Team # _____

2025
ASHP Clinical Skills Competition℠
ASHP Local Competition Case

Directions to Clinical Skills Competition Participants

Identify the patient's acute and chronic medical and drug therapy problems. Recommend interventions to address the drug therapy problems using the forms supplied (Patient Case and Pharmacist's Care Plan).

IMPORTANT NOTE: Only the Pharmacist's Care Plan will be used for evaluation purpose.

Team # _____

Pharmacist's Care Plan

Using the patient's data, you will be able to develop an effective care plan for your patient. Clearly define the health care problems. Health care problems include treatment of all acute and chronic medical problems, resolution of all actual or potential drug-related problems, and identification of any other health care services from which your patient may benefit.

Remember to think about potential medical problems for which your patient may be at risk and disease prevention and disease screening activities that may be appropriate to recommend. Also, don't forget to consider specific patient factors that may influence your goals and recommendations for therapy (e.g., physical, psychological, spiritual, social, economic, cultural, and environmental).

To complete your care plan, specify all of your patient's health care problems that need to be addressed. Then prioritize the problems into one of three categories: (1) Most urgent problem, (2) Other problems that must be addressed immediately (or during this clinical encounter), OR (3) Problems that can be addressed later (e.g. a week or more later/at discharge or next follow up visit). Please note that only one problem should be identified as the "most urgent problem." When identifying individual problems for the case use more specific terms when possible vs general disease conditions. Also, use actual rather than weight-based doses when providing recommendations for therapy.

Then for **each problem** describe the (1) therapeutic goals, (2) recommendations for therapy, and (3) monitoring parameters and endpoints. Your monitoring parameters should include the frequency of follow-up and endpoints should be measurable by clinical, laboratory, quality of life, and/or other defined parameters (e.g., target HDL is greater than 50 mg/dL within 6 months).

Team #_____

LOCAL CASE
2025 ASHP CLINICAL SKILLS COMPETITION

Demographic and Administrative Information

Name: John Beechum	**Patient ID:** 279853158
Sex: Male	**Room & Bed:** Inpatient Psych 03
Date of Birth: 05/18/1968	**Admitting Physician:** Dr. Kreizler
Height: 5'10"/ **Weight:** 310 lbs / **Ethnicity:** White, Non-Hispanic	**Religion:** Christian
Prescription Coverage Insurance: NY Medicaid	**Pharmacy:** NY Care Pharmacy
Copay: $0 for preferred drugs, $3.00 for non-preferred Brand Name Drugs	**Annual Income:** $13,200 VA service connection

Chief Complaint
"The voices won't leave me alone."

History of Present Illness
John Beechum is a 57-year-old male who presents for urgent admission to inpatient psychiatry. His brother is John's primary caregiver who assists with medication adherence and will ensure the patient attends all future appointments once discharged, is also present. The brother reports that John was previously employed and had an apartment but disappeared around 3 months ago. John was recently found on the streets in New York City, and the brother believes John had been unhoused and non-adherent with his medications during the duration he was missing. John has been staying with his brother since John was found 2 weeks ago but has not left his room since then. The brother reporting he has therefore been unable to convince John to take any of his medications. The brother reports that during the first couple of days, John appeared to be experiencing withdrawal symptoms including severe abdominal cramps, diarrhea, body aches, nausea, and vomiting; however, these symptoms resolved.

Patient was previously seen and managed by Dr. Stratton at New York Counseling who prescribed aripiprazole and quetiapine for management of schizophrenia. The last known dose of aripiprazole (Abilify Maintena) was given 3 months ago. Per chart review, aripiprazole resulted in partial management of schizophrenia symptoms; the patient reported improved but continued auditory hallucinations.

Today, John appears disheveled with unkempt hair and clothing. The brother states that he has been unable to convince John to bathe for the past two days, as John claims the water is "impure" and "dirty." Brother also states that John, the patient, has had a poor appetite with several episodes of vomiting since coming to live with them a month ago. During the initial assessment for inpatient psychiatric admission, John was agitated and guarded and was largely unable to participate. During the interview, responses are tangential, and thought blocking is present. John appears to respond to internal stimuli, whom he calls "the angels." John states that God is angry with him and has sent the angels to punish him for being "unclean." At this point, John became severely agitated and began to hit his head with his fists. Stating the angels say he is unclean, and that the patient needs to "purify himself."

Past Medical History
Anxiety – (diagnosed 2023)
Major Depressive Disorder – (diagnosed 1992)
Gonorrhea – (treated and resolved 2022)
Hyperlipidemia – (diagnosed 2011)
Hypertension – (diagnosed 2008)
Obesity – (diagnosed 2011)
Schizophrenia, paranoid type – (diagnosed 1996)
Substance use disorder – (diagnosed 1992)

Past Psychiatric History

John Beechum is a 57-year-old male with an extensive past psychiatric history. The patient was first diagnosed with major depressive disorder and substance use disorder in 1992 after he was admitted for an overdose of heroin. John began using heroin in his early twenties following medical discharge from the Marines. The patient reports using substances to forget his time in Iraq. The initial diagnosis of schizophrenia was delayed as symptoms were attributed to substance use. Documented symptoms of major depressive disorder include depressed mood, anhedonia, weight loss, hypersomnia, fatigue, feelings of worthlessness, and recurrent thoughts of death.

The patient was first diagnosed in 1996 with schizophrenia, paranoid type; his delusions and hallucinations are historically religious in nature, fixating on guilt associated with cleanliness and purity. The patient has appropriately trialed several antipsychotics (see list below) without full resolution of symptoms. He has been admitted for acute exacerbation of schizophrenia 4 times (three times involuntarily, in 1996, 2002, and 2008; and once voluntarily, in 2022).

The patient was recently diagnosed with social anxiety disorder in 2023 while in treatment for schizophrenia. The patient presented with significant, persistent anxiety and avoidance associated with social interactions after he received a promotion at work that required him to supervise his fellow employees. He was started on sertraline, which was then discontinued due to minimal efficacy and then cross-tapered to venlafaxine and as-needed propranolol for presentations.

John was lost to follow-up with his psychiatrist 4 months ago and last received fills of his medications 3 months ago. John was also seen and assessed for psychiatric admission in an external emergency department 1 month ago. At this time John was not admitted but did receive several new prescriptions.

Medication History

Per chart patient was previously adherent to medications and for 3 years prior to loss to follow-up with his psychiatrist months ago. Patient is currently non-adherent as his last fill was 3 months ago. Per fill records the patient was seen in the emergency department and received several prescriptions 1 month ago.

Patient has received pharmacogenomic testing which found no abnormalities in enzymes or receptors.

