IX. CCS Case Study
Coding Review
CCS CASE STUDY

Working these case studies should help you in identifying your strengths and weaknesses in coding cases. The following is a list of a few resources for coding instructions and the latest official guidelines for coding:

- ICD-9-CM codebook
- ICD-9-CM Official Guidelines for coding and reporting
- Coding Clinic for ICD-9-CM (AHA)
- Coding Clinic for HCPCS (AHA)
- CPT codebook (AMA)
- CPT Assistant (AMA)


There are plenty of coding cases in this section to help you practice taking the medical record case coding portion of the CCS Examination. For each of these coding cases, the coding system (ICD-9-CM and/or CPT) and number of codes necessary for each coding system will be given. The spaces for codes on the answer sheet reflect the number and type of codes necessary.

As always, refer to the latest information about the examination that is provided in your examination packet and online at http://www.AHIMA.org.
INPATIENT CODING INSTRUCTIONS

TIP: Refer to the Inpatient information provided in the Examination Study Strategies and Resources, Coding Review, and ICD-9-CM sections in this book before coding the CCS inpatient cases.

1. Follow UHDDS definitions, ICD-9-CM instructional notations and conventions, and current coding guidelines to assign correct ICD-9-CM diagnostic and procedural codes to hospital inpatient medical records.

2. In sequencing the ICD-9-CM codes, list the principal diagnosis first for inpatient cases.

3. Code other diagnoses that coexist at the time of admission, that develop subsequently, or that affect the treatment received and/or the length of stay. These represent additional conditions that affect patient care in terms of:
   - Requiring clinical evaluation, therapeutic treatment, or diagnostic procedures
   - Extending length of hospital stay, or
   - Increased nursing care and/or monitoring
   Examples
   - Present on admission (POA) conditions
   - Conditions that develop subsequent to admission
   - Chronic diseases requiring active intervention during the hospital visit
   - Chronic systemic or generalized conditions that may have a bearing on the management of the patient (e.g., blindness)
   - Status post previous surgeries or conditions that are likely to recur and that may have an effect on patient management

4. Do not code
   - Localized conditions that have no effect on patient management
   - Status post previous surgeries or conditions that have no effect on patient management
   - Abnormal findings (laboratory, x-ray, pathologic, and other diagnostic testing results) unless documentation from the physician of their clinical significance
   - Signs or symptoms that are characteristic of a diagnosis
   - Any social history condition(s) that have no bearing on patient management

5. Do not assign
   - M-codes (Morphology codes)
   - E-codes except those to identify the cause or substance for an adverse effect of a drug that is correctly prescribed and properly administered (E850-E982)

6. Code all procedures that fall within the code range of 00.01–86.99, but do not code 57.94 (Foley catheter).

7. Do not code procedures that fall within the code range 87.01–99.99, but do code these:
   - Cholangiograms 87.51–87.54
   - Retrogrades, urinary systems 87.74 and 87.76
   - Arteriography and angiography 88.40–88.58
   - Radiation therapy 92.21–92.29
   - Psychiatric therapy 94.24–94.27
   - Alcohol/drug detoxification and rehabilitation 94.61–94.69
   - Insertion of endotracheal tube 96.04
   - Other lavage of bronchus and trachea 96.56
   - Mechanical ventilation 96.70–96.72
   - ESWL 98.51–98.59
   - Chemotherapy 99.25
AMBULATORY CARE CODING INSTRUCTIONS

TIP: Refer to the outpatient information provided in the Examination Study Strategies and Resources, Coding Review, and CPT and ICD-9-CM coding sections in this book before beginning coding of the CCS outpatient cases.

1. To select diagnoses, conditions, problems, or other reasons for care that require ICD-9-CM coding in an ambulatory care visit or encounter either in a hospital clinic, outpatient surgical area, emergency room, physician’s office, or other ambulatory care setting; apply ICD-9-CM instructional notations and conventions; current approved Coding Guidelines for Outpatient Services; and “Diagnostic Coding and Reporting Requirements for Physician Billing” (Coding Clinic for ICD-9-CM, Fourth quarter 1995 and 1996).

2. In sequencing the ICD-9-CM codes, the first listed code should describe the condition chiefly responsible for the outpatient services provided during the encounter.

3. Code the secondary diagnoses as follows:
   - Code and report chronic diseases that are treated on an ongoing basis as many times as the patient receives treatment and care for the condition(s).
   - Code all documented conditions that coexist at the time of the encounter that require or affect patient care, treatment, or management.
   - Do not code conditions previously treated that no longer exist.

4. Do not assign
   - E-codes except for those that identify the causative substance for an adverse effect of a drug that is correctly prescribed and properly administered (E850-E982)
   - M-codes
   - ICD-9-CM procedure codes

5. Assign CPT codes for all surgical procedures that fall in the surgery section (regardless of payer).

6. Assign CPT codes from the following sections ONLY IF indicated on the case cover sheet:
   - Anesthesia
   - Medicine
   - Evaluation and management services
   - Radiology
   - Laboratory and pathology

7. Assign CPT/HCPCS modifiers for hospital-based facilities, if applicable (regardless of payer).

Case Study 1

Inpatient Face Sheet

Admit Date: 1/06/2015
Discharge Date: 1/10/2015
Sex: Female
Age: 64
Disposition: Home

Admitting Diagnoses:
1. Neutropenic sepsis
2. Status postchemotherapy for non-Hodgkin’s lymphoma
3. Hypertension

Discharge Diagnoses:
1. Pancytopenia with neutropenic sepsis secondary to chemotherapy
2. Non-Hodgkin’s lymphoma
3. Hypoalbuminemia
4. Hypertension
Case Study 1

Discharge Summary

Admitted: 1/06/2015
Discharge: 1/10/2015

ADMISSION DIAGNOSES:
1. Neutropenic sepsis
2. Status postchemotherapy for non-Hodgkin’s lymphoma
3. Hypertension

DISCHARGE DIAGNOSES:
1. Pancytopenia with neutropenic sepsis secondary to chemotherapy
2. Non-Hodgkin’s lymphoma
3. Hypoalbuminemia
4. Hypertension

HISTORY:
This is a 64-year-old female with non-Hodgkin’s lymphoma, currently undergoing chemotherapy. The patient was evaluated by Oncology in follow-up and found to be neutropenic as well as febrile.

PHYSICAL EXAMINATION:
Vital Signs: Blood pressure 132/90. Temperature was 102.
HEENT: Dry oral mucous membranes. No thrush or herpetic lesions.
Neck: Supple, no adenopathy.
Lungs: Clear.
Heart: Slightly tachycardiac, no murmur.
Abdomen: Soft, nontender.

LABORATORY DATA:
Chemistries revealed total protein 5.8, albumin 2.4. Calcium 7.3, 7.6. The follow-up chem-7 revealed CO₂ of 25, chloride 111. Admission white blood cell count was 0.1, hemoglobin 11.2, hematocrit 32.8, red cell indices were normal. The platelet count was 14,000. The last blood count revealed white blood cell count of 3,500. The hemoglobin was 11.4, hematocrit 34.3, red cell indices remained normal. The urinalysis was pale in color and clear with trace protein noted, nitrite negative, leukocyte esterase negative. The urine culture showed no growth. Blood culture showed no growth.

RADIOLOGY:
The chest x-ray showed no acute process.
Case Study 1

Discharge Summary

Continued:

HOSPITAL COURSE:
The patient was admitted after follow-up with her oncologist. She was found to be febrile and neutropenic; rule out sepsis. The patient was admitted and placed in isolation. Cultures were obtained, and the patient was placed on IV Fortaz as well as IV gentamicin. The patient had pancytopenia with a drop in her platelet count, and the patient was given platelet transfusion, blood transfusions, and IV fluids for dehydration. The patient had a mild reaction to the transfusion and was given IV steroids as well as Benadryl. The patient was started on Neupogen injections on November 7. The patient again received platelet and blood transfusion on November 7 and additional platelet transfusion on November 11. The patient’s white blood cell count was increasing, and she was less clinically septic. IV antibiotics were converted to oral Cipro. Her isolation was discontinued, and she remained afebrile. The patient’s platelets counts continued to be low; however, this will be managed as an outpatient.

DISCHARGE MEDICATIONS:
Floxin 400 mg twice daily.
Mycostatic swish and swallow 5 mL three times daily.

Patient is discharged in improved condition.
Diet and activity as tolerated.
The patient will follow-up with me in my office in 1 week.
Case Study 1

History and Physical

CHIEF COMPLAINT: Neutropenic sepsis.

HISTORY OF PRESENT ILLNESS:
This is 64-year-old white female with a known history of non-Hodgkin’s lymphoma. The patient has been treated with chemotherapy and, on evaluation by Oncology, was found to be febrile and neutropenic. She was felt to be clinically septic. There was also evidence of significant neutropenia. The patient was admitted to the Oncology floor for antibiotic therapy, monitoring of her blood counts, medications to raise her white and hemoglobin counts, and to be placed in reverse isolation.

PAST MEDICAL HISTORY: Non-Hodgkin’s lymphoma and hypertension.

SOCIAL HISTORY: Nonsmoker, no alcohol use.

FAMILY HISTORY: Positive for cancer and heart disease.

REVIEW OF SYSTEMS: Negative.

PHYSICAL EXAMINATION:
HEENT: Negative except for dry oral mucous membranes. No thrush or herpetic lesions.
Neck: Supple, no carotid bruit. No evidence of adenopathy.
Lungs: Clear.
Cardiac: Slightly tachycardic, but no murmur.
Abdomen: Soft, nontender, positive bowel sounds.
Extremities: Bilateral pulses. Poor muscle tone. No evidence of deep venous thrombosis or cellulitis.

ASSESSMENT:
1. Neutropenic sepsis, status postchemotherapy.

PLAN:
1. Admit and place in reverse isolation.
2. Intravenous hydration.
3. Intravenous antibiotics.
4. Continue present medications.
5. Follow blood counts.
Case Study 1

Progress Notes:

1/6: Admit Note: Patient with non-Hodgkin’s lymphoma admitted to isolation for neutropenic sepsis secondary to chemotherapy.

1/7: S: “Feel better today.”
O: Vital signs stable, WBCs 0.1, platelets 14,000, temperature 101.3, blood and urine cultures negative.
A: Responding to antibiotics, still dehydrated.
P: Continue IV fluids and antibiotics. Transfuse platelets and PRBCs. Begin Neupogen injections.

1/8: S: No complaints.
O: Vitals stable, temp 99.8, transfusion reaction last night requiring IV steroids and Benadryl.
A: Continued improvement, responded well to steroids and Benadryl for transfusion reaction.
P: Continue current meds, transfuse PRBCs and platelets tomorrow.

1/9: S: “I feel great.”
O: WBC at 3,500, platelets at 14,000, afebrile, vitals stable.
A: Less clinically septic, tolerated transfusions well with no adverse reaction.
P: Discontinue isolation, change antibiotics to p.o. Discontinue IV fluids.

1/10: S: “I want to go home.”
O: Afebrile, platelets still low.
A: Ready for discharge, will manage platelets as an outpatient.
P: Discharge home.

Orders:

1/6: 1. Admit to reverse isolation.
     2. IV fluids at 83 mL/h with IV Fortaz and gentamicin.
     3. Urine and blood cultures.
     4. Chemistry profile.
     5. CBC, WBC.
     6. Type and cross 4 units.
     7. PA and lateral CXR
     8. Vitals q. shift.

1/7: 1. Begin daily Neupogen injections.
     2. Transfuse 2 units PRBCs and platelets.

1/8: Continue with current treatment.

1/9: 1. Transfuse 2 units PRBCs and platelets.
     2. Discontinue isolation.
     3. Discontinue IV fluids when finished and switch to p.o. antibiotics.

1/10: Discharge home.
## Case Study 1

**Answer Sheet**

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Case Study 2

Inpatient Face Sheet

Admit Date: 1/11/2015
Discharge Date: 1/15/2015
Sex: Female
Age: 50
Disposition: Home

Admit Diagnoses:
1. Right upper lobe lesion
2. Asthmatic bronchitis
3. Depression

Discharge Diagnoses:
1. Non–small-cell carcinoma right upper lobe
2. Metastasized to hilar and thoracic lymph nodes
3. Chronic obstructive pulmonary disease
4. Depression

Procedures:
1. Flexible bronchoscopy
2. Right upper lobe lobectomy with diagnostic biopsies
Case Study 2

Discharge Summary

Admitted: 1/11/2015
Discharged: 1/15/2015

DISCHARGE DIAGNOSES:
1. Non–small-cell carcinoma right upper lobe of lung with metastasis to hilar and thoracic lymph nodes
2. Chronic obstructive pulmonary disease
3. Depression

PROCEDURES PERFORMED:
1. Flexible bronchoscopy
2. Right upper lobe lobectomy

HISTORY OF PRESENT ILLNESS:
This is a 50-year-old female with a 3 cm lesion in the right upper lobe. She had an episode of bronchitis in January. Subsequent chest x-ray revealed a lesion in the right upper lobe. A CAT scan of the chest was performed, and the presence of the lesion in the right upper lobe was confirmed.

HOSPITAL COURSE:
The patient underwent flexible bronchoscopy with right upper lobectomy on November 11, 2010. The findings were a 3 cm lesion in the right upper lobe with metastasis to the lymph nodes. The patient tolerated the procedure well. Vital signs remained stable. There was minimal chest tube drainage. She was advanced to a regular diet the second postoperative day.

LABORATORY DATA:
Routine laboratory work on admission showed potassium of 4, BUN 10, creatinine 0.6. WBCs 8.8, hemoglobin 13.7, and hematocrit 38.2. Platelet count 288,000. The urinalysis was negative. PT was 10.1. Discharge laboratory was unchanged with the exception of BUN 12, creatinine 0.9. Hemoglobin 11.3 and hematocrit 34.2.

EKG: Sinus rhythm.

IMAGING: The preoperative chest x-ray showed a 3 cm suspicious nodule in the right upper lobe with chronic obstructive pulmonary disease. Postoperative chest x-ray showed good expansion of the right middle and lower lobes.

The patient was discharged on the fourth postoperative day in satisfactory condition. Regular diet as tolerated. She is to limit activity for the next 3 weeks. She will follow-up in my office in 1 week.

Discharge medications include: Vicodin 1 tablet p.o. q4h prn for pain. Elavil 150 mg h.s., Ventolin 2 puffs q.i.d.
Case Study 2

History and Physical

CHIEF COMPLAINT: Right upper lobe lesion.

HISTORY OF PRESENT ILLNESS:
This is a 50-year-old female with a 3 cm lesion in the right upper lobe. She had an episode of bronchitis in January. Subsequent chest x-ray revealed a lesion in the right upper lobe. A CAT scan of the chest was performed, and the presence of the lesion in the right upper lobe was confirmed. The patient is admitted at this time for a bronchoscopy and right thoracotomy.

REVIEW OF SYSTEMS:
Patient denies hematemesis, melena, and angina pectoris. There is no complaint of syncope, claudication, or edema.

HEENT: No masses. Pupils equal, round, reactive to light. No oral cavity lesions. No evidence of JVD; thyroid is not enlarged. No carotid bruits.

Chest: Symmetrical.

Lungs: Clear to auscultation and percussion. No wheezing.

Heart: No murmurs, no gallops, regular rhythm.

Abdomen: No masses, no organomegaly.

Extremities: No cyanosis, clubbing, or edema. Good peripheral pulses.

PAST MEDICAL HISTORY:
She has asthmatic bronchitis and has been hospitalized twice in the past for bronchitis. Patient is currently treated for depression. She has no history of diabetes mellitus, hypertension, myocardial infarction, or neurological deficits. She has had no surgeries.

MEDICATIONS: Elavil 150 mg h.s., Ventolin 2 puffs q.i.d.

ALLERGIES: None known.

SOCIAL HISTORY: She smokes two packs of cigarettes per day and has smoked for 30 years.

FAMILY HISTORY: Noncontributory.

