and blood clotting problems. Children <5 yrs. of age, elderly and immunosuppressed individuals are at serious risk.
Clinical Signs-Animal	This organism (0157:H7) generally does not cause disease in animals; may see diarrhea
Control and Prevention	Good personal hygiene; cook meat thoroughly
Comments	Person to person transmission has been observed.
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/ecoli_F.pdf http://www.cdc.gov/ecoli/

Porcine Cryptosporidiosis

JUNE 2015

Cause	*Cryptosporidium* spp. protozoa parasite
Risk of Exposure in Illinois	Unknown
Risk of Transmission to Exposed People	Unknown
Mode of Transmission	Fecal-Oral route; waterborne; airborne; foodborne
Incubation Period	Human: 1-12 days (average is 7 days) Animal: 4-9 days; oocysts shed for up to 10 days
Clinical Signs-Human	Cramping; abdominal pain; profuse watery diarrhea; anorexia; weight loss; vomiting; headache; immunosuppressed patients exhibit more severe illness.
Clinical Signs-Animal	Many infections asymptomatic; symptoms most common in young pigs and not affected by conventional antimicrobial therapy; feces may contain blood and/or mucus; dehydration; loss of body fat
Control and Prevention	Good personal hygiene, avoid contact with piglets with diarrhea; proper fecal waste disposal
Comments	Person to person transmission has been observed.
Additional Information	http://www.cdc.gov/parasites/crypto/ http://www.cfsph.iastate.edu/FastFacts/pdfs/cryptosporidiosis_F.pdf http://coloradodisasterhelp.colostate.edu/prefair/disease/dz/Cryptosporidiosis.html

Porcine Ringworm

JUNE 2015

DERMATOPHYTOSIS

Cause	*Trichophyton* spp.*; Microsporum* spp. fungi
Risk of Exposure in Illinois	Moderate
Risk of Transmission to Exposed People	High
Mode of Transmission	Direct contact with infected animal, or indirect contact with contaminated objects capable of harboring the fungi
Incubation Period	Human: 7-14 days (can last from several days to few weeks) Animal: 2-4 weeks
Clinical Signs-Human	Fungi generally grow in keratinized tissue such as hair, nails and outer layer of skin; mucous membranes not affected. Itching; “ringworm” lesion; hair loss; inflammation
Clinical Signs-Animal	Wrinkled lesion covered by thin, brown easily removed scab or spreading ring of inflammation; adults often asymptomatic
Control and Prevention	Sanitation; good personal hygiene; wear gloves when handling suspect animals or contaminated objects capable of harboring the fungi.
Comments	Person to person transmission has been observed.
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/dermatophytosis_F.pdf http://coloradodisasterhelp.colostate.edu/prefair/disease/dz/Ringworm.html http://www.cdc.gov/fungal/diseases/ringworm/index.html

Porcine Erysipelas

JUNE 2015

DIAMOND SKIN DISEASE

Cause	*Erysipelothrix rhusiopathiae* bacteria
Risk of Exposure in Illinois	Moderate
Risk of Transmission to Exposed People	Unknown
Mode of Transmission	Direct contact through cuts/wounds
Incubation Period	Human: 2-5 days Animal: 2-7 days
Clinical Signs-Human	Skin infection marked by inflammation, redness, and edema
Clinical Signs-Animal	Asymptomatic carriers common. Fever; tender abdomen; off feed; sows may abort; boars may become infertile; diamond shaped skin lesions which can appear pink to dark purple; death
Control and Prevention	Good personal hygiene; PPE; vaccination program
Comments	None
Additional Information	http://www.thepigsite.com/diseaseinfo/41/erysipelas http://coloradodisasterhelp.colostate.edu/prefair/disease/dz/Erysipelas.html http://www.vetmed.wisc.edu/pbs/zoonoses/Erysipelas/erysipelasindex.html

Porcine Leptospirosis

JUNE 2015

Cause	*Leptospira* spp. bacterial spirochete
Risk of Exposure in Illinois	Moderate
Risk of Transmission to Exposed People	High
Mode of Transmission	Ingestion of contaminated water; inhalation; direct contact with urine or through skin lesions; walking barefoot
Incubation Period	Human: 2 days-4 weeks Animal: 3-7 days; swine typically 15-30 days
Clinical Signs-Human	Fever; headache; chills; cough; difficulty breathing; severe muscle pain or tenderness; reddening of the eyes; jaundice; meningitis; acute kidney failure; abortion
Clinical Signs-Animal	Late term abortions; infertility; stillbirths; mummified fetuses; fever; decreased milk production; jaundice Asymptomatic infections are common.
Control and Prevention	Pasture drainage; protect water supply from animal contamination; wear protective clothing.
Comments	Person to person transmission has been observed.
Additional Information	http://www.cdc.gov/leptospirosis/ http://www.cfsph.iastate.edu/Factsheets/pdfs/leptospirosis.pdf http://coloradodisasterhelp.colostate.edu/prefair/disease/dz/Leptospriosis.html http://www.health.state.ny.us/nysdoh/communicable_diseases/en/lepto.htm