Prescription Medication	Fill Data	Medication Regimen	Reason for Discontinuation
Aripiprazole	2002 – 2008, 2010 – 2012	10 mg PO daily	Transitioned to LAI
Asenapine	2014, 2015– 2016	5 mg PO BID	Ineffective
Brexpiprazole	2022	2 mg PO daily	Ineffective
Cariprazine	2022– 2024	6 mg PO daily	Ineffective, akathisia
Clonazepam	1994, 2000, 2007 – 2009	0.25 mg PO BID as needed for anxiety	Discontinued by provider
Escitalopram	2023	20 mg PO daily	Nausea/vomiting
Fluphenazine	1996 – 1998	10 mg PO BID	Ineffective
Hydroxyzine	2022– 2024	25 mg PO QID as needed for anxiety	Ineffective, sedation
Lorazepam	2002, 2006	1 mg PO TID as needed for anxiety	Discontinued by provider
Lurasidone	2010	80 mg PO daily	Ineffective, sedation
Propranolol	2024	10 mg PO as needed for anxiety	Ineffective
Perphenazine	1998 – 2000, 2012 –2013, 2016	8 mg PO TID	Ineffective
Sertraline	1992	25 mg PO daily	Ineffective
Venlafaxine ER	2024	150 mg PO daily	Hypertension
Ziprasidone	2002, 2016– 2022	60 mg PO BID	Ineffective

Outpatient Drug Therapy

Prescription Medication & Schedule	Duration Start–Stop Dates	Prescriber	Pharmacy
Aripiprazole 400 mg IM every 4 weeks	2025 – Present. Last given 3 months ago	Dr. Stratton (Psychiatrist)	NTC
Aripiprazole 10 mg PO daily	2025– Present. Last filled for 90 days 1 month ago	Dr. Howard (Emergency Medicine)	CVS
Atorvastatin 10 mg PO daily	2025– Present. Last filled for 90 days 3 months ago	Dr. Stratton (Psychiatrist)	CVS
Losartan 25 mg PO daily	2025– Present. Last filled for 90 days 1month ago	Dr. Howard (Emergency Medicine)	CVS
Lisinopril 10 mg PO daily	2025– Present. Last filled for 90 days 3 months ago	Dr. Stratton (Psychiatrist)	CVS
Quetiapine 200 mg PO TID	2025– Present. Last filled for 90 days 3 months ago	Dr. Stratton (Psychiatrist)	CVS
Tenofovir disoproxil fumarate / emtricitabine 300/200 mg, one tablet PO daily	2025 – Present. Last filled for 30 days 1 month ago	Dr. Moore (Emergency Medicine)	CVS

Non-Prescription Medication/Herbal Supplements/Vitamins	Duration Start–Stop Dates	Prescriber	Pharmacy
Acetaminophen 1000 mg PO Q8H PRN headache	2025 – Present. Last use unknown.		

Allergies/Intolerances
Asenapine – Akathisia
Amoxicillin/clavulanate – diarrhea

Surgical History
No known surgical history

Family History
Father – deceased due to car accident when patient was a teen, hypertension per brother
Mother – deceased due to car accident when patient was a teen, possible history of anxiety and depression per brother
Maternal grandmother – possible history of schizophrenia per brother
Brother – Hypertension, diabetes mellitus type 2, asthma

Social History
Social and Sexual History
Per brother John has an intermittent relationship with a male partner named Steven, John identifies as bisexual with both male and female past partners, history of gonorrhea in 2022 (treated and resolved)
History of Suicidal Acts and Self-Harm
John has a history of passive suicidal ideation independent of delusions, hallucinations, or substance use. During episodes of substance use disorder and acute schizophrenia John has participated in activities of self-harm including striking his body with his fists or objects. John's history also includes a suspected intentional overdose in 1992. John has no other known suicide attempts.

History of Violence/Assaulting Others/Legal Problems
No history of harm to others, no active legal concerns

Financial Status, Housing, Employment, Leisure Time Issues
Marine veteran, honorable/medical discharge, served 3 tours in Iraq. Previously unhoused, currently resides locally with his brother. The brother plans to have John live with him in the long term and is willing to take an active role in the

patient's care. John previously worked as a mechanic but is currently unable to work due to psychiatric symptoms. The patient's income is currently limited to his service connection benefits of $1,100 per month; he is eligible to receive care and medication through the VA.

Substance Use History
History of substance use disorder first diagnosed in 1990 after he was admitted for overdose with heroin. John has participated in Narcotics Anonymous and has been admitted for residential treatment 4 times. Nicotine-use disorder in remission, quit in 1997. Opioid use disorder is not in remission. Current use is unknown; in August the patient reported injecting heroin 2-4 times per week.

Immunization History
All childhood vaccines through age 18
All required service vaccinations (adenovirus, cholera, hepatitis A, hepatitis B, influenza, MMR, meningococcal, poliovirus, typhoid, Tdap, varicella) 07/1986
COVID-19 full series 10/2023, booster 10/2024
Influenza 10/2024
PPSV23 5/2024

Review of Systems (source: patient, completed this morning at 07:02)
Constitutional: denies fever or chills. Reports fatigue and poor sleep.
HEENT: No changes in vision or hearing; no eye pain, redness, or discharge; no ear pain, nasal congestions, sore throat or hoarseness
Respiratory: no cough, no sob, wheezing, or hemoptysis
CV: denies chest pain; no palpitations, orthopnea, or edema
GI: Refusing meals and oral fluids. Reports decreased appetite, mild upper right quadrant discomfort. Denies nausea or vomiting.
GU: Reports burning with urination and yellow penile discharge. Denies hematuria, urgency, frequency, or flank pain.
MSK: denies joint pain, muscle aches, or swelling
Skin: endorses dry skin and “severe itching” at night, primarily the hands, groin, and waistline.
Neurological: endorses mild headache pain 3/10 that resolved with acetaminophen, denies dizziness or weakness.
Psychiatric: appears to be responding to auditory hallucinations, reports feeling “wicked” and “unclean,” and that he is being told to “purify himself” by the voices

Mental Status Exam (completed this morning at 09:23)
General Appearance: appears stated age, disheveled, unkempt hair and clothing, slouching in chair, limited eye contact, appears sedated, no signs or symptoms of opioid withdrawal
Behavior: alert, slightly agitated, guarded, providing minimal responses and frequently challenging the purpose of questions
Motor Activity: no abnormal psychomotor activity identified
Speech: rapid, pressured, content is tangential
Mood: reports feeling “confused” and “scared,” labile, exaggerated
Affect: restricted, incongruent with mood
Thought Process: tangential, loose associations, flight of ideas, thought blocking
Thought Content: expresses paranoid delusions, reports intrusive thoughts about contamination and cleanliness, no current suicidal or homicidal ideation noted
Perception: appears to be responding to internal stimuli, reports “voices”
Cognition: Oriented to person, not to place or time, attention is limited, recent memory is impaired, unable to recall events from past day or discuss events of past few months, long-term memory appears intact
Insight: lacks insight
Judgement: impaired, unable to contribute to care

Physical Exam (completed this morning at 07:02)
General: Obese male, sitting in chair, arousable, not following commands.
Head: No lesions or discharge, mucous membranes dry.

Eyes: Pupils equal and responsive to light, EOMI intact.
Neck: Supple, symmetrical, no rigidity noted.
Neuro: Restless, mumbles, minimal response to questions, appears to be responding to internal stimuli.
Lungs: Clear to auscultation bilaterally, non-labored.
CV: Regular rhythm, tachycardiac, no murmur or gallop.
Abdomen: Nondistended, tender in upper right quadrant. No rebound/guarding. No hepatosplenomegaly or ascites present.
Genitourinary: Yellow urethral discharge present. Mild erythema at urethral meatus. No Inguinal lymphadenopathy or testicular swelling.
Skin: intense itching, red sores/bumps and raised, skin-colored lines visible on exam in the intertriginous space, wrists, groin, and lower abdomen. Mild jaundice, track marks present on arms. No petechia or purpura.
Extremities: Pulse present in all extremities, no edema. Limited exam, but appears to have a normal range of motion.

