

ATI Real Life Student Packet
N201 Nursing Care of Special Populations
2025

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ATI Scenario: Schizophrenia

To Be Completed Before the Simulation

Blue boxes should be completed using textbook information. What do you expect to find? This information should be collected before you start the ATI simulation

Medical Diagnosis: Schizophrenia

NCLEX IV (8): Physiological Integrity/Physiological Adaptation

Anatomy and Physiology

Normal Structures

Brain: all functions are carried out by similar mechanisms (interactions of neurons), often in similar locations, it is not surprising that mental disturbances are frequently associated with alterations in other brain functions

Plasticity: Process of adapting and changing as gray matter shrinks and thickens and connections are pruned or forged.

Connections between neurons can change w mental illness or psychotropic medications

Cerebrum: made up of 4 different lobes of the brain. Called human brain or higher brain and is responsible for higher cognitive skills, self-awareness, and executive functions. Includes frontal (thought process, initiate/plan/terminate actions, decision making, motivation, social judgement, voluntary motor ability starts in frontal lobe), parietal (sensory and motor, receive and identify sensory information, concept formation and abstraction, and body awareness, reading, mathematics, right and left orientation), occipital (interprets visual images, visual association, visual memories, involved with language formation) and temporal lobes (language comprehension, stores sound into memory, connects with limbic system to allow expression of emotions).

Brainstem: basic life functions like regulation of HR, RR and asleep occur through the brainstem which is composed of the midbrain, pons, and medulla. Reticular activating system control the LOC and sedation

Cerebellum: Involved in both motor control and cognitive processing. Helps maintain balance by coordinating muscles from various groups for complex tasks. Involved in coordination of eye

NCLEX IV (7): Reduction of Risk

Pathophysiology of Disease

Frequently cerebellar dysfunction or a noted decrease in size of the cerebellum: may explain issues with coordination and poor cognitive performance that are part of the negative symptoms of schizophrenia.

Disrupted sensory filtering in schizophrenia is associated with altered connections between the thalamus and prefrontal cortex

Schizophrenia involves structural and function changes in several brain regions, specifically the frontal and temporal lobes, limbic system and their neurotransmitter pathways. This can lead to positive and negative symptoms, psychosis, cognitive dysfunction and emotional dysregulation

Reduced volume in the frontal lobe can be response for impaired executive functions like decision making, planning and social behavior. Apathy and poor judgement can also be noted
Abnormalities in the temporal lobe can be associated with hallucination and disorganized thinking, auditory processing and memory impairments.

Structural changes in the limbic system can cause emotional instability and distorted perceptions
Schizophrenia can shrink the thalamus over time and affect sensory integration and contribute to hallucinations

Gray matter can be reduced in the frontal, temporal and parietal lobes affecting processing and cognition

White matter can have decreased connectivity between the regions impairing communication and thoughts

There may be an increase in CSF volume in ventricles that can indicate brain tissue was lost

movement. Alterations involving the cerebellum are associated with the development of positive symptoms

Limbic system: in addition to the gray matter forming the cortex, there are pockets of grey matter lying deep within the cerebrum: the hippocampus, the amygdala, and the basal ganglia. The hippocampus interacts with the PFC in making new memories. The amygdala plays a major role in processing fear and anxiety. The hippocampus and amygdala, along with the hypothalamus and thalamus are a group of structures called the limbic system or emotional brain. Subcortical basal ganglia play a major role in motor responses via the extrapyramidal motor system, which relies on the neurotransmitter dopamine to maintain proper muscle tone and motor stability.

Thalamus: filters sensory information before it reaches the cerebral cortex

Hypothalamus: maintains homeostasis, regulates temp, bp, perspiration, libido, hunger, thirst, circadian rhythms

Autonomic nervous system is divided into the sympathetic nervous system and parasympathetic nervous system. Sympathetic nervous system is activated when someone is in a state of arousal or experiencing a fight or flight response. The parasympathetic nervous system is associated with a calm and relaxed state.

Neurons: the brain is composed of a vast network of more than 100 billion interconnected nerve cells and supporting cells. An essential feature of neurons is their ability to initiate signals and conduct an electrical impulse from end of the cell to another called neurotransmission.

