PALLIATIVE CARE

Definition

(WHO, 1990 as cited in Shimizu, 2012)

- The active, total care of patients whose disease is not responsive to curative treatment. Control of pain, other symptoms, and of psychological, social and spiritual problems is paramount. Its goal is to achieve the best possible quality of life for patients and their families.

SLP Purposes in Palliative Care

(Pollens, 2012)

- **Quality of Life Enhancement**
  - Improve overall patient communication abilities and social interaction
  - Support patients in maintaining meaningful connections with family and caregivers
  - Help patients express their needs, emotions, and preferences effectively
- **Symptom Management and Comfort**
  - Assess and manage swallowing difficulties (dysphagia) to reduce aspiration risks
  - Provide strategies to minimize choking and improve safe oral intake
  - Develop alternative communication methods when verbal communication becomes challenging
  - Address respiratory and oral care needs related to communication and swallowing
- **Personalized Goal-Oriented Therapy**
  - Collaborate with interdisciplinary teams to develop individualized care plans
  - Match therapy interventions to patient-specific goals and preferences
  - Provide adaptive communication technologies and strategies
  - Support patient autonomy and dignity during complex medical situations

Prevalence and Incidence

Prevalence	Incidence
➢ Internationally, only 14% of people worldwide have access to the best kind of palliative care, which is mostly found in European nations. By 2060, it is anticipated that there will be an 87% rise in severe health-related suffering that can be alleviated by palliative care measures worldwide. (Brant & Silbermann, 2021) ➢ Locally, the majority of Filipinos lack access to high-quality hospice and palliative care, despite initiatives to increase access to these treatments. Only 10% of hospitals nationwide have hospice and palliative care units, according to a 2020 study by Erfe and colleagues. (So, 2024)	➢ An estimated 56.8 million individuals require palliative care annually, including 25.7 million who are in their last year of life. Currently, palliative care is only provided to roughly 14% of those in need worldwide. (WHO, 2020) ➢ No official incidence percentage in the Philippines is recorded for Palliative Care due to the lack of resources and research.

Diseases/Conditions Commonly Seen in Patients in Palliative Care
(Mayo Clinic, 2023)

- It is offered to people of any age who have a serious or life-threatening illness, such as:
  - Cancer
  - Blood and bone marrow disorders requiring stem cell transplant
  - Heart disease
  - Cystic fibrosis
  - Dementia
  - End-stage liver disease
  - Kidney failure
  - Lung disease
  - Parkinson's disease
  - Stroke and other serious illnesses

Signs (Hospice Foundation, 2024)
**manifestations are a case-to-case basis*

Physical Changes
- Communication and activity level decreases
  - Talking and physical activity decrease significantly.
  - Long periods of sleep and resistance to movement.
- Appetite decreases
  - Lack of interest in food and fluids.
- Bowel and bladder changes
  - Constipation may become more evident; loss of bladder control and functioning—use of a *foley catheter*.
- Body temperature changes
  - Decrease by a degree or more, and the person's hand or skin may start to feel cold to the touch.
- Blood pressure and heart rate gradually decrease
  - Vital signs can fluctuate and become irregular.
- Skin changes
  - Skin may become purplish, pale, grey, and blotchy or mottled and usually signal that death will occur within days to hours.
- Changes in breathing
  - Breathing rate slows, becomes irregular, or noisy.
  - *Cheyne-Stokes breathing* pattern develops.
    - cyclical episodes of apnea and hyperventilation

Cognitive Changes
- Detachment from surroundings
  - Does not respond or show little interest in previously enjoyable activities
- Agitation and restlessness
  - Medically known as *terminal agitation* or *terminal restlessness*
- Misperceptions
  - ***Illusions*** - misperceive a sound or get confused about an object in the room.
  - ***Hallucinations*** – perceiving sounds, sights, or sensations that aren't present

Symptoms (Mayo Clinic, n.d.)

- *Pain* is the single most prevalent symptom for patients receiving palliative care (Wilkie & Ezelma, 2012).
- Lack of interest in eating and drinking.
- Discomfort from constipation or incontinence.
- Feel cold or warm depending on the body temperature change.
- Discomfort associated with pressure wounds.
- Breathing changes may not be experienced as distressing by the person but can cause discomfort.
- Feel fearful or comforted by sensory misperceptions.
- Awareness of impending death or visions of deceased loved ones.
- The person may experience a gradual loss of sensation or awareness.

○ ***Delusions of persecution*** – confuse reality and think others are trying to hurt them or cause them harm. ○ ***Delusions of grandeur*** - believe that they can accomplish things that are not possible. ○ ***Near death awareness*** – report awareness of their imminent death and express that they will soon be able to see God or friends and relatives who have preceded them in death. ● Consciousness fades ○ People will lapse into an unconscious or coma-like state and become completely unresponsive.	

<u>Structural and Anatomical Changes Related to the Condition</u> (Cherny et. al, 2021)

In palliative care, structural and anatomical changes often result from advanced diseases and their effects on the body. These changes include:

- **Muscle Wasting and Atrophy**
  - Prolonged illness can lead to reduced muscle mass and strength, particularly in bedridden patients.
- **Skin Breakdown**
  - Pressure sores and ulcers may develop due to immobility, reduced blood flow, and compromised tissue integrity.
- **Organ System Alterations**
  - Progressive organ failure, such as heart or kidney failure, leads to structural changes in the respective organs, including tissue fibrosis or swelling.
- **Skeletal Changes**
  - Bone density loss, such as osteoporosis, can occur due to inactivity or cancer-related conditions.
- **Respiratory Changes**
  - In conditions like advanced lung disease, structural changes may include reduced lung capacity or stiffness in lung tissues.
- **Swallowing and Gastrointestinal Issues**
  - Alterations in gastrointestinal tract structure may lead to dysphagia or reduced digestive efficiency.

<u>Possible Speech-Language Problems</u>

Cognition	**Cognitive decline** ● Deterioration in memory, attention, problem-solving, and decision-making. **Executive function impairments** ● Difficulty organizing, starting, and planning tasks **Disorientation** ● Feeling lost or confused about time, place, or people.
Language	**Deteriorating communication skills** ● A progressive decline in the decline in the capacity to communicate needs, wants, and feelings. **Receptive and Expressive Language Deficits** ● Difficulties in both language comprehension and production.