Vital signs (taken this morning)
HR: 110 bpm
RR: 22 bpm
O2 Saturation: 99% on room air
BP: 129/81 mm Hg
Temp: 99°F

	8 months ago @ 09:37	**1 month ago @ 19:37**	**Yesterday @ 08:00**
Metabolic Panel			
Na (mEq/L)	141	140	141
K (mEq/L)	3.9	4.0	3.9
Cl (mEq/L)	99	99	101
CO_2 (mEq/L)	20	23	26
BUN (mg/dL)	14	16	15
SCr (mg/dL)	0.9	1.1	1.1
Glucose (mg/dL)	90	210	72
Calcium (mg/dL)		9.0	8.7
Phosphorus (mg/dL)		3.0	3.1
Magnesium (mg/dL)		2.0	1.7
Albumin (g/dL)		3.5	4.9
AST (IU/L)		42	57
ALT (IU/L)		57	73
Total bili (mg/dL)		1.3	1.1
Complete Blood Count with Differential			
WBC (thousands/mm^3)	7.6	3.7	6.8
Neutrophils, absolute (1000/µL)	2.3		
RBC (thousands/mm^3)	4.9	4.0	3.7
Hgb (g/dL)	14.8	11.9	11.4
Hct (%)	43	32.4	35
MCV (FL)	84	92	98
MCH (PG)	27	34	32
MCHC (g/dL)	35	37	38
RDW (%)	10	24	29
Plt (K/mm^3)	376	342	397
Fasting Lipid Panel			
Total cholesterol (mg/dL)	264	257	210

LDL (mg/dL)	210	189	167
HDL (mg/dL)	45	32	29
Triglycerides (mg/dL)	132	147	128
Other			
Hemoglobin A1c (%)	12.4	10.7	9.4
TSH (mU/L)		3.7	4.2
$T4_{Total}$ (mcg/dL)		8.9	7.6
$T4_{Free}$ (ng/dL)		1.2	1.6
Folic Acid (ng/mL)		78	57
Vitamin B-12 (pg/mL)		487	393
Vitamin D (ng/mL)		20	16
Ammonia (mcg/dL)		47	32
Serology Panel			
Hepatitis B Surface Antigen			Negative
Hepatitis B Core Total/IgG Antibody			Positive
Hepatitis B Surface Total/IgG Antibody			Positive
Hepatitis C Antibody			Non-reactive

Other Diagnostic Tests

	8 months ago @ 09:37	**1 month ago @ 19:37**	**Yesterday @ 08:00**
ECG 12-Lead Measurements			
Ventricular Rate (bpm)		121	126
Atrial Rate (bpm)		94	96
QRS Duration (mS)		93	92
Q-T Interval (mS)		411	411
QTc Interval (mS)		423	423
Interpretation		Normal sinus rhythm, no abnormalities identified	Normal sinus rhythm, no abnormalities identified
Urine Toxicology			
Amphetamine	Negative	Negative	Negative
Benzodiazepine	Negative	Negative	Negative
Cannabis	Negative	Negative	Negative
Cocaine	Negative	Negative	Negative
Codeine	Negative	Negative	Negative
6-acetylmorphine	Negative	Positive	Negative
Hydrocodone	Negative	Negative	Negative
Morphine	Negative	Positive	Negative
Oxycodone	Negative	Negative	Negative
Fentanyl	Negative	Positive	Negative
Blood			
BAC (mg/dL)	None detected	None detected	None detected

Sexually Transmitted Infections Panel (collected 2 days ago)		
Test	**Specimen**	**Result**
Neisseria gonorrhoeae and *Chlamydia trachomatis* Nucleic Acid Amplification Test	Urine	Positive for *Neisseria gonorrhoeae*
Syphilis Rapid Plasma Reagin	Blood	Negative
HIV 1/2 Antigen/Antibody	Blood	Negative

Culture Results (collected 2 days ago)
Test/Specimen: Skin scraping Identified: *Sarcoptes scabiei*

Admission Medications	Administration/Start Time
Atorvastatin 10 mg PO daily	Given yesterday at 17:00
Diphenhydramine 50 mg PO q4h PRN for anxiety, agitation, aggression	Given yesterday 12:37 Given today 00:53
Diphenhydramine 50 mg IM q4h PRN for anxiety, agitation, aggression	Given today 01:02
Haloperidol 10 mg PO q4h PRN for anxiety, agitation, aggression	Given yesterday 12:47 Given today 00:30, 01:24
Haloperidol 10 mg IM q4h PRN for anxiety, agitation, aggression	Given today 00:53, 06:57
Lorazepam 1 mg PO q4h PRN for anxiety, agitation, aggression	Not yet given
Lorazepam 1 mg IM q4h PRN for anxiety, agitation, aggression	Given today 00:51, 06:58
Losartan 25 mg PO daily	Given today at 07:30
Lisinopril 10 mg PO daily	Given today at 07:30
Quetiapine 200 mg PO TID	Given yesterday 07:30, 13:00, and 17:00 Given today at 07:30
Tenofovir disoproxil fumarate /emtricitabine 300/200 mg one tablet PO daily	Given today at 07:30
Adult multivitamin 1 tablet PO daily	Given today at 07:30

Emergency Department Notes:

Assessment: Schizophrenia, multiple episodes, currently in acute episode

Work-up by outpatient psychiatry was performed. Patient presents with acute exacerbation of schizophrenia requiring inpatient hospitalization due to the present risk to self and for stabilization of schizophrenia.

Plan:

After evaluation John Beecham is admitted to the inpatient psychiatric care unit for stabilization. The psychiatrist has asked you to help develop a treatment plan and initiate clozapine. As a member of the care team, please address pharmacotherapy recommendations with regard to targeted treatment of his schizophrenia as well as other disease states, to optimize this patient's care both in the hospital and at discharge to establish continued psychiatric care in coordination with the VA, restart psychiatric medications**.**

ASHP Clinical Skills Competition℠ - Pharmacist's Care Plan

Evaluated for competition

Problem Identification and Prioritization with Pharmacist's Care Plan

A. List all health care problems that need to be addressed in this patient using the table below.
B. Prioritize the problems by indicating the appropriate number in the "Priority" column below:
   1 = Most urgent problem (Note: There can only be one most urgent problem)
   2 = Other problems that must be addressed immediately or during this clinical encounter; **OR**
   3 = Problems that can be addressed later (e.g. a week or more later)

Please note, there should be only a "1", "2", or "3" listed in the priority column, and the number "1" should only be used once. When identifying individual problems for the case use more specific terms when possible vs general disease conditions. Also, use actual rather than weight-based doses when providing recommendations for therapy.

