

The following completed problem lists and SOAP Notes for each case are provided in order that participants can compare their notes with those generated by the expert panel.

▼ **Case 1 SOAP NOTE**

CASE 1 PROBLEM LIST

S: “My wife made me return for this checkup.”

O: BP 148/96; glucose 120 mg/dL; GGT 50; Wt 88 kg (2.5 kg weight loss from visit 6 months ago)

A: **Problem 1:** Central obesity
Problem 2: Stage I hypertension with risk factors
Problem 3: Impaired glucose tolerance
Problem 4: Mixed dyslipidemia with low HDL
Problem 5: Possible alcohol excess
Problem 6: Adherence problem
Problem 7: Insurance without pharmacy benefits

P: **Problem 1: Central obesity**

- Continue lifestyle modifications with emphasis on diet and exercise
- No suggested follow-up appointment at this time

Problem 2: Stage I hypertension

- Educate patient about 3 possible hypertension therapies: beta-blocker, diuretic, and ACE inhibitor
- Patient chooses ACE inhibitor based on therapy information regarding erectile dysfunction and frequent urination with beta-blockers and diuretics, respectively
- Prescribe captopril b.i.d.

Problem 3: Impaired glucose tolerance

- Continue to monitor for potential problems

Problem 4: Mixed dyslipidemia with low HDL

- Educate on lifestyle modifications with emphasis on a healthy diet and exercise

Problem 5: Possible alcohol excess

- Encourage alcohol restriction

Problem 6: Adherence problem

- Stress importance of medication and continued lifestyle changes in treatment of hypertension

Problem 7: Insurance without pharmacy benefits

- Prescribe captopril as a cost-effective hypertension treatment for this patient

1. Central obesity
2. Stage I hypertension
3. Impaired glucose tolerance
4. Mixed dyslipidemia with low HDL
5. Possible alcohol excess
6. Adherence problem
7. Insurance without pharmacy benefits

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CASE 2 PROBLEM LIST

1. Stage I hypertension, inadequately controlled at current visit (no organ damage)
2. Dyslipidemia with mild LDL elevation
3. Gout
4. Smoking (failed cessation program)
5. Episodic asthma during URI

▼ **Case 2 SOAP NOTE**

S: "I was asked to come in for a blood pressure check, and my blood pressure is higher than it used to be."

O: BP 136/94; HR 64; RR 16; T 37°C; Wt 70 kg (154 lbs); Ht 183 cm (6'0")

A: **Problem 1:** Stage I hypertension, inadequately controlled at current visit (no organ damage)

Problem 2: Dyslipidemia with mild LDL elevation

Problem 3: Gout

Problem 4: Smoking (failed cessation program)

Problem 5: Episodic asthma during URI

P: **Problem 1: Stage I hypertension, inadequately controlled on current therapy**

- Increase benazepril dose to 20 mg qd
- Explain dosing issues and equivalence for different ACE inhibitors
- Follow up in 1 month

Problem 2: Dyslipidemia with mild LDL elevation

- Educate patient and family on lifestyle modifications including diet, exercise, and smoking cessation
- Continue to monitor on follow-up visit

Problem 3: Gout

- Educate on lifestyle modifications as described above
- Continue on allopurinol therapy

Problem 4: Smoking

- Educate on lifestyle modifications as described above
- Continue on nicotine patch

Problem 5: Episodic asthma during URI

- Educate on lifestyle modifications as described above

▼ **Case 3 SOAP NOTE**

S: “My feet hurt and my shoes are too tight, I have trouble walking, and I can’t go to church because of my feet.”

O: 1+ edema in face of normal albumin; no evidence by history or physical exam of CHF

A: **Problem 1:** Ankle edema secondary to dihydropyridine increase

Problem 2: Hypertension, borderline controlled

Problem 3: Dyslipidemia, currently at goal

Problem 4: Coronary artery disease, currently stable

Problem 5: Decline in quality of life, (ie, can’t attend church)

P: **Problem 1: Ankle edema secondary to dihydropyridine increase**

- Reduce amlodipine to 2.5 mg qd
- Add benazepril 5 mg qd
- Follow-up visit in 4 weeks; if effective, consider use of ACE inhibitor/calcium channel blocker combination

Problem 2: Hypertension, borderline controlled

- Manage as above with amlodipine and benazepril
- Continue home blood pressure checks

Problem 3: Dyslipidemia, currently at goal

- Continue present therapy
- Monitor lipids and LFTs per guidelines

Problem 4: Coronary artery disease

- No therapy changes recommended at this time
- Continue to monitor disease for progression

Problem 5: Decline in quality of life

- Measure quality of life after new medication regimen becomes stable

CASE 3 PROBLEM LIST

1. Ankle edema secondary to dihydropyridine increase
2. Hypertension, borderline controlled
3. Dyslipidemia, currently at goal
4. Coronary artery disease
5. Decline in quality of life (ie, can’t attend church)

CASE 4 PROBLEM LIST

1. Poorly controlled systolic hypertension
2. Poorly controlled type 2 DM
3. Chronic renal insufficiency
4. Proteinuria
5. Mild peripheral neuropathy

▼ Case 4 SOAP NOTE

S: “Doc, I’ve been feeling tired lately. I have to go to the bathroom 2 or 3 times a night and have some burning in my feet.”

