Infectious Disease Crossword Puzzle Answer Key

By Maria A. Reed, CCA, CPC, CPC-H, medical coder, Las Vegas Paiute Tribe Health & Human Services and University Health System (University of Nevada School of Medicine)
2. TRICHOMEONIASIS—Most common non-viral sexually transmitted disease in the world caused by the parasite (protozoan) *Trichomonas vaginalis*; more common in women; men usually don't manifest s/s but women can have greenish-yellow frothy vaginal discharge, dysuria, vaginal odor, itching & irritation; can cause premature rupture of membranes in pregnant women; lab tests may include *wet mount prep* or *pap smear* (women); both partners should be treated

4. WESTNILE—Infection caused by a virus transmitted by mosquitoes; majority don't have any s/s, or may have minor s/s like fever, head/body aches, fatigue; people who become infected develop life-threatening illness like meningitis or encephalitis; can be spread by blood transfusions, organ transplants, during pregnancy or through breast milk; no specific treatment or vaccine, mosquito bite prevention is best recommended measure

7. AMEBIASIS—“Amebic dysentery”; infection of large intestine (sometimes liver & other organs) caused by the parasite (protozoan) *Entamoeba histolytica*; symptoms may include diarrhea, cramping abdominal pain, & fever; spread through food or water contaminated with stools, or from person-person through contact with mouth or rectal area of an infected person; worldwide condition but most common in tropical areas with crowded living conditions & poor sanitation

9. EBOLA—Form of hemorrhagic fever; rare & deadly disease caused by infection with the virus family *Filoviridae/genus Ebola virus*; cause disease in humans & nonhumans (bats & primates); s/s (appear from 2-21 days after exposure) include fever, severe headache, weakness, diarrhea, vomiting, abdominal & muscle pain, hemorrhage (bleeding/bruising); spread through direct contact (through broken skin or mucous membrane) with blood or body fluids (urine, saliva, sweat, feces, vomitus, breast milk, or semen), objects (contaminated needles & syringes), or through infected bats/primates; no FDA-approved vaccine or drug yet available at present, experimental vaccines/drugs still under development; treatment is symptomatic

11. CANDIDIASIS—Most common type of yeast infection caused by overgrowth of a type of fungus (usually the *Candida albicans*) that can affect the mouth (i.e. *thrush*), throat, genitals (i.e. *vulvovaginal*), skin (i.e. *diaper rash*), or nails; normally found in small amounts in the body; treatment with antifungal agents

13. RABIES—Caused by a deadly virus spread from saliva of infected animals usually through bite or broken skin; s/s may include fever, headache, nausea & vomiting, drooling, muscle spasms, dysphagia, hydrophobia, confusion, hallucination, partial paralysis; fatal if untreated; treatment includes immune globulin (HRIG) on the day of the bite followed by series of preventive vaccine given over a 14-day period (if there is risk of the disease)

15. TYPHOID FEVER—“Enteric fever”; life-threatening multi-system illness, caused by the bacteria *Salmonella typhi*, transmitted through ingesting food/drink contaminated with infected person's feces or urine; classic presentation includes fever, malaise, diffuse abdominal pain & constipation, & some develop rash (“rose spots”); treatment with antibiotics & fluid & electrolytes; up to 75%, cases acquired while traveling internationally, thus vaccine is recommended

16. DIPHTHERIA—Bacterial infection caused by *Corynebacterium diphtheria* usually affecting mucous membranes of the nose & throat; hallmark sign is “pseudomembrane” (gray thick sheet covering the throat & tonsils); other s/s include sore throat, lymphadenopathy, fever & chills, malaise, nasal discharge; spread through airborne droplets & contaminated items; treatment with antibiotics & antitoxin; *DPT* vaccination can help in prevention

