N311 Care Plan # 4

Lakeview College of Nursing

Name: Kayla Wolpert

Demographics (5 points)

Date of Admission	**Patient Initials**	**Age**	**Gender**
08-24-2020	B.B.	44	Male
Race/Ethnicity	**Occupation**	**Marital Status**	**Allergies**
White/Caucasian	Disabled	Single, never married	Ativan - intolerance
Code Status	**Height**	**Weight**	
DNR; selective treatment in the event of COVID diagnosis current POLST to remain in place, trial period of feeding tube. Selective treatment: primary goal of treating patients' conditions. In addition to treatment described comfort-focused treatment, use mechanical treatment, IV fluids and IV medications, as medically appropriate and consistent with pt.	67.0 inches	141.4lbs	

Medical History (5 Points)

Past Medical History: Unspecified dementia with behavioral disturbances, major depressive disorder (single episode, unspecified), unspecified hyperlipidemia, irritable bowel syndrome with constipation, functional urinary incontinence, unspecified anxiety disorder, restlessness and agitation, unspecified type of attention-deficit hyperactivity disorder (ADHD), unspecified abnormality of gait and mobility, generalized muscle weakness, mixed receptive-expressive language disorder, dysphagia (oropharyngeal phase), cognitive communication deficit, unspecified developmental disorder of speech and language, unspecified lack of expected normal physiological development childhood, unspecified rosacea, unspecified mucopolysaccharidosis, unspecified seborrheic dermatitis, and acrodermatitis continua.

Past Surgical History: Tonsillectomy/adenoidectomy and colonoscopy.

Family History: Maternal grandfather had Alzheimer's disease, and maternal grandmother had Parkinson's disease.

Social History (tobacco/alcohol/drugs): Patient (pt) has never used any type of tobacco, alcohol or recreational drugs.

Admission Assessment

Chief Complaint (2 points): Combative Behaviors

History of present Illness (10 points): Pt is a 44-year-old white male with a history of Sanfilippo Mucopolysaccharidoses, dementia, anxiety and depression. Pt was living in a group home who was brought to the long-term care facility by his father on 08-24-20 due to pts behavioral issues. Pts combative behaviors are still consistent since admission, but behaviors are intermitting. Pt has nonverbal cues as in facial features and clenched fist and will attempt to strike at staff, pt gets more aggravated when staff asks multiple questions and staff not anticipating the wants and need of the pt. Relieving factors could be staff stopping what we are doing and trying a different approach or try to redirect the pt. For treatment pt is now in a long-term facility and pt takes medications to help with combative behaviors like clonidine HCL, divalproex sodium, and ziprasidone mesylate.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): Sanfilippo Mucopolysaccharidoses

Secondary Diagnosis (if applicable): Pt has no known secondary diagnosis.

Pathophysiology of the Disease, APA format (20 points): Mucopolysaccharidoses type III (MPS III) is a rare, inherited disorder also known as Sanfilippo Syndrome (*MPS III (Sanfilippo Syndrome) | Boston Children's Hospital*, n.d.). MPS III is a rare genetic condition that causes fatal brain damage. It is classified as a lysosomal storage disorder (LSD). What this means is that there is a genetic variation that disrupts the normal activity of lysosomes in the human cells (*MPS III (Sanfilippo Syndrome) | Boston Children's Hospital*, n.d.). Lysosomes contain specific proteins that are responsible for breaking down and recycling molecules such as sugars and fats. In this case those with MPS III either lack one of these enzymes or do not contain one of these enzymes to be able to break down molecules for cells to function properly. All four subtypes have the inability to properly breakdown heparan sulfate, which builds up the body's tissues (*MPS III (Sanfilippo Syndrome) | Boston Children's Hospital*, n.d.). This heparan sulphate accumulates and causes damage to the cells of the central nervous system, including the brain (NORD - National Organization for Rare Disorders, 2020). There are four subtypes of MPS III that are differentiated by their genetics, they are MPS IIIA, IIIB, IIIC, and IIID. Even though there are different subtypes they all affect the brain and spinal cord. Therefore, over time it can affect other boy systems.