IMPRESSION:
1. Right upper lobe lesion
   a. Rule out bronchogenic carcinoma.
   b. Rule out benign lesion.
2. Asthmatic bronchitis
3. Depression

PLAN: Patient is admitted for bronchoscopy and right thoracotomy with right upper lobectomy. The procedures and the risks involved were fully explained to the patient and all questions answered. An informed consent was signed by the patient.
Case Study 2

Operative Report

DATE OF OPERATION: 1/11/2015
PREOPERATIVE DIAGNOSIS: Right upper lobe lesion
POSTOPERATIVE DIAGNOSIS: Carcinoma of the right upper lobe with metastasis to hilar and thoracic lymph nodes
SURGEON: Hector Gonzalez, MD
OPERATIVE PROCEDURE: 1. Flexible bronchoscopy
2. Right upper lobe lobectomy

INDICATIONS: Female patient with a 3 cm lesion centrally located in the right upper lobe.
FINDINGS:
The bronchoscopy was negative. On thoracotomy there was a 3 cm lesion centrally located in the right upper lobe. There were positive nodes in the hilar and thoracic lymph nodes.

DESCRIPTION OF PROCEDURE:
Under general anesthesia, the flexible bronchoscope was introduced through both lumen of the endotracheal tube. The carina was normal. Both the right and left bronchial trees were visualized down to the subsegmental level. There was no evidence of endobronchial lesions. The bronchoscopy was negative.

After prepping and draping the operative area, a right posterolateral thoracotomy was made. The incision was deepened through the skin, subcutaneous tissue, and latissimus dorsi muscle. The serratus anterior muscles were retracted anteriorly, and the chest was entered through the fifth intercostal space. On exploration of the right lung there was a 3 cm lesion centrally located in the right upper lobe. A right total lobectomy was performed based on the above findings. Surrounding lymph nodes were inspected and diagnostic biopsies were obtained from both the hilar and surrounding thoracic nodes.

Frozen section was positive for non–small-cell carcinoma. The bronchial resection margin was negative for tumor. The inferior pulmonary ligament was taken all of the way up to the inferior pulmonary vein. The bronchial stump was checked up to a pressure of 35 mm Hg and there was no air leak. Hemostasis was again secured. A chest tube was placed through a separate stab wound and secured to the skin with 0 silk. The incision was closed using #2 Vicryl pericostal sutures, #1 Vicryl for the latissimus dorsi muscle, 2-0 Vicryl for the subcutaneous tissue, and staples for the skin.

The estimated blood loss was less than 200 mL. The patient tolerated the procedure very well and was taken to the recovery room in good condition with stable vital signs.
Case Study 2

Progress Notes:
1/11: Admit Note: A 50-year-old female found to have a 3 cm lesion in the right upper lobe. She is admitted at this time for flexible bronchoscopy and right thoracotomy.

1/12: S: Complains of incisional pain.
   O: Vital signs stable, labs within normal limits, minimal chest tube drainage.
   A: Post-op CXR shows good expansion of right middle and lower lobes.
   P: Patient doing well from surgical standpoint, will remove chest tube in a.m.

1/13: S: Less pain, depressed with diagnosis.
   O: Vitals remain stable, afebrile, good lung sounds.
   A: Progressing nicely.
   P: Advance to full diet, increase ambulation.

1/14: S: Feels better today.
   O: Afebrile, vital signs stable, labs look good.
   A: Incisions clean and dry with no redness.
   P: Possible discharge tomorrow.

1/15: S: Ready to go home.
   O: Discharge labs and CXR within normal limits.
   A: Incisions healing well.
   P: Discharge patient.

Orders:
1/11: 1. Admit patient.
      2. Have consents signed for flexible bronchoscopy and right thoracotomy.
      3. Place pre-op diagnostics on chart.

1/12: 1. Ambulate patient.
      2. Repeat CXR.
      3. Repeat labs.

1/13: 1. Advance to full diet.
      2. Increase ambulation.

1/14: No new orders.

1/15: Discharge patient.
### Case Study 2

**Answer Sheet**

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Case Study 3

Inpatient Face Sheet

Admit Date: 1/10/2015
Discharge Date: 1/15/2015
Sex: Male
Age: 55
Disposition: Home with home health care

Admitting Diagnoses:
1. Diabetic ulcer
2. Uncontrolled diabetes, type 1
3. Chronic renal failure
4. Pneumonia

Discharge Diagnoses:
1. Diabetic ulcer
2. Uncontrolled diabetes with peripheral circulatory disease
3. Pneumonia
4. Anemia
5. Chronic renal failure

Procedure:
1. Excisional debridement decubitus ulcer
Case Study 3

Discharge Summary

Admitted: 1/10/2015
Discharged: 1/15/2015

ADMITTING DIAGNOSES:
1. Diabetic ulcer
2. Uncontrolled diabetes
3. Chronic renal failure
4. Pneumonia

DISCHARGE DIAGNOSES:
1. Diabetic ulcer
2. Uncontrolled diabetes with peripheral circulatory disease, type 1
3. Pneumonia
4. Anemia
5. Chronic renal failure

PROCEDURE:
1. Excisional debridement decubitus ulcer

HISTORY:
This is a 55-year-old male who was admitted through the emergency room for elevated blood sugars and a necrotic heel ulcer of the left foot. The patient was admitted for control of his blood sugars and treatment of the heel ulcer.

PAST MEDICAL HISTORY:
This patient has a long history of type 1 diabetes, chronic kidney failure, coronary artery disease of the native artery with history of CABG, and peripheral vascular disease with subsequent below knee amputation of the right leg.

HOSPITAL COURSE:
The patient was admitted to the hospital and started on intravenous antibiotic therapy. The patient was placed on sliding scale insulin therapy as well as wound care for the heel necrosis. The patient’s left heel ulcer was debrided of all necrotic tissue on January 11. There was no cellulitis of the foot; however, there were multiple areas of skin breakdown on the foot. The patient had no feeling in his left foot, secondary to severe diabetic neuropathy. The patient was continued on local wound care and antibiotic therapy. The patient’s renal failure was monitored and fluids restricted. The patient’s chest x-ray was positive for left lower lobe pneumonia. Sputum culture was not ordered because the patient was already on intravenous antibiotic therapy for the skin ulcer.
Case Study 3

Discharge Summary

Continued:

LABORATORY DATA:
Hemoglobin 9.4, hematocrit 29.6, WBC 8,600, platelet count 336,000. Urinalysis was normal except for a small amount of bacteria, and proteinuria. Sodium was 130, potassium 4.1, chloride 92, CO₂ 32, glucose 270, BUN 53, and creatinine 3.2.

DISCHARGE MEDICATIONS:
70/30 insulin in the morning and 20 units in the evening
Cardizem CD 180 mg once daily
Imdur 60 mg once a day
Lasix 80 mg once a day
Pepcid 20 mg twice a day
Paxil 10 mg three times a day
Nitrostat prn
Patient is prescribed Floxin once daily times 7 days

The patient was felt to have reached maximum benefit of hospitalization and was discharged home in fair condition. He will be followed by home health care for wound care and monitoring of his diabetes as well as chronic renal failure. He is to continue with a 1,800 ADA diet. His activity is limited due to his wheelchair. He is to have no weight bearing on his left foot. He will follow up in my office in 10 days.
Case Study 3

History and Physical

CHIEF COMPLAINT: Diabetic ulcer left foot, elevated blood sugars.

HISTORY OF PRESENT ILLNESS:
This is a 55-year-old white male who presented to the emergency room because of high blood sugars. This patient has a long history of type 1 diabetes. He also has chronic kidney failure due to his diabetes. This gentleman also has a history of coronary artery disease, CABG, and myocardial infarction in 1998. He has diabetic peripheral vascular disease with a history of below the knee amputation of his right leg. He presently has an open necrotic area on the left foot, most likely due to PVD.

PAST MEDICAL HISTORY:
He denies hypertension, shortness of breath. Significant past history is detailed above.

PAST SURGICAL HISTORY: See above.

ALLERGIES: None known.

MEDICATIONS:
70/30 insulin in the morning and 20 units in the evening, Cardizem CD 180 mg once daily, Imdur 60 mg once a day, Lasix 80 mg once a day, Pepcid 20 mg twice a day, Paxil 10 mg three times a day, Nitrostat as needed.

SOCIAL HISTORY:
Patient lives with his wife. He does not smoke or drink. Patient is disabled due to his chronic illness.

FAMILY HISTORY: Noncontributory.

PHYSICAL EXAMINATION:
Vital Signs: Temperature 97.7, pulse 77, respirations 20, blood pressure 146/62.
HEENT: Unremarkable.
Neck: Carotid bruit. The neck is supple.
Heart: Regular rate and rhythm.
Lungs: Clinically clear.
Abdomen: Soft, nontender, no organomegaly.
Extremities: Right below the knee amputation. There is a necrotic area on the left heel and an open ulcer on the left foot.
Case Study 3

History and Physical

Continued:

DIAGNOSTIC DATA:
The patient’s labs that have been done show a hemoglobin of 9.4, hematocrit of 29.6, white blood count 8.6, platelet count 336,000. Urinalysis is abnormal with 25–50 RBCs, 50–100 WBCs, small amount of bacteria, glycosuria, and proteinuria. Chemistry: sodium 130, potassium 4.1, chloride 92, CO₂ 31, anion gap is 11, glucose 260. BUN 53 and creatinine 3.2. Blood cultures and urine cultures have been ordered. The patient has been started on Floxin 400 twice a day. He had a CT scan of the head, which is negative.

His EKG reveals right bundle branch block with right axis deviation, bifascicular block, right bundle branch block with left posterior fascicular block.

IMPRESSION:
1. Uncontrolled diabetes.
2. Atherosclerotic cardiovascular heart disease (native artery).
3. Diabetic peripheral vascular disease with left heel and foot ulcer and neuropathy.
4. Carotid stenosis.
5. Status post right below the knee amputation.
6. End-stage renal disease.
Case Study 3

Progress Notes:

1/10: Admit Note: 55-year-old diabetic male admitted for elevated blood sugars and necrotic heel ulcer of left foot. Patient has a long history of type 1 diabetes, PVD with BKA right in 1995. Patient has CRF, not yet requiring dialysis.

1/11: S: Complains only of chest pain from coughing.
O: Glucose under better control with sliding scale coverage, last accucheck is 203, renal stable, BUN 57, and creatinine 3.8.
A: Foot ulcers debrided at bedside of necrotic tissue.
P: Continue IV antibiotics and wound care for ulcers.

1/12: S: Feeling better.
O: BS at 189, BUN/creatinine at 54/3.6, CXR shows clearing of infiltrates.
A: Foot healing nicely, respiratory status improving.
P: Continue current treatment plan.

1/13: S: No complaints.
O: BS leveling, now at 160. Renal status is stable.
A: Patient is improving, foot ulcer is healing well.
P: DC IV fluids when completed and start on PO meds.

1/14: S: Patient is ready to go home.
O: Wounds look good, BS now in good control, renal status stable.
A: Patient can be discharged tomorrow, reaching maximum medical improvement.
P: Will plan discharge tomorrow.

1/15: Discharge note: Patient will be followed by home health care for wound care and monitoring of type 1 diabetes and renal failure.

Orders:

1/10: 1. Admit patient.
2. CBC, WBC, Chem profile, CXR, EKG.
3. IV antibiotics.
4. Sliding scale insulin, accuchecks q2h.
5. Whirlpool therapy for ulcers.

1/11: 1. Debridement tray at bedside.

1/12: 1. Adjust sliding scale.
2. Repeat labs and CXR.

1/13: 1. DC IVs when finished.
2. Switch to Floxin 400 mg twice daily.

1/14: Repeat labs.

1/15: Discharge home with home health care.
### Case Study 3

#### Answer Sheet

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Case Study 4

Inpatient Face Sheet

Admitted: 11/18/2014
Discharged: 11/21/2014
Sex: Male
Age: 68
Disposition: Home

Admitting Diagnoses:
1. Severe anemia
2. Hypertension
3. SOB, rule out cardiac origin
4. Atrial fibrillation

Discharge Diagnoses:
1. Severe blood loss anemia
2. Atrial fibrillation
3. Hypertension

Procedures:
1. Esophagogastroduodenoscopy
2. Colonoscopy
Case Study 4

Discharge Summary

Admitted: 11/18/2014
Discharged: 11/21/2014

ADMITTING DIAGNOSES:
1. Severe anemia
2. Hypertension
3. SOB, rule out cardiac origin
4. Atrial fibrillation

DISCHARGE DIAGNOSES:
1. Severe blood loss anemia
2. Atrial fibrillation
3. Hypertension

PROCEDURES PERFORMED:
1. Esophagogastroduodenoscopy
2. Colonoscopy

HISTORY OF PRESENT ILLNESS:
Patient presented to my office with complaints of shortness of breath and fatigue. Patient was found to have severe anemia and immediately admitted to the hospital as an inpatient. Patient did not have complaints of abdominal pain or indicate melena or hemoptysis.

PAST MEDICAL HISTORY:
Treatment for hypertension and atrial fibrillation. On Lanoxin and Lopressor.

HOSPITAL COURSE:
The patient was admitted with severe anemia. Patient was transfused 4 units of packed red blood cells with improvement in H/H. Patient was placed on telemetry for cardiac monitoring. Gastrointestinal workup revealed no source of bleed, and patient will be followed as an outpatient for further workup. The patient tolerated the EGD and colonoscopy without complaints or complications.

The patient is discharged home in good condition. Activity and diet as tolerated. He will follow up with me in my office in 1 week.
Case Study 4

History and Physical

CHIEF COMPLAINT: Fatigue and shortness of breath.

HISTORY OF PRESENT ILLNESS:
This 68-year-old male presented to the office complaining of shortness of breath and fatigue for 3 days duration. Blood test performed in the office revealed hemoglobin of 7.3 and hematocrit of 24.3. The patient denies blood in stool and test done in the office was negative. Also denies any abdominal pain or hemoptysis. Patient was admitted from the office with diagnosis of anemia.

PAST MEDICAL HISTORY:
He is currently treated for hypertension and atrial fibrillation.

PAST SURGICAL HISTORY: Remote appendectomy.

ALLERGIES: None known.

MEDICATIONS: Lanoxin and Lopressor.

FAMILY HISTORY: Noncontributory.

SOCIAL HISTORY:
Patient is married and lives with his wife. Quit smoking in 1985 and uses alcohol socially.

REVIEW OF SYSTEMS:
Integument: Skin warm, dry, and pale.

HEENT: Unremarkable.

Respiratory: Clear to auscultation. Admits to SOB.

Cardiac: Regular rhythm.

Abdomen: Soft, bowel sounds present, no masses.

Rectal: Deferred as performed in office.

Extremities: Pedal pulses bilaterally, no clubbing, or edema.

IMPRESSION:
1. Severe anemia.
2. Shortness of breath, rule out cardiac origin.
3. Hypertension.
4. Atrial fibrillation.

PLAN:
1. Admit to telemetry under Dr. Emilia Warren’s services.
2. Cardiac consult with Dr. Lee.
3. Rule out blood loss anemia.
Case Study 4

Cardiac Consult

Date of Consult: 11/18/2014
Consulting Physician: Dr. Ashanti Lee
Requesting Physician: Dr. Emalia Warren

REASON FOR CONSULTATION: Shortness of breath.

HISTORY OF PRESENT ILLNESS:
I am asked to see this patient for evaluation of shortness of breath to rule out cardiac origin. See history and physical for complete details.

PHYSICAL EXAMINATION:
Skin: Warm and dry.
HEENT: Unremarkable.
Chest: Clear breath sounds. No SOB at this time.
Cardiac: Rhythm shows atrial fibrillation.
Abdomen: Soft, good bowel sounds, no tenderness
Extremities: Good pedal pulses, no edema.

LABORATORY DATA: Electrolytes good. CPKs and Troponin normal. CBC revealed H/H to be 8.9/32.4 after transfusion on admission.