Swallowing	**Dysphagia** ● Inability to swallow due to neurological disability of muscle weakness. **Aspiration risk** ● Higher possibility of food or liquid getting into the lungs. **Malnutrition and dehydration** ● Possible effects of swallowing difficulties. ● Malnutrition refers to deficiencies, excesses, or imbalances in a person's intake of energy and/or nutrients. (WHO, 2024) ● Dehydration occurs when you use or lose more fluid than you take in, and your body doesn't have enough water and other fluids to carry out its normal functions. (Mayo Clinic, 2021) ● Dysphagia is a major predisposing condition for aspiration, or entry of secretions, liquids, or foods into the lungs, which can lead to pneumonia and can contribute to malnutrition, dehydration, and, in some cases, death. (*UpToDate*, n.d.)
Articulation	**Reduced intelligibility** ● A difficulty in understanding spoken words. **Dysarthria** ● A motor speech disorder affecting the physical production of speech.
Voice	**Vocal Changes** ● Changes in voice quality, such as breathiness and hoarseness.

Levels of Care

(Kitzes et al., as cited in Forman et al., 2003)

- ➢ **Routine Home Care** - Most common level of care, is the heart of hospice care; the hospice team provides the full scope of hospice services, most often in the patient's personal residence.
- ➢ **Continuous Home Care** - An expanded level of care in home; allows up to 24 hours a day of skilled nursing to ease patients through periods of crisis and to prevent hospitalization for management of acute symptoms.
- ➢ **Respite Care** - Supports the patient's family and caregivers; they need time away from the intensity of caring for a terminally ill individual (mini-vacation, special events, rest, etc.).
- ➢ **Inpatient Care** - or ***acute symptom management*** is a short term admission to a Medicare certified facility for medical problems requiring nursing and medical management.

Service Settings

(Kitzes et al., as cited in Forman et al., 2003)

- ➢ **Home** - According to the National Hospice Organization, home is defined as "a person's place of residence."
- ➢ **Facility-Based Care** - Hospice has a professional management responsibility for the safety and comfort of the patient.
- ➢ **Common Service Sites Hospital** - Most common sites for regular inpatient care, and the most frequent method for providing that care is a "scatter bed" approach.

- ➢ **Long-Term Care Facility** - Nursing homes are used as sites for regular inpatient care, respite care, and routine home care.
- ➢ **Hospice Facilities** - First hospice facilities were licensed as specialty hospital hospices, nursing homes, or extended care facilities, and the level of care they could offer was limited to regular inpatient care.
- ➢ **Specialized Residences** - Certain populations of patients with terminal illness are spurring the development of specialized hospice/palliative care settings; includes community-based homes, residences owned by hospices, and designated inpatient wards.

Healthcare Resources

Medical Care (Hackensack Meridian Health, 2024)

- **Opioid Medicines**
  - Opioid medicines work best for moderate to severe pain and can be taken in a variety of ways.
  - One drawback of these medicines is that, over time, patients will likely develop a tolerance to the one they're taking and need higher doses to get the same effect.
  - One way healthcare providers may get around this problem is by switching the type, dose, or the way the medicine is given.
  - These are common ways in which opioid medicines can be given:
    - ***Oral Medicines*** - These can be taken in pill or liquid form and can be short-acting or long-acting (sustained release).
    - ***Adhesive Patch*** - This kind is applied to the skin to release medicine over time.
    - ***Opioid Medicine Injection*** - This shot may be given under the skin or into a muscle.
    - ***Opioid Medicine IV*** - This medicine is given directly into the blood through an intravenous (IV) line.
    - ***Medicine Pump*** - Opioids can be given through a pump attached to an IV line that you control. This is called *patient-controlled analgesia*.
    - ***Spinal Injection*** - For pain that's hard to control, a pain-control specialist may give an opioid medicine directly into the spinal cord area.
  - **Precautions to Avoid or Reduce Risks of Addiction** (Lau et al., 2021; Latif et al., 2020):
    - ***Risk of Overdose*** - Patients receiving opioids are at risk for opioid-related adverse events, including overdose. Close monitoring is essential, especially for those with a history of substance use disorders or who are at high risk for opioid misuse.
    - ***Side Effects Management*** - Common side effects of opioids include constipation, sedation, nausea, and respiratory depression. It is crucial to prescribe appropriate laxatives and antiemetics alongside opioids to mitigate these effects.
    - ***Dosing Considerations*** - Opioid dosing should be individualized based on the patient's pain levels and response to medication. Regular reassessment is necessary to adjust dosages as needed and to prevent under-treatment or over-treatment.
    - ***Route of Administration*** - Consider alternative routes (e.g., subcutaneous or rectal) for patients who cannot take oral medications due to nausea or swallowing difficulties.
- **Helper Medicines**
  - These medicines are called ***adjuvant analgesics***. They can help control pain in certain cases. Commonly used adjuvant medicines include:
    - ***Steroids*** - These are strong anti-inflammatory medicines that may help relieve pain by decreasing inflammation. They may be used along with other pain relievers for nerve, bone, or other types of pain.
    - ***Antidepressants*** - Treating any existing depression can make pain easier to control. These medicines may also be useful in pain caused by nerve damage.

        - ***Anticonvulsants*** - These medicines are usually used to control seizures, but they can also help control nerve-related pain.
        - ***Local Anesthetics*** - These are medicines that can block pain signals in the body. A pain specialist may inject a local anesthetic to block pain.
        - ***Muscle Relaxants*** - Muscle relaxants may be used along with pain medicine if pain is aggravated by muscle spasms.
        - ***Antianxiety Medicines*** - These medicines may be used along with pain medicine if tension or anxiety aggravate pain.
        - ***Biphosphonates*** - These medicines are sometimes used to prevent fractures in people whose cancer has spread to the bone. They can play a key role in relieving bone injury and pain.
    - **Precautions to Avoid or Reduce Risks of Addiction** (Lau et al., 2021; Latif et al., 2020):
        - ***Deprescribing Unnecessary Medications*** - In palliative care, polypharmacy is common due to multiple comorbidities. Regularly review all medications to identify those that may be unnecessary or inappropriate for the patient's current health status, thereby reducing the risk of adverse effects.
        - ***Drug Interactions*** - Careful review of all medications is necessary to avoid harmful interactions, particularly with sedatives or other CNS depressants that can exacerbate respiratory depression when combined with opioids.
        - ***Monitoring for Efficacy*** - Helper medications should be monitored for effectiveness and adjusted based on patient feedback and symptom control.