All types of MPS III are associated with mental deterioration, but the severity and rate of progression depends on the type of MPS III (NORD - National Organization for Rare Disorders, 2020). MPS III is an autosomal recessive pattern, which means the affected person received one

defective copy of the gene from each of their parent. In autosomal recessive inheritance, in each pregnancy of a couple who are both carriers, there is a: 25% (1 in 4) chance of having an affected child, 50% (1 in 2) chance of a child receiving only one copy of the altered gene and therefore being a carrier, 25% (1 in 4) chance that a child will be neither affected nor a carrier (NORD - National Organization for Rare Disorders, 2020). The risk is the same for males and females.

Most signs and symptoms occur during early childhood. These include delayed speech, behavior problems, certain features of autism spectrum disorder, sleep disturbances, developmental regression, intellectual disability, seizures, movement disorders, mildly coarse facial features, an enlarged head and tongue, and umbilical hernia or inguinal hernia (*MPS III (Sanfilippo Syndrome) | Boston Children's Hospital*, n.d.). But over time the patient may have developed arthritis, hearing loss, visual impairment, enlargement of the liver and spleen, frequent respiratory infections, and chronic diarrhea (*MPS III (Sanfilippo Syndrome) | Boston Children's Hospital*, n.d.).

To diagnose MPS III, mucopolysaccharides are usually first measured in urine, followed by measurement of enzyme activity in blood or a small skin sample (NORD - National Organization for Rare Disorders, 2020). Treatment of MPS III is symptomatic and supportive. At different stages this could include a combination of the following: a neurologist, developmental pediatrician, metabolic/genetics specialist, orthopedics, gastroenterologist, ophthalmologist, cardiologist, endocrinologist, allied health (e.g., physiotherapy, OT, behavioral therapists, speech therapist) and an ENT (ear, nose and throat) specialist (NORD - National Organization for Rare Disorders, 2020). But there are currently no approved therapies to reverse the effects of MPS III.

My pt has unspecified Sanfilippo mucopolysaccharidoses. My pt has suffered many of the signs and symptoms of this disease. These include behavior problems, seizures, intellectual

disabilities, and difficulty with movement. He also has trouble communicating with us other than nonverbal and will get agitated and try to strike staff if we cannot anticipate what he wants or needs. He used to reside in a group home, but family decided he would be better in a long-term care facility. Where they can help more with the pts wants, needs and ADLs. For treatment for my pt he is on several medications to help those are clonidine HCL, ziprasidone mesylate, and divalproex sodium. Treatment also include pt being in a long-term facility, helping to redirect the pt with his behaviors so he does not get combative or harm himself.

Pathophysiology References (2) (APA):

MPS III (Sanfilippo Syndrome) | Boston Children's Hospital. (n.d.). Boston Children's Hospital. Retrieved March 19, 2021, from https://www.childrenshospital.org/conditions-and-treatments/conditions/m/mps-iii---sanfilippo-syndrome

NORD - National Organization for Rare Disorders. (2020, August 13). *Mucopolysaccharidosis Type III*. https://rarediseases.org/rare-diseases/mucopolysaccharidosis-type-iii/

Laboratory Data (20 points)
If laboratory data is unavailable, values will be assigned by the clinical instructor

CBC Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal Value
RBC	**Male: 4.7-6.1 Female: 4.2-5.4**	*****	*****	***Per pt power of attorney (POA) they do not want any aggressive intervention and treatment. POA declines any lab and imaging but agrees for pt to have Urinary Analysis (UA) if needed. ***
Hgb	**Male:14-18**	*****	*****	

	g/dL Female: 12-16 g/dL			
Hct	**Male: 40-52% Female: 36-47%**	*	*	
Platelets	**150-400 x 10^9/L**	*	*	
WBC	**5-10 x 10^9/ L**	*	*	
Neutrophils	**55-70**	*	*	
Lymphocytes	**20-40**	*	*	
Monocytes	**2-8**	*	*	
Eosinophils	**1-4**	*	*	
Bands	**0.5-1**	*	*	

Chemistry Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason For Abnormal
Na-	**136-145 mEq/L**	*	*	***Per pt power of attorney (POA) they do not want any aggressive intervention and treatment. POA declines any lab and imaging but agrees for pt to have Urinary Analysis (UA) if needed. ***
K+	**3.5-5 mEq/L**	*	*	
Cl-	**98-106 mEq/L**	*	*	
CO2	**23-30 mEq/L**	*	*	
Glucose	**74-106 mg/dL**	*	*	
BUN	**10-20 mg/dL**	*	*	
Creatinine	**0.5-1.1 mg/dL**	*	*	