CHEST X-RAY: Normal.

EKG: Atrial fibrillation.

IMPRESSION:
1. Atrial fibrillation.
2. Hypertension.
3. SOB, no cardiac origin, probable due to severe anemia.

PLAN:
1. Continue telemetry for one more day in light of atrial fibrillation.
2. Control hypertension.
3. Continue treatment of anemia.
Case Study 4

Procedure Note

Date: 11/19/2014

PREOPERATIVE DIAGNOSIS: Severe anemia
POSTOPERATIVE DIAGNOSIS: Severe anemia
PROCEDURE: Esophagogastroduodenoscopy
SURGEON: Dr. Carlos Waldron

DESCRIPTION OF PROCEDURE:
The esophagogastroscope was inserted through the oropharynx and taken down to the second portion of the duodenum, which was normal. The antrum and fundus of the stomach revealed no pathology. There was a small hiatal hernia noted.

The scope was removed and the patient tolerated the procedure without complication.

FINDINGS:
Normal findings, other than small hiatal hernia. No bleeding noted.
Case Study 4

Procedure Note

Date of Procedure: 11/19/2014
Preoperative Diagnosis: Severe anemia
Postoperative Diagnosis: Severe anemia
Surgeon: Makena Mitchell, MD
Procedure: Colonoscopy
Indications: Severe anemia, r/o lower GI bleed as source.

DESCRIPTION OF PROCEDURE:
Following IV sedation, the colonoscope was inserted into the rectum and advanced to the left colon and beyond the splenic flexure and into the ascending colon and into the cecum. The entire colon was normal with no signs of bleeding. The scope was gradually withdrawn, and the patient tolerated the procedure well.
Case Study 4

Progress Notes:

11/18: Admit note: Severe anemia in a 68-year-old male. Patient complains of SOB and fatigue for several days. Cardiac consult with Dr. Lee to rule out cardiac source for SOB. Will transfuse 2 units PRBCs now and run serial CBCs. Telemetry to monitor heart rate, control hypertension until cardiac origin for SOB ruled out. Will schedule patient for GI workup.

11/19: S: Less SOB and fatigued, no complaints.
O: Hypertension under good control, as well as heart rate.
A: H/H now at 9.3/34.5.
P: Patient schedule for EGD and colonoscopy later today. Will transfuse 2 more units of PRBCs prior to scope.

11/20: S: No complaints follow EGD and colonoscopy. No SOB and no fatigue.
O: Anemia, likely due to blood loss, but no source of bleeding found.
A: Tolerated scopes; upper and lower anatomy normal. H/H continues to rise.
P: Monitor H/H one more day and plan for discharge tomorrow.

O: Labs within normal limits, vital signs stable.
A: Blood loss anemia, with no identified source.
P: Discharge home and follow as an outpatient for possible additional workup to determine source of bleed.

Orders:

2. Vitals q. 12 hours.
3. Two units PRBCs now.
4. Standard lab orders.
5. H/H q. 12 hours.
6. Consult Dr. Lee, Cardiology.
7. GI workup for bleeding source.
8. Prep for colonoscopy.

11/19: 1. EGD and colonoscopy today.
2. Transfuse 2 units PRBCs.
3. Continue with H/H monitoring.

11/20: Continue monitoring H/H.

11/21: Discharge home.
## Case Study 4

### Answer Sheet

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Case Study 5

Inpatient Face Sheet

Admit Date: 1/15/2015
Discharge Date: 1/18/2015
Sex: Male
Age: 53
Disposition: Home

Admit Diagnoses:
1. Upper GI bleeding
2. Alcohol abuse

Discharge Diagnoses:
1. Alcoholic gastritis with hemorrhage
2. Alcoholic cirrhosis
3. Obesity
4. Chronic obstructive pulmonary disease

Procedure:
1. Esophagogastroduodenoscopy
Case Study 5

Discharge Summary

Admitted: 1/15/2015
Discharged: 1/18/2015

DISCHARGE DIAGNOSIS:
1. Acute upper gastrointestinal bleeding secondary to gastritis
2. Alcoholic cirrhosis
3. Obesity

HISTORY:
This is a 53-year-old white male who presented to the emergency room on the day of admission after vomiting bright red blood. The patient had an onset of nausea early in the morning and he had bright red vomitus and brownish vomitus later and then passed a black stool. The patient has a long-standing history of alcohol abuse, and he is a heavy smoker.

His initial hemoglobin was 14.5, hematocrit 42.4; later this dropped to 13.1 and 37.6.

PAST HISTORY:
Significant for chronic smoking and alcohol abuse. Patient has a history of hernia repair in the past.

MEDICATIONS:
Patient is taking Pepcid 20 mg, Darvon, and hydrochlorothiazide.

ALLERGIES: None known.

PHYSICAL EXAMINATION:
A large, well-developed, and obese male in no acute distress. NG tube was passed. The patient’s abdomen is soft and nontender. The patient’s liver was down about four fingerbreadths. The patient’s initial bilirubin was 3.4, SGOT 103, alkaline phosphatase 269, albumin was down to 2.2, and the prothrombin time was 14.5.

HOSPITAL COURSE:
Upper GI endoscopy revealed lower esophagitis and gastritis. The patient had no duodenal ulcers. The patient’s bleeding stopped, and he was maintained on IV fluids the first 2 days of admission, followed by removal of NG tube and placed on a clear liquid diet, followed by bland, low-fat diet. The patient has made progressive improvement.
Case Study 5

Discharge Summary

Continued:

The patient had hepatitis C drawn and results have not been reported as yet. The patient’s hemoglobin is stabilized at about 12 g. The patient’s white count has remained normal, mean corpuscular volume is enlarged and compatible with alcohol liver disease. The patient’s PT was elevated after vitamin K, this returned to a more normal level of 12.9. The patient’s blood chemistries have been maintained. His electrolytes on the day of discharge revealed a sodium 137, potassium 3.5, BUN 6; creatinine was 0.8 and the remainder of the values within normal limits. His alkaline phosphatase is slightly high at 176. SGOT 75. Bilirubin still high at 3.4.

The patient’s abdominal sonogram revealed thickening of the gallbladder wall with irregularity in the neck region. There were no visualized stones. There was no dilatation of the cystic or hepatic duct. The patient’s chest x-ray revealed clear lung fields.

The patient has been informed that he has cirrhosis. The patient is discharged home in improved condition. He has been encouraged to stop smoking and drinking. He will be continued on Pepcid 20 mg and a multivitamin each day. Activity and diet as tolerated. He will follow up in my office in 1 week.
Case Study 5

History and Physical

CHIEF COMPLAINT:
Throwing up blood, dark tarry stool, and diarrhea for a few weeks.

HISTORY OF PRESENT ILLNESS:
The patient is a 53-year-old white male with no significant medical problems except a history of depression. He is a chronic smoker with COPD. His only surgery was a hernia repair 20 years ago. The patient was brought to the emergency room following several episodes of bright red vomitus. His hemoglobin and hematocrit is stable at 14.5/43.4. His guaiac was positive. NG tube was inserted and was positive for guaiac, and he was throwing up coffee-ground emesis, and he was admitted for upper GI.

PAST MEDICAL HISTORY:
Significant for depression, alcohol abuse, chronic smoker, arthritis.

MEDICATIONS:
He is taking Pepcid 20 mg, Darvon, and hydrochlorothiazide.

ALLERGIES: None known.

SOCIAL HISTORY:
He is married. Smokes two packs of cigarettes per day and drinks six to seven drinks nightly.

FAMILY HISTORY: Not significant.

PHYSICAL EXAMINATION:
He is alert and oriented x3. NG tube is passed through his nose. He is not in acute distress. Vital signs are stable. Temp 98.5, blood pressure 125/60, pulse 88, respiration rate 20.

HEENT: Pupils equal and reactive to light. Extraocular muscles intact, anicteric sclerae. No lesions on the scalp.

Neck: Supple. No thyromegaly. No JVD. He has NG tube through his nose and bloodstain on his NG tube.

Chest: Clear to auscultation. No rales. No wheezing.

Heart: S1 and S2 audible. Regular rhythm.

Abdomen: Bulky, but is soft and nontender. Bowel sounds positive. No hepatosplenomegaly.

Extremities: Trace edema. Nontender calf muscles of his legs.

DIAGNOSTIC DATA:
WBC 3.9, hemoglobin 14.5, hematocrit 43 and platelets 197. PT 14.5, INR 1.5, PTT 30. Sodium 138, potassium 3.8, chloride 98, bicarb 32, BUN 7, creatinine 0.8, and glucose 105. He had low albumin 2.2, low protein 6.3, low calcium 8.7, and albumin/globulin ratio of 0.5.

EKG showed normal sinus rhythm and nonspecific T-wave changes. Chest x-ray is negative.

IMPRESSION:
A 53-year-old white male with a known history of depression, alcohol abuse, and chronic smoker admitted with upper GI bleed. Patient has had a NG tube inserted in the emergency room as well as being started on intravenous Pepcid. Patient also has depression and will continue his Paxil.
Case Study 5

Procedure Note

Date of Procedure: 1/16/2015
Preoperative Diagnosis: Upper GI bleeding
Postoperative Diagnosis:
1. Alcoholic gastritis
2. Esophagitis
Surgeon: Huan Jing, MD
Procedure: Complete endoscopy to descending duodenum

An informed consent was obtained after which the patient underwent sedation and continuous monitoring of pulse oximetry and vital signs.

With the patient in the left lateral decubitus position, the video gastroscope was carefully advanced under direct visualization through the upper esophageal sphincter. Esophageal examination revealed esophagitis of the distal esophagus.

The scope was advanced into the stomach. Moderate gastritis was noted. Retroflexion revealed normal angularis, lesser curvature, and fundus of the stomach. The instrument was advanced across the pylorus into the duodenal bulb, which was unremarkable. The descending duodenum was also normal.

As the endoscope was being withdrawn, careful examination revealed no other findings. Patient appeared to tolerate the procedure well and was sent to the recovery area in stable condition.

His GI bleeding appears to have originated from gastritis and esophagitis. There was no active bleeding noted at this time. This is suspected to be secondary to alcohol.
Case Study 5

Progress Notes:

1/15: Admit Note: Patient presented to the emergency room after vomiting bright red blood. Patient has a long history of alcohol abuse. Patient had a NG tube inserted in the ER and was started on IV fluids. Patients H/H remains stable at this point. Will continue to monitor. Lab studies are significant for alcoholic liver disease.

1/16: S: Feels better, is hungry.
O: Patient’s labs are within normal levels other than indicating chronic liver disease.
A: Patient tolerated EGD. There was no evidence of active bleeding, but bleeding source was presumed to be hemorrhagic gastritis secondary to alcohol.
P: Remove NG tube and place on clear liquid diet.

1/17: S: Patient feels improved, no complaints of abdominal pain.
O: Vital signs stable, afebrile.
A: Tolerating clear liquids.
P: Advance to soft diet.

1/18: S: No complaints.
O: Vitals stable, H/H WNL.
A: Patient much improved.
P: Discharge patient home.

Orders:

1/15: 1. Admit patient to service of Haley Renee, MD.
2. Keep on bed rest.
3. Monitor H/H.
4. Continue IV fluids at 85 mL/h.

1/16: 1. For EGD this afternoon.
3. Remove NG tube.
5. Ambulate with assistance.

1/17: 1. Repeat labs.
2. Advance to soft diet.

1/18: Discharge patient home.
## Case Study 5

### Answer Sheet

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Case Study 6

Inpatient Face Sheet

Admit Date: 11/27/2014
Discharge Date: 11/30/2014
Sex: Female
Age: 72
Disposition: Home

Admitting Diagnosis:
1. Chest pain, rule out acute coronary artery disease

Discharge Diagnoses:
1. Coronary artery disease
2. Unstable angina
3. Atrial fibrillation
4. Second-degree AV block
5. Status post percutaneous transluminal coronary angioplasty

Procedures:
1. Diagnostic left-heart catheterization, percutaneous transluminal coronary angioplasty, coronary angiograms
Case Study 6

Discharge Summary

Admitted: 11/27/2014
Discharged: 11/30/2014

ADMITTING DIAGNOSES:
1. Chest pain, rule out acute coronary artery disease

DISCHARGE DIAGNOSES:
1. Chest pain, acute intermediate coronary syndrome
2. History of arteriosclerosis of the native coronary vessels
3. Atrial fibrillation
4. Second-degree atrioventricular block

PROCEDURE PERFORMED:
1. Left-heart catheterization, selective coronary angiography, percutaneous transluminal coronary angioplasty.

HOSPITAL COURSE:
This is a 72-year-old female with a history of coronary artery disease, status post percutaneous transluminal coronary angioplasty several months ago. She came in with acute intermediate coronary syndrome. A myocardial infarction was ruled out. In view of these events, it was decided to perform a diagnostic heart catheterization and possible percutaneous transluminal coronary angioplasty versus bypass surgery.

A diagnostic heart catheterization was performed and showed the following: the left main coronary artery was open, the left anterior descending artery was open, and there was a previous stent in the circumflex system, which had no obstruction. There was a totally occluded distal right coronary artery. There was some collateral circulation filling the right coronary artery. In view of this, it was felt that the patient would benefit from percutaneous transluminal coronary angioplasty, so the patient received IV heparin, ReoPro, and intracoronary nitroglycerin, and we were able to open the distal right coronary artery with balloon angioplasty.

The patient began ambulation the day after the above procedure. The patient is stable at discharge. Discharge to home on atenolol 25 mg once a day, Monopril 10 mg once a day, and aspirin. She will follow a low-cholesterol, low-fat diet. She is to follow up in my office in 1 week.
Case Study 6

History and Physical

CHIEF COMPLAINT: Chest pain.

HISTORY OF PRESENT ILLNESS:
This is a 72-year-old white female with a history of coronary artery disease, status post percutaneous transluminal coronary angioplasty and stent implantation last summer, who has been taking Tenormin 50 mg once a day, Monopril 10 mg once a day, one aspirin a day, and nitroglycerin prn. She experienced an episode of palpitation and lightheadedness last night, and this morning she started having chest pain. The patient called 911 and the EMS staff found her with a very fast rhythm, heart rate of 160 per minute accompanied by atrial fibrillation. She denied any prior history of palpitations and denies chest pains prior to this episode. The patient denies diabetes mellitus or high blood pressure. She denies history of myocardial infarction in the past. She has a strong family history of coronary artery disease. She denies alcohol or smoking.

PAST MEDICAL HISTORY: The past history is only pertinent for coronary artery disease and low HDL, postmenopausal.

PAST SURGICAL HISTORY: History of back surgery.

ALLERGIES: Sulfa.

REVIEW OF SYSTEMS: See history of present illness. Patient denies paroxysmal nocturnal dyspnea, orthopnea, leg swelling, fatigue, or loss of consciousness.

PHYSICAL EXAMINATION:
General Appearance: Patient is alert, cooperative, and in no acute distress.

Vital Signs: Her heart rhythm is regular. Telemetry shows a second-degree atrioventricular block, Mobitz type I, with beats 2 and 4, 2:3 conduction. No electrocardiogram evidence of ischemia.

Head and Neck: Neck is supple. No jugular venous distention, no carotid bruits.

Lungs: Clear.

Heart: Irregular rate and rhythm. No murmur, gallop, or rub.

Abdomen: Soft, nontender. Bowel sounds present. No tenderness on rebound.

Extremities: No cyanosis or edema. Bilateral peripheral pulses.

ASSESSMENT:
1. Prolonged chest pain, rule out acute coronary artery disease.
2. Mobitz type I second-degree atrioventricular block.
3. Coronary artery disease, status post stent implantation 8 months ago.