Electrical signals within neurons are then converted at synapses into chemical signals throughout the release of molecules called neurotransmitters, which then elicit electrical signals on the other side of the synapse. Once an electrical impulse reaches the end of a neuron the neurotransmitter is released from the axon terminal at the presynaptic neuron and diffuses across a synapse to a postsynaptic neuron. Here it attaches to specialized receptors on the cell surface and either inhibits or excites the postsynaptic neuron.

Neurotransmitters: A neurotransmitter is a chemical messenger between neurons through which one neuron triggers another. The four major groups are monoamines, amino acids,

and neurodegeneration is occurring.

Overactivity of Dopamine can be linked to positive symptoms while underactivity can produce negative symptoms

Serotonin and glutamate imbalances can be shown through cognitive and mood related symptoms

Abnormal synaptic pruning and disrupted connectivity can affect thought and emotional regulation

Schizophrenia could be linked to a genetic component but malnutrition and trauma can alter brain development and function. Viral infection, anatomical abnormalities and head injury have also been linked to schizophrenia.

<p>peptides, and cholinergic. Monoamine neurotransmitters and acetylcholine are implicated in variety of neuropsychiatric disorders. Amino acid such as GABA and glutamate balance brain activity.</p> <p>Antagonist: blocking neurotransmitter activity Agonists: promoting neurotransmitter activity</p> <p>Dopamine is an important neurotransmitter involved in cognition, motivation and movement. It controls emotional response and the brains reward and pleasure centers, stimulates the heart, and increases blood flow to vital organs.</p> <p>Acetylcholine plays a role in skeletal movement, arousal, memory, and the sleep wake cycle</p> <p>Norepinephrine is released from noradrenergic neurons, Low levels of NE are linked to low arousal and depression. High levels can create a feeling of hyperarousal.</p> <p>Serotonin found in the brain and spinal cord helps regulate mood, arousal, attention, behavior, and body temperature.</p> <p>Histamine: blocking the receptors can cause sedation or significant weight gain</p> <p>GABA: modulates neuronal excitability and is associated with the regulation of anxiety</p> <p>Glutamate: a potent excitatory neurotransmitter</p>	
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To Be Completed Before the Simulation

Anticipated Patient Problem: Risk for injury (Self or others)

Goal 1: will not hurt self or others during my time of care

Relevant Assessments	Multidisciplinary Team Intervention
(Prewrite) What assessments pertain to your patient's problem? Include timeframes	(Prewrite) What will you do if your assessment is abnormal?
Assess for any voices and what they say q2-4hr PRN	Reassure that the voices are not real and that they are safe q2-4hrs PRN
Assess if medications are being taken on time/daily at beginning of shift	Administer prescribed antipsychotics per order/PRN
Assess skin and limbs for wounds q shift PRN	Provide protective clothing or restraints per order/PRN
Assess LOC q1-2hrs	Perform a mental status examination and provide a 1-1 sitter if needed during shift/PRN
Assess environment and belongings for harmful objects or weapons q shift	Remove any dangerous items and maintain a calm and quiet room throughout shift
Monitor for signs of escalating behavior PRN	Maintain therapeutic communication, remain between door and client and ask for help from staff ASAP

Goal 2: s/sx of schizophrenia such as voices or visual hallucinations will decrease by time of care

To Be Completed Before the Simulation

Anticipated Patient Problem: Deficient Knowledge

Goal 1: will state 2 signs and symptoms of schizophrenia by end of my shift

Relevant Assessments	Multidisciplinary Team Intervention
(Prewrite) What assessments pertain to your patient's problem? Include timeframes	(Prewrite) What will you do if your assessment is abnormal?
Assess knowledge of schizophrenia q shift	Educate what schizophrenia is and the causes at beginning of shift
Assess knowledge of prescribed education q shift	Educate the different types of antipsychotics and how they can be administered q shift
Assess knowledge of signs and symptoms of schizophrenia q shift	Educate to look for positive and negative s/sx and how they can present q shift
Assess daily activities and hobbies q shift	Educate certain activities such as drinking, or drug use can heighten the s/sx of schizophrenia during shift
Assess ability to perform self care q shift	Educate that schizophrenia can interfere with ability to care for oneself and to aid when needed/ PRN
Assess support system and home life q shift	Educate having a support system, friends and a home can help manage and aid in maintenance of schizophrenia and keep the pt on tract q shift

Goal 2: will verbalize understanding of prescribed medications for schizophrenia by end of my care

