



“First...  
I Will Build Roads!”



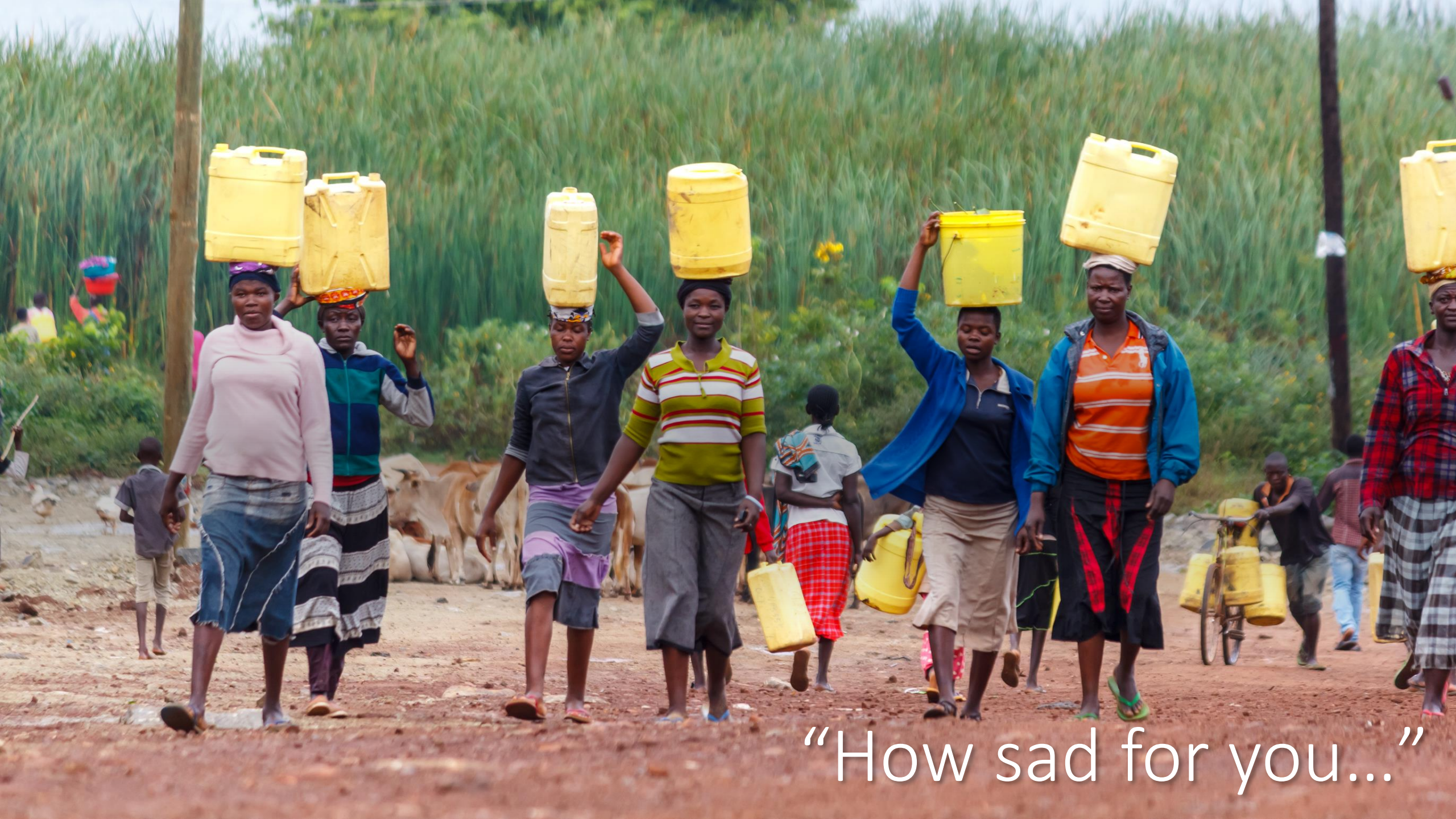
Sharing God's Love in Haiti and Latin America

**2022 PTPA NATIONAL CONFERENCE**  
August 26 – 28, 2022

Presented by: Chief Dr. Chuuuks



**Healing is Mutual...Compassion is Communal**



“How sad for you...”