PLAN:
1. Admit to telemetry. Obtain cardiac enzymes and serial electrocardiograms.
2. Hold Tenormin and place on Norvasc and nitrates.
3. Cardiac catheterization and electrophysiology study.
### Case Study 6

**Procedure Note**

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<td>Selective coronary angiography</td>
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<td>PTCA of distal right coronary artery</td>
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<td>Pre Operative Diagnosis:</td>
<td>Unstable angina r/o CAD</td>
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<tr>
<td>Post Operative Diagnosis:</td>
<td>CAD</td>
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<td>Surgeon:</td>
<td>Chao Cheng, MD</td>
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**Procedure Note:**

A diagnostic left-heart catheterization was performed and showed the following: the left main coronary artery was open, the left anterior descending artery was open, and there was a previous stent in the circumflex system, which had no obstruction. There was a totally occluded distal right coronary artery. There was some collateral circulation filling the right coronary artery. In view of this, it was felt that the patient would benefit from percutaneous transluminal coronary angioplasty, so the patient received IV heparin, ReoPro, and intracoronary nitroglycerin, and we were able to open the distal right coronary artery with balloon angioplasty. There was no clot formation or dissection. The patient returned to the floor in stable condition.
Case Study 6

Progress Notes

       O:  EKG and enzymes negative for AMI.  
       A:  Unstable angina, probable coronary occlusion.  
       P:  Heart cath. and possible PTCA.  

       O:  Labs within normal limits, EKG stable; patient ambulating.  
       A:  CAD.  
       P:  Observe a few more days.  

11/29:  S:  No chest pain, wants to go home.  
       O:  Vitals stable, heart sounds good, regular rhythm.  
       A:  Patient is stable, continues to do well.  
       P:  Plan discharge for a.m.  

11/30:  S:  “Never felt better.”  
       O:  CXR clear, labs and vitals within normal limits.  
       A:  Patient stable for discharge.  
       P:  Discharge now.  

Orders

       2.  Vitals q4h.  
       3.  Prepare for left-heart catheterization and possible PTCA.  
       4.  Continue home medications.  
       5.  Serial EKGs.  
       6.  Cardiac enzymes.  
       7.  Cardiac diet  
       8.  Hold Tenormin, place on Norvasc and IV nitrates.  

11/28:  Ambulate.  

11/29:  Discontinue all IVs.  

11/30:  Discharge patient.
### Case Study 6

**Answer Sheet**

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Case Study 7

Inpatient Face Sheet

Admit Date: 12/02/2014
Discharge Date: 12/05/2014
Sex: Male
Age: 81
Disposition: Home

Admitting Diagnoses:
1. Unstable angina
2. Aortic stenosis
3. Atrial fibrillation

Discharge Diagnoses:
1. Acute anterior wall MI
2. Moderate aortic stenosis
3. Chronic atrial fibrillation
4. Herpes zoster
5. Hypertension
Case Study 7

Discharge Summary

Admitted: 12/02/2014
Discharged: 12/05/2014

ADMITTING DIAGNOSES:
1. Unstable angina
2. Aortic stenosis
3. Atrial fibrillation

DISCHARGE DIAGNOSES:
1. Acute myocardial infarction, anterior wall
2. Moderate aortic stenosis
3. Chronic atrial fibrillation
4. Herpes zoster
5. Hypertension

HISTORY: This 81-year-old Hispanic male presented to the emergency room complaining of chest pain that began that morning. Upon walking to retrieve his newspaper he began having discomfort in the chest as well as the right jaw. The pain was relieved with rest and was not associated with any sweating, syncope, or palpitations.

PHYSICAL EXAMINATION:
Vital Signs: Blood pressure 136/60. Heart rate was 100 to 120.
Heart: There was II/VI systolic murmur in the pericardium.

HOSPITAL COURSE: Following admission, the cardiac enzymes showed a CPK of 100, Troponin was positive at 4.6, and the relative index was 5.4. Digoxin level was 1.7. The BUN, creatinine, and electrolytes were unremarkable. The prothrombin time initially was 24.2, and prior to discharge, it was 15.1 with an INR of 1.6.

The admission electrocardiogram showed atrial fibrillation with rapid ventricular response and was positive for new anterior wall infarction. Chest x-ray showed a left lower lobe infiltrate but no obvious pneumonia.

This patient was seen by Dr. Maddie Kendall of Cardiology who concurred with the diagnosis of acute myocardial infarction with the elevation of Troponin and the patient’s pain. The patient’s hospital course was benign. He was maintained on Imdur 30 mg daily, Metoprolol 50 mg in the morning and 25 mg in the evening. He was also maintained on Nitro-Dur initially, which was then changed to Imdur. Anticoagulation was continued.

The patient stabilized, having no further symptoms. Patient was discharged home on Imdur 60 mg twice daily, Lanoxin 0.25 mg daily, and Coumadin. Continue Zovirax for herpes zoster. Diet is low fat, low cholesterol, and low sodium. No strenuous activity. Patient to follow up in my office in 1 week.
Case Study 7

History and Physical

CHIEF COMPLAINT: Chest pain and right jaw pain.

HISTORY OF PRESENT ILLNESS:
Patient began having chest and right jaw pain upon walking to get his newspaper. The pain lasted about 10–15 minutes but was relieved with rest. There was no associated sweating, palpitation, or syncope.

PAST MEDICAL HISTORY:
Irregular heartbeats and a history of myocardial infarction in 1965.

PAST SURGICAL HISTORY:
Includes tonsillectomy; appendectomy; cataract surgery and hernia repair, all remote.

CURRENT MEDICATIONS:
Digoxin 0.25 mg daily, Lopressor 25 mg twice daily, Imdur 30 mg daily, Coumadin 5 mg daily.

FAMILY HISTORY:
Noncontributory.

REVIEW OF SYSTEMS:
Unremarkable.

PHYSICAL EXAMINATION:
Admission evaluation revealed blood pressure of 136/60, heart rate from 100 to 120, temperature of 98.3.

HEENT: Unremarkable.
Neck: Supple, bilateral carotid bruits, no adenopathy.
Lungs: Clear.
Heart: S1 and S2 is normal, grade 2/6 systolic murmur all over the pericardium.
Abdomen: Soft, nontender.
Extremities: No edema of the feet.

PLAN:
1. Admit patient to coronary care.
2. Continue intravenous nitroglycerin drip.
Case Study 7

Progress Notes:
12/2: Admit Note: Patient admitted through the emergency room with chest pain. EKG revealed new infarct of anterior wall. Patient placed in CCU for cardiac monitoring and IV nitro.

12/3: S: Patient feels well, no more chest pain.  
O: Vitals stable, cardiac enzymes within normal limits.  
A: Evolving inferior AMI.  
P: Continue monitoring.

12/4: S: No chest pain, wants to go home.  
O: IVs discontinued, patient started on Imdur.  
A: Patient doing well from cardiac standpoint.  
P: Plan discharge for tomorrow.

12/5: S: Ready for discharge.  
O: Vitals stable, heart rhythm regular.  
A: Tolerating change in meds.  
P: Discharge patient.

Orders:
12/2: 1. Admit to coronary care.  
2. Follow CCU protocol.  
3. IV nitro.  
4. Continue home meds.  
5. Cardiac enzymes.  
6. Serial EKGs.  
7. Cardiac diet.  
8. Chemistry profile.  
9. Dig level.  
10. PT level.

12/3: 1. Cardiac enzymes  
2. Transfer to PCU  
3. Continue home meds.  
4. Ambulate with assistance.

12/4: 1. Discontinue IVs.  
2. Start on Imdur 60 mg twice daily.

12/5: Discharge patient.
Case Study 7

Answer Sheet

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Case Study 8

Inpatient Face Sheet

Admit Date: 12/18/2014
Discharge Date: 12/22/2014
Sex: Female
Age: 74
Disposition: Home with home health care

Admitting Diagnoses:
1. Chronic obstructive pulmonary disease with upper respiratory infection
2. Hypertension
3. Thoracoabdominal aneurysm

Discharge Diagnoses:
1. Acute exacerbation of chronic obstructive lung disease
2. Hypertension
3. Thoracoabdominal aneurysm
Case Study 8

Discharge Summary

Admitted: 12/18/2014
Discharged: 12/22/2014

ADMITTING DIAGNOSIS:
1. COPD with upper respiratory infection

DISCHARGED DIAGNOSIS:
1. Acute exacerbation of chronic obstructive lung disease
2. Hypertension
3. Thoracoabdominal aneurysm

HISTORY:
This is a 74-year-old female who was admitted for exacerbation of chronic obstructive pulmonary disease. Please see details of history and physical.

PAST MEDICAL HISTORY:
This patient has a history of COPD. She has had GI bleeding secondary to AVM in the past. She has a history of GI reflux and hypertension. She has a large thoracoabdominal aneurysm; however is not a surgical candidate due to her severe COPD.

HOSPITAL COURSE:
The patient was admitted and placed on intravenous steroids and intravenous antibiotics with Claforan, oxygen, inhalation therapy, and mucolytics. Her chest tightness and wheezing gradually improved with the medications and respiratory therapy.

IMAGING: The chest x-ray was clear other than the thoracic aneurysm. Her follow-up x-ray was also clear.

EKG: Sinus rhythm with left ventricular hypertrophy type changes.

LABORATORY DATA: Oxygen saturation on 2 L revealed 94% to 98%, and on room air she desaturated to 90%. The biochemical profile showed a BUN of 17, creatinine of 1.1, potassium 3.5, sugar 136. The liver function tests were normal. CBC showed a white count of 10.2, hemoglobin 13, and hematocrit of 39.

DISCHARGE MEDICATIONS: Cough syrup including Ventolin solution, Benadryl elixir, and Tylenol with codeine elixir 2 teaspoons q.i.d. Cefzil 250 1 b.i.d. for 7 days. Humibid LA 2 b.i.d. Tagamet 400 mg b.i.d. Provera 2.5 mg daily. Senokot 25 at h.s. Nebulizer with Atrovent and Albuterol q.i.d. Ativan 1 b.i.d. as needed. Home oxygen at 2 L.

The patient is discharged home in stable condition. She will be followed by home health care. Diet and activity as tolerated. She will follow up in my office in 1 week.
Case Study 8

History and Physical

CHIEF COMPLAINT: Increased shortness of breath.

HISTORY OF PRESENT ILLNESS: This is a 74-year-old white female admitted to the hospital with dyspnea. The patient has a known history of COPD and has been controlled with medications at home. She has not been on home oxygen. One week ago, she had acute onset of a respiratory infection with wheezing and increasing shortness of breath. She was seen in the office and started on antibiotics and steroids. However, she returned to the office today with worsening symptoms and inability to sleep because of her breathing problems and acute dyspnea.

PAST MEDICAL HISTORY: COPD with previous smoking history. She has had a history of GI bleed secondary to AVM. She has GI reflux and hypertension. She has a large thoracoabdominal aneurysm.

SOCIAL HISTORY: Married. No alcohol and currently not smoking.

MEDICATIONS: Humibid LA 2 b.i.d, Tagamet 400 mg b.i.d, Provera 2.5-mg daily, Senokot 25 at h.s. Nebulizer with Atrovent and albuterol q.i.d. Ativan. Diazide one a day. Aerobid two puffs b.i.d. Multivitamin, and Biaxin 500 mg b.i.d.

ALLERGIES: None known.

REVIEW OF SYSTEMS: No chest pains, palpitations, no complaints of stomach, bowel, or urinary symptoms.

PHYSICAL EXAMINATION: Acutely ill female. She is dyspneic, using accessory muscles for respiration with a respiratory rate of 28. Pulse is 100. O₂ was 92% on room air. She has audible wheezing.

Neck: No JVD.

Lungs: Diffuse inspiratory and expiratory wheezing and diminished breath sounds overall.

Cardiac: Sounds were obscured.


Extremities: Without edema.

Heart: Has had a murmur in the past.


IMPRESSION: Severe COPD with secondary bronchitis and worsening pulmonary status, unresponsive to outpatient treatment.

PLAN: Patient is to be placed on oxygen. She is admitted for intravenous antibiotics, breathing treatments, and respiratory care. She will be placed on intravenous steroids.
Case Study 8

Progress Notes:

12/18: Admit Note: 74-year-old female admitted for acute exacerbation of COPD. Patient was tried on outpatient antibiotics and steroid therapy without relief. She requires acute hospital care for IV antibiotics and respiratory care.

12/19: S: Breathing is easier.
   O: CXRs clear, breathing is easier.
   A: Chest tightness and wheezing improving.
   P: Continue with IV Claforan and respiratory care.

12/20: S: Feeling much better.
   A: Patient continues to improve.
   P: Continue current treatment plan.

   O: Afebrile, vitals stable. Labs within normal limits.
   A: Good respiratory improvement.
   P: DC IVs. Case Management for discharge planning.

12/22: S: Anxious to go home.
   O: Vitals good, afebrile, lungs clear.
   A: Ready for discharge.
   P: Discharge patient today.

Orders:

12/18: 1. Admit patient to service of Elizabeth Ann, MD.
        2. CXR.
        3. IV Claforan.
        4. Respiratory care.
        5. CBC, WBC, liver function studies, Chem profile.

12/19:  Continue with current orders.

12/20:  Add Tylenol with codeine elixir 2 teaspoons q.i.d.

12/21:  1. DC IV fluids.
        2. Make arrangements for home O₂.

12/22:  Discharge patient home with home health care.
### Case Study 8

**Answer Sheet**

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Case Study 9

Inpatient Face Sheet

Admit Date: 11/24/2014
Discharge Date: 12/01/2014
Sex: Female
Age: 70
Disposition: Home

Admitting Diagnoses:
1. Acute abdominal pain, rule out diverticular disease
2. History of hypertension

Discharge Diagnoses:
1. Perforated sigmoid colon secondary to diverticulitis
2. Dense intra-abdominal adhesions
3. Hypertension
4. Postoperative atelectasis
5. Acute pharyngitis
6. Small bowel defect requiring resection

Procedures Performed:
1. Hartmann’s procedure, lysis of adhesions, small bowel resection, colostomy
2. Flexible sigmoidoscopy
Case Study 9

Discharge Summary

Admitted: 11/24/2014
Discharged: 12/01/2014

ADMITTING DIAGNOSES:
1. Acute abdominal pain, probably due to diverticular disease
2. History of hypertension

DISCHARGE DIAGNOSIS:
1. Perforated sigmoid colon secondary to diverticulitis
2. Dense intra-abdominal adhesions
3. Hypertension
4. Pulmonary atelectasis, persistent postoperative
5. Acute pharyngitis

PROCEDURES:
1. Hartmann’s procedure, lysis of adhesions, small bowel resection
2. Flexible sigmoidoscopy

HISTORY OF PRESENT ILLNESS:
This is a 70-year-old white woman who had, on the day of admission, undergone an outpatient colonoscopy. The physician was unable to advance the scope past the sigmoid colon and felt she had a perforated bowel secondary to diverticulitis. She has had a history of numerous episodes of diverticulitis.

PAST MEDICAL HISTORY: Hypertension, hysterectomy, appendectomy.

MEDICATIONS ON ADMISSION: Inderal-LA and aspirin.

ALLERGIES: None known.

PHYSICAL EXAMINATION:
Reveals an elderly white woman with tenderness in the left lower quadrant of the abdomen.

LABORATORY DATA:
The admission laboratory data were within normal limits with the exception of low hematocrit of 34, hemoglobin 11.8, and elevated globulin 3.9. Postoperatively, white count was over 19,000, transiently returning to normal in 2 days. The hemoglobin dropped to 10.1 with hematocrit of 29.7.

RADIOLOGY REPORTS:
Gastrografin enema findings were suggestive of perforation at the level of the rectosigmoid at a point where the patient had extensive diverticula.
Case Study 9

Discharge Summary

Continued:

Chest x-ray revealed pneumomediastinum and subcutaneous emphysema, but no pneumothorax. There was air in the retroperitoneum. The follow-up chest x-rays showed nasogastric tube in satisfactory position with decreased subcutaneous emphysema within the neck and decreased pericardial air collection since the prior study, and development of small bilateral effusions on November 11. The abdominal x-rays showed a large amount of free retroperitoneal air and air in the mediastinum.