Albumin	**3.5-5 g/dL**	*	*	
Calcium	**9-10.5 mg/dL**	*	*	
Mag	**1.3-2.1 mEq/L**	*	*	
Phosphate	**3-4.5 mg/dL**	*	*	
Bilirubin	**0.3-1 mg/dL**	*	*	
Alk Phos	**30-120 U/L**	*	*	

Urinalysis Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	**Clear, Amber/ Yellow**	*	*	***Per pt power of attorney (POA) they do not want any aggressive intervention and treatment. POA declines any lab and imaging but agrees for pt to *have Urinary Analysis (UA) if needed. * Pt has no UA since being admitted.**
pH	**4.6-8 Average: 6**	*	*	
Specific Gravity	**1.005-1.03**	*	*	
Glucose	**50-300 mg/day**	*	*	
Protein	**0-8 mg/dL**	*	*	
Ketones	**negative**	*	*	
WBC	**0-4 per low-power field Negative for cast**	*	*	
RBC	**Less than or equal to 2 Negative for cast**	*	*	

Leukoesterase	**negative**	*	*	

Cultures Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings
Urine Culture	**Negative: less than 10,000 per mm of U** **Positive: greater than 100,000 per mm of U**	*	*	***Per pt power of attorney (POA) they do not want any aggressive intervention and treatment. POA declines any lab and imaging but agrees for pt to have Urinary Analysis (UA) if needed. ***
Blood Culture	**Negative**	*	*	
Sputum Culture	**Normal Upper RT**	*	*	
Stool Culture	**Normal intestinal flora**	*	*	

Lab Correlations Reference (APA): No lab references due to pt not having labs done.

Diagnostic Imaging

All Other Diagnostic Tests (10 points): Per pt power of attorney (POA) they do not want any aggressive intervention and treatment. POA declines any lab and imaging but agrees for pt to have Urinary Analysis (UA) if needed.

Current Medications (10 points, 2 points per completed med)

5 <u>different</u> medications must be completed

Medications (5 required)

Brand/Generic	Geodon Solution/ Ziprasidone Mesylate	Remeron/ Mirtazapine	Depakote Sprinkles/ Divalproex Sodium	Clonidine HCL/ Catapres	Citalopram Hydrobromide/ Celexa
Dose	10mg	30mg	500mg	0.3mg	20mg
Frequency	As needed (PRN) q 2hrs.	1x a day	4x a day	1x a day	1x a day
Route	IM	PO	PO	PO	PO
Classification	Antipsychotic/ Antimanic Agent	Antidepressant	Anticonvulsant	Antihypertensives	Antidepressant
Mechanism of Action	Selectively blocks dopamine and serotonin receptors in the mesocortical tract of the CNS, thereby suppressing psychotic symptoms (Jones & Bartlett Learning, 2020, pp. 1141).	May inhibit neuronal reuptake of norepinephrine and serotonin. By doing so, this tetracyclic antidepressant increases the action of these neurotransmitters in nerve cells. Increased neuronal serotonin and norepinephrine levels may elevate mood (Jones & Bartlett Learning, 2020, pp. 743-744).	Anticonvulsant unrelated chemically to other drugs used to treat seizure disorders. Mechanism of action unknown; may be related to increased bioavailability of the inhibitory neurotransmitter gamma-aminobutyric acid (GABA) to brain neurons. Inhibits secondary phase of platelet aggregation (*Divalproex*, 2021).	Stimulates peripheral alpha-adrenergic receptors in the CNS to produce transient vasoconstriction and then stimulates central alpha-adrenergic receptors in the brain stem to reduce heart rate, and systolic and diastolic blood pressure. Although alpha2 adrenergic receptors in the brain are stimulated, the precise action that calms children with ADHD is unknown (Jones & Bartlett Learning, 2020, pp. 248-249).	Blocks serotonin reuptake by adrenergic nerves, which normally release the neurotransmitter from their storage sites when activated by a nerve impulse. This blocked reuptake increases serotonin levels at synapses, which may elevate mood and reduce depression (Jones & Bartlett Learning, 2020, pp. 232-233).