Surgical Care

- **Palliative Surgery** (Badgewell, 2016)
    - A surgical intervention designed to alleviate symptoms and improve the quality of life for patients with advanced, incurable diseases.
    - There are different conditions where palliative surgery is beneficial. It includes:
        - ***Bowel Obstruction*** - Common complication in advanced cancer. Determining the cause, whether tumor-related or not, is crucial. Surgical intervention may be necessary to relieve obstruction.
        - ***Bowel Perforation*** - Patients with advanced cancer are at increased risk of bowel perforation due to various factors. Prompt diagnosis and surgical intervention are essential.
        - ***Biliary Obstruction*** - Treatment for biliary obstruction depends on the underlying cause and prognosis. Palliative procedures can alleviate symptoms and improve quality of life.
        - ***Gastrointestinal Bleeding*** - Gastrointestinal bleeding in advanced cancer can arise from various causes. Standard surgical principles are applied to stabilize patients and control bleeding.
        - ***Feeding Tube Placement*** - Gastrostomy tubes are often preferred over jejunostomy tubes due to lower risks and easier placement. However, patient preferences and specific needs should guide the decision-making process.
        - ***Other indications for palliative surgical consultation*** - Abdominal pain, constipation, malignant ascites, wound problems, anorectal infections, and general surgical conditions like cholecystitis and appendicitis are additional reasons for palliative surgical consultation.

Rehabilitation Care

- **Occupational Therapy**
    - Provide ongoing assessment and intervention to address the evolving needs of individuals with life-limiting illnesses. Occupational therapists work in various settings, including community

health, aged care, rehabilitation centers, and hospice (Occupational Therapy Australia, 2015).

- **Physical Therapy**
  - Address physical limitations for patients with advanced illnesses. By managing pain, breathlessness, and weakness, and promoting mobility and functional independence, physiotherapy helps patients maintain dignity and comfort. This can significantly enhance their quality of life and reduce the need for hospitalization (Ogundunmade, 2024).
- **Respiratory Therapy**
  - Enhance the quality of care for patients with advanced respiratory disease, particularly those with limited access to palliative care. By providing specialized respiratory care, symptom management, and psychosocial support, respiratory therapists can significantly improve the quality of life for these patients (Goodridge, 2019).
- **Oxygen Therapy**
  - Improve quality of life and comfort for patients with advanced, life-limiting illnesses, particularly those experiencing breathlessness or dyspnea. Unlike long-term oxygen therapy (LTOT), which is used to improve survival in patients with severe hypoxemia, palliative oxygen therapy is not primarily intended to extend life. Instead, it aims to alleviate distressing symptoms and enhance the overall well-being of patients in their final stages of life (European Association for Palliative Care, n.d.).
- **Speech-Language Therapy**
  - Provide comprehensive support in communication, cognition, and swallowing. This can also consult patients, families, and healthcare professionals, develop strategies to enhance communication and decision-making, optimize swallowing function, and collaborate with the interdisciplinary team to ensure holistic patient care (Pollens, 2004).

SLP Therapy

Areas	Strategies	Assessment & Materials	Approaches
Cognition	• Target specific cognitive domains (e.g., attention, memory, executive function) • Implement compensatory strategies • Provide environmental modifications	• Montreal Cognitive Assessment (MoCA) • Mini Mental State Examination (MMSE)	• Cognitive Stimulation Therapy • Attention Process Training • Memory Strategy Training
Language and Pragmatics	• Address any language delays or disorders resulting from hearing loss or social factors • Improve social communication skills by increasing interactions for more opportunities for language growth	• Comprehensive Assessment of Spoken Language 2nd Edition (CASL-2) • Clinical Evaluation of Language Fundamentals Fifth Edition (CELF-5) • Western Aphasia Battery (WAB) Test • Structured and Unstructured Conversations	• Cognitive-linguistic Therapy • Social Skills Training • Script Training or Narrative Interventions • Pragmatic Language Intervention • Augmentative and Alternative Communication (AAC)

			○ If speech is severely impaired, AAC strategies may be used to support communication
Feeding / Swallowing	• Improve oral motor control • Address any structural issues affecting swallowing	• Eating and drinking abilities (e.g. oral containment, sucking, mastication) • Sensory status • Acceptance of food • Diet diversity • Oral medication management • Caregiver behaviors during feeding • Psychosocial impact on family and child dynamics	• Oral Motor Exercises • Swallowing Maneuvers • Secretion management • Oral hygiene practices • Acceptance of food
Speech To enhance articulation, phonology, clarity and intelligibility.	• Target specific error sounds, especially those affected by velopharyngeal dysfunction • Use visual feedback (e.g., mirrors, video recordings) • Implement oral motor exercises to improve muscle strength and coordination • Identify articulation errors characterized as *obligatory errors* (due to structural differences) or as *compensatory* (learned) errors	• Oral Peripheral Mechanism Test • Bauman-Waengler • Speech-Motor Screening • Frenchay Dysarthria Assessment • Goldman Fristoe Test of Articulation 3rd Edition (GFTA-3) • Passage and Conversation • Any articulation screener with sounds in different placements	• Traditional articulation therapy • Phonological process approach • Cycles approach for multiple sound errors
Voice To address issues such as hoarseness or breathiness and achieve a clearer, more efficient voice production.	• Address compensatory articulation patterns • Improve vocal quality and pitch control • Assess for voice quality and signs of vocal fold pathology (e.g., hoarseness, breathiness).	• Auditory-perceptual assessment • Pitch analyzers • Assessment of voice handicap • Referral for ear, nose, and throat assessment	• Vocal Range and Flexibility Exercises • Voice Therapy Programs • Vocal Hygiene • Breath Support Training

Educational

- Advocate for policy reforms to improve access to essential palliative care services and medicines.
- Educate patients and families about palliative care options and resources (i.e. awareness of early delivery in palliative care to reduce unnecessary hospital admissions)
- Coordinate care through interdisciplinary teams among doctors, nurses, social workers, etc…
- Implement community outreach programs to provide care in local settings.

Critical Members of the Management Team

(Cleveland Clinic, n.d; Jeuland et. al, 2017)

Palliative Care Practitioner	Physicians that know about serious and complex conditions and be adept at managing palliative emergencies
Clinicians/Specialists	Provide direct medical management, ensuring patients receive appropriate treatment for pain and other symptoms.
Hospice/Palliative Specialty Nursing Staff	Support patients and their families who are experiencing life limiting illnesses.
Psychologist	Offer therapeutic support for emotional and psychological challenges.
Social Worker	Address psychosocial concerns, provide grief counseling, assist with advanced care planning, and help secure insurance, equipment, and funding for assistive devices.
Pharmacists	Assist with medication selection and administration for palliation
Occupational Therapist	Enhancing daily functioning through adaptive equipment and strategies for pain or fatigue management.
Physical Therapists	Preserve mobility and reduce discomfort with personalized exercise programs and fall prevention.
Respiratory Therapists	Manage breathing difficulties, providing oxygen therapy and interventions to improve respiratory comfort.
Speech-Language Pathologists	Address communication and swallowing issues, ensuring safety and providing alternative communication methods for those unable to speak effectively. Assist with the management of related symptoms like dry mouth or hoarseness. Ensure that the patient's family members understand communication challenges and offer support in ways that respect the patient's wishes.
Nutritionist	Tailor individualized nutrition plans to manage symptoms, maintain comfort, and support the patient's dignity while working alongside the care team and educating family members.
Chaplain	Provide spiritual and emotional support to patients, families, and care teams throughout the end-of-life journey.