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters

TEAM #_____

ASHP Clinical Skills Competition℠ - Pharmacist's Care Plan

Evaluated for competition

Problem Identification and Prioritization with Pharmacist's Care Plan

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters

TEAM #____

ASHP Clinical Skills Competition℠ - Pharmacist's Care Plan

Evaluated for competition

Problem Identification and Prioritization with Pharmacist's Care Plan

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters

TEAM #____

ASHP Clinical Skills Competition℠ - Pharmacist's Care Plan

Evaluated for competition

Problem Identification and Prioritization with Pharmacist's Care Plan

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters

TEAM #____

ASHP Clinical Skills Competition℠ - Pharmacist's Care Plan

Evaluated for competition

Problem Identification and Prioritization with Pharmacist's Care Plan

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters

TEAM # ____

ASHP Clinical Skills Competition℠ - Pharmacist's Care Plan

Evaluated for competition

Problem Identification and Prioritization with Pharmacist's Care Plan

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters

TEAM #____

ASHP Clinical Skills Competition℠ - Pharmacist's Care Plan

Evaluated for competition

Problem Identification and Prioritization with Pharmacist's Care Plan

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters

TEAM #____

ASHP Clinical Skills Competition℠ - Pharmacist's Care Plan

Evaluated for competition

Problem Identification and Prioritization with Pharmacist's Care Plan

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters

TEAM #____

TEAM #_____

TEAM #_____

Team # _____

2025
ASHP Clinical Skills Competition℠
ASHP Local Answer Key

ASHP Clinical Skills Competition - Pharmacist's Care Plan – 2025 Answer Key (Local Case)

Evaluated for competition

Problem Identification and Prioritization with Pharmacist's Care Plan

A. List all health care problems that need to be addressed in this patient using the table below.
B. Prioritize the problems by indicating the appropriate number in the "Priority" column below:
   1 = Most urgent problem (Note: There can only be one most urgent problem)
   2 = Other problems that must be addressed immediately or during this clinical encounter; **OR**
   3 = Problems that can be addressed later (e.g. a week or more later)

**Please note, there should be only a "1", "2", or "3" listed in the priority column, and the number "1" should only be used once.*

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters
Schizophrenia, Treatment resistant	**1**	Problem: • **Inappropriate therapy/Duplicate therapy**: • Inappropriate use of antipsychotics Use of multiple second-generation antipsychotics • **Inappropriate therapy**: overuse of as-needed agents for agitation and aggression **Ineffective therapy**: continued symptoms after multiple appropriate trials of antipsychotics Plan: • Discontinue oral quetiapine • Discontinue oral aripiprazole • Discontinue LAI aripiprazole • **Clozapine**: Initiate clozapine 12.5 mg once daily and titrate by 25-50 mg per day to a target dose of 300 mg/day. • **[PICK ONE]** **Haloperidol**: initiate haloperidol oral 2-10 mg every 2-6 hours as needed for agitation or aggression AND haloperidol IM 2-10 mg every 6 hours as needed for agitation or aggression if PO is ineffective *OR* **Lorazepam**: continue lorazepam 1 mg PO q4h PRN for anxiety, agitation, aggression AND lorazepam 1 mg IM q4h PRN for anxiety, aggression, and aggression if PO is ineffective • **[BONUS]** Non-pharmacological treatment: programs focused on the patient's adaptive functioning such as case management,	Therapeutic Goals: • Reduction of acute symptoms of psychosis (positive symptoms - hallucinations and delusions) Monitoring Parameters: • Signs and symptoms of schizophrenia (positive, negative, cognitive symptoms) at every visit • **[BONUS]** use of Positive and Negative Syndrome Scale (PANSS) or Brief Psychiatric Rating Scale (BRPS) to monitor symptoms and response • CBC with differential weekly from initiation to 6 months if in normal range, increase frequency if neutropenia develops • Adverse effects of clozapine: constipation, weight gain, hepatotoxicity, fever, pulmonary embolism, seizure, cardiotoxicity, extrapyramidal symptoms • Adverse effects of haloperidol: QTc prolongation, rapid mood fluctuation

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters
		psychoeducation, targeted cognitive therapy, basic living skills, social skills training, work programs, financial support, and caregiver support. Programs aimed at supportive employment and housing are preferred. • **[BONUS]** Non-pharmacological treatment: de-escalation techniques, identify self and role, make the patient comfortable, relaxation techniques, validate the patient's feelings for management of agitation and aggression	• Adverse effects of lorazepam: sedation, CNS depression, hypotension • Adverse effects of diphenhydramine: hypotension • Adverse effects of combined psychotropics/antihistamines: sedation, CNS depression, anticholinergic effects, decreased seizure threshold, confusion, dizziness, delirium, neuroleptic malignant syndrome, serotonin syndrome • Monitor ADEs at all visits • Follow-up: Every 6-24 hours until discharged, then weekly
Gonorrhea infection	**2**	Problem: • **Treatment indicated:** active gonorrhea infection Plan: • **[PICK ONE]** **Ceftriaxone** (preferred)**:** initiate ceftriaxone 500 mg IM as a single dose (1g IM as a single dose acceptable) *OR* **Cefixime** (not preferred alternate treatment option)**:** initiate cefixime 800 mg PO as a single dose • **Non-Pharmacological treatment**: management of sex partners for evaluation, testing, and presumptive treatment. Recommend avoiding condomless sexual intercourse for 7 days/after symptoms have resolved. Note that students may elect not to counsel given the patient's current mental status • **[BONUS]** recommend to screen throat and/or rectal based on the patient's sexual history.	Therapeutic Goals: • Resolution of symptoms of infection, itching, and discharge. • Reduce the risk of transmission and reinfection Monitoring Parameters: • Repeat NAAT in 3 months • Cephalosporin adverse effects: injection site pain/reactions, rash, diarrhea, increased LFTs

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters
Scabies infection	**2**	Problem: • **Therapy indicated:** treatment for scabies infection Treatment: • **[PICK ONE]** **Permethrin** (preferred): Topical 5% cream, apply to all areas of the body from the neck to the soles of the feet (30 g/1 tube for average adult) leave on for 8 to 14 hours before removing by washing (usually administered before bedtime) *OR* **Ivermectin** (preferred): 27, 28.5 OR 30 mg (200 mcg/kg) by mouth once, repeat in 7 to 14 days • **Non-pharmacological:** Management of contacts and environment. Family members sharing the house should also be treated for scabies. Articles of clothing and bedding should be laundered or segregated for several days to reduce the risk of transmission or reinfection • **[BONUS]** if pruritis occurs, may use antihistamines for up to 4 weeks after treatment • **[BONUS]** Precautions: contact isolation (single patient room)	Therapeutic Goals: • Resolution of infection, lesions, and nocturnal pruritus • Prevention of transmission Monitoring Parameters: • Visual inspection for mites/lesions one to two weeks post-treatment, if permethrin was used a second application may be given if needed • Resolution of nocturnal pruritus by 1 week after treatment • Permethrin adverse effects: skin irritation, redness, itching, stinging or tingling of the skin. Avoid contact with the eyes. • Ivermectin adverse effects: neurotoxicity, itching, rash, diarrhea, nausea, increased liver enzymes, dizziness, tachycardia
Opioid Use Disorder	**3**	Problem: • **Therapy indicated**: treatment for opioid use disorder Treatment: • **[PICK ONE]** **Buprenorphine** (preferred): initial dose of 2 to 4 mg by mouth/sublingually (may consider 1 mg) and monitor for withdrawal symptoms. If tolerated, increase at a rate of 2 to 4 mg per 24 hours to response. o Patient must be stable on oral formulation at least 7 days before transition to ER or LAI formulations *OR* **Methadone**: methadone 2.5 to 10 mg as a single dose and monitor for withdrawal symptoms over 24 hours. If tolerated, then titrate at a rate of 5-10 mg per week to response.	Therapeutic Goals: • Reduction in opioid cravings, dependence, and intoxication • Obtain remission/abstinence from opioids Monitoring Parameters: • Patient reported cravings and use at every visit • Urine drug screen at least annually • Vitals, cognition every 4-6 hours for 24 hours, then daily till response, then every 3-4 weeks • EKG for QTc at one month • Liver function tests at one month