19. BOTULISM—Rare but potentially fatal disease caused by bacteria *Clostridium botulinum* (same bacteria used to produce *Botox*, a pharmaceutical product predominantly injected for clinical & cosmetic use); may enter body through wounds or ingestion of improperly canned or preserved food; forms are: *Infant* (most common, grows in baby's GIT & mostly caused by eating honey or corn syrup), *Foodborne or Wound* (produce toxin causing a dangerous infection); s/s (usually appear 8-36 hours after ingestion) include abdominal cramps, nausea & vomiting, diplopia, dyspnea, dysphagia, dysphonia, weakness & paralysis but **NO fever**; *botulinum* antitoxin helps fight bacteria & reduce complications; toxins produced are one of the most lethal substances known

20. POLIOMYELITIS—Highly infectious viral disease, mainly affecting children; transmitted through air droplets, contact with the infected person's stool, or (less frequently) through contaminated food & water; s/s may include fever, fatigue, headache, vomiting, stiff neck, pain in limbs, or permanent
paralysis (in few cases); no cure but can only be prevented by immunization

22. **ASCARIASIS**—Most common intestinal helminthic infection worldwide caused by the parasitic roundworm *Ascaris lumbricoides*; acquired by ingesting food/drink contaminated by the parasite eggs; most infected people have no symptoms but in moderate/heavy infestations show symptoms depending on the part of the body affected (i.e. cough, vomiting, fever); complication may include obstruction/blockage of adult worms (in intestine, bile duct or appendix), pneumonia (lungs), or malnutrition; diagnostic tests include stool ova/parasite exam, eosinophil blood count, or abdominal x-ray

24. **AVIANFLU**—"Bird flu", "H5N1"; infection in birds that can change to spread in humans; risk is higher among poultry handlers, travel to areas where virus is present, touching or eating (raw) poultry products of infected birds; s/s include cough, diarrhea, fever, headache, malaise, myalgia, sore throat, runny nose, breathing problems; treatment with antiviral agents, prevention with H5N1 vaccines in cases of outbreak

25. **TETANUS**—"Lockjaw"; serious illness caused by Clostridium bacteria (live in soil, saliva, dust & manure); can enter the body through a deep cut or through a burn; common s/s include: spasms/stiffness of jaw & neck or abdominal muscles, dysphagia, fever, increased BP & HR; complications may include disability or death; vaccine help in prevention, given as part of routine childhood immunization, adults get booster shots every 10 years

26. **SMALLPOX**—Caused by the virus Variola (major & minor forms); can be used as biologic warfare agent; s/s include high fever, fatigue, headache, backache, rash with flat red sores; contamination by direct contact or indirect contact (airborne, contaminated items); totally eradicated in the world in 1979 (WHO) but few have been kept for research purposes; no cure, treatment is symptomatic

---

**Down**

1. **SYPHILIS**—Highly contagious disease caused by the bacteria Treponema pallidum; spread primarily by sexual contact; pregnant women can spread it to their babies (congenital); 3 distinct stages: primary/early (mouth or genital sores "chancre"), secondary (rash, lymphadenopathy, fever, weight loss), latent (inactive/no sx), & tertiary/late (affects other organs- i.e. brain/heart/nerves); treatment with penicillin; Jarisch-Herxheimer reaction maybe experienced during 1st day of treatment (characterized by fever, chills, nausea, pain & headache) but doesn't last >1 day

3. **SHIGELLOSIS**—Intestinal infection caused by the bacteria Shigella; can be passed through direct contact with bacteria in stool or in contaminated food or by drinking or swimming in contaminated water; s/s include diarrhea (often with blood or mucus), abdominal cramps, & fever; complications may include dehydration, seizures, rectal prolapse, reactive arthritis, or toxic megacolon

5. **GONORRHEA**—"Clap or drip"; very common infectious disease caused by the bacteria Neisseria gonorrhoea transmitted most often through sexual contact with infected persons or by contact with infected bodily fluids (mother to her newborn during childbirth); s/s may include greenish yellow/white discharge from vagina/penis, burning during urination, sore throat, fever, rash arthritis-like symptoms; complications may include PID or ectopic pregnancy (women), infertility, meningitis; treatment with antibiotics & sexual partners should also be tested & treated; prevention through safe sex