Medical Precautions for SLP Therapy

Before	During	After

• Preparation
  ○ Review the patient's medical history, prognosis, and communication/swallowing needs.
  ○ Prepare materials or tools (e.g., AAC devices, communication boards) suited to the patient's needs.
• Coordination
  ○ Communicate with the interdisciplinary team to align goals.
• Emotional Readiness
  ○ Reflect on your emotional state.
  ○ Anticipate sensitive discussions and plan your language to be compassionate yet clear.
	• Establish Connection
	  ○ Greet the patient and family warmly
	  ○ Educate on the session's purpose and adapt based on the patient's immediate needs.
	• Intervention and Support
	  ○ Provide clear, empathetic explanations and encourage questions.
	  ○ Educate caregivers on communication techniques or feeding strategies as needed.
	• Active Listening
	  ○ Pay attention to verbal and nonverbal cues.
	  ○ Acknowledge emotions and provide reassurance when appropriate.
	• Flexibility
	  ○ Adjust the session to prioritize the patient's comfort and emotional state.
		• Document
		  ○ Record the session's outcomes
		  ○ Highlight any changes to the care plan or needs requiring further attention.
		• Share Results and Progress
		  ○ Communicate therapy results and progress with the client and their family.
		• Team Communication
		  ○ Share findings and updates with the interdisciplinary team to ensure coordinated care.
		  ○ Discuss any challenges faced and seek input if needed.
		• Reflection
		  ○ Evaluate the session's effectiveness and your approach.

Support Systems

Local	International

• **Philippine Society for Hospice and Palliative Medicine (PSHPM)**
  ○ Palliative care services are being developed and advocated for nationally by this organization.
• **Department of Health (DOH)**
  ○ The inclusion of palliative care in the national health agenda has been made possible substantially by the DOH.
• **Hospice and Palliative Care Units in Hospitals**
  ○ A lot of hospitals now offer teams or units specifically for palliative care services.
	• **World Health Organization (WHO)**
	  ○ Establishes guidelines and international standards for palliative care.
	• **International Association for Hospice and Palliative Care (IAHPC)**
	  ○ A global network of professionals providing hospice and palliative care

PATIENTS IN THE ICU

Definition

(Healthdirect Australia Limited, 2024)

- An **Intensive Care Unit (ICU)** is a part of a hospital that gives care to people who are critically ill. Patients in the ICU have serious health issues that can be life-threatening. They might:
  - Have a serious injury
  - Have a serious illness
  - Be recovering from major surgery
- Patients in the ICU are closely monitored at all times, 24 hours a day, by teams of specialist health practitioners.
- People are admitted to the ICU if they likely:
  - Are in a critical condition
  - Need specialized care
  - Need to be watched closely

Prevalence and Incidence

Prevalence	Incidence
➢ In the United States, about 5.7 million patients are admitted to intensive care units (ICUs) each year, making up almost 20% of total acute care admissions. ➢ No official prevalence percentage in the Philippines is recorded for ICU due to the lack of resources and research.	➢ 54% of ICU patients had a suspected or confirmed infection, and 70% of all patients were receiving at least one antibiotic (therapeutic or preventive) in a 24-hour point prevalence survey carried out at 1150 institutions across 88 nations on September 13, 2017. 30% of patients with confirmed or suspected infections died in hospitals. ➢ More than 5 million patients are admitted annually to U.S. ICUs ➢ Locally, There is no official incidence percentage in the Philippines recorded for ICU due to the lack of resources and research.

Diseases/Conditions Commonly Seen in Patients in the ICU

For adults, cardiac, respiratory, and neurologic conditions are common in adult ICU patients. According to the Centinela Hospital Medical Center (n.d), listed below are some of the common illnesses of patients in the ICU.

Cardiovascular System

1. Myocardial infarction or "heart attack" - When the heart muscle itself doesn't get enough blood because one or more of its blood vessels, called coronary arteries, becomes blocked.
2. Shock - Term used to describe when the blood pressure drops to a dangerously low level. If the pressure falls enough, the cells in the body don't get enough oxygen and begin to die.
3. Arrhythmia - Used to describe when the heartbeat, which normally goes at a regular rate of 60 to 100 beats every minute, becomes too fast or too slow.
4. Congestive Heart Failure - Term used to describe when the heart fails to pump enough blood forward to the body and as a result, fluid builds up in the lungs, called "pulmonary edema."

Pulmonary System

1. Respiratory failure - When a machine is needed to help with breathing.
2. Pneumonia - An infection of the lungs and a very common cause of critical illness.

Kidneys

1. Kidney failure - When the kidneys cannot remove all of the wastes from the blood and waste builds up

Gastrointestinal System

1. Bleeding - A very common reason for admission to intensive care is bleeding from the esophagus, stomach or intestines.
2. Malnutrition - A common complication of critical illness. Good nutrition is very important for the body's ability to heal and fight off infections. Food can be given by mouth, through a feeding tube or by vein.

Nervous System

1. Stroke - When a blood vessel of the brain becomes blocked, so that blood cannot carry oxygen to the cells beyond the blockage. If the blockage clears before permanent damage has occurred it is sometimes called a "mini-stroke
2. Encephalopathy - Term used to describe when patients aren't thinking clearly or are confused. Brain function is temporarily or permanently altered by brain disease or damage

Infections

1. Sepsis - A serious condition in which the body responds improperly to an infection. If the infection gets worse it can involve the kidneys, brain, lungs and other organs of the body.

Multiple System Organ Failure - When more than one organ of the body stops working normally. Since each organ of the body has its own important purpose to keep us well, the more organs that don't work properly, the less likely it is that a patient will get better from a critical illness.

Trauma-Related Injuries

1. Motor Vehicular Accidents (MVA), falls, and wounds - may require intensive monitoring and treatment.

Signs (Puntillo et. al, 2012)

Although patients in the ICU have different signs, these are the most common:

- Threatened airway
- Respiratory arrests and cardiac arrests
- Respiratory rate ⩾40 or ⩽8 breaths/min
- Oxygen saturation <90% on ⩾50% oxygen
- Pulse rate <40 or >140 beats/min
- Systolic blood pressure <90 mm Hg
- Sudden fall in level of consciousness (fall in Glasgow coma score >2 points)
- Repeated or prolonged seizures
- Rising arterial carbon dioxide tension with respiratory acidosis

Symptoms (Puntillo et. al, 2012)

- Tired
  - A feeling of fatigue or lack of energy.
  - Most prevalent symptom among patients.
- Thirst
  - A strong desire for fluids, noted as the most intense symptom in terms of distress.
- Anxious
  - Feelings of worry or unease, which were reported significantly more by mechanically ventilated patients.
- Restless
  - An inability to relax or remain still, indicating discomfort or agitation.
- Hungry
  - A sensation of needing food.
- Short of breath
  - Difficulty in breathing or a feeling of breathlessness.