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters
		OR **Naltrexone**: naltrexone 25 mg by mouth daily for 3-7 days, if tolerated, increase to 50 mg by mouth daily o **[BONUS]** Requires a naloxone test dose prior to initiation: inject 0.2 mg naloxone IV and observe for 30 seconds; if no withdrawal, inject naloxone 0.6 mg IV and observe for 20 minutes. If withdrawal is present, do not start naltrexone and repeat the test in 24 hours *AND* • **Naloxone**: naloxone nasal spray (preferred) 2-8 mg as a single dose, used as needed for opioid overdose, may repeat in 2-3 minutes ○ Also accept naloxone 0.4-2 mg IM autoinjector as a single dose used as needed for opioid overdose, may repeat in 2-3 minutes ○ Should be provided on discharge • **Non-Pharmacological**: adjunctive treatment in addition to medication. Preferred options include opioid use disorder-specific cognitive behavioral therapy (CBT) and psychotherapy once schizophrenia symptoms are stable. Could consider a 12-step program. ○ Once patient is psychiatrically stable may provide counseling on harm reduction techniques such as naloxone, safe needle sites, risks of IV compared to oral drugs	• Buprenorphine adverse effects: headache, insomnia, nausea, vomiting, withdrawal • Methadone adverse effects: respiratory depression, QTc prolongation, hypotension, constipation, nausea, vomiting, sedation, dizziness, serotonin syndrome, decreased seizure threshold • Naltrexone adverse effects: headache, insomnia, nausea, vomiting, nervousness • Assess for ADEs at all visits • Follow-up outpatient once weekly
Prior Chronic Hepatitis B Infection	**3**	Problem: • Chronic infection without acute hepatitis or cirrhosis Treatment: • Treatment of hepatitis B is ***not indicated*** unless LFTs increase greater than 2 times the upper limit of normal, the patient develops cirrhosis, or starts therapy that may reactivate the virus • **Recommend continued monitoring**	Therapeutic Goals: • Prevent reactivation of hepatitis B infection Monitoring Parameters: *Disease State* • Liver function tests every 3-6 months
HIV prophylaxis	**3**	Problem: **Untreated indication** • **[PICK ONE]** Re-initiation of tenofovir disoproxil fumarate / emtricitabine 300/200 mg, one tablet PO daily (PrEP therapy) *OR*	Therapeutic Goals: • Prevention of HIV infection and transmission Monitoring parameters:

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters
		Initiate cabotegravir 600 mg IM once monthly for two doses, then every two months, with or without oral lead in. *OR* Initiate lenacapavir 600 mg PO once and 927 mg SC once on day 1 followed by 600 mg PO once followed by 927 mg SC every 6 months (26 weeks) from the date of the last injection (± 2 weeks)	• Repeat screening for HIV infection every 3 months or if the patient has symptoms of acute HIV (headache, fever, fatigue, weight loss, night sweats) • Sexually transmitted infection screening every 3 months • Complete metabolic panel every 6 months • PrEP adverse effects: abdominal pain, headache • Monitor for adherence and adverse effects at each visit
Hypertension	**3**	Problem**: duplicate therapy**, lisinopril and losartan Treatment: • Discontinue either lisinopril or losartan • **[PICK ONE]** May increase dose of continued agent or recommend future assessment (lisinopril 20-40 mg PO daily OR losartan 50-100 mg PO daily) *OR* Therapy should include a RAAS inhibitor (ACE-I or ARB) students may choose another ACE/ARB if discontinuing both lisinopril and losartan	Therapeutic Goals: • Blood pressure <130/80 mmHg in patients with diabetes (can use lower goal of <120 mmHg SBP depending on reference cited) Monitoring Parameters: • Blood pressure, heart rate • Blood pressure monitoring by a healthcare provider daily while inpatient and every 3-6 months outpatient (may say at every appointment, as psychiatric visits will be more frequent) • Recommend daily home blood pressure readings • Signs and symptoms of severe hypertension/complications • Basic metabolic panel at 3 months for renal function and potassium • Adverse effects of ACEi/ARBs: acute kidney injury, hyperkalemia, orthostatic hypotension, rash, nausea, vomiting,

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters
			dizziness, cough, angioedema, hypotension • Monitor for adverse effects at each visit, complete BMP in 1 month • Follow-up outpatient in 1 month
Hyperlipidemia	**3**	Problem: uncontrolled hyperlipidemia, **inappropriate dosing** Treatment: • **Atorvastatin or Rosuvastatin**: therapy should include a high-intensity statin, either: ○ increasing the dose of atorvastatin from 10 to 40-80 mg daily *OR* initiating rosuvastatin 20-40 mg daily • **Non-pharmacological**: lifestyle modifications including diet and exercise	Therapeutic Goals: • LDL <70 mg/dL based on age and risk factors • HDL > 50 mg/dL • Triglycerides <150 mg/dL • Expected efficacy of high-intensity statin therapy is 50-55% reduction in LDL Monitoring Parameters: • Obtain lipid panel at 4 to 12 weeks • Obtain complete metabolic panel at 4 to 12 weeks • Assess adherence to diet and exercise regimen within 3 to 6 months • Adverse effects of statins: diarrhea, muscle pain – rhabdomyolysis, increased serum transaminases • Assess adverse effects at each visit • Follow-up in 1 month
Diabetes mellitus type 2	**3**	Problem: uncontrolled diabetes mellitus type 2, **untreated indication** Treatment • **Metformin**: Initiate metformin 500 mg PO BID and titrate to goal of 1000 mg BID if tolerated (students may elect not to start metformin initially if waiting till outpatient or until B12 is normalized) *AND* • **GLP-1 or GIP/GLP-1**: Initiate GLP-1 or GIP/GLP-1 therapy	Therapeutic Goals: • Hgb A1C < 8% • Fasting blood glucose 80-130 mg/dL • Prevent hypoglycemia • Monitoring Parameters:Signs of DKA/HHNKS • Signs and symptoms of hypoglycemia