# MEDICAL E**B**P LORER

The Timmy Foundation

*We were not all born to be doctors and nurses,  
but we were all born to be healers.*

— Charles J. Dietzen, MD

MEDICAL  
E**B**P LORER

The Timmy Foundation

## THE BIG IDEA

Young people can be inspired to change the world through medical science investigation, international case studies, and service projects.

*“We can do no great things, only small things with great love.”*

— Mother Teresa

## ACKNOWLEDGMENTS

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**The Timmy Foundation** is a 501(c)(3) nonprofit organization based in Indianapolis and dedicated to supporting health care and education initiatives in developing countries. Charles J. Dietzen, M.D., founded the organization in 1997. Dr. Chuck, as he is called, named the foundation after his brother Timmy, who lived only four days. Because of volunteer support and donated items, 97 percent of charitable contributions to the foundation go to its programs. There are only three full-time employees at the foundation because of substantial help from its volunteers. Numerous volunteer opportunities for all ages are available. Contact **The Timmy Foundation** World Headquarters at 22 East 22nd Street, Indianapolis, IN 46202; (317) 920-1822; fax (317) 920-1821; [www.timmyfoundation.org](http://www.timmyfoundation.org)



GLOSSARY OF MEDICAL TERMINOLOGY

**Abdomen:** The part of the body between the chest and the pelvis but excluding the back; also called *belly*.

**Acute:** Characterized by sharpness or severity; having a sudden onset, sharp rise, and short course.

**Allergy:** Exaggerated or pathological reaction (such as sneezing, respiratory distress, itching, or skin rashes) to substances, situations, or physical states that are without comparable effect on the average individual.

**Auscultate:** To listen through a stethoscope.

**Bilateral:** Relating to or affecting both the right and left sides of the body or the right and left members of paired organs.

**Bilirubin:** A reddish-yellow pigment that occurs especially in bile and blood and causes jaundice if accumulated in excess.

**Bladder (Urinary):** An expandable membranous sac that serves for the temporary retention of urine.

**Blood pressure:** Pressure exerted by the blood on the walls of the blood vessels and especially the arteries, usually measured on the brachial artery by means of a sphygmomanometer, and expressed in millimeters of mercury.

**Bounding:** Strong and forceful, as in a bounding pulse.

**Bowel sounds:** Abdominal sounds, positive or abnormal, made by the movement of the intestines as they push food through.

**Breech presentation:** Presentation of the fetus in which the buttocks or legs are the first parts to appear at the uterine cervix.

**Bruit:** Any of several generally abnormal sounds heard on auscultation. (Turbulent blood flow in a major vessel.)

**Cachectic:** General physical wasting associated with malnutrition, usually from chronic disease.

**Caries:** Tooth decay or cavities.

**Cerebrovascular accident (CVA):** Also called stroke the sudden diminution or loss of consciousness, sensation, and voluntary motion caused by rupture or obstruction (such as by a clot) of a blood vessel in the brain.

**Clear to auscultation (CTA):** No unusual sounds heard through a stethoscope. Unobstructed breath sounds.

**Clinic:** An institution connected with a hospital or medical school where diagnosis and treatment are made available to outpatients.

**Clinical:** Involving or concerned with the direct observation and treatment of living patients.

**Clubbing:** Showing a bulbous enlargement of the tips of the fingers or toes, with convex overhanging nails.

**Congenital:** Having a particular trait from birth.

**Contracture:** A permanent shortening producing deformity or distortion, such as of muscle, tendon, or scar tissue.

**Contralateral:** Occurring on, affecting, or acting in conjunction with a part on the opposite side of the body.

**Costal:** Relating to, involving, or situated near a rib.

**Cranial nerve:** Any of the 12 paired nerves that arise from the lower surface of the brain and pass through openings in the skull to the periphery of the body.