	• Pain
	  ○ Physical discomfort or suffering.
	• Sad
	  ○ Feelings of unhappiness or sorrow, indicating emotional distress.
	• Scared
	  ○ Feelings of fear or apprehension, reflecting psychological distress.
	• Confused
	  ○ A lack of clarity in thought or understanding, which was the least prevalent symptom reported.

Structural and Anatomical Changes

Structural and anatomical changes in patients in the ICU often result from the effects of prolonged illness, immobility, or interventions like mechanical ventilation. These changes can affect various systems:

Muscle Atrophy

- Extended bed rest causes muscle wasting, particularly in weight-bearing muscles, leading to ICU-acquired weakness. This is exacerbated by systemic inflammation and oxidative stress.

Neuromuscular Dysfunction

- Nerve damage or critical illness-related polyneuropathy can result in loss of muscle strength and reduced ability to move or perform tasks, impacting recovery.

Bone Density Loss

- Prolonged immobilization may lead to demineralization of bones, increasing the risk of fractures and long-term mobility issues.

Respiratory Changes

- Reduced activity of respiratory muscles, often seen with mechanical ventilation, can delay weaning and cause breathing difficulties

Skin Breakdown

- Immobility increases the risk of pressure ulcers, which are caused by prolonged pressure on the skin and underlying tissues.

Vascular Changes

- Stasis of blood flow due to inactivity can result in *venous thromboembolism (circulating blood clot that causes obstruction)*, posing a risk for pulmonary embolism (blood clot gets stuck in an artery in the lung).

Possible Speech-Language Problems

Cognition	**Causes for Cognition Problems/Deficits may include:** • Inadequate brain oxygenation – common in mechanically ventilated patients • Delirium • Infections, which lead to inflammatory responses

	• Glucose dysregulation
	• Certain medical illnesses, which may themselves have direct effects on the brain
	• Medications
	
	Signs of Cognition Problems/Deficits in the ICU may look like:
	
	• Memory Problems
	  ○ Difficulty remembering names, finding words, and other basic information.
	  ○ Struggling to concentrate, follow instructions, or maintain focus.
	  ○ Impairments in Executive Function
	  ○ Difficulty thinking and responding quickly
	• Delirium
	  ○ Rambling and losing focus
	  ○ Altered level of consciousness
	  ○ Hallucinations or delusions
	• Behavioral Signs
	  ○ Acting impulsively
	  ○ Agitation (i.e. restlessness, anxiety, irritability)
	  ○ Lethargy (i.e. reduced alertness, decreased responsiveness)
	  ○ Changes in mood

Language	**Causes for Language Problems in the ICU:**
	• Brain Injury
	• Neurological Disorders
	• Infections (i.e. Sepsis, meningitis)
	• Drug Abuse
	• Delirium
	
	Signs of Language Problems in the ICU
	• **Receptive language deficits**
	  ○ Inability to comprehend written or spoken words
	• **Expressive language deficits**
	  ○ Inability to produce or write words.
	• **Anomia**
	  ○ Difficulty in retrieving and finding words.
	• **Reduced verbal output**
	  ○ Has a decreased amount of speech

Swallowing	**Causes of Swallowing Problems or Difficulties in the ICU:** • **Dysphagia** ○ Difficulty in swallowing due to muscle weakness, decreased oral sensitivity, or neurological impairment.

	• **Aspiration risk**
	  ○ Heightened possibility of food or liquid getting into the lungs.
	• **Trauma**
	  ○ Artificial tubes like endotracheal tubes, tracheostomy tubes, and feeding tubes can cause trauma to the throat and vocal cords.
	• **Neuromuscular Weakness**
	  ○ ICU patients can experience muscular weakness due to neuromyopathy
	• **Impaired Sensation**
	  ○ ICU patients can experience impaired sensation in the larynx or oropharynx.
	• **Gastroesophageal Reflux**
	  ○ This can contribute to swallowing problems.
	  ○ One of the complications of reflux which can lead to swallowing problems is Dysphagia
	  ○ There may also be esophagus damage for long-term acid reflux which can cause scarring and narrowing of the esophagus, which makes it hard for food to pass.
	• **Dyssynchronous Breathing and Swallowing**
	  ○ When breathing and swallowing become uncoordinated, it can lead to aspiration.
	Signs of Swallowing Problems or Difficulties in the ICU
	• Coughing
	• Choking
	• Wet vocal quality
	• Drooling
	• Difficulty swallowing different consistencies of foods and liquids.

Articulation	**Causes of Articulation Problems or Difficulties in the ICU:**
	• **Intubation or tracheostomy**
	  ○ Prevents speaking by changing airflow
	• **Neurological Conditions**
	  ○ Can affect the patient's ability to speak clearly
	  ○ Can affect muscles of articulation and phonation
	• **Laryngeal Nerve Damage**
	  ○ This can occur after cardiothoracic intervention or anterior cervical spinal cord surgery.
	• **Medications**
	  ○ Sedatives
	  ○ Opioids
	  ○ Other medications that affect muscle control
	
	Signs of Articulation Problems or Difficulties in the ICU:
	• **Physical Signs**
	  ○ Muscle Weakness
	  ○ Reduced oral motor control
	  ○ Neurological Impairments
	  ■ Facial Droop

	■ Slurred speech • **Speech Sound Errors**
Voice	**Effects of Tracheostomy** • A 'stoma' or a hole at the nape of your neck can change the sound of your voice, it may make it sound more breathy or quiet. • **Speaking Valve** ○ Allows the patient to speak ○ Works by redirecting the flow of air through the vocal cords, enabling speech **Effects of BiPAP** • **Dry Mouth and Throat** ○ Reduced saliva production ○ Hoarseness and Sore Throat • **Changes in Vocal Fold Vibration** ○ Increased Air Pressure ■ can affect the vibration of the vocal folds • **Muscle Fatigue** ○ Prolonged use can lead to muscle fatigue in the vocal tract. **Effects of CPAP** • **Dry Mouth and Throat** ○ Reduced saliva production ○ Hoarseness and Sore Throat • **Changes in Vocal Fold Vibration** ○ Increased Air Pressure ■ can affect the vibration of the vocal folds

<u>Types of ICU</u>

(Physiopedia, 2024)

➢ **Medical Intensive Care Unit**
- It is for adult patients requiring specialized medical treatment monitoring. These include diabetic ketoacidosis, gastrointestinal bleeding, drug abuse, stroke, cancer, and respiratory arrest.

