

Chapter Questions Answer Key

1.1.1	C. Surveillance is the ongoing and systemic collection, analysis and interpretation of data used to describe and monitor a health event.
1.1.2	True.
1.1.3	B. Occurs after birth, is not hereditary, congenital or degenerative. It commonly results in a change in neuronal activity and includes TBI.
1.1.4	True. TBI is more common in males than females in all age groups and for the entire spectrum of injury severity.
1.1.5	C. Accredited programs are in compliance with quality and performance standards and meet the needs of individuals with disabilities.
1.1.6	True. Other examples of ABIs that are not TBIs include toxic exposure such as ETOH abuse, ingestion of lead, inhalation of volatile agents, encephalitis, meningitis, metabolic disorders, neurotoxic poisoning, and anoxia.
1.1.7	True.
1.1.8	B. The Acute Hospital setting is focused on saving the individual's life and preventing further injury. A person may be in a coma during this phase of support. Surgery may be necessary.
1.1.9	C. Individuals without an effective advocate to negotiate the social service system or without a social support system also have difficulty accessing services.
1.1.10	A. The BIA estimates that only 5% of people with severe BI have adequate long-term funding.
1.1.11	A. Brain Injury Association (BIA)

1.2.1	True. Medicare and other state or federally funded programs are also examples.
1.2.2	True.
1.2.3	A. 5.3 million
1.2.4	D. The leading cause of death from TBI is from causes other than those related to motor vehicles, assaults, unknown, struck by/against, or falls.
1.2.5	C. CARF (Rehab Accreditation Commission) and JCAHO (Joint Commission on the Accreditation of Healthcare Organizations)
1.2.6	C. The TBI Grant Program provides "seed money" for integration of services, establishment of policy, and procurement of financial support.
1.2.7	True. This act acknowledged the incidence and prevalence of brain injury nationally and paved the way for surveillance, rehab, and funding.
1.2.8	False. The injury would be an ABI (Acquired Brain Injury) but may or may not be a TBI (Traumatic Brain Injury).
1.2.9	A. 80,000-90,000
1.2.10	C. \$60 billion annually.
1.2.11	B. Caused by external force
1.2.12	C. Between 10-30% of TBIs are considered moderate.
1.3.1	B. The Olmstead decision interpreted Title II of the ADA and required states to administer services in the most integrated setting appropriate to the needs of the individual.
1.3.2	C. The TBI Act has been extended to continue to expand the state surveillance, education and prevention programs.



1.3.3	A. New studies report that fall-related injuries are the number one cause of TBI injury.
1.3.4	C. 56% of adults with brain injuries tested positive for alcohol.
1.3.5	A. 25% of TBIs come from transportation-related incidents.
1.3.6	False. The category “Other” surpassed both motor vehicle and fall related deaths from TBI.
1.3.7	B. The NIDRR provided funding to establish the TBI Model Systems of Care.
1.3.8	A. HRSA administers the TBI Grant Program.
1.3.9	A. Center on Outcome Measurement in Brain Injury (COMBI).
1.3.10	C. 80% of deaths from head trauma in children under two years of age are non-accidental.
1.3.11	False. The risk of a third injury is eight times greater after a second injury.
1.3.12	B. Between 1/3 and 1/2 of persons with severe TBI die.
1.3.13	B. 91% of firearm-related TBIs result in death.
2.1.1	C. Labeling and stereotyping, perceiving to be a cost to society, or identifying by a label or difference from those in authority are all examples of cultural devaluation.
2.1.2	C. In the medical model, the power person is the “expert” — doctor, nurse, or therapist.
2.1.3	D. All of the above are disability labels.
2.1.4	True.