O: BP 166/78; Ht 175 cm (5'9"); Wt 78 kg (172 lb); mild AV nicking; clear lungs; slight decreased pin prick to feet; 1+ edema HbA_{1C} 8.5; BUN 30; SCr 1.5; Glu 265; K 4.5; Lipid panel WNL; 2+ proteinuria; 1-2+ glucosuria

A: **Problem 1:** Poorly controlled systolic hypertension
Problem 2: Type 2 DM, poorly controlled
Problem 3: Chronic renal insufficiency secondary to DM and hypertension
Problem 4: Proteinuria secondary to DM and hypertension
Problem 5: Mild peripheral neuropathy secondary to DM

P: **Problem 1: Poorly controlled systolic hypertension**

- Counsel on lifestyle changes such as diet and exercise
- Increase dose of lisinopril to 20 mg tab po qd
- Add hydrochlorothiazide 12.5 mg tab po qd
- Check serum electrolytes, BP at follow up (2 weeks); initial goal is BP 140/85 with further reductions as tolerated to current JNC-VI guidelines

Problem 2: Poorly controlled type 2 DM

- Increase glyburide to 10 mg tab po b.i.d.
- Encourage self-monitoring of blood glucose b.i.d. (morning and evening)
- Refer to support group for additional diabetes education
- Assess when last ophthalmologic exam completed; schedule if necessary
- Goal: HbA_{1C} 7.0
- Monitor for improved glucose control with self-monitoring of blood glucose and HbA_{1C} as well as decreased signs and symptoms such as nocturia

Problem 3: Chronic renal insufficiency

- Monitor renal function over next 3 months
- Discontinue NSAID use; suggest acetaminophen prn as an alternative analgesic
- Goal: BP control as described in Problem 1

Problem 4: Proteinuria

- Manage DM and hypertension as above, including use of ACE inhibitors for renal-sparing effects
- Goal: BP and HbA_{1C} control as described in Problems 1 and 2

Problem 5: Mild peripheral neuropathy

- Manage DM and hypertension as above
- Refer to diabetes educator regarding proper foot care
- Goal: BP and HbA_{1C} control as described in Problems 1 and 2

▼ **Case 5 SOAP NOTE**

S: “I’ve been real short of breath, and I need some more samples. I’ve mixed up all my drugs.”

O: BP 180/104; HR 115; RR 22; Ht 157 cm (5'2"); Wt 79 kg (174 lb) (BMI 32); S3; Bibasilar rales; 2+ pitting edema; Na 132; K 5.2; BUN 30; SCr 2.0; digoxin undetectable; UA: 3+ protein; unknown EF

A: **Problem 1:** Progressive CHF

Problem 2: Ischemic cardiomyopathy S/P MI

Problem 3: Hypertension, uncontrolled; ran out of medications

Problem 4: Renal insufficiency secondary to NSAID use and hypertension

Problem 5: Osteoarthritis, stable

Problem 6: Polypharmacy and inability to afford medications

Problem 7: Obesity

P: **Problem 1: Progressive CHF**

- Restart digoxin 0.25 mg tab po qd for 5 days; reduce to 0.125 mg po qd; monitor digoxin levels in 1 to 2 weeks; educate regarding signs of digoxin toxicity
- Discontinue torsemide; start furosemide 40 mg tab po qd
- Start fosinopril 20 mg po qam; goal should be fosinopril 20-40 mg tab po qd; monitor serum K
- Refer for dietary counseling for weight loss; monitor daily weights; weight goal: see Problem 7
- Obtain ejection fraction

Problem 2: Ischemic cardiomyopathy S/P MI

- Start enteric-coated aspirin 81 mg tab po qd
- Consider beta-blocking agent if patient remains tachycardic
- Treat with ACE inhibitor as discussed above

Problem 3: Hypertension, uncontrolled; ran out of medications

- Monitor BP at home following changes suggested above; goal BP is 130/85
- Discontinue NSAID use
- Monitor renal function over next 3 months
- Refer for dietary counseling as above