Reason Client Taking	Pt is taking this due to increased behavioral disturbances.	Pt is taking this due to depression, insomnia, and appetite.	Pt is taking this due to unspecified dementia with behavioral disturbances.	Pt is taking this due to restlessness, agitation and unspecified ADHD.	Pt is taking this due to depression.
Contraindications (2)	Concurrent use of other drugs that prolong QT interval, recent acute MI, uncompensate d heart failure.	Hypersensitivity to mirtazapine or its components, use within 14 days of an MAO inhibitor, including I.V. methylene blue and linezolid.	Hypersensitivity to divalproex sodium, thrombocytopenia, and if the pt has history of bleeding disorders.	Hypersensitivity to clonidine or its components, and anticoagulant therapy (epidural infusion).	Hypersensitivity to citalopram or its components, and pimozide therapy.
Side Effects/Adverse Reactions (2)	Agitation, dysphagia, and urinary incontinence.	Agitation, seizures, increased appetite, and UTI.	Emotional upset, aggression, and diarrhea.	Agitation, headache, and weakness.	Agitation. Seizures, and impaired concentration.

Medications Reference (APA):

Divalproex. (2021, March 3). Drugs.Com. https://www.drugs.com/pro/divalproex.html

Jones & Bartlett Learning. (2020). *2021 Nurse's Drug Handbook* (20th ed.). Jones & Bartlett Learning.

Assessment

Physical Exam (18 points)

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	Pt was alert and oriented times 2, person and situation but not to time or place. Pt was well-groomed with no acute distress.
INTEGUMENTARY: **Skin color:** **Character:**	Pt skin color was pink. Skin was warm and dry upon palpation. No rashes, lesions, wounds, or

Temperature: **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** 15 – low risk **Drains present: Y☐ N ☒** **Type:**	bruising. Normal quantity, distribution, and texture of hair. Nails without clubbing or cyanosis. Skin turgor was unable to obtain due to pt not allowing me to do so, tried 2 different times. Capillary refill less than 3 seconds in fingers and toes bilaterally. Pt has a Braden score of 15 which is low risk.
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	Head and neck are symmetrical, no abnormalities. Trachea is midline without deviation. Pt did not allow me to palpate thyroid, carotid pluses or to detect if there was lymphadenopathy, tried 2 different times. Bilateral sclera white, bilateral cornea clear, bilateral conjunctiva not obtained due to pt not allowing me to. No visible drainage from eyes. Bilateral lids are moist and pink without lesions or discharge noted. PERLA and EOMs not obtained due to pt not allowing me. Bilateral auricles moist and pink without lesions. Septum is midline, could not obtain information on if pt had moist and pink turbinates, bleeding or polyps and could not obtain tenderness or nontenderness of frontal sinuses. Pt did not allow me to investigate their mouth, other than pt has good dentition.
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema:**	Clear S1 and S2 sounds no murmurs or gallops. PMI not palpable at 5th intercostal space at MCL. Normal rate and rhythm. All extremities pink, warm, dry and symmetrical. Pluses 2+ throughout bilaterally. Capillary refill less than 3 seconds fingers and toes bilaterally. No edema upon inspection and palpation. Epitrochlear lymph nodes nonpalpable bilaterally. Homan's sign was not performed due to pt not allowing me, attempted 2 times.
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	Normal rate and pattern of respirations, respirations symmetrical and non-labored, lung sounds clear throughout anterior/posterior bilaterally with no wheezes, crackles, or rhonchi noted.
GASTROINTESTINAL: **Diet at home:** **Current Diet** **Height:**	Pt is on a regular diet, pureed texture and regular consistency. Pt height is 67 inches and weighs 141.4lbs. Pt would not allow me to auscultate bowel sounds or palpate the abdomen, attempted