2.1.5	True.
2.1.6	False. Empathy is the ability to identify with and understand another person’s feelings or difficulties.
2.1.7	True.
2.1.8	B. The “power person” is the person with a disability.
2.1.9	A. PEARL, No Blame, Can versus Can’t, and Active Treatment all are examples of interactive styles that foster outcome goals, partnerships, and agreement within the rehab process.
2.2.1	True. Although this may fit within the civil rights movement, it is not realistic for the disability rights movement.
2.2.2	B. Active treatment is an interaction between two people that is intended to result in greater independence, autonomy, empowerment or inclusion for one of those people.
2.2.3	C. According to the medical model, the patient is exempt from any real responsibility except to cooperate.
2.2.4	B. When the goal is to address sickness or establish medical stability
2.2.5	True.
2.2.6	A. Mutual reinforcement is characterized by an exchange of reinforcers or desired events between two or more people.
2.2.7	C. Other examples include transferring financial control to the consumer, using person-centered planning, increasing community awareness, and gathering and analyzing data to improve services.
2.2.8	False. This type of behavior is not wanted.
2.2.9	False. The concept of “no blame” does not place blame.



2.2.10	False. The concept of “can versus can’t” encourages inclusion, supports a person’s interests, and offers an individual the dignity of risk that is a vital part of learning, growth, and development of human beings.
2.3.1	B. Self determination builds on the principles of informed consent, right to refuse, and consumer empowerment.
2.3.2	C. Self-determination revolves around freedom, authority, support and responsibility.
2.3.3	C. The Interdependent paradigm encourages acceptance and empowerment for all and sees the “problem” as limited or non-existent support for differences.
2.3.4	C. The person providing assistance is POSITIVE, EARLY (proactive), acts these ways ALL the time, REINFORCES accomplishments and LOOKS for situations to facilitate independence.
2.3.5	False. The rehab process often involves complex techniques, procedures or approaches by a diverse group of people.
2.3.6	True.
3.1.1	B. The medulla contains reflex centers that control many involuntary functions such as breathing, heart rate, blood pressure, swallowing, vomiting and sneezing.
3.1.2	C. The hypothalamus is the major brain region that manages the release of body hormones.
3.1.3	B. The cerebral hemispheres control opposite sides of the body. Thus, if a person receives an injury to the right hemisphere, there will be difficulty controlling the left arm or leg.
3.1.4	False. A mild brain injury can have significant impact on a person’s life, causing problems that may severely alter a persons’ abilities to function successfully at work or in social situations.

3.1.5	True. Other signs of post-concussion symptoms include headache, dizziness, sleep disturbance, changes in personality, memory problems, depression, diminished attention span.
3.1.6	C. There are many causes of anoxia that can result in brain injuries, including near drownings, heart attacks, suffocation, smoke inhalation, asthma attacks and strangulation. Anoxia can kill brain cells or neurons.
3.1.7	B. The axon transmits signals from one cell body to another via junctions known as synapses.
3.1.8	C. The brain stem is like the “point person” for all incoming and outgoing information and basic life functions.
3.1.9	B. Neurons
3.1.10	True. Injury to the cerebellum may produce problems with coordination, fine motor movements, equilibrium (balance) and a sense of where the body is in space.
3.1.11	C. The cerebral cortex is made up of a left and right hemisphere.
3.1.12	C. The four lobes of the brain are the frontal, parietal, occipital and temporal lobes. They are named for the skull bones that cover them.
3.1.13	C. Each hemisphere is made up of four lobes: frontal, parietal, temporal and occipital.
3.1.14	B. The occipital lobe includes a person’s primary vision center.
3.1.15	False. Many symptoms of post-concussion syndrome can continue, causing a variety of difficulties including headache, dizziness, depression.
3.1.16	True. The thalamus is a major relay station for incoming and outgoing sensory information.