6. **CHOLERA**—Acute diarrheal infection caused by the bacteria Vibrio cholera acquired through ingestion of contaminated food or water; incubation period (2hrs-5days); treatment with oral rehydration (successful in 80% of cases); safe water & good sanitation help decrease disease transmission

8. **HANDFOOTMOUTHDISEASE**—Mild, contagious viral infection caused by Coxsackievirus A16, characterized by mouth sores & rash on hands & feet; other s/s include fever, sore throat, malaise, loss of appetite, irritability; common in young children; spread from person-person through air droplets or contact with stools or blister-fluid from infected persons; treatment is symptomatic; complete recovery occurs in 5-7 days

10. **MENINGOCOCCEMIA**—Severe infection of the lining of the brain & spinal cord (meningitis) & bloodstream (bacteremia or septicemia); caused by bacteria Neisseria menigitides; spread through respiratory & throat secretions; s/s include sudden onset of fever, headache, stiff neck, nausea & vomiting, rash, increase light sensitivity, & confusion; treatment with antibiotics
11. **CHICKENPOX**—"Varicella"; common childhood viral infection caused by the virus *Varicella-zoster*; s/s include an itchy, blister-like rash (has 3 stages/phases: papules to vesicles to scab lesions), fever, loss of appetite, headache, malaise; highly contagious to people who haven't had the disease nor been vaccinated to it; treatment is supportive & *Varivax* vaccine helps decrease its incidence

12. **MALARIA**—"Biduoterian fever, Blackwater fever, Plasmodium"; caused by a parasite (sporozoites/merozoites) passed from one human to another by bite of infected Anopheles mosquitoes; also transmitted through blood transfusions, or from mother to unborn child (congenital); s/s may include fever & chills (paroxysms), vomiting, jaundice, bloody stools, anemia, convulsion or coma; typically diagnosed by microscopic exam of blood or test (i.e. PCR); treatment by combination of drugs (i.e. chloroquine) including an artemisinin; reduce risk by using insecticides & repellants

14. **LEPROSY**—"Hansen's disease"; chronic infection caused by the bacteria *Mycobacterium leprae*; not very contagious but with long incubation period; cardinal signs include hypoesthesia, skin lesions, & peripheral neuropathy; subtypes are tuberculoid & lepromatous; diagnosis by Lepromin test, biopsy of skin lesion & examination of skin scrapings

17. **HERPESZOSTER**—"Shingles"; painful, blistering skin rash (usually around the area from spine to the anterior chest or abdomen, or may involve face/mouth/eyes/ears); caused by the virus *Varicella-zoster*; after infection w/ chicken pox, virus remains dormant in certain nerves for years but becomes active again when immune system is lowered; other s/s include fever & chills, headache, lymphadenopathy, arthralgia; complications can include postherpetic neuralgia, visual loss, skin infection or neurological problems; prevention by vaccine

18. **RUBEOLA**—"Hard measles"; acute highly contagious viral disease; s/s include fever, generalized rash, cough, coryza, conjunctivitis; complications may include pneumonia, encephalitis, & even death; prevention through vaccination; had cases of the outbreak in the U.S. recently

21. **TUBERCULOSIS**—Caused by the bacteria *Mycobacterium tuberculosis*, usually attack the lungs but can also other organs (i.e. kidney, spine, brain); spread through airborne; use Mantoux tuberculin skin test as screening test; BCG (Bacillus Calmette-Guerin) only available vaccine

23. **RUBELLA**—"German or 3-day measles"; very contagious illness caused by the virus *Rubella*, usually mild but can cause more serious problems (rare cases); s/s may include rash (starting from the face & spreading to the body), fever, arthralgia, swollen glands; can cause miscarriage or birth defects in pregnant women; transmitted by airborne, & through pregnancy; no treatment but combined (MMR) vaccine can help prevent it; hyperimmunglobulin (given in pregnancy) to prevent development of Congenital Rubella Syndrome