HOSPITAL COURSE:
The patient was admitted and started on intravenous antibiotics with Unasyn and tobramycin combination.

The patient was seen in consult by gastrologist who felt she probably had an acute sigmoid perforation secondary to diverticular disease. He felt she would benefit with Gastrografin enema, especially to determine whether she could be treated conservatively or not. The procedure was completed with the findings as mentioned above. It was felt she would require resection.

She was taken to the operating room where the above procedures were performed. The patient tolerated the procedure well under general anesthesia. The estimated blood loss was less than 100 mL with no replacement. The pathology report revealed diverticulosis with diverticulitis and perforation of the small bowel.

Postoperatively, the wound was healing nicely. The colostomy was noted to be viable. She was transferred to the surgical floor on November 25. She was having the expected amount of abdominal discomfort postsurgery. She also complained of sore throat and was started on Cepacol throat lozenges. The intravenous fluids and medications were continued.

The colostomy was not functioning over the first few days. There was minimal drainage from the nasogastric tube. Reglan was added. Breath sounds were decreased over the right lower lobe on November 28. The chest x-ray revealed atelectasis. CXRs were done daily and the RLL was reexpanded on November 30.

The colostomy began functioning on November 29. Intravenous fluids were discontinued. Intravenous Lasix was given. Her diet was increased with toleration. Activity was increased and medications were changed to p.o.

The patient improved significantly in the next several days, and she was stable enough to be discharged. She will be followed in the office in 1 week. She is discharged on Duricef 500 mg b.i.d. and Tylox one q4h prn soft diet and activity as tolerated.
Case Study 9

History and Physical

CHIEF COMPLAINT: Abdominal pain.

HISTORY OF PRESENT ILLNESS:
The patient is a 70-year-old white female who has undergone attempted colonoscopy this morning. There was difficulty in negotiating the sigmoid colon and the patient developed tenderness post colonoscopy. Abdominal x-rays revealed free air as well as mediastinal air.

PAST MEDICAL HISTORY: Hypertension, hysterectomy, appendectomy.

MEDICATIONS ON AdMISSION: Inderal-LA and aspirin.

ALLERGIES: None known.

PHYSICAL EXAMINATION:
Well-developed, well-nourished, 70-year-old white female in moderate distress.

REVIEW OF SYSTEMS:
Cardiac: Normal sinus rhythm.
Pulmonary: Clear.
HEENT: Within normal limits.
Abdomen: Soft with left lower quadrant pain and some distention.
Extremities: Bilateral pedal pulses.

Patient will be admitted for conservative management in hopes of avoiding surgery. She will receive intravenous antibiotic and bowel rest.
Case Study 9

Procedure Note

DATE OF PROCEDURE: 11/24/2014
PROCEDURE: Attempted full colonoscopy
SURGEON: Aaron Nair, MD
INDICATION: Abdominal pain with history of diverticular disease

DESCRIPTION OF PROCEDURE:
With the patient in the left lateral position under direct luminal vision, a complete colonoscopy was attempted, but the Olympus colonoscope was only advanced up to 30 cm inside the sigmoid. The findings were as follows:

1. Rectum and anal canal: Internal hemorrhoids are seen in circumferential fashion, not bleeding at the time. No evidence of masses, lesions, angioma, or polyps seen in the rectal area.
2. Rectosigmoid junction, sigmoid, and descending colon: Extensive sigmoid diverticulosis with significant peridiverticulitis and spasm appreciated in a highly redundant sigmoid.

In view of the fact that the diverticular process was so extensive and the sigmoid extremely redundant, the advancement of the scope beyond this area was difficult and hence the procedure was terminated.

The patient returned to the floor in stable condition.

FINAL IMPRESSION:
1. Extensive sigmoid diverticulosis with diverticulitis and spasm.
2. Redundant sigmoid.
3. Internal hemorrhoids.
CASE STUDY 9

PROCEDURE NOTE

DATE OF PROCEDURE: 11/24/2014
PREOPERATIVE DIAGNOSIS: Perforated sigmoid colon
POSTOPERATIVE DIAGNOSIS: 1. Perforated sigmoid colon 2. Dense intra-abdominal adhesions
SURGEON: Amadeusz Worton, MD

FINDINGS: Moderately large perforation of the sigmoid colon approximately 2 cm in diameter with pelvic phlegmon. Dense intra-abdominal adhesions requiring extensive lysis taking 2 hours.

DESCRIPTION OF PROCEDURE:
The patient was taken to the operating suite and placed in the supine position. After adequate induction of general anesthesia the patient was prepped and draped in sterile fashion. A midline incision was made and the abdomen was entered. Dense adhesions were encountered requiring extensive sharp dissection.

The area of transection in the proximal sigmoid was dissected out circumferentially. The mesentery was taken down between Kelly clamps. Rectosigmoid was mobilized. The distal sigmoid was dissected out circumferentially and a roticulator placed across this. A stapler was fired, the bowel was transected.

Small bowel adhesions were lysed. One area was extremely thin, resulting in a serosal defect, which required resection. An area in the mid jejunum was dissected out circumferentially both proximally and distally. The intervening mesentery was serially cross-clamped between Kelly clamps. The vessels were ligated with 2-0 silks. G.A. was fired across both sides. Functional end-to-end anastomosis was then performed.

The abdomen was irrigated with copious amounts of fluid. A Jackson-Pratt drain was placed in the pelvis. Attention was then directed toward closure. The proximal defect was made in the left lower quadrant. Transected colon was brought out through the colostomy defect without difficulty. Upon adequate sponge, needle, lap, and instrument count the abdominal wound was closed with running #2 Prolene suture.

The subcutaneous tissue was irrigated with copious amounts of antibiotic solution. The cautery was utilized for hemostasis. The skin was loosely approximated. A Jackson-Pratt drain was secured with a 3-0 Nylon. A sterile dressing was applied and attention turned toward maturation of the colostomy.

The colon was secured to the fascia with three interrupted 3-0 Vicryl sutures. The colon was than transected and the colostomy matured in the usual fashion with interrupted 3-0 Vicryl sutures. The colostomy appliance was placed and the patient was taken to the recovery room, having tolerated the procedure well.
Case Study 9

Progress Notes:

11/24: Admit Note: Patient admitted following attempted colonoscopy. Physician was unable to advance the scope past the sigmoid colon and felt she had perforated bowel secondary to diverticulitis. This patient has a long history of diverticulitis. Laboratory data is within normal limits with the exception of H/H of 11.8/34. Patient was taken to surgery for resection of bowel. She tolerated the procedure well with minimal blood loss. The pathology report revealed diverticulitis and bowel perforation.

O: H/H dropped to 10.1/29.7, WBC 19,000, vital signs stable.
A: Good postoperative course so far.
P: Continue present treatment.

11/26: S: Less surgical pain.
O: WBCs coming down, now at 14,000, vitals stable, incisions clean and dry.
A: Continues to improve.
P: Begin ambulation, maintain liquid diet.

O: WBCs normal, incisions healing nicely, colostomy still not functioning but viable.
A: Acute pharyngitis.
P: Continue all meds; add Cepacol lozenges for sore throat.

O: Minimal NG drainage, decreased breath sounds RLL.
A: Wound healing nicely, possible atelectasis.
P: Get CXR to evaluate atelectasis.

11/29: S: Feels better, throat less sore.
O: CXR shows persistent post-op atelectasis RLL, colostomy beginning to function.
A: Good post-op course.
P: Advance diet; remove NG tube, CXR daily.

O: CXR improved, RLL expanded, tolerating diet.
A: Continues to improve, colostomy functioning nicely.
P: Plan for discharge tomorrow.

12/01: S: Ready to go home.
O: Wounds clean and dry, afebrile, tolerating diet.
A: Good post-op recovery.
P: Discharge today.
Case Study 9

Orders:

   2. Transfer to SICU following surgery.
   3. Follow unit protocol.
   4. Vitals q4h.
   5. IV Unasyn and tobramycin.

   2. Continue all current meds and treatment.
   3. Cepacol throat lozenges for sore throat.

11/26: 1. Portable CXR.
   2. Continue all orders.

11/27: 1. CXR daily.
11/30: 1. Discontinue IVs.
12/01: 1. Discharge.
### Case Study 9

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Case Study 10

Inpatient Face Sheet

Admitted: 12/14/2014
Discharged: 12/17/2014
Sex: Female
Age: 35
Disposition: Home

Admitting Diagnosis:
1. Ovarian cyst

Discharge Diagnoses:
1. Ovarian cyst
2. Postoperative blood loss
3. Urinary tract infection

Procedures:
1. Total abdominal hysterectomy
2. Bilateral salpingo-oophorectomy
3. Exploratory laparotomy
Case Study 10

Discharge Summary

Admitted: 12/14/2014
Discharged: 12/17/2014

DISCHARGE DIAGNOSES:
1. Ovarian cyst
2. Uterine adhesions
3. Urinary tract infection
4. Postoperative anemia

PROCEDURES PERFORMED:
1. Exploratory laparotomy
2. Hysterectomy
3. Bilateral salpingo-oophorectomy

HISTORY:
This 35-year-old female has experienced pelvic pain for 3 months duration. Pelvic ultrasound revealed a right ovarian cystic mass. She was admitted for elective surgery.

PAST MEDICAL HISTORY:
Refer to History and Physical for complete history.

HOSPITAL COURSE:
Patient underwent exploratory laparotomy that revealed a benign cyst of the right ovary and adhesions of the uterus requiring hysterectomy and bilateral salpingo-oophorectomy. She tolerated the surgery without complication. Postoperative course was significant for postoperative anemia, requiring transfusion of PRBCs. She also was noted to have elevated temperature and cultures indicated a urinary tract infection. She was already on IV antibiotics postsurgery that would also cover the UTI. She progressed well, in spite of the anemia and the UTI, and she was discharged in good condition on December 17. She was given a prescription for antibiotics and iron pills. Activity as tolerated; however, no driving for 2 weeks. Diet as tolerated. She is to see me in 3 days for postoperative follow-up and staple removal.
Case Study 10

History and Physical

CHIEF COMPLAINT: Pelvic pain.

HISTORY OF PRESENT ILLNESS:
This 35-year-old gravida 3, para 3, has complained of pelvic pain for 3 months duration. Pelvic ultrasound revealed her right ovary to be enlarged with a large cystic mass. She is admitted today for elective exploratory laparotomy. The patient understands that she may require a hysterectomy and possible salpingo-oophorectomy.

PAST MEDICAL HISTORY: Negative, except for childbirth.

PAST SURGICAL HISTORY: No surgeries.

SOCIAL HISTORY: Nonsmoker, nondrinker.

FAMILY HISTORY: Noncontributory.

ALLERGIES: Penicillin.

MEDICATIONS: None.

REVIEW OF SYSTEMS:
HEENT: Within normal limits.
Neck: Supple. No lymphadenopathy.
Heart: Regular rhythm, no murmurs.
Lungs: Clear to auscultation.
Rectal: Deferred.
Extremities: Within normal limits.

IMPRESSION:
1. Ovarian cyst.

PLAN:
1. Exploratory laparotomy.
Case Study 10

Procedure Note

Date of Procedure: 12/14/2014
Preoperative Diagnosis: Ovarian cyst, right
Postoperative Diagnosis: Right ovarian cyst
Surgeon: Dr. Ajambo Odehiambo
Anesthesiologist: Dr. Cedric Alger
Procedure: Exploratory laparotomy
Hysterectomy, bilateral salpingo-oophorectomy

DESCRIPTION OF PROCEDURE:
Following administration of general anesthesia, the patient’s abdomen was prepped and draped in sterile manner. A midline incision was done below the umbilicus to the pubis symphysis and then taken down to the fascia. The muscles were separated and the peritoneum was cut, taking care to avoid the bladder and bowel. There was a large cystic mass on the right ovary measuring $6 \times 8$ centimeters. The right ovary and tube with the cyst intact were removed. The left tube and ovary were removed in similar fashion. The decision was made to perform a hysterectomy and this was carried out without complications. All bleeders were ligated using 0-Vicryl. The pelvic cavity was irrigated with saline. The abdomen was then closed using 2-0 Dexon and the skin was closed using staples. The patient tolerated the procedure and was discharged to the recovery room in good condition.

Estimated blood loss: 400 mL

Pathology Report

Specimens:
1. Uterus dense adhesions
2. Left ovary and fallopian tube
3. Right ovary and fallopian tube with cystic mass

Microscopic Diagnosis:
1. Uterus:
   Mild chronic cervicitis
2. Left fallopian tube and ovary:
   Atrophic ovary with normal fallopian tube
3. Right fallopian tube and ovary:
   Normal right tube and benign cyst of the ovary
Progress Notes:

12/14: Patient admitted to surgical floor following exploratory laparotomy, hysterectomy, and bilateral salpingo-oophorectomy. Patient tolerated the procedure well. Is fully awake and complains of moderate surgical pain. Patient will remain NPO until the evening meal and then will have a soft diet. Ambulate upon full recovery from anesthesia.

12/14: S: Moderate pain.
O: Incision clean and dry, vital signs good. H/H 9.8/35.4. Was 12.9/42.3 on admission. Temp elevated to 101.2.
A: Probable post-op anemia.
P: Monitor H/H, continue with present pain medication.

O: Incision clean and dry, vitals good. H/H dropped to 8.10/32.2. Temp still elevated 100.1.
A: Possible occult infection.
P: Will culture to r/o infection. Continue to monitor H/H.

12/16: S: Complains of minor pain at operative site.
A: Urine culture revealed UTI. Treated with antibiotics. Ambulating freely, progressing well.
P: Change to p.o. antibiotics, monitor H/H, probable discharge tomorrow.

12/17: S: Feels well, ready to go home.
O: Incision healing well, vital signs good. H/H at 11.2/42.1. Temperature normal.
A: Ready for discharge.
P: Discharge home; follow up in office in 1 week.

Orders:

12/14: 1. Admit patient to surgical floor from recovery.
2. Standard postoperative orders.
3. Vital signs q.6 hours.
12/15: 1. Blood and urine cultures to rule out infection.
2. Transfuse 2 units PRBCs.
3. Continue with IV antibiotics.
12/16: 1. Change IV antibiotics to p.o.
2. Continue to monitor H/H.
12/17: Discharge home.
## Case Study 10

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Case Study 11

Emergency Room Visit Face Sheet

Date of Service: 01/01/2015
Age: 25
Sex: Female
Admitting Diagnosis: Injury to left wrist
Discharge Diagnosis: Sprain left wrist
Disposition: Home
Case Study 11

Emergency Room Visit

DATE OF SERVICE: 1/01/2015

HISTORY OF PRESENT ILLNESS:
Initial encounter for a 25-year-old female who was at work today when a bread tray fell on her left wrist. She has persistent pain in the area, which is exacerbated with moving the wrist and hand. She describes the pain as very severe.

PAST MEDICAL HISTORY: Noncontributory.

ALLERGIES: None.

PHYSICAL EXAMINATION:
General: Well-developed, well-nourished female in moderate distress. Vitals are stable.
Skin: Warm and dry.
HEENT: Unremarkable.
Chest: Symmetrical.
Extremities: The left wrist is tender and mildly swollen, especially over the distal ulna with no gross deformity. Normal range of motion against resistance with moderate pain. No abrasions or lacerations. Normal distal neurosensory examination. The remainder of the extremity examination is within normal limits.

Neurological: She is awake, alert, and oriented times three with no focal neurologic deficits.

RADIOLOGY EXAMINATION:
The patient was taken to the x-ray room where the wrist was x-rayed. No acute fractures appreciated in the AP and lateral views.

IMPRESSION: Left wrist sprain.