3.1.17	A. Cerebellum
3.1.18	B. Limbic system. Injury to this system can produce problems with basic emotional perceptions, feelings and responses to the world and to oneself.
3.1.19	True.
3.1.20	True. Unlike another part of the body such as the arm or leg that is able to swell, the brain has no extra room. Tremendous pressure can build after an injury and compress the brain tissue and vessels.
3.1.21	C. An accumulation of blood
3.2.1	C. The brain stem includes the medulla, pons and midbrain.
3.2.2	C. The reticular activating system, or “RAS,” modulates or changes arousal, alertness, concentration, and basic biological rhythms.
3.2.3	True. The medulla contains reflex centers that control living functions such as breathing and heart rate.
3.2.4	C. An injury to the limbic system can cause problems with basic emotional perceptions, feelings and responses to the world and oneself.
3.2.5	B. There are three meninges that cover the brain: dura mater, arachnoid mater, pia mater.
3.2.6	B. Parents and teachers act as the child’s frontal lobe by organizing, planning and directing a child’s life. As the child gets older, they may have difficulty managing themselves.
3.2.7	C. Cerebellum
3.2.8	A. The space between the dura mater and arachnoid mater
3.2.9	False. A coup-contracoup injury means that one side of the head is struck, and the force causes bouncing back and forth, injuring the opposite side of the brain.

3.2.10	C. The brain is bathed in CSF — cerebrospinal fluid.
3.2.11	True. A complete (as opposed to decreased) stoppage of oxygen to the brain would be referred to as “Anoxia.”
3.2.12	C. The hippocampus and amygdale are usually associated with the limbic system.
3.2.13	D. An injury to the basal ganglia affects voluntary motor nerves, causing akinesia, muscle rigidity and tremor.
3.2.14	B. Neurons are brain cells making up the nervous system.
3.2.15	C. The optic chiasm. At this point, optic fibers from the inner half of each retina cross to the opposite hemisphere of the brain.
3.2.16	A. Brocca’s area is the area that controls muscles of the face and mouth and the production of speech.
3.2.17	C. The parietal lobe functions include the sense of touch, spatial perception, differentiation of size, color, shape, visual perception.
3.2.18	A. Memory function
3.2.19	C. The “secondary injury” is caused by swelling, bleeding, compression and contusions to the brain.
3.2.20	B. Parkinson’s disease is the result of disease of the basal ganglia, leading to slowness and loss of movement, rigidity and tremor.
3.2.21	A. Each neuron has three main parts: the cell body, axon, and dendrite.
3.2.22	C. Neurotransmitters are chemical messengers that leap the gap between neurons.



3.2.23	C. The GCS (Glasgow Coma Scale) is one measure frequently used to describe the level of brain injury.
3.2.24	B. Severe BI can happen without a lot of bleeding to the brain. Individual nerve cells that are stretched and break are called diffuse axonal injuries. They can result in extensive brain damage.
3.2.25	C. Neurons communicate by way of an electro-chemical process.
3.2.26	A. The cerebellum
3.2.27	C. The corpus callosum
3.2.28	False. The RIGHT hemisphere responds to spatial sense and “gestalt.”
3.2.29	False. Brocca’s area controls the muscles of the face and mouth and enables the production of speech.
3.2.30	C. Memory, hearing, understanding of language (Wernicke’s area) and organization and sequencing are all found in the temporal lobe.
3.2.31	A. Frontal
3.2.32	A. Frontal lobe. The prefrontal cortex helps hold on to information for several minutes.
3.2.33	A. The cerebellum controls direction, rate, force and steadiness of a person’s movements.
3.2.34	A. In most people, the left hemisphere processes information in a logical, linear manner which helps the person to understand and use language.
3.2.35	A. The frontal lobe functions include: initiation, problem solving, judgment, inhibition, planning, self-monitoring, motor planning, personality, awareness of abilities, organization, attention, mental flexibility, speaking.

3.2.36	B. The parietal lobe
3.3.1	False. The primary sensory cortex is the first part of the brain to consciously register physical sensations. The sense of touch, heat, cold, pain and body awareness is located in the parietal lobe.
3.3.2	C. The temporal lobe
3.3.3	C. Wernicke’s area governs a person’s understanding of speech.
3.3.4	B. Slowness of movement. Often found with injuries to the basal ganglia.
3.3.5	A. Excess cerebrospinal fluid
3.3.6	C. The cerebellum
3.3.7	C. Organ of Corti. Each hair is connected to nerve fibers which send signals through the 8th cranial nerve to the brainstem.
3.3.8	A. The Glasgow Coma Scale measures the patients best eye, verbal and motor response to provide a total score.
3.3.9	C. Glial cells nourish and support neurons.
3.3.10	B. The diencephalon is made up of the thalamus and hypothalamus and other structures.
3.3.11	B. A score of 9-12 on the GSC indicates moderate brain injury.
3.3.12	C. The hypothalamus is the control center for hunger, thirst, sexual response, endocrine levels and temperature regulation.
3.3.13	C. Hippocampus
3.3.14	C. The amygdale. This is where the stimulus is evaluated for emotional content.