To Be Completed During the Simulation:

Actual Patient Problem #1: R/F injury
 Goal: Will not cause harm to self or others during my time of care **Met:** **Unmet:**
 Goal: s/sx of schizophrenia such as voices or visual hallucinations will decrease by time of care **Met:**
 Unmet:

Actual Patient Problem #2: Deficient Knowledge
 Goal: will state 2 signs and symptoms of schizophrenia before end of my care **Met:** **Unmet:**
 Goal: will verbalize understanding of prescribed medications for schizophrenia by end of my care **Met:**
 Unmet:

Additional Patient Problems:
 #3 Anxiety
 #4 decreased self care
 #5
 #6

Below will be your notes, add more lines as needed. **Relevant Assessments:** Indicate pertinent assessment findings. **Multidisciplinary Team Intervention:** What interventions were done in response to your abnormal assessments? **Reassessment/Evaluation:** What was your patient’s response to the intervention?

Patient Problem (#)	Time	Relevant Assessments	Time	Multidisciplinary Team Intervention	Time	Reassessment/ Evaluation
R/F injury	0930	Change in speech pattern, associative looseness “it had birds in it, birds can fly, I don’t like flies…”	0945	Performed SAFE-T screening tool and educated to reach out if thoughts of harming self	0945	Stated “Will do” to contact Emily
Anxiety	0930	Nervousness, fidgeting with hands, lack of eye contact, social withdrawal	0930	Sitting and standing off to the side of patient and has direct path to door, can go over resources to help lessen anxiety, visiting on regular basis can help maintain social interaction	0955	Sister wants resources for home and agreed to visit more frequently
Decreased self care	0930	Weight 190lbs, 20lbs less than 6months ago, not eating much, still WNL for height	9045	Dr educated to eat 3 meals a day to prevent more weight loss	0945	Stated “alright I will”
R/F injury	0935	Missing work, tired, associative looseness/ “confused when	0945	Educated signs and symptoms of schizophrenia to pt and sister	0945	Sister recognized dizziness and troubling swallowing during

		talking”, not taking medication				lunch the other day was a sign of schizophrenia
Anxiety	0940	Missed appointment, didn't want to take medication	0940	Asked why d/c of medication and will double check for different medications	0940	Pharmacist is trying to poison with risperidone, has delusion of persecution
R/F injury	0940	Asked about voices, “only mumblings sometimes, no words anymore”	0940	Educated to reach out if any words to hurt self or others	0940	Agreed to notify Emily or someone to get help
Deficient knowledge	0945	Drinks 1-2 beers at bingo every week, stopped smoking 2 years ago, use cocaine	0945	Educated urine analysis to detect drug use, educated drugs can mimic or enhance effects that are present with schizophrenia	0945	Sister wants UA to see if any present drugs could be contributing to symptoms, stated agreement
Anxiety	0950	Not taking meds for fear of being poisoned	0950	Dr educated about injectable antipsychotics that can be given by known staff members	0950	Agreed to take paliperidone shot today before leaving and to come back next month for another dose
Deficient knowledge	0950	Sister asked if he should be in therapy	0955	Nurse educated that group therapy can help benefit others with schizophrenia and establish a goal for long-term commitment	0955	Will grab handout for local group therapy organizations in the area by the front desk
Anxiety	A week later 1000	Nervous, no eye contact, still hearing voices/music like background noise	1000	Reassure that he is safe and there are no voices other than the nurses	1010	Less anxious, feeling better, voices going away, states will listen to own music to drown them out
Deficient knowledge	1005	Started going out with friends more	1030	Educated that the medication can take a full 2 weeks to take effect and over the next week may continue to see improvements	1030	Sister says that it's good to hear
R/F injury	1005	Using marijuana because it's relaxing	1010	Educated marijuana can worsen s/sx of schizophrenia and	1010	“Yeah I can give those things a try”

				may want to try relaxing by deep breathing, exercise, or journaling		
Deficient Knowledge	1020	Feelings of paranoia and won't go to the store, doesn't trust pharmacist, sister wants to help	1020	Educated that hopefully paranoia will decrease as the medication continues to work	1020	"I trust my sister" and understanding that the feelings should hopefully fade
Deficient knowledge	1020	Sister asks "What happens if he gets too sick some days to take care of himself, what should I do?"	1025	Provided pamphlet on durable power of attorney for health care	1025	Stated not being familiar with the process