➢ **Surgical Intensive Care Unit**
- It is required to manage postoperative surgical patients who have undergone significant surgeries, including abdominal, craniotomy, thoracotomy, and unstable trauma patients. It is used when any patient requires observation and monitoring or life support after surgery.

➢ **Pediatric Intensive Care Unit**
- It is used for child patients only. It is used to manage critically ill child patients. The child who requires complete supervision of medical staff is admitted to this unit. This unit is used to handle cases of surgery care or trauma and patient who are at risk of deterioration.

➢ **Neonatal Intensive Care Unit**
- It is used for neonatal patients born before the due date (prematurely born child). These infants are at high risk of infection or critically ill patients. The neonatal intensive care unit manages neonates with any congenital issues and complications.

➢ **Cardiac Intensive Care Unit**
- It is used to manage patients with life-threatening conditions related to cardiac issues like cardiac arrest or myocardial infarctions.

➢ **Burns Care Unit**
  - It is a specialized unit to handle burn injuries.

➢ **Trauma Care Unit**
  - It is used to manage trauma cases (falls, stab wounds, gunshot wounds, TBI, blunt force trauma, or major burns).

Healthcare Resources

(Sharma, 2023; MedlinePlus, 2024; Pan et al., 2022; Mercadante et al., 2023)

Medical Care

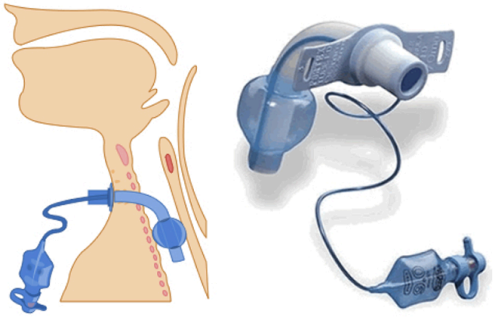
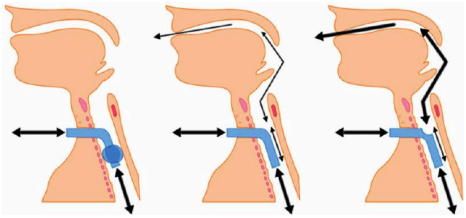
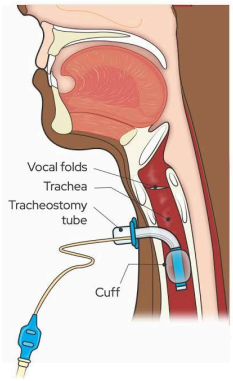
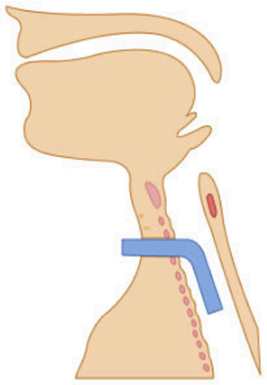
- **Monitoring Equipment** - Continuous monitoring of vital signs
  - ***Heart Monitors***: To track heart rate and rhythm.
  - ***Blood Pressure Monitors***: For real-time blood pressure readings.
  - ***Pulse Oximeters***: To measure oxygen saturation levels.
- **Infusion Pumps** - Regulate the medicine given through a drip.
- **Syringe Pumps** - Deliver a very small amount of medications, mechanically moving the piston of a syringe to send medication into IV tubing (Kurth et al., 2019).
- **Suction Machines** - Devices that remove obstructions like mucus, saliva, or blood
- **Dialysis Machines** - Used for patients with acute kidney failure to remove waste products from the blood.
- **Respiratory Support** - Provide oxygen on the requirement
  - ***Mechanical Ventilator***: Ensure the patient receives adequate oxygen and carbon dioxide removal.
  - ***Constant Positive Airway Pressure (****CPAP****)***: Remain//keep the airways open and reduce the work of breathing.
  - ***Bi-level Positive Airway Pressure (****BiPAP****)***: Supply pressurized air into the airways
- **Nasogastric Tubes and Feeding Tubes** - Feed the patient through tubes.
  - **Nasogastric Tubes** (Cleveland Clinic, 2024)
    - "Nasogastric" means nose to stomach.
    - It is a thin, flexible tube that's inserted through the nasal cavity into your throat and down through the esophagus into the stomach.
  - **Feeding Tubes** (WebMD, 2023)
    - It is a flexible plastic tube placed into the stomach or bowel to help you get nutrition when unable to eat.
    - It will run either through the nose or mouth or directly into your stomach or intestines.
    - It delivers a liquid nutrition formula (blend of protein, carbohydrates, fats, vitamins, minerals, and other micronutrients) directly into the digestive system.
    - It can be delivered through the use of a pump or syringe to push the food, while others rely on gravity.

Surgical Care

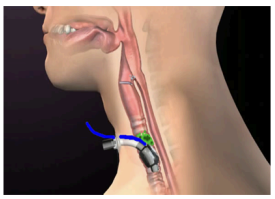
- **Invasive Procedures**
  - ***Central Venous Catheters (****CVC****)***: A long, soft, thin, hollow tube that is placed into a large vein (blood vessel) used for administering medications and fluids or for monitoring central venous pressure.
  - ***Arterial Lines/Catheterization (****Art Line/A-Line****)***: A thin, hollow tube that is placed into an artery (blood vessel) in the wrist, groin, or other location to monitor blood pressure and obtain blood samples.
- **Chest Tubes** - Inserted to drain fluid or air from the pleural space, aiding in lung expansion.