3.3.15	C. The pons enables the “thinking” part of the brain (cerebral cortex) to work with the “movement” part of the brain (cerebellum).
3.3.16	False. The amygdale is a structure that seems to be closely tied with emotional memories and reactions.
3.3.17	C. The ventricles make, store and circulate CSF. They also protect the brain tissue when swelling occurs.
3.3.18	False. The outer layer of the brain is called the dura mater or “tough mother.”
3.3.19	A. The reticular activating system (RAS) is found in the brain stem, and injury can leave a person unaware of surroundings, with altered alertness, concentration, and arousal.
3.3.20	A. Cerebrospinal fluid
4.1.1	C. Each person’s injury is unique and so is there recovery.
4.1.2	B. The physician/nurse
4.1.3	True.
4.1.4	False. The person typically awakens to a state of confusion, extreme fatigue, and no memory of the seizure.
4.1.5	A. The model of the car involved is unlikely to be a factor in rehab.
4.1.6	A. Contracture
4.1.7	B. Generally one year
4.1.8	False. Heterotopic ossification is abnormal growth of bone in soft tissues or around joints.
4.1.9	A. Bony prominences such as the hip, coccyx, back of head or shoulder blades are more likely to develop pressure ulcers.
4.1.10	C. Use of a vail bed is not considered a seizure risk.

4.1.11	False. Universal precautions help control blood borne pathogens.
4.1.12	False. They need a less stimulating environment.
4.1.13	A. Generalized seizures are a sudden burst of abnormal, generalized discharges that usually affect both hemispheres of the brain.
4.1.14	A. Heimlich maneuver
4.1.15	True.
4.1.16	False. The most common neurological condition reported after brain injury is headache.
4.1.17	B. Hemiplegia
4.1.18	B. Torticollis
4.1.19	D. All of the above
4.2.1	D. All of the above
4.2.2	C. Trachea and larynx
4.2.3	C. Spasticity
4.2.4	B. A gastrostomy tube
4.2.5	False. Medications can also have a negative effect, through excess sedation or adverse reactions.
4.2.6	C. Cardiovascular injury following BI may be due to complications from direct trauma or damage to the area of the brain that controls the heart.
4.2.7	True.
4.2.8	True.
4.2.9	B. A partial seizure
4.2.10	B. Absence seizures
4.2.11	B. 58%



4.2.12	False. Difficulty swallowing is called dysphagia.
4.2.13	C. Peristalsis
4.2.14	A. Postictal state
4.2.15	False. Weakness on one side of the body is called hemiparesis.
4.2.16	A. The ventricles — the fluid filled cavities in the brain
4.2.17	C. DVT
4.2.18	C. Paxil and Celexa are examples of SSRIs. Others include Zoloft, Effexor, Prozac, and Remeron.
4.2.19	B. Age, family history, history of TBI
4.2.20	A. Tegretol and Depakote have both been used for post-traumatic agitation.
4.2.21	C. Simple partial seizures
4.2.22	B. Ativan and Xanax are examples of anti-anxiety medications.
4.2.23	False. Aphasia is difficulty understanding speech and/or difficulty expressing thoughts.
4.2.24	False. Hypotension is low blood pressure, generally below 90/50.
4.2.25	B. Do not place any object into a person's mouth when they are having a seizure.
4.2.26	B. Cogwheel rigidity
4.2.27	A. Status epilepticus and it is a medical emergency
4.2.28	B. Itchy skin
4.2.29	C. Tardive Dyskinesia
4.2.30	C. Increased risk of torticollis
4.2.31	A. Apraxia