**Cyanosis:** A bluish or purplish discoloration of the skin due to deficient oxygenation of the blood.

**Dentition:** The development and cutting of teeth; the character of a set of teeth, especially with regard to their number, kind, and arrangement.

**Disability:** A physical or mental impairment.

**Distention:** Unusual or abnormal swelling.

**Distress:** Pain or suffering affecting the body, a bodily part, or the mind.

**Dorsiflex:** To flex in a dorsal, or upward, direction.

**Edema:** An abnormal accumulation of watery fluid in connective tissue or a body cavity.

**Epidemiology:** The sum of the factors controlling the presence or absence of a disease or pathogen.

**Erythema:** Abnormal redness of the skin due to capillary congestion, such as in inflammation.

**Etiology:** The cause or causes of a disease or abnormal condition.

**Excoriation:** A raw, irritated lesion; an abraded or chafed area of the skin, often from scratching.



**Extraocular:** Any of six small voluntary muscles that pass between the eyeball and the orbit and control the movement of the eyeball in relation to the orbit.

**Fever:** A rise of body temperature above the normal; an abnormal bodily state characterized by increased production of heat, accelerated heart action and pulse, and systemic debility with weakness, loss of appetite, and thirst.

**Flaccid:** Not firm or stiff.

**Flex:** To move muscles so as to cause flexion of the joints, such as of the knees; to move or tense a muscle or muscle group by contraction.

**Fluctuance:** a wave-like motion that is felt when a fluid-containing structure is palpated.

**Gastrocnemius:** the largest muscle of the calf of the leg that runs from the femur to the Achilles tendon.

**Goiter:** An enlargement of the thyroid gland that is commonly visible as a swelling of the anterior part of the neck.

**Hamstring:** Either of two groups of tendons that run from the upper part of the back of the knee to the back of the thigh.

**Heart disease:** An abnormal organic condition of the heart or of the heart and circulation.

**Heart rate:** A measure of cardiac activity usually expressed as the number of beats per minute.

**Hemiparesis:** Muscular weakness or partial paralysis restricted to one side of the body.

**Human Immunodeficiency Virus (HIV):** Any of several retroviruses that infect and destroy helper T cells of the immune system, causing the marked reduction in their numbers that is diagnostic of AIDS.

**Holosystolic murmur:** An atypical sound heard throughout the entire contraction of the heart ventricles.

**Homans' sign:** Pain in the calf of the leg, upon dorsiflexion of the foot with the leg extended, that is diagnostic of clotting in the deep veins of the area.

**Hyperpigmented:** Having excessive coloration, as with inflammation.

**Icteric:** Affected with jaundice, a yellowish pigmentation of the skin, tissues, and certain body fluids caused by bile pigment deposits and which follows interference with normal production and discharge of bile (as in certain liver diseases) or excessive breakdown of red blood cells (as after internal hemorrhage or in various hemolytic states).

**Immunization:** Treatment by vaccination.

**Infection:** Contamination by pathogen or disease.

**Jugular vein:** Veins of each side of the neck.

**Lesion:** An abnormal change in structure of an organ or part due to injury or disease.

**Liver:** The largest gland in the human body, which secretes bile and causes important changes in many of the substances contained in the blood that passes through it.

**Lymph node:** Any of the rounded masses of lymphoid tissue that are surrounded by a capsule of connective tissue, are distributed along the lymphatic vessels, and contain numerous lymphocytes which filter the flow of lymph passing through the node

**Lymphadenopathy:** Abnormal enlargement of the lymph nodes.

**Lymphatic:** Relating to, or produced by lymph, lymphoid tissue, or lymphocytes.

**Malaria:** An acute or chronic disease caused by the presence of sporozoan parasites of the genus *Plasmodium* in the red blood cells, transmitted from an infected to an uninfected individual by the bite of an Anopheline mosquito, and characterized by periodic attacks of chills and fever that coincide with mass destruction of blood cells and the release of toxic substances by the parasite at the end of each reproductive cycle.

**Malnourished:** Supplied with less than the minimum amount of the foods essential for sound health and growth.

**Margin:** The outside limit or edge of something, as in the right costal margin, the outside edge of the rib cage on the right side.