The patient was placed in a padded splint and was given a prescription for Darvocet. She will follow up with her physician next week.
### Case Study 11

#### Answer Sheet

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Note: E&M codes are assigned, when applicable, for outpatient clinic and emergency department visits. Because each hospital facility has its own unique system to assign the appropriate E&M codes, the appropriate codes would range from 99281 to 99285 with modifier -25 for this case.
Case Study 12

Emergency Room Visit Face Sheet

Date of Service: 01/15/2015
Age: 7
Sex: Male
Admitting Diagnosis: Fever, abdominal pain, vomiting
Discharge Diagnosis: Acute pyelonephritis due to *E. coli*
Nausea and vomiting
Disposition: Home
Case Study 12

Emergency Room Visit

Date: 01/15/2015

HISTORY OF PRESENT ILLNESS:
This is a 7-year-old boy who is brought to the emergency room by his parents. He has been running an elevated temperature for the past 12 hours; the high was 103. He also complains of stomach pains and vomiting. The parents are very concerned.

PAST MEDICAL HISTORY: Negative.

ALLERGIES: None.

MEDICATIONS: None.

SOCIAL HISTORY: Patient lives with his parents.

PHYSICAL EXAMINATION:

HEENT: Eyes are normal. There is a minimal amount of inflammation of the tonsils. Ears, nose, and mouth are normal.

Neck: Supple.

Skin: Negative.

Chest: Lungs sounds are normal.

Heart: Normal rhythm with no murmurs appreciated.

Abdomen: Diffuse tenderness. No masses or organomegaly noted.

Neurological: Normal.

Extremities: Normal.

RADIOLOGY EXAMINATION: Renal x-ray was normal.

LABORATORY REPORTS:
Labs normal except for urinalysis, which was positive for E. coli > 100,000.

IMPRESSION:
1. Acute pyelonephritis.
2. Nausea and vomiting.
3. Discharged with Bactrim and will follow up with his physician.
Case Study 12

Answer Sheet

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Case Study 13

Emergency Room Visit Face Sheet

Date of Service: 01/02/2015
Age: 65
Sex: Female
Admitting Diagnosis: Nose bleed
Discharge Diagnosis: Recurrent nosebleed
Disposition: Home
DATE OF SERVICE: 01/02/2015

HISTORY OF PRESENT ILLNESS:
Patient presents to the emergency room with a history of waking up with her nose bleeding. This is the second occurrence of epistaxis that she has had. She states that the bleeding has resolved. Denies that she takes any aspirin.

PHYSICAL EXAMINATION:
HEENT: Normal tympanic membranes. The examination of the nares shows evidence of former bleeding site, it is now resolved. Oropharynx is normal.
Neck: Supple, no bruits.
Lungs: Clear.

IMPRESSION: Recurrent nosebleed.
The patient is to return to her primary physician if bleeding reoccurs.

Case Study 13
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| Date of Service:          | 01/17/2015 |
| Age:                      | 58         |
| Sex:                      | Male       |
| Admitting Diagnosis:      | Indigestion |
| Discharge Diagnosis:      | Dyspepsia  |
| Disposition:              | Home       |
**Case Study 14**

**Emergency Room Visit**

**DATE OF EMERGENCY ROOM VISIT:** 01/17/2015

**HISTORY OF PRESENT ILLNESS:**
Patient has complaints of indigestion for the past month. The indigestion occurs after eating heavy meals and/or physical exertion. The duration of pain lasts about 20 minutes. He states that he has had a previous cholecystectomy approximately 2 years ago.

There is no shortness of breath, nausea, vomiting, bloody stools, or sweating. There is a family history of heart disease with his father having bypass surgery in his 60s. His mother died of an MI 3 years ago. The patient has a history of smoking but is currently on the patch to help him stop. He does not exercise regularly. He denied any chest pains or cough. GU, Musc., Neuro, Skin, Eyes are negative.

**PHYSICAL EXAMINATION:**
- **Vitals:** Blood pressure 140/80, P 76, Resp. 16. Temperature is normal.
- **HEENT:** Head is normocephalic. No masses or lesions noted on the eyes. Oral mucosa is normal. Throat is normal.
- **Neck:** No distention of jugular vein.
- **Lungs:** Clear bilaterally to percussions and auscultation. No rubs, rales, or wheezing noted.
- **Heart:** Normal sinus rhythm. No rubs, gallops, or murmurs. Carotid arteries, abdominal artery and femoral arteries are normal. No bruits noted. Pedal pulses normal. No peripheral edema noted.
- **Abdomen:** No masses, tenderness, organomegaly.
- **Neurological:** Normal.
- **Extremities:** No clubbing, cyanosis, ischemia, or edema noted. Gait is steady. Good range of motion in all extremities.

**PLAN:**
At this point, the patient will not be placed on prescriptions. It was suggested that he take an over-the-counter antacid like Pepcid or Axid to help prevent heartburn. It was recommended that the patient make an appointment with his physician to follow up.

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**Case Study 14**

**Answer Sheet**

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Case Study 15

Ambulatory Care

Face Sheet

Date of Service: 01/15/2015
Age: 62
Sex: Male
Admitting Diagnoses: Urinary retention
Postoperative Diagnoses: Benign prostatic hypertrophy
Procedure:
1. Cystoscopy
2. Transurethral resection of the prostate
Discharge Disposition: Home
Case Study 15

History and Physical

DATE OF ADMISSION: 01/15/2015
ADMITTING DIAGNOSIS: Urinary Retention

HISTORY OF PRESENT ILLNESS:
This is a 62-year-old male who has been experiencing increasing signs of urinary retention with urgency and difficulty with urination.

PAST MEDICAL HISTORY:
Positive for severe COPD, requiring home oxygen at 2.5 L. Patient is also on steroids for COPD. Past history of myocardial infarction with coronary artery disease. Patient underwent cardiac catheterization but is not considered a surgical candidate.

ALLERGIES: None known.

MEDICATIONS:
Albuterol one dose four times a day; Theo-Dur 200 mg twice a day; Cardizem CD 120 mg once a day.

SOCIAL HISTORY: Significant for smoking two packs a day for 45 years. Occasional alcohol use.

FAMILY HISTORY: Noncontributory.

PHYSICAL EXAMINATION:
General: The patient is awake, alert, and oriented.
HEENT: Pupils are equal and react to light and accommodation. Extraocular muscles are intact.
Respiratory: Prolonged expiratory phase. Scattered wheezes.
Cardiovascular: Regular rate and rhythm. No murmurs, rubs, or gallops.
Abdomen: Soft, nontender. Bowel sounds are present. No organomegaly.
Extremities: No edema, cyanosis, or clubbing.
Neurologic: Nonfocal.

PLAN:
Patient is admitted to ambulatory surgery for cystoscopy and possible transurethral resection of the prostate.
Case Study 15

Operative Report

Date of Operation: 01/15/2015
Preoperative Diagnosis: Urinary retention
Postoperative Diagnosis: Benign prostatic hypertrophy
Operation: Laser coagulation of the prostate
Surgeon: Dai Ngyun, Jr., MD
Anesthesiologist: Earl Kenna, MD
Anesthesia: Spinal

DESCRIPTION OF PROCEDURE:
The patient was placed on the operating table in the lithotomy position after spinal anesthesia was given. External genitalia was prepped and draped in the sterile manner.

A 21-French cystoscope was introduced within the bladder. The bladder was carefully inspected, and there was no evidence of tumor. There was mild trabeculations in both ureteral orifices. At this time, the resectoscope was introduced and resection of the lateral lobes of the prostate was done, allowing complete opening of the prostatic urethra. All of the prostatic chips were removed from the bladder. The bladder was coagulated and completely smoothed out with the VaporTrode. An 18-French Foley catheter was inserted into the bladder and left indwelling.

The patient tolerated the procedure well and was sent to the recovery room in satisfactory condition.
The patient will be discharged home when fully recovered with Foley in place. Patient will see me in my office tomorrow for removal of the Foley.

Pathology Report

TISSUES: Prostate tissue
PREOPERATIVE DIAGNOSIS: Urinary retention
POSTOPERATIVE DIAGNOSIS: Benign prostatic hypertrophy

GROSS DESCRIPTION:
Specimen received in formalin labeled “prostate tissue” consists of 9.0 × 9.0 × 2.5 cm, 40 g aggregate of multiple irregular rubbery gray-white, tan-yellow, and tan-pink tissue. Representative sections (40 chips) are submitted.

MICROSCOPIC DIAGNOSIS:
Prostate tissue: Benign hyperplasia in 36 chips
Foci of adenocarcinoma in four chips
Case Study 15

Progress Note:

The patient was taken to the OR where under spinal anesthesia; a cystoscopy and transurethral resection of the prostate was performed. The patient tolerated the procedure well and was transferred to the recovery room in satisfactory condition. Pathology report showed BPH and foci of adenocarcinoma in four chips.

Orders:

Standard postoperative orders.
Discharge from the recovery room when stable.
Vital signs q. 15 minutes x 4, q. 30 minutes x 2, then q. 1 hour until discharge.
Vicodin, 40 mg one tablet prn for pain.
Macrobid b.i.d. for 1 week.
Discharge patient home when fully recovered and stable with Foley indwelling.
Patient is to return to my office tomorrow for follow-up and Foley removal.

Case Study 15

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Case Study 16

Ambulatory Care

Face Sheet

Date of Service: 01/17/2015
Age: 52
Sex: Male
Admitting Diagnosis: Chest pain
Discharge Diagnoses: Coronary artery disease, native artery
Angina
History of coronary artery bypass grafting
Procedures: Left-heart catheterization
Disposition: Home
Case Study 16

History and Physical

DATE OF ADMISSION: 01/17/2015

HISTORY OF PRESENT ILLNESS:
This is a 52-year-old male with a history of angina for which he underwent four-vessel coronary surgical revascularization. This was performed last December. He had a left internal mammary artery to the left anterior descending coronary artery, sequential saphenous vein graft to the obtuse marginal and diagonal vessels and a saphenous vein graft to the right coronary artery. His left ventricular function was normal.

More recently he has been having problems with chest pain. For this reason, he is now brought back to the cardiac catheterization laboratory for reevaluation.

ALLERGIES: Demerol and Biaxin.

LABORATORY DATA:
His laboratory studies reveal normal electrolytes, BUN, creatinine, and a mildly depressed hemoglobin and hematocrit of 13 and 38.8, respectively, with normochromic, normocytic indices. The platelet count is normal. PT and PTT are normal.

ELECTROCARDIOGRAM: Demonstrates sinus bradycardia and otherwise is normal.

PHYSICAL EXAMINATION:
Vital signs: Stable.
General: Well-developed, well-nourished male in no acute distress. Patient is oriented times three. Skin is warm and dry. Pupils round and equal. Neck supple; trachea is midline.
Chest: Clear to auscultation and percussion.
Heart: Normal sinus rhythm. No rubs or gallops appreciated.
Abdomen: Soft without distention. There is no guarding or rebound. No organomegaly.
Extremities: Unremarkable.

Further decisions will be based on cardiac catheterization test results. He is agreeable to proceed. He is aware of the risks that include bleeding, infection, heart attack, rhythm disturbance, death, stroke, reaction to dye, or damage to nerve or blood vessel.

He is aware of the alternatives of cardiac catheterization, which would include medical therapy and possibly stress testing. He is agreeable to catheterization.
Cardiac Catheterization Report

Date of Catheterization: 01/17/2015
Procedure: Cardiac catheterization
Preoperative Diagnosis: Chest pain
Postoperative Diagnosis: Coronary artery disease
Surgeon: Marta Senka, MD
Assistant: Salali Phillips, MD

Cardiac Catheterization Procedure:
The patient was brought to the cardiac catheterization laboratory n.p.o. with a peripheral intravenous line in place. The right groin was prepped and draped in the usual fashion. Local anesthesia was obtained with Xylocaine 2%.

Utilizing a modified Seldinger technique, the right femoral artery was entered percutaneously and a #5 French side-arm sheath was placed. Utilizing Judkin’s technique and left and right 4 bend Judkin’s catheters and a #5 French 110 cm pigtail catheter, left-heart catheterization was completed.

Upon completion, the arterial catheter and sheath were removed and hemostasis was achieved by direct pressure applied to the right groin. The patient tolerated the procedure well and left in stable condition.

IMPRESSION:
1. Severe native multivessel coronary arterial disease. Total occlusion of the proximal left anterior descending coronary artery after the first septal and first diagonal vessels.
2. Anatomically obstructive stenosis in the obtuse marginal vessel; 3 in its proximal and midportions.
3. Total occlusion of the mid right coronary artery.
4. Patent LIMA graft to the left anterior descending coronary artery.
5. Patent sequential saphenous vein graft to the diagonal vessel and OM-3 vessel. Small diseased diagonal vessel demonstrated.
6. Patent saphenous vein graft to the distal right coronary artery. Approximate 60%–70% stenosis in the midportion of the posterior descending coronary artery.
7. Normal left ventricular size and systolic contractile pattern.
8. Mildly elevated left ventricular end-diastolic pressure 16 mm Hg.
Case Study 16

Progress Note

1/17 Patient admitted for left-heart catheterization. Aware of risks and benefits. Agreeable to proceed.

1/17 LHC completed via right femoral approach. Tolerated well. SVG to Diag./OM patent. Stenosis at level of Diagonal at SVG. SVG–RCA patent. LIMA to LAD patent. Normal LV. Severe native CAD. Films to be reviewed. D/C home today.

Physician Orders:

1/17 1. NPO after MN except for meds.
2. D5 1/2 NSS with 10 mEq. KCL/1 at 75 cc/hour on admit.
3. Pre-op meds.
4. Benadryl 50 mg p.o.
5. Tagamet 300 mg.
6. Consent for right- and left-heart catheterization.
7. Diet: Cardiac.

1/17 1. Darvocet –100 tab p.o. q. 4–6 hours PRN pain.
2. Tylenol #3 one tab p.o. q4h PRN pain if unrelieved by Darvocet
3. Maintain IV at 150 mL/hour x 4 hours, then Heplock.
4. Resume diet.
5. Bed rest for 3 hours, then bathroom privileges.
6. Blood pressure in right arm, pulse, respirations q. 15 minutes x 2; q. 30 minutes x2; q1h x 2 or until stable; the q4h. Call physician if heart rate 50 or > 100 systolic BP.
7. Check pulses distal to catheterization site q. 15 minutes x 2; q. 30 minutes x 2; q1h x 2; then q4h. Notify physician of loss of palpable pulse, complaint, or pain or coldness in distal extremity.
8. Check dressing for bleeding and hematoma q. 15 minutes x 2; q. 30 minutes x 2; then q1h x 2 and PRN.
9. Discharge when patient is stable.

Case Study 16

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Case Study 17

Ambulatory Care

Face Sheet

Date of Service: 01/18/2015
Age: 23
Sex: Male
Admitting Diagnosis: Injury to right knee
Discharge Diagnosis: Tear medical meniscus right knee
Procedure: Arthroscopy
             Medial meniscectomy
Disposition: Home
Case Study 17

History and Physical

DATE OF ADMISSION: 01/18/2015
ADMITTING DIAGNOSIS: Twisting injury right knee

HISTORY OF PRESENT ILLNESS:
This patient was playing baseball 2 weeks ago when he sustained an injury to his right knee sliding into a base. Patient was seen in the emergency room (initial encounter) where x-rays were negative for any fractures. Patient has been keeping his leg elevated and keeping weight off it as much as possible.

PAST MEDICAL HISTORY: Negative.
ALLERGIES: None.
MEDICATIONS: None.

SOCIAL HISTORY: Patient smoked one pack a day for 10 years; alcohol, none.

PHYSICAL EXAMINATION:
General: Well-developed, well-nourished male.

HEENT: No gross lesions noted. Pupils round and equal. No icterus. No masses or thyroidomegaly. Oropharynx negative.

Neck: No masses or thyroidomegaly.

Chest: Clear to auscultation and percussion.

Heart: Normal rhythm.

Abdomen: No masses or rebound tenderness.

Extremities: Right knee with recurrent swelling, locking and catching. 2+ effusion. Left knee is normal.