4.2.32	B. Aricept is used to treat Alzheimer's and is currently being studied for use after TBI.
4.3.1	False. Bladder training should begin as soon as the person is oriented and has sufficient short term memory to participate in a bladder program.
4.3.2	B. Do not give water during or immediately after a seizure.
4.3.3	True. Additionally, tolerance to blood loss is decreased due to dilation of the blood vessels, which leads to increased risk of hypoxia.
4.3.4	C. Sinemet and Symmetrel are examples of anti-Parkinson's medications.
4.3.5	B. Other respiratory complications may include trauma to the larynx, trachea, chest, lungs, and risk of aspiration pneumonia.
4.3.6	C. Risperdal is not an anticonvulsant.
4.3.7	C. Akathisia
4.3.8	C. Central or peripheral nervous system injury
4.3.9	C. Bony prominences such as hips, coccyx, heels, elbows and shoulder blades are common sites of pressure ulcers.
4.3.10	A. Inhaling foods, liquids or vomitus into the lungs
4.3.11	False. Neurogenic bladder is the most common type of bladder incontinence after brain injury.
4.3.12	C. During a complex partial seizure the person may appear to be conscious, but is only at least partially aware of the surroundings and will not remember details of the incident.
4.3.13	B. Use of vicodin



4.3.14	A. Vicodin is not generally used to treat GI problems.
5.1.1	True.
5.1.2	B. Positive reinforcement
5.1.3	A. Rewards
5.1.4	B. Escape or avoidance
5.1.5	A. Antecedents, behaviors, consequences
5.1.6	C. Duration
5.1.7	A. Task analysis
5.1.8	False. No treatment plan should be considered static. People change, their needs change.
5.1.9	B. Incidental teaching
5.1.10	A. Frequency
5.1.11	B. Ask the patient.
5.1.12	C. Shaping
5.1.13	True.
5.1.14	C. Relaxation techniques
5.1.15	D. All of the above
5.1.16	B. Memory loss
5.1.17	A. Do not avoid humor. Appropriate humor can be a human bridge and connection between patient and staff member.
5.1.18	B. Person-centered treatment
5.2.1	C. Punishment
5.2.2	C. Outcome driven treatment planning
5.2.3	B. Motor skills and spatial orientation (also hand-eye coordination, dexterity, depth perception)
5.2.4	C. Both A and B
5.2.5	C. Lack of awareness of deficits

5.2.6	True. Following BI, people can have reduced access to support systems which can lead to depression , isolation, and substance abuse.
5.2.7	False. Latency is the amount of time that it takes a person to initiate a behavior.
5.2.8	B. Positive reinforcement is when a person receives a desired effect as a direct result of their behavior.
5.2.9	B. Rate
5.2.10	B. Impaired receptive speech
5.3.1	C. Most often cognitive problems such as memory loss, difficulty with problem solving and decision making are prominent.
5.3.2	C. The nervous system and the environment
5.3.3	C. Extinction
5.3.4	C. Rewards, escape, punishment, extinction
5.3.5	False. Executive functioning refers to the ability to plan, initiate, direct and monitor one's activities.
5.3.6	True.
5.3.7	A. Goals
5.3.8	B. Daily memorization tasks
5.3.9	True.
5.3.10	B. Negative reinforcement is when a person avoids an undesirable event or unpleasant situation as a direct result of their behavior.
6.1.1	B. Sports and auto occupant accidents (ages 14-19)



6.1.2	A. Birth to age five
6.1.3	True.
6.1.4	C. Families
6.1.5	B. Memory
6.1.6	C. Attention
6.2.1	A. Academic accommodations
6.2.2	A. ADA
6.2.3	True.
6.2.4	B. Age
6.2.5	False. Eligibility for special education ends upon graduation from high school or age 21.
6.2.6	C. An Individualized Education Plan (IEP) is a contract between the student's family and the school system.
6.3.1	False. Often there are serious cognitive and behavioral problems that emerge as the child grows.
6.3.2	C. There are five peak maturation periods: 1-6, 7-10, 11-13, 14-17, and 18-21.
6.3.3	A. Seizures, headaches and lack of endurance
6.3.4	False. Section 504 is the part of the Rehabilitation act of 1973 that makes that requirement.
7.1.1	C. Listen
7.1.2	True.