Weight: **Auscultation Bowel sounds:** **Last BM:** 1015 **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:** **Scars:** **Drains:** **Wounds:** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	2 times. Pts last BM was at 1015, it was dark in color, foul smell, large BM but soft. During inspection pt did not have any incisions, scars, drains, or wounds. Pts abdomen was not distended.
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☐ N ☒** **Type:** **Size:**	Pt had no pain with urination due to pt is incontinent, urine is yellow and clear, no foul smell, pt solid their brief. Inspection of the genital pt is uncircumcised, no penile discharge or lesions, no scrotal swelling, testes distended bilaterally, no apparent inguinal or femoral hernias, pts genitals are reddened in color and moist due to pt being incontinent (Crnp et al., 2016, pp. 774).
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☒ N ☐** **Fall Risk: Y ☒ N☐** **Fall Score:** 90 **Activity/Mobility Status:** **Independent (up ad lib)** ☐ **Needs assistance with equipment** ☒ **Needs support to stand and walk**☒	All extremities have full range of motion (ROM). Hand grips and pedal pushes and pulls demonstrate normal and equal strength. Pts gait and mobility is unstable and must use a wheelchair assistive device and must always have an Aid or nurse present when transferring. Pt is alert and oriented times 2 to person and situation but not time and place. PERLA was not obtained due to pt not allowing me, attempted twice. Pt has a fall score of 90 due to pt having a fall within the last three months, must have ambulatory aid, mental status, gait and transferring.
NEUROLOGICAL: **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no -** **Legs ☐ Arms ☐ Both ☐** **Orientation:** **Mental Status:**	Pt would not allow me to obtain PERLA, attempted twice. Pt is alert and oriented times 2 to person and situation but not time and place. Pt has cognitive communication deficit, developmental disorder of speech and language, unspecified lack of expected normal physiological development childhood.

Speech: **Sensory:** **LOC:**	
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	Pt could not communicate coping methods. Pt has unspecified lack of expected normal physiological development childhood. Pt could not tell me if he had a preferred religion and not documented in chart. Pt could not tell me about family or personal data. Chart does show mother and father are alive but does not state if they visit.

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
0900	66	119/69	18	98.4 degrees F	98%

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
0900	0-10	n/a	0, pt had no nonverbal pain during assessment. Pt could not tell me if he was in pain or not.	n/a	n/a

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
750mL	Pt was heavily soiled three times, pt did have a large soft BM.

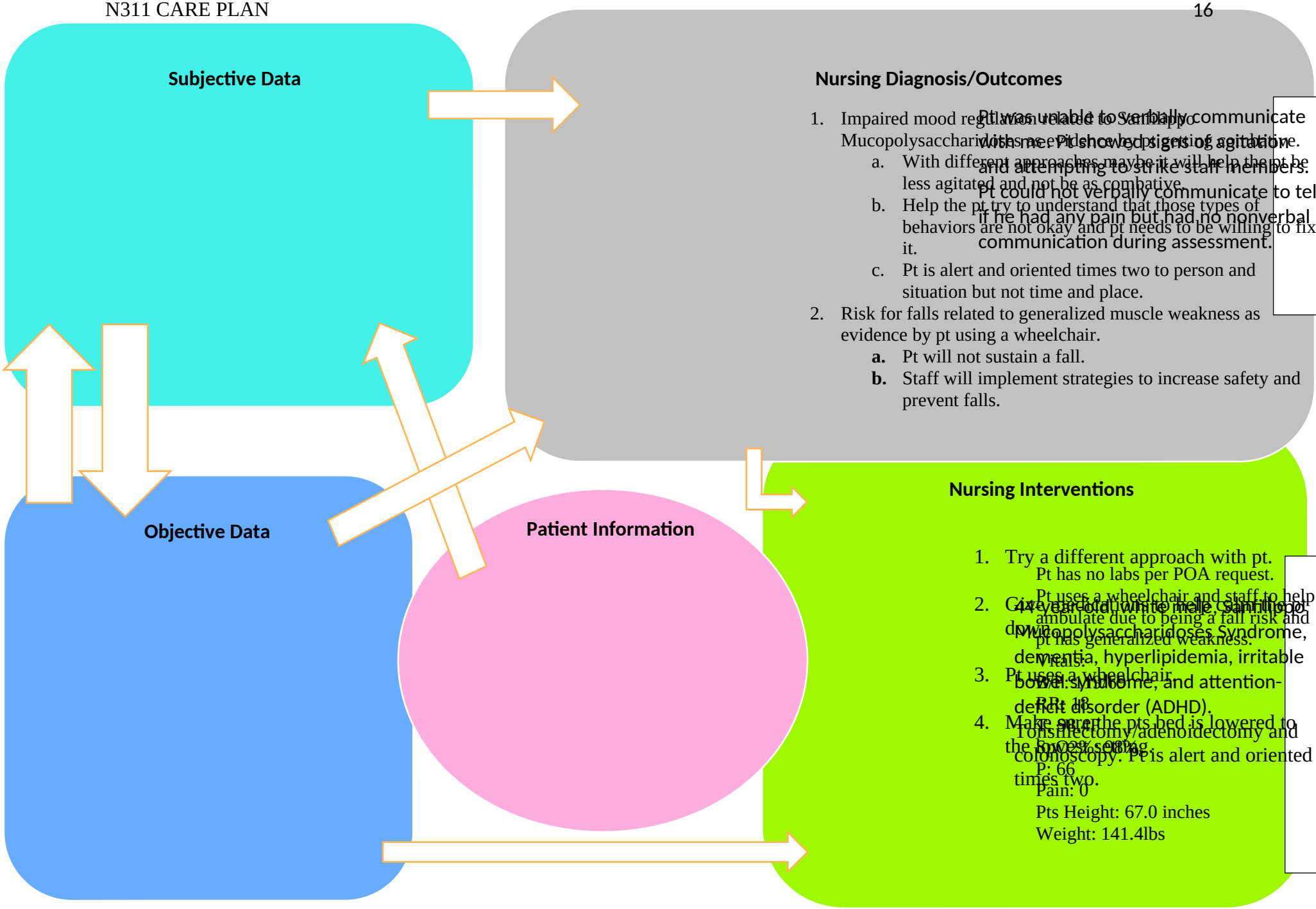
Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis

Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components	**Rational** • Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** • How did the patient/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. Impaired mood regulation related to Sanfilippo Mucopolysaccharidoses as evidence by pt getting combative.	This was chosen due to pt being combative and not being able to verbally communicate, and pt needs frequent reorientation.	**1.**Try a different approach with pt. **2.** Give medications to help calm the pt down.	Stopping what we are doing and trying a different approach will help calm pt as well as the medications the doctor prescribed. Due to pts cognitive status, pt does not understand and does not know how to verbally communicate.
2. Risk for falls related to generalized muscle weakness as evidence by pt using a wheelchair.	This was chosen due to when pt was taken to the toilet pt was very unsteady, needed assistance, and pt has had a fall in the past three months, and pt needs frequent reorientation.	**1.** Pt uses a wheelchair. **2.**Make sure the pts bed is lowered to the lowest setting.	By using a wheelchair, it helps prevent fall and so does lowering the pts bed to the lowest setting. Due to pts mental status, he does not understand why we must do these things to prevent falls.

Other References (APA):

Crnp, H. B. M. R., Palm, M. L., & Md, L. B. S. (2016). *Bates' Nursing Guide to Physical Examination and History Taking* (2nd ed.). LWW.

Concept Map (20 Points):


Subjective Data
Pt was unable to verbally communicate with me. Pt showed signs of agitation and attempting to strike staff members.
Pt could not verbally communicate to tell if he had any pain but had no nonverbal communication during assessment.
Nursing Diagnosis/Outcomes
1. Impaired mood regulation related to Sanfilippo Mucopolysaccharidosis as evidenced by signs of agitation.
a. With different approaches maybe it will help the pt be less agitated and not be as combative.
b. Help the pt try to understand that those types of behaviors are not okay and pt needs to be willing to fix it.
c. Pt is alert and oriented times two to person and situation but not time and place.
2. Risk for falls related to generalized muscle weakness as evidence by pt using a wheelchair.
a. Pt will not sustain a fall.
b. Staff will implement strategies to increase safety and prevent falls.
Objective Data
Patient Information
Nursing Interventions
1. Try a different approach with pt.
2. Give medications to help calm pt down.
3. Pt uses a wheelchair.
4. Make sure the pts bed is lowered to the lowest setting.
Pt has no labs per POA request.
Pt uses a wheelchair and staff to help ambulate due to being a fall risk and pt has generalized weakness.
Vitals:
BP: 118
RR: 20
P: 66
Pain: 0
Pts Height: 67.0 inches
Weight: 141.4lbs
44 year old, white male, Sanfilippo Mucopolysaccharidoses Syndrome, dementia, hyperlipidemia, irritable bowel syndrome, and attention-deficit disorder (ADHD).
Tonsillectomy/adenoidectomy and colonoscopy. Pt is alert and oriented times two.