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters
		○ **Semaglutide** (preferred) initiate at 0.25 mg SubQ once weekly and follow titrate schedule to maximum tolerated dose *OR* **Dulaglutide** initiate at 0.75 mg SubQ once weekly; may increase to 1.5 mg once weekly after 4 to 8 weeks as tolerated *OR* **Liraglutide** initiate at 0.6 mg SubQ once daily for 1 week then increase to 1.2 mg SubQ once daily *OR* **Tirzepatide** (preferred) initiate at 2.5 mg SubQ once weekly for 4 weeks then increase to 5 mg once weekly. May further increase at 2.5 mg per week to goal ● **Non-pharmacological**: life-style modifications including diet and exercise	● Complete basic metabolic panel at 1 month, HgA1c at 3 months ● Adverse effects of metformin: GI effects, vitamin B12 deficiency, headache, lactic acidosis ● Adverse effects of GLP-1 agonists/GIP such as nausea/vomiting, diarrhea, pancreatitis, injection-site reactions, gallbladder disease ● Assess for adverse effects at every visit ● Follow-up in 1 month
Obesity	**3**	Problem: Class 2 obesity, BMI > 35, antipsychotic induced weight gain, **untreated indication** Treatment ● **Metformin**: Initiate metformin 500 mg PO BID and titrate to goal of 1000 mg BID if tolerated (students may elect not to start metformin initially if waiting till outpatient or until B12 is normalized) *AND* ● **GLP-1 or GIP/GLP-1**: Initiate GLP-1 or GIP/GLP-1 therapy ○ **Semaglutide** (preferred) initiate at 0.25 mg SubQ once weekly and follow titrate schedule to maximum tolerated dose *OR* **Dulaglutide** initiate at 0.75 mg SubQ once weekly; may increase to 1.5 mg once weekly after 4 to 8 weeks as tolerated *OR* **Liraglutide** initiate at 0.6 mg SubQ once daily for 1 week then increase to 1.2 mg SubQ once daily *OR* **Tirzepatide** (preferred) initiate at 2.5 mg SubQ once weekly for 4 weeks then increase to 5 mg once weekly. May further increase at 2.5 mg per week	Therapeutic Goals: ● Weight-loss of 1-2 lbs per week Monitoring Parameters: ● Weight, goal loss of 1-2 pounds per week with pharmacotherapy and non-pharmacotherapy ● Adverse effects of metformin: GI effects, vitamin B12 deficiency, headache, lactic acidosis ● Adverse effects of GLP-1 agonists/GIP such as nausea/vomiting, diarrhea, pancreatitis, injection-site reactions, gallbladder disease ● Assess for adverse effects at every visit ● Follow-up in 1 month

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters
		• **Non-pharmacological**: life-style modifications including diet and exercise	
Social anxiety	**3**	Problem: **Untreated indication** Treatment • **[PICK ONE]** SSRI (preferred): ○ Citalopram: initiate at 10 to 20 mg PO daily and titrate to response *OR* Escitalopram: initiate at 5 to 10 mg PO daily and titrate to response *OR* Fluoxetine (preferred): initiate at 10 to 20 mg PO daily and titrate to response *OR* Sertraline: initiate at 25 to 50 mg PO daily and titrate to response *OR* Pregabalin: initiate at 100 mg PO BID and increase by 150 mg per day to maximum of 600 mg per day • **Non-pharmacological**: management of risk factors (co-psychiatric diagnoses, life stressors); recommend cognitive behavioral therapy (CBT)	Therapeutic Goals: • Reduction in severity and frequency of anxiety symptoms and panic attacks if present Monitoring Parameters: • Severity and frequency of anxiety symptoms • May utilize Liebowitz Social Anxiety Scale (LSAS) • Anticipate full efficacy by 4 to 6 weeks • Assess for the presence of adverse effects at 2 to 3 weeks • Monitor for changes in mood and behavior at every visit • SSRI adverse effects: anxiety/jitteriness, insomnia, headache, GI effects, weight gain, sexual dysfunction, hyponatremia, serotonin syndrome • Pregabalin adverse effects: CNS and respiratory depression, peripheral edema, visual disturbances, weight gain, dizziness, drowsiness, fatigue • Monitor for adverse effects at every visit • Follow-up in 2-3 weeks
Vitamin D deficiency	**3**	Problem: • Therapy indicated; vitamin D deficient Treatment • **Vitamin D3** (preferred):	Therapeutic Goals: • Normalization of serum vitamin D Monitoring Parameters: • Repeat vitamin D in 3 to 6 months, with a goal level of 20-40 ng/mL

Health Care Problem	Priority	Recommendations for Therapy	Therapeutic Goals & Monitoring Parameters
		○ cholecalciferol 1000 - 6000 IUPO once daily for 3-4 months *OR* cholecalciferol 50000 IU PO once weekly for 2 months	• Vitamin D supplementation adverse effects: hypercalcemia, hypercalciuria, toxicity • Complete basic metabolic panel at 3-6 months • Follow-up in 3-6 months
Immunizations	**3**	Vaccines Due: • Annual influenza vaccine and COVID-19 vaccine, Shingles and Pneumonia • Influenza vaccine: one-time trivalent IM formulation appropriate for age (excludes LAIV and those indicated for patients aged 65 and older) • Pneumonia: Give one IM dose of PCV15, PCV20, or PCV 21 • Shingles Recombinant, adjuvanted Vaccine Series • 2 dose series: initial dose followed by 2nd dose in 2-6 months • Tdap or Td (should be administered every 10 years)	Therapeutic Goals: • Reduce incidence of vaccine preventable disease Monitoring Parameters: • Hypersensitivity reactions (15 minutes after each vaccine) • Injection site pain

Team # _____

2025
ASHP Clinical Skills Competition℠
LOCAL CASE
SUPPLEMENTAL NOTES FOR JUDGES

Directions to Clinical Skills Competition Judges

Attached are supplemental notes provided to you by the case writer to give you some insight into the case and rationale for the answer key. All materials were vetted by a national group of clinical specialists practicing in various specialties. However, if the local coordinator and judging panel disagree with the answer key provided, please use your clinical judgment and expertise as you see fit to determine what is appropriate for your local competition to select a winner to participate in the national competition.

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2025 ASHP CLINCIAL SKILLS COMPETITION – LOCAL CASE
SUPPLEMENTAL NOTES FOR JUDGES

The primary problem is schizophrenia.

Problems to address while hospitalized and upon discharge include gonorrhea infection, scabies infection, opioid use disorder, chronic hepatitis B infection, human immunodeficiency virus prophylaxis, hypertension, hyperlipidemia, diabetes mellitus type 2, obesity, social anxiety, and vitamin deficiency.

Health Care Problem 1
SCHIZOPHRENIA, TREATMENT RESISTANT
The patient was previously diagnosed with anxiety, depression, and schizophrenia. Based on their current symptoms the patient is currently experiencing an acute exacerbation of schizophrenia, characterized by disorganized thought processes, perceptual disturbances, and impaired functioning. He presents with persistent religious delusions and auditory hallucinations, describing voices identified as "angels" commanding him to purify himself due to being "unclean." These hallucinations are associated with agitation and self-injurious behavior (e.g., hitting his head with his fists, refusing food, water, and bathing). Tangentiality, loose associations, flight of ideas, and thought blocking were noted during the psychiatric interview, consistent with disorganized thinking. Cognitive impairment is evidenced by disorientation to time and place, limited attention span, and impaired recent memory. Negative symptoms include social withdrawal, avolition, and poor self-care. He lacks insight into his condition and demonstrates impaired judgment, with decreased ability to participate in care planning. These findings are consistent with a severe episode of chronic paranoid schizophrenia, likely exacerbated by prolonged medication nonadherence following loss to follow-up. Prolonged lack of treatment during this time has led to the development/exacerbation of several other medical conditions.

Based on the patient's medication history he has had several appropriate trials of antipsychotics without full resolution of symptoms. Goals of care should focus on acute resolution of symptoms and decreased threat to the patient and others. As the patient's symptoms have contributed significantly to his current state. The use of opioids may have contributed to his current state, but as the patient has not had access or use of substances in over 2 weeks his symptoms are not attributable to opioid intoxication or withdrawal.

Key to the management of schizophrenia is a combination of antipsychotic therapy, to target positive symptoms, and non-pharmacological therapy to support the patient's functioning in society. Antipsychotics are primarily effective for positive symptoms such as hallucinations and delusions but have decreased efficacy for management of negative or cognitive symptoms. As this patient has had several appropriate trials of antipsychotic therapy without full resolution of symptoms, the diagnosis of treatment resistant schizophrenia is appropriate. Treatment resistant schizophrenia is generally defined as lack of significant symptoms improvement despite at least 2 antipsychotics from two different classes at appropriate doses for 2-8 weeks. The patient has trialed both first-generation antipsychotics (fluphenazine, perphenazine) and second-generation antipsychotics (aripiprazole, asenapine, brexipiprazole, caripiprazine, lurasidone, quetiapine, ziprasidone) without full resolution of symptoms and continued episodes of psychosis.