**Mass:** An aggregation of matter.

**Midwife:** A person who assists women in childbirth.

**Muscle stretch reflex:** Contraction in response to stretching within a muscle, often tested by tapping on a tendon with a small rubber mallet.

**Negative bilaterally:** Not occurring on either side.



**Neurological:** Relating to the nervous system.

**Normocephalic:** A normal head.

**Organomegaly:** Abnormal enlargement of the internal organs of the body.

**Palpate:** To examine by touch.

**Paravertebral:** Occurring adjacent to the spinal column.

**Penicillin:** An antibacterial medication made from the molds of the genus *Penicillium*.

**Percussion:** The act or technique of tapping the surface of a body part to learn the condition of the parts beneath by the resulting sound.

**Perfusion:** The pumping of a fluid through an organ or tissue.

**Pitting edema:** Edema that results in a depression in the tissue.

**Plantar:** Relating to the sole of the foot.

**Potable:** Safe to drink.

**Pulse:** The palpable beat resulting from a regularly recurrent wave of distension in arteries that results from the progress through an artery of blood injected into the arterial system at each contraction of the ventricles of the heart; measured in beats per minute.

**Purulent:** Containing pus.

**Rales:** An abnormal sound heard accompanying the normal respiratory sounds on auscultation of the chest.

**Rehabilitation:** The restoration of a sick or disabled person by therapeutic measures and reeducation to participation in the activities of a normal life within the limitations of the person's disability.

**Relapse:** A recurrence of symptoms of a disease after a period of improvement.

**Respiratory rate:** The speed at which gases move into and out of the lungs, measured per minute.

**Retraction:** Backward or inward movement of skin or an organ.

**Rhinorrhea:** Excessive mucous secretion from the nose.

**Scoliosis:** Lateral curvature of the spine.

**Sickle-cell anemia:** A chronic hereditary anemia that occurs in some populations and can cause organ failure.

**Spastic gait:** A manner of walking characterized by spasms of paralyzed muscles.

**Sputum:** Mucus or other bacterial products produced in diseases of the lungs.

**Sternal:** Relating to the breastbone.

**Suprapubic:** Above the pubic bone.

**System:** A group of body organs or structures that together perform one or more vital functions.

**Systolic ejection murmur:** An atypical sound of the heart indicating a stenosis, or narrowing. The murmur is caused by turbulent forward blood flow and is graded by volume, 1/6 to 6/6, with 1/6 having the faintest sound.

**Tachycardia:** Rapid heart rate. Greater than 100 beats per minute in an adult or older child.

**Temperature:** The degree of heat that is natural to a human body; a normal oral temperature is about 98.6°F.

**Thrill:** An abnormal fine tremor or vibration in the respiratory or circulatory systems felt on palpation, often associated with a heart murmur.

**Trauma:** An injury, such as a wound, to living tissue caused by an outside agent.

**Triage:** A system of classifying sick or injured patients according to the severity of their conditions.

**Tuberculosis:** Also called TB, a usually chronic disease caused by a bacterium of the genus *Mycobacterium*, usually communicated by inhalation of the airborne causative agent. It especially affects the lungs but may spread to other parts of the body, and is characterized by fever, cough, difficulty in breathing, and other symptoms.

**Upper respiratory infection (URI):** Contamination by bacteria or pathogen of the part of the respiratory system including the nose, nasal passages, and nasopharynx.

**Urinary tract infection (UTI):** Contamination by bacteria or pathogen of the tract through which urine passes and which consists of the kidney, the ureters, the bladder, and the urethra.

**Vaccination:** The introduction into humans or domestic animals of microorganisms that have previously been treated to make them harmless for the purpose of inducing the development of immunity.

**Vertebral:** Relating to the spinal column.

**Vitals:** Short for "vital signs," the pulse rate, respiratory rate, body temperature, and blood pressure of a person.



## TEACHER RESOURCES

This Medical Explorer mirrors real medical investigations. In medical and other science investigations, the paths chosen often lead to new topics and unexpected discoveries. Encourage your students to ask questions, try new ideas, and work with others. Students will be challenged by the new material and topics that they uncover in researching information about the case studies. Sorting through it all may be difficult for some students and teachers. **The Timmy Foundation** is an excellent place to start to find medical resources for your classroom. The foundation will be able to provide information, contacts for speakers, and much more. The following is a list of outstanding free online resources and publications that can be used with this project.