PLAN:
Patient will be admitted for 1-day surgery for arthroscopy of the right knee.
Case Study 17

Operative Report

Date of Operation: 01/18/2015
Preoperative Diagnosis: Right knee medial meniscus tear
Postoperative Diagnosis: Right knee medial meniscus tear
Operation: Arthroscopic medial meniscectomy
Surgeon: Edmundo Diego, MD
Anesthesia: General
Anesthesiologist: Branden Godfrey, MD

INDICATIONS:
This patient has a twisting injury to the right knee. He has had recurrent swelling, locking, catching involving the knee, 2+ effusion.

PROCEDURE:
The patient was taken to the operating room, and general anesthesia was induced without complications. A well-padded pneumatic tourniquet was placed to the right upper thigh. The right leg was prepped and draped in the normal fashion. Diagnostic arthroscopy was performed. The findings are as listed below.

Under direct visualization, a medial portal was established. The posterior horn of the medial meniscus was debrided. A shaver was then introduced and taken back to a stable rim. The rest of the knee was then probed, and the findings are listed below.

The scope was then withdrawn and the wound closed with #4-0 Vicryl. The patient tolerated the procedure well and was transferred to the recovery room.

FINDINGS:
1. Patello-femoral joint: No articular cartilage change.
2. Medial compartment: Grade 1 changes of the mediofemoral condyle, posterior horn degenerative meniscus tear.
3. Anterior cruciate ligament and posterior cruciate ligament intact.
4. Lateral compartment, no articular cartilage changes noted. Lateral meniscus is intact. A fissure is seen within the tibial surface.
Case Study 17

Progress Notes

Patient has a twisting injury to the right knee with recurrent swelling, locking, and catching. Patient was taken to the operating room where an arthroscopic medical meniscectomy was performed. Patient will be discharged with crutches and will make a follow-up appointment in 2 weeks.

Orders:

1. Standard postoperative orders.
2. Discharge from recovery room when stable.
3. Urinary catheterization if patient unable to void post-op x 1; then call physician.
4. Elevate right knee 20 degrees. Ice packs for 15 minutes then discontinue. Repeat x 1 hour.
5. Vital signs q. 15 minutes x 4; then q. 30 minutes x 2; then q. 1 hour until discharge.
6. Tylenol 500 mg q4h for pain.
7. Start on soft diet.
8. Discharge when patient is stable.

Case Study 17

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Case Study 18

Ambulatory Care

Face Sheet

Date of Service: 01/03/2015
Age: 71
Sex: Female
Admitting Diagnosis: Scalp masses
Discharge Diagnoses: Sebaceous cyst, scalp
                   Hypertension
                   Chronic obstructive pulmonary disease
Procedure: Excision scalp masses x 2
Disposition: Home
Case Study 18

History and Physical

DATE OF ADMISSION: 01/03/2015

ADMITTING DIAGNOSIS: Scalp mass

HISTORY OF PRESENT ILLNESS:
Patient is returning for recurrent scalp masses. She had one removed approximately 1 year ago and now has two more.

PAST MEDICAL HISTORY:
Scalp mass, 1 year ago. Patient has a history of hypertension and COPD.

ALLERGIES: Sulfa.

MEDICATIONS: Tenormin and Alupent.

SOCIAL HISTORY:
She smoked 1/2 pack a day for 12 years; alcohol, social. She is retired and her hobbies include reading, gardening, and bingo.

PHYSICAL EXAMINATION:
General: Patient weighs 185. She is 5’6½” tall. BP 148/78. Pulse 80. Patient appears generally in good health considering her weight and history of COPD.

Head: Mass on the vertex of the scalp with another mass located in the right posterior occipital region.

HEENT: Pupils are equal, round, and reactive to light and accommodation. Extraocular muscles are intact. Fundi are poorly visualized.

Neck: Thyroid not palpable. No jugular venous distention.

Chest: Lungs showed resonant breath sounds equally with left basilar rales.

Heart: Regular rate and rhythm, no murmurs.

Abdomen: No masses or rebound tenderness.

Extremities: Normal with good reflexes.

PLAN:
Admit to day surgery for removal of scalp masses.
Case Study 18

Operative Report

Date of Operation: 01/03/2015
Preoperative Diagnosis: Scalp mass x 2
Postoperative Diagnosis: Scalp mass x 2
Operation: Excision of scalp mass x 2
Surgeon: Fairuza Padma, MD
Anesthesia: Monitored anesthesia care
Anesthesiologist: Jaden Allen, MD
Estimated Blood Loss: Minimal
Drains: None
Complications: None

PROCEDURE:
Patient is taken to the operating room with her informed consent. She is prepped and draped in the usual manner. IV sedation is administered, and then local, using 1% lidocaine.

The first mass measuring 2 cm was on the vertex of the scalp. There is a scar here from a previous excision and a mass just posterior to it. The scar was excised through a 2 cm transverse incision with an elliptical incision, and she was found to have a sebaceous cyst, which was adherent to the scar and also tracking posteriorly. This was excised in its entirety. The wound was closed with 2-0 Prolene in an interrupted fashion.

Next, a 2.5 cm mass is located in the right posterior occipital region, and this area was anesthetized with 1% lidocaine and a 2.5 cm transverse incision made over this through the skin and subcutaneous tissue, and this mass is circumferentially dissected and excised.

The wound was closed with 3-0 Vicryl in interrupted fashion for the subcu, and we had a good skin closure with this. Steri-Strips and Benzoin applied. The patient tolerated the procedure well. She was written a prescription for Vicodin one q4h prn for pain.
Case Study 18

Pathology Report

Date: 01/03/2015
Physician: Nicholle Atticus, MD
Preoperative Diagnosis: Scalp mass x 2
Surgical Procedure: Excision of scalp mass x 2
Postoperative Diagnosis: Scalp mass x 2
Specimen(s): 1. Scalp mass 2. Scalp mass
GROSS: There are two containers. Container number one, labeled “scalp mass,” consists of an ovoid firm mass of smooth surfaced tissue with overall dimensions of 2 × 1.5 × 0.5 cm. The specimen is marked with India ink, bisected and entirely submitted in cassette “1.” Container number two, labeled “scalp mass,” consists of multiple portions of yellow-gray-white soft tissue in aggregate 3 × 1.5 × 0.3 cm and totally submitted in cassette “2.”
GROSS AND MICROSCOPIC EXAMINATION:

<table>
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<tr>
<th>Mass from scalp:</th>
<th>(Specimen #1)</th>
<th>Sebaceous cyst</th>
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<tbody>
<tr>
<td>Mass from scalp:</td>
<td>(Specimen #2)</td>
<td>Sebaceous cyst</td>
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</tbody>
</table>
Case Study 18

Progress Notes:


Orders:

1. Standard postoperative orders.
2. Discharge from recovery room when stable.
3. Urinary catheterization if patient unable to void post-op x 1; then call physician.
4. Vital signs q. 15 minutes x 4; then q. 30 minutes x 2; then q. 1 hour until discharge.
5. Tylenol 500 mg q4h for pain.
7. Discharge when patient is stable.

Case Study 18

Answer Sheet

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Case Study 19

Inpatient Face Sheet

Admit Date: 1/15/2015
Discharge Date: 1/17/2015
Sex: Female
Age: 46
Disposition: Home

Admitting Diagnoses:
1. Herniated cervical disk
2. Neck and right arm pain
3. Asthma

Discharge Diagnoses:
1. Herniated C7-T1 disk
2. Radiculopathy secondary to above
3. Asthma
4. Respiratory distress secondary to morphine

Procedures:
1. Cervical fusion, anterior
2. Excision of C7-T1
Case Study 19

History and Physical

CHIEF COMPLAINT: Neck and arm pain.

HISTORY OF PRESENT ILLNESS:
This 46-year-old female is referred by her primary care physician, Dr. Adrianna Ross, due to neck and right arm pain that she attributes to a whiplash-type injury sustained during a fall while using her roller blades in March of last year. She has been treated medically by her PCP without resolution of her symptoms. She was seen by Dr. Alexander Warren who ordered EMG nerve conduction velocity testing and subsequent MRI. Patient describes her pain as radiating into the right shoulder, down the back of the arm, with pain in the fingers. The pain is on the right side and is made worse by moving her neck. Patient denies any other pain.

PAST MEDICAL HISTORY:
MEDICATIONS: Flexeril and Vicodin for pain and occasional inhaler for asthma.
ALLERGIES: None known.

REVIEW OF SYSTEMS:
Vital Signs: Temperature 98.7, pulse 73, respirations 18, blood pressure 117/78.
HEENT: Unremarkable.
Neck: Decreased range of motion due to pain.
Heart: Regular rate and rhythm.
Lungs: Clear.
Abdomen: Soft, nontender.
Extremities: Decreased grip on the right as compared to the left.

SOCIAL HISTORY:

FAMILY HISTORY: Noncontributory.

ASSESSMENT:
Review of MRI demonstrates herniated disk on the right at C7-T1.
C8 radiculopathy secondary to C7-T1 herniated disk.

PLAN: Diskectomy.
DATE: 1/15/2015

PREOPERATIVE DIAGNOSIS: C7-T1 herniated disk, right

POSTOPERATIVE DIAGNOSIS: C7-T1 herniated disk, right

PROCEDURE: C7-T1 microdiscectomy and fusion with Allograft and premier plate system

SURGEON: Dr. Anika Miller
ASSISTANT: Dr. Dagnar Mallard
ANESTHESIA: General

INDICATIONS: The patient is a 46-year-old female with neck and right arm pain, found to have a large herniated disk.

DESCRIPTION OF PROCEDURE: The patient was inducted with general anesthesia and placed supine on the operating table. The neck was prepped and draped in the usual manner. A transverse skin incision was made low in the neck from the sternocleidomastoid to the midline. The platysmas was cut sharply. Dissection was carried down to the space between carotid sheath laterally, esophagus and trachea medially. Prevertebral fascia was opened. Appropriate level was identified by x-ray. Longus colli muscles were cauterized, elevated, and retracted. Then posts were drilled in the body of C7 and T1, and the disk spaced was distracted. It was opened initially with a #15 blade and interspace rongeurs. Microscope was brought into the field, and a dissection was carried down to the posterior longitudinal ligament and the dura was exposed transversely. Herniated fragment was found in the right lateral gutter.

A foraminotomy was carried out, giving exposure to the initial part of the C8 nerve. Once this was accomplished, and it felt to be well decompressed, the wound was irrigated out. An allograft was fashioned with slightly more height on the left than on the right, as this is where some extra bone was removed. This was tapped into place, the posts were removed, the holes were waxed, and an appropriate size 25 mm fusion premier plate was put into place and screwed into place. The compression devise was used to give some compression on the bone. Once this was accomplished, the wound was irrigated and closed with 3-0 coated Vicryl in the platysma and 4-0 coated Vicryl in the skin.

The patient tolerated the procedure well without complications.

ESTIMATED BLOOD LOSS: 100 mL.
Case Study 19

Progress Notes:

1/15: Admit Note: Patient admitted with complaint of neck pain radiating to the right arm. MRI revealed a herniated C7-T1 disk. Patient is admitted for elective diskectomy. The procedure, alternative therapy, and the accompanying risks have been discussed and she desires the procedure.

1/15: Operative Note:
Pre-op: C7-T1 HNP
Post-op: Same
Operation: C7-T1 diskectomy
Surgeon: Dr. Miller
Assistant: Dr. Millard
Anesthesia: General

Patient was given morphine postoperatively in the recovery room. Patient immediately suffered respiratory distress as a result of the morphine. Narcan was administered with immediate results. Patient was observed for an additional 2 hours postrecovery with no further adverse effects. She was transferred to the floor alert and oriented with no further signs of complications.

1/15: S: Patient feeling well, only complaint of incisional pain.
O: Respiratory rate normal with no signs of distress.
A: Neurological stable.
P: Patient advised of allergy to morphine and instructed to never allow administration of morphine.

1/16: S: No complaints.
O: Afebrile, vital signs stable.
A: Upper extremity strength good, sutures intact without redness.
P: Discharge tomorrow.

1/17: Discharge Note: Patient admitted on January 15 for elective diskectomy C7-T1. Patient tolerated surgery well. Patient developed respiratory distress as a result of morphine given postoperatively in the recovery room. Respiratory distress quickly reversed with administration of Narcan. Patient’s vital signs and laboratory values were within normal limits throughout hospitalization. Incision is healing well with sutures intact. Patient is stable from a neurological standpoint with good upper extremity strength. She is to follow up with me in 3 weeks. Activity as tolerated; however, she is to do no lifting. Discharge home in good condition.
Orders:

1/15: Preoperative Orders:

1. Admit to Dr. Rosen.
2. Complete following tests 2 days pre-op:
   - CBC
   - C/C UA
   - PT/PTT
   - Type and screen
   - Chem basic
   - Chest x-ray
   - EKG
3. Pre-op per anesthesia.
4. Start IV 1,000 mL D,LR prior to surgery.
5. Bilateral thigh-high TED hose.
6. NPO.

1/15: PACU Standing Orders

1. Vital signs every 5 minutes for 15 minutes, then every 15 minutes until discharged from PACU.
2. Oxygen via nasal cannula at 3–5 L/minute.
3. May discontinue oxygen when stable.
4. Check operative site every 30 minutes.
5. Maintain IV with D,LR 500 mL while in PACU.
6. Discharge from PACU when discharge criteria met.

1/16: 1. Incentive spirometer q. 2 hours.

1/17: 1. D/C home.
2. F/U 3 weeks.
# Case Study 19

## Answer Sheet

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Code ICD-9-CM Diagnosis Code  
(One diagnosis code will be needed)

**Case Study 20**

**Inpatient Face Sheet**

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<td>Preterm labor</td>
</tr>
<tr>
<td>Discharge Diagnosis:</td>
<td>Preterm labor</td>
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</table>
Case Study 20

Labor and Delivery History and Physical

HISTORY: Patient is a 24-year-old female, gravida 2, para 0, abortus 0, who had her prenatal care at the Women’s Clinic. She presented to Labor and Delivery with the complaint of abdominal pain and cramps. Her membrane is intact.

LMP: EGA of 31.4 weeks. Ultrasound at 6 weeks. No complications during this pregnancy.

PAST MEDICAL HISTORY: Noncontributory.

PAST SURGICAL HISTORY: None.

MEDICINE: None during pregnancy.

ALLERGIES: No known allergies.

PRENATAL LABS: Rh+, Rubella BL, VDRL NR, GC−, Chlamydia−, Pap−, AB Screen 0, Hepatitis Screen−, Diabetic Screen 153.

PHYSICAL EXAMINATION:

Vital signs: BP 135/82, Temp. 98.4, Pulse 102, Resp 21, FHTs 145.

General: No acute diseases.

HEENT: No asymmetry.

Neck: No asymmetry.

Heart: Regular rate and rhythm.

Lungs: Clear to auscultation bilaterally.

Abdomen: Soft, nontender, nondistended, + bowel sounds.

Extremities: No edema.

Neuro: No deficits.

Cervix: 1/th.

Presenting Part: VTX/FFN+.

Impression: 24-year-old G2P00 at 31.4 weeks with PTL

PLAN:

1. Admit

2. U/S
Case Study 20

Progress Notes:

1/14: Admit Note: Patient admitted to Labor and Delivery with preterm labor at 31.4 weeks’ gestation. Patient immediately started on magnesium sulfate.

S: Patient denies HA/CP/SOB/CTX/RUQ pain.
O: VS 121/73, P 87, FHT: 135–141, + accelerations.
A: 24-year-old at 31.4 weeks with PTL.
P: Follow Mg levels, perform US.

1/15: S: Patient reports that pain is completely gone.
O: PE, WNL. FHT: 150's, + accels, − decels.
A: PTL with Mg tocolysis, US indicates fetus at 1,698 g, cervix closed.
P: DC today, strict bed rest with BRP, follow-up at clinic in 1 week.

Orders:

1/14: 1. Admit to L&D with PTL at 31.4 weeks.
2. CBC and clean-catch UA.
3. MgSO₄ per protocol—5 g loading dose/then 2 g/hour.
4. Fetal monitor.
5. US.
6. Strict bed rest.
7. Clear liquid diet.