Porcine Pasteurellosis

JUNE 2015

Cause	*Pasteurella* spp. bacteria
Risk of Exposure in Illinois	Moderate
Risk of Transmission to Exposed People	Low
Mode of Transmission	Animal bite or scratch, inhalation, non-intact skin contamination from infected material, and ingestion
Incubation Period	Human: Via wound-less than 24 hours (up to 14 days) Animal: Approx. 1-3 weeks after being introduced to stressful situation
Clinical Signs-Human	Local redness; swelling; skin infection and abscess; less commonly chronic pneumonia, meningitis and generalized illness
Clinical Signs-Animal	Symptoms start out vague with slight depression; anorexia; fever; labored breathing and cough may be present; thick nasal discharge; generalized illness
Control and Prevention	Vaccinate livestock; minimize stress; good personal hygiene; avoid bites/scratches
Comments	None
Additional Information	http://faculty.vetmed.ucdavis.edu/Faculty/bbchomel/WHO_Zoonoses/PDF/pigzoo.pdf http://www.bu.edu/buohc/files/2009/07/zoonosis_domestic-table.pdf http://www.phsource.us/PH/ZD/DiseasesTable.htm

Porcine Rabies

JUNE 2015

Cause	Rhabdovirus
Risk of Exposure in Illinois	Low
Risk of Transmission to Exposed People	High
Mode of Transmission	Direct contact with infected saliva into break in skin or mucous membranes; animal bite
Incubation Period	Human: 10 days-3 months (up to years; depends on location of bite/exposure) Animal: 10 days-6 months
Clinical Signs-Human	Headache; fever; general ill-being; abnormal behavior; weakness or paralysis; difficulty swallowing; delirium; convulsions; death
Clinical Signs-Animal	Restlessness; anorexia or increased appetite; any abnormal behavior or neurological signs (ataxia, incoordination, aggression, paralysis, etc); fever; death
Control and Prevention	Wear gloves when handling suspect animals; vaccination program for animals and individuals at high risk
Comments	Reportable disease in Illinois; seek medical attention immediately if exposure is suspected; person to person transmission has been observed.
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/rabies_F.pdf http://www.cdc.gov/rabies/ http://www.health.state.ny.us/nysdoh/communicable_diseases/en/rabies.htm

Porcine Salmonellosis

JUNE 2015

Cause	*Salmonella* spp. bacteria
Risk of Exposure in Illinois	High
Risk of Transmission to Exposed People	Moderate
Mode of Transmission	Ingestion (fecal-oral); contaminated food and water; direct contact
Incubation Period	Human: 12 hours-3 days Animal: Highly variable; often symptoms do not appear until the animal is stressed; common 1-5 days
Clinical Signs-Human	Varies from self-limiting gastroenteritis to generalized illness; vomiting; watery diarrhea; low grade fever; abdominal pain
Clinical Signs-Animal	Generally seen in pigs 3wks-5months of age; rare in suckling pig; anorexia; fever; diarrhea; death; asymptomatic infections common
Control and Prevention	Wash hands after contact with animal feces; wear protective clothing when working with diarrheic piglets; cook meat thoroughly
Comments	Person to person transmission has been observed.
Additional Information	http://www.cfsph.iastate.edu/Factsheets/pdfs/nontyphoidal_salmonellosis.pdf http://www.cdc.gov/salmonella/ http://coloradodisasterhelp.colostate.edu/prefair/disease/dz/Salmonellosis.html

Porcine Sarcosporidiosis

JUNE 2015

PORCINE SARCOCYSTOSIS

Cause	*Sarcocystis* spp. (Formerly known as *Isospora* spp.) Protozoa Parasite
Risk of Exposure in Illinois	Not transmitted from swine to humans except in meat; exposure to feces of definitive hosts is high on livestock farms.
Risk of Transmission to Exposed People	Not transmitted from swine to humans except in meat; exposure to feces of definitive hosts is high on livestock farms.
Mode of Transmission	Ingestion of undercooked meat; fecal-oral transmission from definitive hosts (dogs, cats, wildlife, birds); fly transmission possible
Incubation Period	Human: 3 hours- 18 days Animal: Unknown
Clinical Signs- Human	Asymptomatic to chronic; muscle pain, weakness or swelling; reddening of skin; fever; diarrhea; vomiting; fever; chills
Clinical Signs- Animal	Weight loss or reduced weight gain; difficulty breathing; muscle tremors; abortion; purpura of skin
Control and Prevention	Cook meat thoroughly; wash hands thoroughly; good sanitation and personal hygiene
Comments	Humans infected with S. hominis or S. suihominis can transmit infection to pigs.
Additional Information	http://www.cfsph.iastate.edu/Factsheets/pdfs/sarcocystosis.pdf http://www.cdc.gov/dpdx/sarcocystosis/index.html http://www.michigan.gov/dnr/0,1607,7-153-10370_12150_12220-27272--,00.html