The combination of antipsychotics in this case would not be an appropriate treatment plan as combination of antipsychotics is not associated with increased efficacy but does increase the risk of adverse effects like weight gain, extrapyramidal symptoms, and CNS depression. While initiation of long-acting aripiprazole may require an overlap of up to 14 days, continued oral aripiprazole and the addition of quetiapine is also not appropriate. Of note, in severe refractory cases increased dosing of antipsychotics or the combination of antipsychotics may be used but this is outside the scope of this case and the expected knowledge of a pharmacy student.

The preferred treatment for resistant schizophrenia is clozapine if it may be used safely. Previously clozapine was a part of the REMS program and required strict monitoring for neutropenia. While the requirements for REMS reporting have been recently removed by the FDA, these guidelines for monitoring of absolute neutrophil count are still used for safety monitoring. Titration of clozapine requires close monitoring but is generally initiated at 12.5 mg daily and titrated by 25-50 mg per day to a target dose of 300 mg/day.

Given the patient's acute symptoms and management inpatient, initiation of an as needed antipsychotic for acute agitation or aggression is also generally prescribed in addition to the use of de-escalation techniques. Best practice is the use of an agent that has both oral and parenteral formulations, in which the oral can be used first if the patient is cooperative and then if needed the parenteral agent can be administered. Haloperidol is most used, but olanzapine or chlorpromazine are also options. Many hospitals will order a three drug "cocktail" of haloperidol, a benzodiazepine, and diphenhydramine although there is no clear benefit for the combination of agents versus monotherapy. Overuse of these agents is common and it is important to monitor total daily dose of agents such as haloperidol due to the risk of QTc prolongation.

Long-term treatment should also include non-pharmacological treatment to assist the patient in reintegration to home, work, and society.

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Health Care Problem

GONORRHEA INFECTION

The patient is positive for *N. gonorrhoeae* based on NAAT testing from both urine and urethral swab specimens, with urine culture confirming the presence of *N. gonorrhoeae* and no isolation of *c. trachomatis*. Clinical presentation includes dysuria and yellow urethral discharge, with physical exam notable for urethral erythema and mucopurulent discharge. These findings are consistent with symptomatic gonococcal urethritis. No signs of epididymitis or disseminated gonococcal infection (e.g., rash, tenosynovitis, arthritis) were observed. The patient denies testicular swelling or inguinal pain.

Based on available history management should follow CDC guidelines for uncomplicated gonorrhea. Preferred treatment is a single dose of ceftriaxone 500 mg intramuscularly as the patient weighs less than 150 kg. If following the 2023 WHO guidelines a single dose of 1 g intramuscularly may be used. The patient does not require treatment with doxycycline as testing for *c. trachomatis* was negative. Additionally, allergies to cephalosporins or resistance are not currently a

concern based on the information provided. The noted allergy to amoxicillin/clavulanate is a known and expected adverse reaction to the medication and is not suggestive of a true allergy.

If possible partner therapy should be recommended; however, given the patient's current psychiatric status it may not be possible to identify any individual with whom he has been sexually active.

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Health Care Problem

SCABIES INFECTION

Based on clinical presentation and visual identification of *s. scabiei* from skin scraping, the patient should be treated for scabies infection. Specifically classic scabies, however this is beyond the expected knowledge of a pharmacy student. Symptoms include intense nocturnal pruritus and excoriated lesions primarily affecting intertriginous areas such as the groin, waistline, and wrists. On physical exam, erythematous papules and characteristic serpiginous burrows were noted in these regions, consistent with scabietic infestation. The distribution and severity of itching, particularly at night, are classic for scabies. No secondary bacterial infection or crusted scabies were observed.

Preferred treatment should consist of topical permethrin 5% cream applied to the entire body from the neck down (generally a 30g tube is used for an average adult) the medication is then left on the skin for 8 to 14 hours before washing it off with soap and water. In 7 to 14 days the patient should be inspected for the presence of mites and lesions, if present a second round of permethrin should be applied.

The patient should also be monitored for the resolution of nocturnal pruritus within 1 week of treatment, until then symptoms may be managed with antihistamines and for up to 4 weeks after treatment.

Additionally, all close contacts should be evaluated and treated empirically, and environmental decontamination measures initiated to prevent reinfestation.

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Health Care Problem

OPIOID USE DISORDER

The patient has a longstanding history of opioid use disorder, initially diagnosed in 1992 following an intentional overdose involving heroin and alcohol. Recent history suggests continued active use in the setting of acute psychosis, with the patient reported injection of heroin 2–4 times weekly and alcohol use when heroin is unavailable previously. Estimates for the volume of recent use or last use are not available, however urine toxicology obtained during admission

a month ago was positive for fentanyl, 6-acetylmorphine, and morphine, confirming recent opioid exposure. Symptoms described by the patient's brother; including severe cramps, diarrhea, body aches, nausea, and vomiting suggest opioid withdrawal approximately two weeks ago. As the patient is no longer showing signs/symptoms at this time the patient is not experiencing opioid withdrawal and initiation of withdrawal treatment would not be appropriate.

The patient does meet DSM-5 criteria for moderate to severe opioid use disorder with associated functional impairment, medical complications, and prior unsuccessful attempts at cessation.

Initiation of medication for opioid use disorder (MOUD) should be considered to reduce opioid craving, prevent withdrawal, and decrease risk of overdose. Options include methadone, buprenorphine, or naltrexone. If using naltrexone or intending to transition to buprenorphine/naloxone the patient should first receive a test dose of naloxone to confirm the absence of withdrawal. Given their recent opioid use and history of overdose, the patient should receive a prescription for naloxone nasal spray and their brother and family should receive training on its use for opioid overdose.

In terms of efficacy, methadone is highly effective, but its use in this patient may be complicated by difficulties in access as methadone for opioid use disorder may only be obtained at a licensed dispensary and daily or weekly visits may be difficult in the setting of schizophrenia. Naltrexone has demonstrated efficacy for management of opioid cravings and is not currently contraindicated although this therapy may not be preferred in the setting of hepatitis it is not contraindicated with the patient's current level of hepatic impairment. Finally, buprenorphine and its combination formulations also have demonstrated efficacy for cravings and decreasing dependence on opioids and may be preferred in concern for overdose risk or continued substance use but also has a potential for hepatic impairment. All available options for the patient have risks and benefits that should be considered in the management of opioid use disorder.

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Health Care Problem

CHRONIC HEPATITIS B INFECTION

The patient has chronic hepatitis B infection, as evidenced by a positive hepatitis B surface antigen (HBsAg), positive total anti-HBc, and detectable HBV DNA (1,156 IU/mL), with negative IgM anti-HBc and negative anti-HBs, confirming chronic rather than acute or resolved infection. The patient has a history of injection drug use and prior incarceration, which are risk factors for viral hepatitis. Liver enzymes are mildly elevated (AST 57 IU/L, ALT 73 IU/L), and the patient reports mild right upper quadrant tenderness, though there is no hepatomegaly or signs of hepatic decompensation on exam. Without acute hepatitis or cirrhosis acute treatment is not recommended currently. If students choose to continue antiviral therapy with tenofovir disoproxil/emtricitabine for HIV prophylaxis this will serve as additional treatment for hepatitis B. If cabotegravir alone is used for HIV prophylaxis, then additional coverage of hepatitis B is not present. Routine monitoring of HBV DNA, liver function, and renal function is recommended to assess disease progression and treatment response.