- **Tracheostomy**
  - **Description**
    - A surgical procedure to create an opening in the neck to facilitate breathing in patients requiring long-term ventilation.
  - **When is it needed?**
    - In cases of:
      - medical conditions that make use of ventilators, necessary for an extended period, usually for more than one or two weeks.
      - Vocal cord paralysis
      - Throat cancer
      - Mouth Cancer
      - Management of secretions (unable to clear airways effectively)
      - Any medical condition blocking or narrowing the airway
      - Paralysis (or conditions that make it hard to cough up mucus from the throat)
      - Major head or neck surgery
      - Severe injury to the head or neck
      - Other emergency situations
  - **Procedure**
    - **Surgical Tracheostomy**
      - A surgeon will create an incision (cut) in the neck in the trachea in the front of the neck, they will then insert a tube into the opening and secure it in place with stitches or surgical tape. This will take 20-45 minutes to complete.
      - In cases when the patient is unable to breath on their own, the surgeon will hook the tracheostomy tube up to a ventilator (Breathing Machine)
    - **Minimally Invasive Tracheostomy**
      - Also called a percutaneous tracheostomy, a surgeon usually does this procedure in a hospital room. The surgeon makes a small cut near the base of the front of the neck. A special lens is fed through the mouth so that the surgeon can view the inside of the throat. Using this view of the throat, the surgeon guides a needle into the windpipe to create the tracheostomy hole. Then the surgeon expands the hole to the right size for the tube. (*Tracheostomy - Mayo Clinic*, n.d.)
  - **Risks**
    - Bleeding
    - Infection
    - Damage to the Esophagus
    - Damage to the trachea (windpipe)
    - Tracheoesophageal fistula (an abnormal opening between the trachea and esophagus)
    - Injury to the recurrent laryngeal nerve (the nerve that moves the vocal cords)
    - Blocked tracheostomy (mucus or blood clots)
    - Air that becomes trapped in the lungs, chest, or under the skin around the tracheostomy
  - **Benefits**
    - Improved Comfort
    - Reduced need for sedation
    - Easier time weaning off of mechanical ventilation
    - Faster rehabilitation
    - Better nutrition
    - Earlier communication

- **Types of Tracheostomy Tubes**

Type	Definition/Purpose
Cuffed Tubes    	➢ These have a soft balloon around the distal end of the tube which inflates to seal the airway. ➢ Cuffed tubes are necessary when positive pressure ventilation is required or in situations where airway protection is essential to minimize aspiration of oral or gastric secretions (although all cuffs are not an absolute barrier to secretions). ➢ When the cuff is inflated, all air from the vent goes into the lungs. ➢ Speech can be achieved by simple **cuff deflation**, assuming that there is enough space between the outer tracheostomy tube and the trachea for adequate flows of exhaled gas to pass, that the larynx is functional and that the upper airways are patent. (McGrath et al., 2015) ○ This method of vocalisation is often referred to as **'leak speech'**. ○ Some air goes out the nose & mouth also some from the tube.
Uncuffed Tubes  	➢ These do not have a cuff that can be inflated inside the trachea and tend to be used in longer-term patients who require on-going suction to clear secretions. These tubes will not allow sustained effective positive pressure ventilation as the gas will escape above the tracheostomy tube. ➢ **One-way "speaking" valves** are one-way valves that are inserted into the breathing circuit between the ventilator and the patient's tracheostomy or can be fastened straight onto a tracheostomy tube. ○ The valves in the tracheostomy tube are closed during expiration and open during inspiration. To ensure gas escape, an uncuffed or cuff-deflated tube is used, as gas cannot flow through the tube during expiration.

	○ Note that speaking valves should **NEVER** be used with the cuffed tubes or inflated cuffed tubes as this can lead to asphyxiation, respiratory arrest, and death. (*Tracheostomy*, n.d.)
Fenestrated Tubes 	➢ Fenestrated tubes have an opening(s) on the outer cannula, which allows air to pass through the patient's oral/nasal pharynx as well as the tracheal opening. ➢ The air movement allows the patient to speak and produces a more effective cough. ➢ However, the fenestrations increase the risk of oral or gastric contents entering the lungs. It is therefore essential that patients who are at high risk of aspiration or on positive pressure ventilation do not have a fenestrated tube, unless a non-fenestrated inner cannula is used to block off the fenestrations.
Single Cannula Tubes 	➢ These are traditionally the first tube to be sited in a critical care area.
Double Cannula Tubes 	➢ These have an outer Cannula to keep the airway open and an inner cannula which acts as a removable liner to facilitate cleaning of impacted secretions.
Tubes with Subglottic Suction	➢ These are tubes with a small hole and channel that connect to a suction port.

 	➢ The purpose of these tubes is to remove secretions that build up above the cuff and prevent bacteria from accumulating. ○ A syringe or suction can be used to remove secretions from the tube. ➢ These tubes can help reduce the risk of ventilator-associated pneumonia (VAP)
Adjustable Flange Tracheostomy Tubes 	➢ Is a type of tracheostomy tube used when a patient's trachea is too far from their skin for a standard tube to fit properly. ➢ This consists of a tube that can be changed in length inside the trachea by passing it through a flange with a locking mechanism.

Rehabilitation Care

- **Physical Therapy (Physiotherapy)**
  - Prevent and treat deconditioning (musculoskeletal function), as well as management of the respiratory system (maintain lung volume, improve oxygenation and ventilation, optimize clearance of secretions) in critically ill patients (Physiopedia, 2024).
- **Occupational Therapy**
  - Focuses on early mobilization and functional recovery. It helps patients regain independence in activities of daily living (ADLs) and reduce the risk of ICU-acquired weakness (Sones, n.d.).
- **Respiratory Therapy**
  - According to the Sengkang General Hospital (2024), this provides critical support through ventilator management, oxygen therapy, and techniques to improve breathing efficiency.
- **Speech-Language Therapy**
  - Assists patients by evaluating and managing swallowing, communication, cognitive, or speech difficulties, which are common due to conditions like intubation or neurological impairments (Thorburn, 2024).
- **SLP Tracheostomy Therapy/Treatment**
  - The patient may be able to use a **speaking valve** to help them talk. A speaking valve is a special attachment designed to help you speak with a trach, but not all trachs allow for this attachment. The speaking valve is placed over the trach tube, and it allows air to move in through the neck but not back out. Instead, the air is pushed up through your voice box (larynx) and to your mouth. There are also special speaking valves that you can use with a ventilator. (ASHA)
  - SLPs may also give alternate ways of communication that don't involve use of the voice, such as (Mph, 2023):
    - Text-to-speech apps
    - Communication Boards (i.e. AAC)
    - Sign Language
    - Speech-generating devices