Porcine Streptococcus

JUNE 2015

Cause	*Streptococcus* spp. bacteria
Risk of Exposure in Illinois	Moderate
Risk of Transmission to Exposed People	Rare
Mode of Transmission	Direct contact through cuts and abrasions in skin
Incubation Period	Human: Uncertain; suspect few days Animal: Variable
Clinical Signs-Human	Fever; headache; nausea; vomiting; stiff neck; arthritis; meningitis which may result in some degree of hearing loss
Clinical Signs-Animal	Often carried asymptomatically; depression; fever; anorexia; incoordination; paralysis; meningitis; pneumonia; endocarditis; may have high mortality
Control and Prevention	Identify and treat infected animals; good personal hygiene
Comments	None
Additional Information	http://www.cfsph.iastate.edu/Factsheets/pdfs/streptococcosis.pdf http://www.cfsph.iastate.edu/FastFacts/pdfs/streptococcosis_F.pdf

Porcine Tetanus

JUNE 2015

Cause	*Clostridium tetani* bacteria
Risk of Exposure in Illinois	Low
Risk of Transmission to Exposed People	High if open wounds on skin
Mode of Transmission	Direct contact; penetrating wound
Incubation Period	Human: 8 days (ranges from 3 days-21 days) Animal: Variable (3 days-3 weeks)
Clinical Signs-Human	Headache; muscle stiffness in jaw (lock jaw) followed by stiffness in neck; difficulty swallowing; rigidity of abdominal muscles; spasms; sweating; fever; death
Clinical Signs-Animal	Muscle stiffness; lack of coordination; inability to eat or drink; bloat; death
Control and Prevention	Immunization; appropriate treatment of wounds; wear gloves when working with affected animals
Comments	Tetanus vaccination is recommended for farm workers
Additional Information	http://www.health.state.ny.us/nysdoh/communicable_diseases/en/tetanus.htm http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/tetanus.pdf

Porcine Toxoplasmosis

JUNE 2015 | TOXO

Cause	*Toxoplasma gondii* protozoa parasite
Risk of Exposure in Illinois	Not transmitted from pigs to humans except in meat; exposure to feces of definitive host is high on livestock farms.
Risk of Transmission to exposed people	High
Mode of Transmission	Ingestion of undercooked meat; fecal-oral transmission from cats on farm
Incubation period	Human: 5-23 days Animal: Suspect similar to humans
Clinical Signs-Human	Infection is common but clinical illness is low; flu-like symptoms: fever, headache, weakness; fetal death; congenital abnormalities; encephalitis; immunocompromised patients are at high risk.
Clinical Signs-Animal	Pigs are usually asymptomatic; diarrhea, incoordination, tremors or cough; infection during pregnancy: abortion (although uncommon), premature birth, weak or dead piglets
Control and Prevention	Cook meat thoroughly; good personal hygiene; avoid contact with cat feces, esp. if pregnant.
Comments	Person to person transmission only *in utero*
Additional Information	http://www.cfsph.iastate.edu/FastFacts/pdfs/toxoplasmosis_F.pdf http://www.cdc.gov/toxoplasmosis/

Porcine Trichinosis

JUNE 2015

Cause	*Trichinella* spp. parasite
Risk of Exposure in Illinois	Low
Risk of Transmission to Exposed People	Moderate to High with undercooked meat
Mode of Transmission	Ingestion of raw or undercooked meat
Incubation Period	Human: 5-45 days (average is 10-14 days) Animal: Nearly always asymptomatic except in very heavy infections
Clinical Signs- Human	Severity of disease depends on number of ingested larvae; gastroenteritis; diarrhea; abdominal pain; vomiting; fever; muscle tenderness; profuse sweating; chills; chest pain
Clinical Signs- Animal	Heavy infections- vomiting, diarrhea, weakness, muscle swelling; possible myocarditis
Control and Prevention	Cook meat thoroughly
Comments	Reportable disease in Illinois
Additional Information	http://www.cdc.gov/parasites/trichinellosis/ http://www.health.state.ny.us/nysdoh/communicable_diseases/en/trich.htm

Porcine Yersiniosis

JUNE 2015

Cause	*Yersinia* spp. bacteria
Risk of Exposure in Illinois	Low
Risk of Transmission to Exposed People	High
Mode of Transmission	Ingestion of food or water contaminated by intestinal carriers; an infection of rodents transmitted to humans by bite of infected fleas; direct contact with infected blood or tissues
Incubation Period	Human: 2-8 days Animal: Uncertain
Clinical Signs-Human	Mimics clinical signs similar to appendicitis; fever; abdominal tenderness; anorexia; vomiting; enteritis with diarrhea; respiratory illness
Clinical Signs-Animal	Often inapparent; abortion; inflammation of the epididymis and testis; high mortality
Control and Prevention	Prevent fecal contamination of food and drinking water; good personal hygiene
Comments	Potential bioterrorist agent; Person to person transmission has been observed.
Additional Information	http://www.health.state.ny.us/nysdoh/communicable_diseases/en/yersin.htm http://www.cdc.gov/nczved/divisions/dfbmd/diseases/yersinia/