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Health Care Problem

HUMAN IMMUNODEFICIENCY VIRUS PROPHYLAXIS

The patient is currently receiving HIV pre-exposure prophylaxis (PrEP) with daily oral tenofovir disoproxil/emtricitabine. Indication for PrEP is supported by the patient's ongoing risk factors, including a history of injection drug use with reported heroin use as recently a few months ago, as well as intermittent sexual activity with male partners and a documented history of gonorrhea in 2022. Recent STI screening confirms a new diagnosis of gonorrhea, reinforcing ongoing risk for HIV acquisition. The patient's HIV antigen/antibody screen and HIV RNA are both negative currently, confirming HIV-negative status. Continued PrEP is clinically appropriate and does not need be discontinued in the setting of hepatitis B, the patient's previous therapy of tenofovir disoproxil/ emtricitabine 300/200 mg, one tablet PO daily may be restarted as it may take up to 20-30 days to provide adequate protection. Alternatively, the patient may be initiated on the long-acting formulation of cabotegravir which is given every 2 months. This alternative may be preferred with the co-occurring diagnosis of schizophrenia and previous loss to follow-up. However, changes in mood including altered mood, depressed mood, mood swings, and suicidal ideation have been reported as such risks versus benefits should be discussed. Cabotegravir is dosed 600 mg intramuscularly once monthly for 2 doses then every two months, with or without oral lead in.

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Health Care Problem

HYPERTENSION

The patient has a longstanding history of hypertension, diagnosed in 2008, with current antihypertensive therapy including losartan 25 mg daily and lisinopril 10 mg daily. Blood pressure on admission was 129/81 mm Hg, indicating controlled values in the inpatient setting. Medication adherence is uncertain due to recent history of medication nonadherence and homelessness. No evidence of hypertensive urgency or end-organ damage is present on exam or laboratory evaluation. Given the patient's comorbid conditions, including chronic kidney disease and hyperlipidemia, continued use of renin-angiotensin system inhibitors is appropriate for both blood pressure control and renal

protection. However, the patient should not be treated with an ACEi and ARB concurrently and students should discontinue either lisinopril or losartan and recommend follow-up for management of hypertension.

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Health Care Problem

HYPERLIPIDEMIA

The patient has a past diagnosis of hyperlipidemia, initially documented in 2011, and is currently prescribed atorvastatin 10 mg daily. Recent lipid panel shows elevated total cholesterol (210 mg/dL), LDL (167 mg/dL), and persistently low HDL (29 mg/dL), consistent with suboptimal lipid control. Given the patient's multiple cardiovascular risk factors, including hypertension, diabetes mellitus, and chronic hepatitis B, a moderate- to high-intensity statin is indicated for both primary and secondary prevention of atherosclerotic cardiovascular disease (ASCVD). Atorvastatin 10 mg daily is considered low-intensity with an excepted LDL lowering of <30% compared to a high-intensity statin with possible lowering of 50%. Titration to atorvastatin 40–80 mg daily or an equivalent high-intensity statin should be considered.

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Health Care Problem

DIABETES MELLITUS TYPE 2

The patient has a diagnosis of type 2 diabetes mellitus, with poor glycemic control as evidenced by a most recent hemoglobin A1c of 9.4%, down from 12.4% eight months prior, but still above goal. The patient has no documented antihyperglycemic medications currently active, and recent history suggests poor medication adherence and limited engagement with outpatient care. No evidence of acute hyperosmolar or ketoacidosis crisis is present. Given the elevated A1c and comorbid hypertension, statin use, and chronic kidney disease, guideline-directed therapy with agents demonstrating cardiovascular and renal benefit, such as GLP-1 receptor agonists or SGLT2 inhibitor, should be considered if tolerated and accessible once discharged to outpatient treatment. GLP-1 may be preferred over SGLT-2 inhibitors for additional benefit in wight loss and possible benefit in substance use disorder. Semaglutide is preferred in this setting given it has the most data for use across various indications; but tirzepatide may be also considered for increased weight loss or another GLP-1 for similar benefits. The patient should also be started on metformin once discharged or after any necessary imaging has been completed.

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Health Care Problem

OBESITY

The patient meets criteria for obesity with a body weight of 310 lbs and height of 5'10", corresponding to a body mass index (BMI) of approximately 44.5 kg/m², consistent with class III (severe) obesity. Obesity is a significant contributor to the patient's overall cardiometabolic risk profile and is associated with comorbid conditions present in this case, including hypertension, type 2 diabetes mellitus, and hyperlipidemia. While inpatient weight loss interventions are limited, education on the impact of obesity on health outcomes and referral for outpatient nutritional counseling, behavioral support, and metabolic screening is warranted. Pharmacologic therapy with GLP-1 agonists or tirzepatide should be considered in a future plan for weight management and additional benefit as described above.

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Health Care Problem

SOCIAL ANXIETY

The patient carries a diagnosis of social anxiety disorder, first identified in 2023 following increased anxiety and avoidance behaviors triggered by a promotion at work that required supervising peers. Symptoms included persistent fear of negative evaluation, physiological signs of anxiety during social interactions, and functional impairment resulting in occupational decline although these symptoms are also associated with the co-occurring diagnosis of schizophrenia. Initial pharmacologic management with sertraline yielded minimal benefit and was transitioned to venlafaxine, with as-needed propranolol prescribed for situational anxiety. Of note, initial dosing for sertraline was not therapeutic and this would not be considered an appropriate trial of this antidepressant.

Given the patient's current psychiatric decompensation, social anxiety symptoms may be difficult to isolate from primary psychotic symptoms; however, historical documentation supports a comorbid anxiety disorder. Long-term management should include reassessment of medication efficacy and tolerability, with SSRIs the preferred pharmaceutical agents in social anxiety disorder and consideration of referral for cognitive behavioral therapy (CBT), which remains the gold standard for treatment of social anxiety disorder. If considering pharmacotherapy fluoxetine may be preferred as it is least likely to contribute to additional weight gain. However, citalopram, escitalopram, or sertraline may be considered. Venlafaxine should be avoided to limit further increases in the patient's blood pressure.

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Health Care Problem

VITAMIN D DEFICIENCY

The patient is vitamin D deficient with a serum 25-hydroxyvitamin D level of 16 ng/mL, consistent with insufficiency per Endocrine Society guidelines. Deficiency may be multifactorial, potentially related to limited sunlight exposure due to social withdrawal and recent history of homelessness, along with poor nutritional intake as evidenced by refusal of meals and oral fluids during hospitalization. Low vitamin D status may contribute to fatigue and impaired immune function and is commonly seen in patients with psychiatric illness and chronic medical comorbidities.

Replacement therapy is indicated, for serum levels 12 to 20 ng/mL oral supplementation with 800 to 1000 IU daily should be initiated and levels should be repeated in 3 months. High dose vitamin D of 50000 IU once weekly could be considered to reduce pill and caregiver burden.

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