To Be Completed After the Simulation

The orange boxes should be filled out with your simulation patient's actual results, assessments, medications, and recommendations

NCLEX IV (7): Reduction of Risk

Actual Labs/ Diagnostics
 UA: positive for marijuana
 CBC with differential
 Prolactin Level
 Fasting blood glucose
 Lipid profile
 AIMS

NCLEX II (3): Health Promotion and Maintenance

Signs and Symptoms
 Change in speech pattern, associative looseness
 Auditory hallucinations, hears mumbling, delusions
 Had decline in self-care and grades
 Nervousness
 Weight loss
 Dizziness
 Trouble swallowing
 Social withdrawal

NCLEX II (3): Health Promotion and Maintenance

Contributing Risk Factors
 Male
 Age 21
 Parents' divorce
 Lives alone
 Social use of alcohol
 Small support system
 Marijuana use

NCLEX IV (7): Reduction of Risk

Therapeutic Procedures
Non-surgical
 SAFE-T
 Ask what voices say
Therapeutic communication
Surgical
 NA

Prevention of Complications
 (Any complications associated with the client's disease process? If not what are some complications you anticipate)
Suicide, harm to self or others
Involuntary bodily movements

NCLEX IV (6): Pharmacological and Parenteral Therapies

Medication Management
 Acetaminophen 325mg 1-2 PO PRN
 Risperidone 2mg PO BID
 Paliperidone 234mg IM

NCLEX IV (5): Basic Care and Comfort

Non-Pharmacologic Care Measures
 Hospitalization
 SAFE-T
 Emergency/crisis resources
 Soft speaking, addressing patient
 Therapeutic communication

NCLEX III (4): Psychosocial/Holistic Care Needs

Stressors the client experienced?
 Previous schooling
 Job at warehouse

Client/Family Education

Document 3 teaching topics specific for this client.
 • educated s/sx of schizophrenia
 • Educate on new medication (Paliperidone) and side effects
 • Educate group therapy and how it aids to those with schizophrenia

NCLEX I (1): Safe and Effective Care Environment

Multidisciplinary Team Involvement
 (Which other disciplines were involved in caring for this client?)
 RN Pharmacist
 NP Receptionist
 Doctor

Patient Resources

Emergency and crisis resources
 Pamphlet of information on paliperidone
 Local group therapy

Reflection Questions

Directions: Write reflection including the following:

1. What was your biggest “take away” from participating in the care of this client?
My biggest take away was to be patient and listen to client and family concerns. I also saw how family can be the one mostly involved in care of a person with schizophrenia compared to the client. I also learned how important it is to remind a client they are safe and provide reassurance when what they think is going on is not real.
2. What was something that surprised you in the care of this patient?
I am surprised the nurses didn't try to talk to the client more about his school and work and how he had dropped out. They gathered more information from the sister then trying with the client. I understand he was anxious, but it seemed as though they ignored him a little on key topics that he may have been able to elaborate on and explain how he felt.
3. What is something you would do differently with the care of this client?
Some care I would do differently is talk to the client more if able to, find a better room that he may be less anxious in or ask if there is anything I could grab for him. I would ask about his anxiety and if it is constant or in certain situations. I would explain healthy diets and meals instead of just saying to eat three meals a day. I would ask about his hobbies and provide resources on additional ones that may help.
4. How will this simulation experience impact your nursing practice?
This simulation will impact my nursing practice by being more patient with clients who experience mental health illness and to always make sure the client and I are safe in our area. I will also know to offer different routes to aid in treating an illness I cannot see because one may work better than another. I will also know to include their support system because the client may not be able to take everything in at once or mentally be present to participate in their care.
5. Discuss norms or deviations of growth and development that was experienced during the simulation, including developmental stage.
The patient was in the intimacy vs isolation stage when he was transitioning from childhood to adulthood. HE was in college but dropped out and continued to find work at a local warehouse. He was living on his own. In the beginning of the simulation he was going through isolation and social withdrawal from his friends but by the end he had gained connection with them again after being on the medication. He was on track for his age but defiantly experienced isolation which held him back, however developmentally he was correct height and weight, spoke reasonably given situation and was able to form own thoughts outside of his diagnosis of schizophrenia.