### MEDICAL EXPLORER THE TIMMY FOUNDATION

#### Topics of Interest

- Body Systems
- Cells
- Immunization and vaccination
- Hygiene
- Diet and nutrition
- Genetics (human genome)
- Cultural and languages
- Medical ethnology
- Medical abbreviations and terminology

### ONLINE RESOURCES

- CalTech Precollege Science Initiative: Human Body Under Attack <http://www.capsi.caltech.edu/>
- Centers for Disease Control and Prevention <http://www.cdc.gov/>
- Children's Museum of Indianapolis — Agricultural Biotechnology Unit of Study, Genetics and Cell Biology <http://www.childrensmuseum.org/teachers/unitsofstudy/biotechnology/index.htm>
- Global Polio Eradication <http://www.polioeradication.org>
- Indiana AHEC Program — Student Resources on Health Careers <http://www.ahec.iupui.edu/studentresources/default.htm>
- MedLine Plus: Health Topics <http://www.nlm.nih.gov/medlineplus/healthtopics.html>
- MedLine Plus: Medical Encyclopedia <http://www.nlm.nih.gov/medlineplus/encyclopedia.html>
- MedLine Plus: Medical Dictionary <http://www.nlm.nih.gov/medlineplus/mpldictionary.html>
- Museum of Science & Industry: Live ... From the Heart [http://www.msichicago.org/educ\\_jiveheart.html](http://www.msichicago.org/educ_jiveheart.html)
- National Academies Press [www.nap.edu](http://www.nap.edu)
- National Institutes of Health Curriculum Supplements — High School <http://science.education.nih.gov/Customers.nsf/highschool.htm>

- National Institutes of Health Curriculum Supplements — Middle School <http://science.education.nih.gov/Customers.nsf/middleschool.htm>

- National Heart, Lung, and Blood Institute — Diseases and Conditions Index <http://www.nhlbi.nih.gov/health/dci/index.html>

- Science, Medicine, and Animals: Teacher's Guide <http://orsted.nap.edu/books/0309101174/html>

- **The Timmy Foundation** <http://www.timmyfoundation.org>

- United States Department of State — International Travel Information [http://travel.state.gov/travel/cis\\_pa\\_tw/cis\\_pa\\_tw\\_1168.html](http://travel.state.gov/travel/cis_pa_tw/cis_pa_tw_1168.html)

- WISE: Web-Based Inquiry Science Environment <http://wise.berkeley.edu/>

- World Health Organization <http://www.who.int/en/>



### STUDENT CASE STUDY NARRATIVE — JAMISON

Jamison is a 10-year-old Haitian boy who came to the clinic at Haitian Academy. He reports that he had injured his leg in a “tap-tap” bus accident 2½ years earlier. He had been unable to walk on the injured leg for several months and noticed that the skin broke open where he presumed he had fractured his leg. Since that time he has had a lot of purulent drainage from the wound. He spikes fevers on occasion and at times is delirious with these fevers. He reports that he is very ill during these times but usually recovers. He is now able to bear weight on the leg but it is significantly deformed.

#### HISTORY

**Allergies:** No known allergies.

**Surgeries:** No history of surgery.

**Medical:** Jamison reports that he has had no immunizations. He does have a fever on occasion but reports no headaches.

**Medications:** none

#### FAMILY MEDICAL HISTORY

None provided.

#### SOCIAL HISTORY

Jamison lives in a rural area. His family members are subsistence farmers. They live in the lowlands of Haiti. Jamison had worked in the past as a sugar cane cutter. He reports they have no water within the home. They typically buy filtered water. He has limited ability to bathe.

#### REVIEW OF SYSTEMS (ROS)

Jamison has never attended school. He had no developmental problems as a child. He has been healthy other than the leg.