Problem 4: Renal insufficiency secondary to NSAID use and hypertension

- Discontinue NSAID use
- Monitor renal function over next 3 months

Problem 5: Osteoarthritis, stable

- Discontinue NSAID use; begin acetaminophen 650 mg tab po t.i.d.
- Encourage light exercise to maintain range of motion
- Begin strength-building exercise
- Dietary therapy with goal of weight reduction

Problem 6: Polypharmacy and inability to afford medications

- Refer to pharmacist to help improve and monitor compliance
- Discontinue use of samples previously obtained
- Instruct BV to bring in all medications at next visit for review
- Refer for possible inclusion in manufacturers’ patient assistance programs for obtaining prescription medications

Problem 7: Obesity

- Refer for dietary counseling; initial goal weight is BMI of 30, long-term goal is 27

CASE 5 PROBLEM LIST

1. Progressive CHF
2. Ischemic Cardiomyopathy S/P MI
3. Uncontrolled hypertension
4. Renal insufficiency
5. Osteoarthritis
6. Polypharmacy
7. Obesity

CASE 6 PROBLEM LIST

1. CHF secondary to cardiomyopathy
2. Hypertension systolic and diastolic BP uncontrolled; probably exacerbated by alcohol intake
3. Excessive alcohol intake
4. Overweight on current diet
5. Hepatomegaly, elevated LFTs

▼ **Case 6 SOAP NOTE**

S: “I’ve been having a hard time catching my breath. I’m interested in some new drugs that I read about on the Internet.”

O: Neck vein distention; tachycardia; S3/S4; bibasilar rales; hepatomegaly without ascites; trace pedal edema; BP 160/96; HR 120; BMI 29; EF 0.3; Bili 2.4; LDH 300; AST 68; ALT 40; GGT 600; Alb 3.0

A: **Problem 1:** CHF secondary to cardiomyopathy
Problem 2: Hypertension, systolic and diastolic BP uncontrolled; probably exacerbated by alcohol intake
Problem 3: Excessive alcohol intake
Problem 4: Overweight on current diet
Problem 5: Hepatomegaly, elevated LFTs

P: **Problem 1: CHF secondary to cardiomyopathy**

- Discontinue nifedipine
- Start lisinopril 10 mg tab po qd; goal is lisinopril 20 mg po qd
- Start hydrochlorothiazide 25 mg tab po qd
- Counsel regarding serious adverse effect of sildenafil in patients with CHF; discontinue sildenafil
- Consider adding digoxin at a later time if signs and symptoms remain despite new therapy
- Monitor daily weights, reduction of symptoms; electrolytes
- Dietary and alcohol treatment as discussed below

Problem 2: Hypertension

- Treat as above; goal is 130/85

Problem 3: Excessive alcohol intake

- Refer for alcohol assessment and counseling
- Goal: complete abstinence

Problem 4: Overweight

- Discontinue alcohol intake under medical supervision as above
- Refer for dietary counseling
- Begin exercise program with daily walking
- Long term weight goal: BMI 27

Problem 5: Hepatomegaly, elevated LFTs

- Discontinue alcohol under medical supervision as above
- Monitor LFTs

▼ **Case 7 SOAP NOTE**

S: “I have had trouble breathing in the past week especially while climbing the stairs. I have also been unable to get my shoes on for the past 3 days, and I’ve gained 5 pounds.”

O: Mild respiratory distress, dyspnea, appears fatigued
 VS: T 37.4°C; BP 190/70; HR 90; RR 24; Wt 59 kg; Ht 160 cm;
 Lungs: Bibasilar rales; COR: PMI nondisplaced; nl S1 & S2, S4; II/VI SEM;
 EXT: 2+ edema, bilateral knee crepitiu; ECG: NSR, remarkable for prominent voltage, left axis deviation; CXR: Pulmonary vascular congestion;
 UA: Trace protein, no casts; ECHO: Mild-moderate LV hypertrophy, E-A reversal with diastolic dysfunction, EF= 0.6; Medications: ibuprofen 200 mg t.i.d.; indomethacin 25 mg t.i.d. po for 1 week obtained from a friend; acetaminophen 500 mg po prn

A: **Problem 1:** CHF with preserved systolic function and exacerbation secondary to recent NSAID use

Problem 2: Isolated systolic hypertension secondary to central vascular stiffening

Problem 3: Mild renal insufficiency secondary to long-standing hypertension

Problem 4: Joint pain and knee crepitus on exam secondary to OA

P: **Problem 1:** CHF with preserved systolic function and exacerbation secondary to recent NSAID use

- Discontinue NSAID use
- Decrease salt intake, goal: 2 g Na+ diet
- Dietary consult
- Diuresis with furosemide 20 mg po qd and 3-day follow-up visit, including lab tests for serum electrolytes and renal function
- Check daily weights
- At 2-week follow-up symptoms remarkably improved with better exercise tolerance and the ability to sleep comfortably on 1 pillow. On exam, the only remarkable finding is BP 165/70. Plan to titrate benazepril to goal dose for CHF and provide patient education about disease state and management