7.2.1	C. Both A and B
7.2.2	C. Survivor guilt
7.3.1	A. Blunted affect
8.1.1	C. Legal rights are powers or privileges that an individual has under the law.
8.1.2	B. A legal representative may exercise rights for the individual as allowed by state law.
8.1.3	A. The facility may open mail and review is not an example of a patient's right.
8.1.4	False. Seclusion/restraint procedures are never allowed for retribution, staff convenience, or to make up for inadequacies of the treatment program such as unsafe environment, inadequate staffing, or lack of treatment planning.
8.1.5	A. Only the court may determine that an individual is legally incompetent.
8.1.6	B. When a person is an imminent danger to himself/herself or others, it may be necessary to use a restraint or seclusion if other less restrictive procedures have not been effective.
8.1.7	False. The Olmstead decision (1999) requires governments to provide services in the most integrated setting appropriate to the needs of the individual with a disability.
8.1.8	C. Use of a dependent individual's property illegally or without consent
8.1.9	C. Both A and B
8.1.10	B. A Power of Attorney is a document in which a competent person, the principal, appoints another, the agent, to act for him/her in legal and financial matters.
8.1.11	C. HIPAA regulations came into effect in April 2003, and created national standards to protect medical records and other protected health information.
8.1.12	True. Accreditation standards often vary with the setting. The standard for a hospital may be different than one in a rehab facility.



8.1.13	C. Informed consent refers to the right of a patient to consent to care only after the healthcare provider fully discloses the risks and facts necessary to make an informed decision.
8.1.14	False.
8.1.15	D. Abuse, neglect and exploitation are all types of maltreatment protected by state protective law.
8.1.16	True. Once a child reaches the age of adulthood, the natural guardianship of the parent automatically dissolves unless legal action is taken.
8.1.17	True. As part of the HIPAA Privacy standards, a staff member may be held liable for a breach of confidentiality.
8.1.18	True.
8.1.19	True.
8.2.1	False. A living will is a document that is often called an Advance Directive, and provides written instructions by a competent adult to a physician on provision or withdrawal of life-sustaining procedures.
8.2.2	C. Seclusion is generally defined as isolating a person from others and physically preventing him or her from leaving the confined area.
8.2.3	False. Competency or capacity is a legal term that describes a person's mental ability to understand the nature and effect of one's decisions and actions.
8.2.4	C. Ethical standards are standards of professional conduct rooted in moral principles and values.
8.2.5	False. A restraint may be a manual, mechanical, chemical, or other means of restricting movement or access to one's body.

8.2.6	C. Title I of the ADA prohibits discrimination against persons with disabilities in recruitment, hiring, promotions, training, pay and other privileges of employment.
8.2.7	C. Public accommodation by businesses and nonprofit entities providing a service to the public
8.2.8	B. Hearing or speech disabilities
8.2.9	A. A durable power of attorney is also known as a medical power of attorney, or a health care proxy.
8.2.10	C. City busses, public rail transit
8.2.11	B. Privilege is the right of the patient to prevent disclosure of health care information by a health care provider.
8.3.1	False. In <i>Youngberg vs. Romeo</i> , the US Supreme Court held that a basic liberty under the Constitution is to be free from undue bodily restraint.
8.3.2	False. There are four basic sources of law that provide individual rights at the state and federal level: common law, constitutional law, statutory law, and administrative law.
8.3.3	C. A guardian is a legally enforceable arrangement under which one person, the guardian, has the legal right and duty to care for another, the ward.
8.3.4	False. If the son/daughter wishes to have contact with their other parent, it is their basic legal right, unless there is a court order restricting such access.