#### PHYSICAL EXAM

**Vitals:** Heart rate – 120

Respiratory rate – 24

Blood pressure – 105/70

Temperature – 99.2°F

**General:** Jamison is cachectic.

He presently is in no acute distress.

He answers questions appropriately.

**Skin and Lymphatics:** Skin is clear with the exception of a large lesion over the right tibia. There presently is no drainage of pus. He has swollen lymph nodes in the right groin area and some in the left.

**HEENT (Head, eyes, ears, nose, throat):** Normocephalic without lesions.

Eyes — pupils equally round and reactive to light with extraocular muscles intact.

Ears, nose, throat — clear. He has multiple dental caries.

**Neck:** Supple without mass or goiter. No lymphadenopathy or jugular vein distention. No bruit auscultated.

**Chest:** Symmetrical without retraction. Clear to auscultation bilaterally.

**Cardiovascular (CV):** Tachycardia without murmur or gallop. Pulses are full and bounding bilaterally.

**Abdomen:** Soft, nontender, with positive bowel sounds. No mass or organomegaly appreciated.

**Back and Extremities:** No vertebral or paravertebral tenderness on palpation. No costovertebral angle tenderness on percussion. No clubbing, cyanosis, or

edema of extremities with the exception of the right foot, which has a moderate amount of swelling at this time. He has a negative Homans’ sign bilaterally. He reports decreased sensation in the right foot. Presently the leg is not tender. There is no significant erythema.

**Neurological:** Jamison is alert and oriented. Cranial nerve examination revealed no abnormality. Muscle stretch reflexes were normal with the exception of the right lower extremity. He has limited muscle stretch reflex at the knee. He reports decreased sensation over the foot at this time, particularly between the large toe and second toe. He has limited ability to plantar flex and dorsiflex the foot. He has difficulty also with extension of the right knee. Otherwise, Jamison has normal strength and sensation throughout.



### STUDENT CASE STUDY PHYSICAL EXAM TRANSLATION FORM — JAMISON

Write in your own words an explanation of what is covered in the Physical Exam.  
Use this form to write your Assessment and Treatment plan for the case study.

Person Completing Form: \_\_\_\_\_ Date: \_\_\_\_\_

School: \_\_\_\_\_ Grade: \_\_\_\_\_

Patient’s Name: \_\_\_\_\_

Patient’s Residence: \_\_\_\_\_

**PHYSICAL EXAMINATION** (use more space if needed)

General: \_\_\_\_\_

Skin and lymphatics: \_\_\_\_\_

Head, eyes, ears, nose, and throat: \_\_\_\_\_

Neck: \_\_\_\_\_

Chest: \_\_\_\_\_

Cardiovascular: \_\_\_\_\_

Abdomen: \_\_\_\_\_

Back and extremities: \_\_\_\_\_

Neurological: \_\_\_\_\_

**ASSESSMENT**

“Jamison is a \_\_\_\_\_-year-old boy who has \_\_\_\_\_.”

**TREATMENT PLAN** (use more space if needed)

Education: \_\_\_\_\_

Medicine: \_\_\_\_\_

Equipment: \_\_\_\_\_

Surgery: \_\_\_\_\_

Nutrition: \_\_\_\_\_

Socioeconomic issues: \_\_\_\_\_



## TEACHER KEY PHYSICAL EXAM TRANSLATION FORM — JAMISON

Students write in their own words an explanation of what is covered in the Physical Exam.  
Students will use this form to write their Assessment and Treatment Plan for the case study.