Problem 2: Isolated systolic hypertension secondary to central vascular stiffening

- Initiate benazepril 10 mg po qd at follow up after successful diuresis and plan to discontinue furosemide
- Patient education of disease process, importance of compliance with dietary/medication regimen, and common medication side effects
- Benazepril po was increased to goal dose of 20 mg qd, and 2 weeks later BP 140/65

Problem 3: Mild renal insufficiency secondary to long-standing hypertension

- Repeat BUN/SCr after starting benazepril po

Problem 4: Joint pain and knee crepitus on exam secondary to OA

- Refer to physical therapy
- Use acetaminophen 500 mg po qd or prn

CASE 7 PROBLEM LIST

1. CHF with preserved systolic function and exacerbation secondary to recent NSAID use
2. Isolated systolic hypertension secondary to central vascular stiffening
3. Mild renal insufficiency secondary to long-standing hypertension
4. Joint pain and knee crepitus on exam secondary to OA

CASE 8 PROBLEM LIST

1. S/P anterior wall MI with LV systolic dysfunction
2. CAD
3. Cigarette smoking

▼ Case 8 SOAP NOTE

S: 5 days post-MI, before discharge patient asks, "What medications will I have to take? Why do I have to take these medications? What do I have to do to not have another MI?"

O: S/P anterior wall MI
VS: T 37.3°C (Oral); BP 110/70; HR 65; RR 14; Wt 79.5 kg; Ht 175 cm
COR: PMI 1 cm laterally displaced at MCL with systolic lift, S3 gallop, II/VI SEM apex
Lungs: WNL
EXT: (-) edema
ECG: NSR, AWTMI, Q waves in V1-V5
ECHO: EF=35%
CXR: Mild cardiomyopathy, no pulmonary congestion
SCr: 0.8

A: **Problem 1:** S/P anterior wall MI with LV systolic dysfunction
Problem 2: CAD with premature CAD in 1st degree relative
Problem 3: Cigarette smoking

P: **Problem 1: S/P anterior wall MI with LV systolic dysfunction**

- Continue ASA and beta blocker
- Discontinue cimetidine because heartburn sensation was actually a cardiac symptom of an MI
- Add enalapril 5 mg po b.i.d. and titrate as tolerated to goal dose of 20 mg po b.i.d.
- Refer to cardiac rehabilitation and schedule 10-day outpatient follow-up visit

Problem 2: CAD with premature CAD in 1st degree relative

- Aggressive identification and modification of reversible risk factors
- Smoking cessation counseling
- Repeat lipid profile
- Encourage physical activity when appropriate
- Encourage low saturated fat, low cholesterol diet

Problem 3: Cigarette smoking

- Smoking cessation counseling
- Recommend nicotine replacement and/or bupropion as necessary

▼ **Case 9 SOAP NOTE**

S: Wife reports patient had SOB with acute episode.

O: VS: T 37°C; HR 120; BP 130/90; RR 15; Wt 80.4 kg; Ht 175 cm; Wt 5 kg over recent discharge weight
 Lungs: Tachypnea, rales 2/3 way up
 COR: S3 gallop, increased CVP
 ABD: Hepatomegaly
 EXT: 2+ edema
 CXR: Pulmonary edema
 ECHO: EF=0.15

A: **Problem 1:** Acute pulmonary edema secondary to dietary salt intake
Problem 2: Idiopathic cardiomyopathy with poor systolic function
Problem 3: Poor access to medical care and information
Problem 4: Hepatomegaly

P: **Problem 1: Acute pulmonary edema secondary to dietary salt intake**

- IV diuresis
- Attempt to extubate after diuresis
- Educate patient about dietary Na⁺ restrictions on discharge from hospital

Problem 2: Idiopathic cardiomyopathy with poor systolic function

- Discontinue captopril; start fasinopril 20 mg po qd and titrate as tolerated
- Increase furosemide 40 mg po b.i.d.
- Digoxin 0.25 mg po qd
- When stable on ACE inhibitor and diuretic regimen, consider adding metoprolol and other therapies such as spironolactone
- Discontinue KCl 20 mEq po qd and recheck K⁺ levels at follow-up visit
- Educate patient and family about disease, importance of diet and medications, and self-management skills
- Consider anticoagulation if no contraindications

Problem 3: Poor access to medical care and information

- Refer to CHF case management

Problem 4: Hepatomegaly

- Monitor at follow-up visit

CASE 9 PROBLEM LIST

1. Acute pulmonary edema secondary to dietary salt intake
2. Idiopathic cardiomyopathy with poor systolic function
3. Poor access to medical care and information
4. Hepatomegaly