SLP Therapy

Areas	Strategies	Assessment & Materials	Approaches
Cognition	• Target specific cognitive domains (e.g., attention, memory, executive function) • Implement compensatory strategies • Provide environmental modifications	• Montreal Cognitive Assessment (MoCA) • Mini Mental State Examination (MMSE)	• Cognitive Stimulation Therapy • Attention Process Training • Memory Strategy Training
Language and Pragmatics	• Address any language delays or disorders resulting from hearing loss or social factors • Improve social communication skills by increasing interactions for more opportunities for language growth	• Ease of Communication Scale (ECS) - Likert scale based on the patient's ability to communicate needs effectively. • Bedside-Western Aphasia Battery (WAB) Test • Structured and Unstructured Conversations	• Cognitive-linguistic Therapy • Social Skills Training • Script Training or Narrative Interventions • Pragmatic Language Intervention • Augmentative and Alternative Communication (AAC) ○ If speech is severely impaired, AAC strategies may be used to support communication
Feeding / Swallowing	• Improve oral motor control • Address any structural issues affecting swallowing	• Eating and drinking abilities (e.g. oral containment, sucking, mastication) • Sensory status • Acceptance of food • Diet diversity • Oral medication management • Caregiver behaviors during feeding • Psychosocial impact on family and child dynamics	• Oral Motor Exercises • Swallowing Maneuvers • Secretion management • Oral hygiene practices • Acceptance of food • Postural Changes
Speech To enhance articulation, phonology, clarity and intelligibility.	• Target specific error sounds, especially those affected by velopharyngeal dysfunction • Use visual feedback (e.g., mirrors, video	• Oral Peripheral Mechanism Test • Bauman-Waengler Speech Motor Assessment • Passage and Conversation	• Traditional articulation therapy • Phonological process approach • Cycles approach for multiple sound errors

	recordings) • Implement oral motor exercises to improve muscle strength and coordination • Identify articulation errors characterized as *obligatory errors* (due to structural differences) or as *compensatory* (learned) errors	• Any articulation screener with sounds in different placements	
Voice To address issues such as hoarseness or breathiness and achieve a clearer, more efficient voice production.	• Address compensatory articulation patterns • Improve vocal quality and pitch control • Assess for voice quality and signs of vocal fold pathology (e.g., hoarseness, breathiness).	• Auditory-perceptual assessment • Pitch analyzers • Assessment of voice handicap • Referral for ear, nose, and throat assessment	• Vocal Range and Flexibility Exercises • Voice Therapy Programs • Vocal Hygiene • Breath Support Training

Educational

- Regular Assessment and Monitoring
  - Continuous monitoring of the patient's condition through regular assessments is crucial for detecting changes in vital signs and symptoms
- Coordinated Care Among Team of Specialists
  - A multidisciplinary approach is essential in the ICU, where specialists from various fields (e.g., respiratory therapy, nutrition, nursing, and physicians) work together
- Prompt Interventions and Care
  - Timely medical interventions are necessary to address sudden changes in the patient's condition.
- Family Support
  - Providing emotional and psychological support for the family is an integral part of ICU care, as families are often under significant stress.
- Preventive Measures and Infection Control
  - In the ICU, preventing infections through strict hygiene practices, isolation protocols, and the use of appropriate medications is essential to protect vulnerable patients.

Critical Members of the Management Team (Intensive Care Foundation, n.d.)

Intensivist	Doctors in the ICU are referred to as *intensivists*. They are specialists who have completed advanced training in intensive care medicine or a related speciality. The intensivist is often an expert in one of these areas: Surgery, Internal medicine, Anesthesiology.
Nurses	ICU nurses usually look after just one or two patients only. Many have special experience, education and training in caring for critically ill and injured patients.
Pharmacist	Attend ward rounds and assist doctors and nurses with advice regarding medications as well as ensuring a supply of medication for

	patients.
Dietitians	Work out patients' nutritional needs and how best they will be fed. Sometimes this can be through a nasogastric tube (a tube that goes up the nose and down into the stomach) or through a drip straight into the vein.
Respiratory therapist	Manages airway support, ventilators, oxygen therapy, and respiratory assessments to ensure optimal breathing and recovery for critically ill patients.
Physiotherapists/Physical therapist	Attend to patients in ICU (often when they are asleep) to exercise muscles in their arms and legs to prevent joints from becoming stiff and, sometimes to help strengthen the chest muscles and lungs of patients who need help with breathing while in ICU.
Occupational therapist	Assess ADL performance despite ICU limitations (e.g., sedation, intubation, restricted mobility). Create plans to improve function while addressing ICU-specific issues like weakness, fatigue, and cognitive impairments. Focus on early mobilization, preventing deconditioning, and adapting tasks for medical equipment.
Speech Language Pathologists	SLPs in the ICU play a vital role in assessing aspiration risk, recommending diet modifications, and addressing communication, cognitive, and voice challenges, including for patients with NGTs. They manage cognitive and communication impairments from critical illnesses like infections, sepsis, and multi-organ failure. SLPs specialize in neuroconditions (e.g., stroke, TBI, ALS, Parkinson's) that impact swallowing, speech, and cognition. For respiratory-compromised patients (e.g., ventilators, tracheostomies, oxygen support), SLPs provide therapy for swallowing and communication and may introduce speaking valves for tracheostomy patients.
Social Workers	Provide invaluable support for families of the critically ill including counseling and assistance with financial matters.
Chaplain	A clergy member in the hospital who talks with patients, families and staff.

<u>Medical Precautions for SLP Therapy</u>

Note: Remember to monitor the ***vital signs*** of the patient before, during, and after the session.

Before	During	After

• Review Client History
  ○ Read patient charts
  ○ Remain informed about the holistic clinical status
	• Maintain Hygiene
	  ○ Adhere to strict hygiene practices (e.g. PPE, hand washing, sterilization)
		• Share Results and Progress
		  ○ Communicate therapy results and progress with the client and

of the patient ● Be aware of the equipment or devices used to monitor the patient ○ These include ventilators, tubes, oxygen and other equipment or devices used by the patient. ● Communicate effectively with the interdisciplinary team ○ Share information across discipline boundaries ○ Request information about the patient's current status ● Ensure a Safe Environment ○ Ensure to be in prime condition, free from any potential diseases/hazards ○ Wear personal protective equipment (PPE).	● Explain Procedures ○ Clearly explain the assessment/therapy procedures to the client ● Set Boundaries and Obtain Consent ○ Establish clear boundaries and obtain explicit consent for any physical contact or intervention. ● Monitor Patient ○ Observe the patient and monitoring devices frequently ○ Monitor vital signs ● Utilize Appropriate Communication ○ Use clear, accessible language and simple instructions.	their family. ● Provide Post-Therapy Instructions ○ Offer clear post-therapy care instructions and suggest carry-over techniques. ● Document and Follow-Up ○ Accurately document session outcomes and any concerns. ● Review Therapy Goals ○ Adjust therapy goals based on client progress and feedback ● Communicate progress to the interdisciplinary team ○ Effective coordination and communication among the management team will enhance patient care.

Support Systems

Local	International
● **Department of Health (DOH)** ○ The DOH plays an important part in healthcare policy and regulation for critical care. ● **Critical Care Nurses Association of the Philippines (CCNAPI)** ○ This group supports ICU patients indirectly by concentrating on the professional development of critical care nurses.	● **Society of Critical Care Medicine (SCCM)** ○ This organization offers patients and their critical care professionals resources and support.

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