Person Completing Form: **Teacher Key** ● Patient's Name: **Jamison** ● Patient's Residence: **Haiti**

### PHYSICAL EXAMINATION

**Vitals:** Increased heart rate.

**General:** Jamison is a 10-year-old Haitian boy who came to the clinic at Haitian Academy. He reports that he had injured his leg in a "tap-tap" bus accident 2½ years earlier. He had been unable to walk on the injured leg for several months and noticed that the skin broke open where he presumed he had fractured his leg. Since that time he has had a lot of purulent drainage from the wound. He spikes fevers on occasion and at times is delirious with these fevers. He reports that he is very ill during these times but usually recovers. He is now able to bear weight on the leg but it is significantly deformed. He is also cachectic. *This term indicates he is very slim, almost appearing wasted away. This can result from either malnutrition, chronic illness (2½ year infection), or a combination of the two.*

**Skin/Lymphatics:** Skin is clear with the exception of a large lesion over the right tibia. There presently is no drainage of pus. He has swollen lymph nodes in the right groin area and some in the left. *The lesion over the right tibia is the open infection. There is likely cellulitis that can be seen, which is infection of the skin. Pus is a yellowish-green fluid that drains as the immune system kills off the bacteria and breaks down dead tissue — this is currently not happening. The swollen lymph nodes result from fighting the bacteria. Lymph nodes near sites of infection swell and help eliminate the bacteria. Enlarged nodes in the groin area make sense because the lymphatics from the lower leg drain to this area.*

**HEENT:** Normocephalic without lesions.

**Eyes** — pupils equally round and reactive to light with extraocular muscles intact.  
**Ears, nose, throat** — clear. He has multiple dental caries — *dental cavities. His eyes, ears, nose and throat are normal.*

**Neck:** Supple without mass or goiter. No lymphadenopathy or jugular vein distention. No bruit auscultated. *His neck is normal.*

**Chest:** Symmetrical without retraction. Clear to auscultation bilaterally. *Clear to auscultation means nothing abnormal was heard listening through the stethoscope. No retractions means that there was no evidence of the muscles working extra hard around the rib cage to pull air in.*

**Cardiovascular:** Tachycardia without murmur or gallop. Pulses are full and bounding bilaterally. *Tachycardia indicates that the heart is beating faster than normal (above 100 beats per minute). This can result from numerous states. Jamison may have a fast heartbeat from his fever or dehydration (which can be caused by fever). No murmur or gallop means that no extra heart sounds were heard with the stethoscope.*

**Abdomen:** Soft, nontender, with positive bowel sounds. No mass or organomegaly appreciated. *Abdomen is normal.*

**Back/Extremities:** No vertebral or paravertebral tenderness on palpation. No costovertebral angle tenderness on percussion. No clubbing, cyanosis, or edema of extremities with the exception of the right foot, which has a moderate amount of swelling at this time. He has a negative Homans' sign bilaterally. He reports decreased sensation in the right foot. Presently the leg is not tender. There is no significant erythema. *No vertebral or paravertebral tenderness means no*

*tenderness over the vertebrae of the spine or the muscles on either side of the spine. No costovertebral angle tenderness on percussion means no tenderness over the area of the kidneys when this is tapped. No clubbing, cyanosis, or edema of extremities means that he does not have enlarged fingertips nor are the fingertips and toes blue as in cyanosis. There is edema or swelling from the infection in the right leg. The Homans' sign was negative on both legs, which means when the foot was pointed up toward the head, Jamison did not have any pain in the back of his leg. This test is used to identify blood clots in the legs. No erythema tells us that the leg was not red.*

**Neurological:** Jamison is alert and oriented. Cranial nerve examination revealed no abnormality. Muscle stretch reflexes were normal with the exception of the right lower extremity. He had limited muscle stretch reflex at the knee. He reports decreased sensation over the foot at this time, particularly between the large toe and second toe. He had limited ability to plantar flex and dorsiflex the foot. He has difficulty also with extension of the right knee. Otherwise, Jamison has normal strength and sensation throughout. *Limited muscle stretch reflex at the knee may indicate some nerve damage in this area. This can be the result of swelling in the area causing nerves to be compressed and not function appropriately. This also explains why he has decreased sensation in his toes. The limited ability to plantar or dorsiflex the foot and extend the knee is a result of the broken bone. The muscles used in these actions attach to the tibia primarily, which is now broken. Also, pain and swelling can limit movement.*



## TEACHER KEY CONTINUED PHYSICAL EXAM TRANSLATION FORM — JAMISON

### ASSESSMENT

Open fracture with osteomyelitis. Jamison had trauma from a motor vehicle accident that caused his tibia to break through the skin. This had never been treated over a 2½ year period, resulting in osteomyelitis, infection within the bone.

### TREATMENT PLAN

**Education:** The family is notified that Jamison has osteomyelitis of the right leg. This is an infection of the bone, which is the tibia in this case. Moreover, he also has an open fracture of his right tibia. This means that the skin overlying the fracture was broken as well. The break in the skin allowed bacteria to enter Jamison's leg and cause an infection. The body tries to fight infections with the immune system. Many of Jamison's symptoms (fevers, swollen leg, enlarged lymph nodes, and purulent drainage) are related to his body's attempt to fight off the infection. Episodes of "spiking fevers and acting delirious" are symptomatic of another type of infection — sepsis. This is when infection enters the blood stream. It can be extremely serious and sometimes fatal. Therefore it is very important that Jamison promptly receive the appropriate treatment.

**Osteomyelitis:** Osteomyelitis is an infection within a bone. This often results from injuries in which a bone is broken along with the skin overlying it. If left untreated, this can result in recurrent sepsis, or infection of the blood. Antibiotics and sometimes surgery are required to treat the infection.



**Medicine:** We would treat Jamison in the clinic with antibiotics. He would need an injection of antibiotics into a muscle (IM, intramuscular) along with oral (p.o.) antibiotics. He may benefit from pain medication as well. Eventually intravenous antibiotics would be used.

**Equipment:** He would benefit from bandages to wrap his leg. Also crutches may help him get around in the short term. Long term he will require his leg to be amputated, and therefore, will need a prosthetic limb to walk.

**Surgery:** Jamison's leg would be amputated above the infection site and he would be treated with intravenous antibiotics.

**Nutrition:** Jamison was noted to be cachectic or extremely thin and wasted in clinic. This can result from malnutrition, among other things. He will also need proper nutrition to help support his immune system fighting the infection and help heal after the surgery.

He should receive a multivitamin daily for as long as possible. Also, if the family does not have enough food, then some should be provided. Access to clean drinking water is always important.

**Socioeconomic Issues:** Students should consider the cost of amputation and antibiotics in the U.S. compared to Haiti. Can he get the surgery in Haiti? Would it be better to bring him to the United States? The antibiotics and surgery will certainly be cheaper in Haiti. He should be able to get the procedure done in a large city.

### Present Findings

Students should prepare a final presentation for the case study. This presentation will include reports from the Consultation Teams and can include participation from local health care providers and representatives from **The Timmy Foundation**.





# It IS All About Logistics!

## LESSON 3 PEOPLE LIKE YOU MAKING A DIFFERENCE



The objective of this lesson is to provide role models and inspiration to students to make a difference in the world. The lesson is divided into three parts. The first two sections provide background information about **The Timmy Foundation** and selected international partners. Students learn about the international partner organizations that the foundation supports. All of these organizations have two things in common: they seek to help others, and they exist because of committed volunteers. The last part of the lesson gives examples of ways students can get involved to make a difference. Students are presented with a list of service projects to support.

### STUDENT TASKS

Direct students to find information about **The Timmy Foundation** at <http://www.timmyfoundation.org>. Share the following excerpts from the foundation's Web site. Assign each student or group a section of the material to present to the class. **The Timmy Foundation** can assist students in finding volunteers who have completed service projects or those who have participated on international mission trips.



*Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it's the only thing that ever has.*

— Margaret Mead

### THE TIMMY FOUNDATION

#### — OUR VISION —

*A world in which basic health care and education are available to all children.*

#### — OUR MISSION —

*Building healthy futures worldwide, one child at a time. We accomplish this mission by strengthening community-based health and education initiatives and empowering people to share their energy and compassion.*

**The Timmy Foundation** partners include international nongovernmental organizations (NGOs) that provide medical care and education to the underserved.

**The Timmy Foundation** has established chapters in universities and high schools throughout the United States. In addition,

**The Timmy Foundation** works with churches and other nonprofit organizations in the United States to improve the health and development of children at home and abroad.

# Organizations and Resources

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***Subject:*** PTPA Resource List