1/15: 1. DC MgSO₄.
2. Transfer to antepartum.
3. If patient remains stable throughout the day, may discharge this evening.

Case Study 20

Answer Sheet

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<tr>
<th>DIAGNOSES</th>
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<tr>
<td>Principal Diagnosis</td>
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Case Study 21

Inpatient Face Sheet

Admit Date: 12/12/2014
Discharge Date: 12/18/2014
Sex: Female
Age: 75
Disposition: Home

Admitting Diagnoses:
1. Asthmatic bronchitis
2. Pneumonia
3. Supraventricular tachycardia
4. Chronic diastolic heart failure

Discharge Diagnoses:
1. Pneumonia
2. Asthmatic bronchitis
3. Supraventricular tachycardia
4. Chronic diastolic heart failure
5. Tobacco use

Procedures: None
Case Study 21

Discharge Summary

ADMITTED: 12/12/2014
DISCHARGED: 12/18/2014

ADMITTING DIAGNOSES:
1. Asthmatic bronchitis, rule out pneumonia
2. Supraventricular tachycardia

DISCHARGE DIAGNOSES:
1. Pneumonia
2. Asthmatic bronchitis
3. Supraventricular tachycardia
4. Chronic diastolic heart failure
5. Tobacco use

CHIEF COMPLAINT: Shortness of breath, history of asthma, possible pneumonia, fever.

HISTORY OF PRESENT ILLNESS: A 75-year-old female presented to the emergency room with the above complaints. She had been treated as an outpatient by her primary care physician, Dr. Nicholas Magee. She failed to improve with Zithromax. The patient has a past history of bronchial asthma, supraventricular arrhythmia, and chronic diastolic heart failure. Her cardiologist is Dr. Benjamin William and her pulmonologist is Dr. Victoria Stamper. On 3/23/2014, the patient had a cardiac catheterization with findings of minimal coronary artery disease.

PHYSICAL EXAMINATION: On exam today, the patient is short of breath with congestion noted in the head and chest, expiratory wheezing, rales, and rhonchi throughout. No edema. For complete physical details, please see History and Physical.

HOSPITAL COURSE: The patient was admitted and given intravenous fluids, placed on telemetry monitoring, started on intravenous steroids, which were subsequently tapered, pan cultured, and had a pulmonary medicine consult. Chest x-ray shows pneumonia.

Consultation with Dr. Stamper of pulmonary medicine was performed.

RADIOLOGY REPORTS:
P A and lateral chest x-ray of December 12, showed left lower lobe pneumonia. Follow-up PA and lateral chest x-ray on 12/15 showed clear, but hyperexpanded lungs compatible with the patient’s clinical history of asthma, no evidence of focal consolidation pneumonia compared to the chest x-ray of 12/13, which showed slight improvement of left lower lobe pneumonia and hiatal hernia.

LABORATORY DATA: On admission, glucose 116, sodium 135, potassium 3.5, blood urea nitrogen 11, creatinine 1.4, calcium 8.4. On 12/15 glucose 125, sodium 137, potassium 3.9, blood urea nitrogen 19, creatinine 1.5, calcium 8.5. On admission, white blood cell count was 22,300 with a hemoglobin 13.9, hematocrit 42, platelets 210,000. White blood cell count had decreased on 12/15 to 12,900 with a hemoglobin of 12.7, hematocrit 37.7, platelets 266,000. Blood culture negative.
Case Study 21

Discharge Summary

Continued:

HOSPITAL COURSE: The patient presented with shortness of breath, cough, and congestion, following outpatient care for respiratory infection. She has a history of asthma. She was admitted and placed on intravenous antibiotics, supplemental oxygen, nebulizer therapy with bronchodilators and intravenous steroids. She also was found to have sinusitis, pneumonia.

The patient was felt to have reached maximum medical improvement on December 17 and was cleared for discharge. The patient was given the instructions and advice and will go home with the medications and the nebulizer treatments of albuterol and saline four times a day.

DISCHARGE MEDICATIONS:
1. Levaquin 250 mg once a day for 7 days.
2. Claritin 10 mg, one tablet daily.
3. Nasonex nasal spray, two sprays each nostril daily.
4. Potassium chloride spray, three or four times a day.
5. Lanoxin 0.125 mg daily.
Case Study 21

History and Physical

ADMISSION DATE: 12/12/2014

CHIEF COMPLAINT: Shortness of breath, history of asthma, possible pneumonia, fever.

HISTORY: This 75-year-old female presented to the emergency room with the above complaints. She was initially seen by her primary care physician when Zithromax failed to improve her symptoms. The patient was found to have possible infiltrate on chest x-ray, pyrexia, and was admitted for further evaluation and treatment.

The past medical history includes bronchial asthma, history of supraventricular arrhythmia, and palpitation.

PREVIOUS CONSULTANTS: Dr. Benjamin William and Dr. Victoria Stamper.

PROCEDURES: On 10/23/2011, the patient had cardiac catheterization with findings of minimal coronary artery disease with recommendation for medical management.

PRESENT MEDICATIONS: The present medications include Lanoxin 0.25 mg daily, Nasonex nasal spray, and Claritin D 24-hour tablet.

Additional medical history includes asthmatic bronchitis and respiratory allergies.

PAST SURGERY: Cataracts.

SOCIAL HISTORY: The patient admits to cigarette smoking. She has never been married and has no children.

ALLERGIES: None known.

SYSTEMS REVIEW:

INTEGUMENT: Denies rashes, seborrhea, or psoriasis.

HEENT: Denies any problems chewing, tasting, hearing, or swallowing.

RESPIRATORY: Admits to shortness of breath, asthma, and dyspnea on exertion.

GASTROINTESTINAL: Unremarkable.

FAMILY HISTORY: The family history includes two brothers and two sisters. One brother deceased. One brother has asthma. Parents are deceased. Mother died at age 82 from a stroke and father died at age 85 from a stroke.
Case Study 21

History and Physical

Continued:

PHYSICAL EXAMINATION: The physical examination reveals a well-nourished, well-hydrated, Caucasian female with no complaints, alert and cooperative, mild respiratory stridor.

LUNGS: Full aeration, expiratory wheezing bilaterally.

CARDIOVASCULAR: S1 and S2 regular. No palpitations perceived at this time. No irregular rhythm noted on auscultation by this examiner. There is no jugular venous distention.

ABDOMEN: The abdomen is soft, nontender. No guarding, rebound, or rigidity.

IMPRESSION AT THIS TIME: Asthmatic bronchitis, rule out pneumonia.

RECOMMENDATION: Intravenous fluids, intravenous steroids, intravenous Levaquin, panculture, pulmonary medicine consult.

CONDITION AT THIS TIME: Guarded.
Case Study 21

Consultation

DATE: 12/12/2014
REQUESTING PHYSICIAN: Dr. Magee
CONSULTING PHYSICIAN: Dr. Stamper

This is a 75-year-old female who has a long-standing history of asthma since the age of 8 who was not doing well for the past few days with increased shortness of breath, cough, and congestion. She saw Dr. Magee who gave her Zithromax, which did not help her symptoms. Then she developed increased fever, cough, and congestion, so she came to the emergency room where she was noted to have questionable pneumonia and bronchitis and bronchospasm. She was admitted to the hospital for further treatment.

PAST MEDICAL HISTORY: The past medical history is positive for long-standing asthma, COPD exacerbation requiring recurrent hospitalization, and history of allergic rhinitis. She also has a history of postnasal drip, chronic wheezing, shortness of breath, and tachycardia.


FAMILY HISTORY: Parents died of stroke in their 80s. One brother had asthma.

MEDICATIONS PRIOR TO ADMISSION: The patient’s medications prior to admission included Vioxx 25 mg once a day, Ablution inhaler, Claritin 10 mg once a day, Serevent inhaler, Flonase inhaler and nasal spray.

ALLERGIES: None known.

REVIEW OF SYSTEMS: Otherwise negative.

PHYSICAL EXAMINATION: Alert white female who is in acute distress, tachycardic and tachypneic, she is short of breath. Temperature 100.4, pulse 120, respirations 20, blood pressure 140/98, saturation 88%, on admission. Last vitals: temperature 97, pulse 99, respirations 20, blood pressure 150/80.

HEENT: Negative except some sinus tenderness and postnasal drip.
NECK: No jugular venous distention.
LUNGS: Bilateral diffuse rhonchi and wheezes.
HEART: Regular rhythm, tachycardia, no gallops or murmur.
ABDOMEN: The abdomen is soft, nontender.
EXTREMITIES: No edema.
Case Study 21

Consultation

Continued:

Chest x-ray was reviewed; there is no definite infiltrate except some basilar atelectasis, early infiltrate cannot be ruled out. Arterial blood gas: pH 7.45, pCO₂ 30, pO₂ 73 on 2 L nasal cannula. White blood count 18.1, hemoglobin 13.9. Comprehensive metabolic panel essentially unremarkable. Bilirubin 1.67. Digoxin 0.49.

ASSESSMENT:
1. Bronchial asthma
2. Bronchitis
3. No definite pneumonia; however, cannot be ruled out
4. Basilar atelectasis
5. Tachycardia due to above

RECOMMENDATION: Intravenous Solu-Medrol, intravenous antibiotics, oxygen, nebulizer treatment, sinus x-rays, and follow closely.
### Case Study 21

#### Answer Sheet

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<td>DX 5</td>
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Case Study 22

Inpatient Face Sheet

Admit Date: 11/25/2014
Discharge Date: 12/02/2014
Age: 78
Sex: Male
Disposition: Home

Admit Diagnoses:
1. Dyspnea, rule out pulmonary embolism
2. History of deep venous thrombosis
3. Chronic renal insufficiency
4. Dizziness, possibly benign positional vertigo, rule out other causes

Discharge Diagnoses:
1. Dyspnea on exertion, confirmed secondary to pulmonary embolism
2. Mild congestive heart failure, chronic systolic
3. History of chronic renal failure
4. Diabetes mellitus type 1
5. Diabetic neuropathy

Procedure Performed: None
Case Study 22

Discharge Summary

ADMITTED: 11/25/2014
DISCHARGED: 12/02/2014

ADMITTING DIAGNOSES:
1. Dyspnea, rule out pulmonary embolism
2. History of deep venous thrombosis
3. Chronic renal insufficiency
4. Dizziness, possibly benign positional vertigo, rule out other causes

DISCHARGE DIAGNOSES:
1. Dyspnea on exertion, confirmed secondary to pulmonary embolism
2. Mild congestive heart failure, chronic systolic
3. History of chronic renal failure
4. Diabetes mellitus type 1
5. Diabetic neuropathy
6. Chronic obstructive pulmonary disease
7. Dizziness: etiology likely multifactorial, patient started on Meclizine
8. History of tobacco dependence

HISTORY: This is a 78-year-old gentleman with the above-mentioned medical problems who came to the emergency room at this time with light-headedness, dizziness, wooziness, drunk feeling, not sure of his steps. He was having increasing shortness of breath and does have a history of deep venous thrombosis and pulmonary emboli.

PERTINENT EXAM: Blood pressure 123/80, pulse rate 109, respirations 16, temperature 96.
HEENT: Unremarkable.
NECK: No jugular venous distention.
LUNGS: A few crepitations, no wheezing.
HEART: Regular. No murmur.
ABDOMEN: Distended, soft, nontender.
EXTREMITIES: 2–3 + edema.

LABORATORY: White blood cell account 11,500, left shift differential. Other counts were normal. Follow-up hemoglobin 11.1, hematocrit 32.9. Baseline INR normal. Chemistries: sodium 135, blood urea nitrogen 35, creatinine 1.8, alkaline phosphatase 80. AST/ALT levels initially normal. Follow-up blood sugar 198–200. Urinalysis: yellow and hazy appearance, microscopic blood noted, protein noted, nitrite negative, leukocyte esterase a small amount detected. Urine culture suggested a contaminated specimen.

Chest film revealed some prominent interstitial markings and possible congestive heart failure.
Case Study 22

Discharge Summary

Continued:

Computed tomography brain scan shows mild atrophy. Ventilation perfusion lung scan revealed an intermediate probability for pulmonary embolism. Electrocardiogram—sinus rhythm, sinus tachycardia. Arterial blood gases on 2 L nasal cannula, pH 7.41, pCO$_2$ 33.1, pO$_2$ 98.8, bicarb 20.8, and saturation is 97.5%.

HOSPITAL COURSE: The patient admitted with increasing weakness, dyspnea, and hypoxemia and dizziness at this time as well. There is no evidence of acute cerebrovascular accident. Computed tomography brain scan revealing chronic changes, nothing acute.

Ultimately the patient was found to have a pulmonary embolism and started on subcutaneous Lovenox injection, 1 mg/kg subcutaneous every 12 hours and then Coumadin started as well. Daily prothrombin time, INR evaluations were obtained, and Coumadin doses were titrated accordingly. We were able to confirm the suspicion with a computed tomography scan and pulmonary angiogram. The patient was continued on anticoagulation, as well as treatment for heart failure with ace inhibitor therapy. He had reached the maximal hospital benefit and was discharged on December 2, 2010.

MEDICATIONS ON DISCHARGE:
1. Humulin 75/25 15 units twice daily
2. Xanax 0.25 mg three times a day
3. Celexa 30 mg at h.s.
4. Coumadin 10 mg daily
5. Protonix 40 mg a day
6. Prinivil 40 mg daily
7. Meclizine

DIET: 1,800 ADA, low fat, low salt.

OTHER THERAPEUTIC MEASURES: The patient reached maximum therapeutic benefit from his hospital admission. He was discharged with his medications and diet as listed.

ACTIVITY: As tolerated.
Case Study 22

History and Physical

ADMITTED: 11/25/2014

CHIEF COMPLAINT: Dizziness, lightheadedness, and shortness of breath on exertion.

HISTORY OF PRESENT ILLNESS: This is 78-year-old gentleman who has a history of multiple medical problems. He came into the emergency room because he was feeling dizzy, lightheaded, woozy, and kind of drunk. He could not be sure of his steps. He has also been complaining of increased shortness of breath on exertion. He does have chronic dyspnea on exertion due to multiple medical problems including obesity, deep venous thrombosis; however, he feels that his symptoms are worse than before.

PAST MEDICAL HISTORY: His history is positive for multiple medical problems. He has history of hypertension, diabetes mellitus type 1, deep venous thrombosis. He has been on Coumadin for quite some time because of deep venous thrombosis.

SOCIAL HISTORY: He smoked cigarettes but quit smoking 25 years ago. He does not drink alcohol. He is married, lives with his wife.

ALLERGIES: None.

REVIEW OF SYSTEMS: As mentioned earlier; other than that, is unremarkable. He does not have any chest pain, denies any shortness of breath on exertion. He has no cough, hemoptysis, fever, or chills. No nausea or vomiting, abdominal pain, diarrhea, or urinary burning or hematuria at this time.

MEDICATIONS: Protonix 40 mg once a day, and insulin 75/25 Humalog, 35 units in the morning and 35 units in the evening.

PHYSICAL EXAMINATION:

GENERAL APPEARANCE: Elderly white gentleman who is in no respiratory distress, but gets short of breath on exertion.

VITAL SIGNS: Blood pressure 123/80 on admission, pulse 109, respirations 16, temperature 96, oxygen saturation 98%.

HEENT: Head, ears, eyes, nose, and throat were negative.

NECK: No jugular venous distention.

LUNGS: There are a few crepitations, no wheezing, rhonchi, or rales.

HEART: Regular rhythm, no gallops or murmur.

ABDOMEN: The abdomen is distended, soft, nontender.

EXTREMITIES: There are 2–3 + edema.
Case Study 22

History and Physical

Continued:

LABORATORY DATA: The pertinent laboratories include on admission, urinalysis positive for white blood cells and 2+ bacteria. White blood cell count 11.5, hemoglobin 12.4. Comprehensive metabolic panel is unremarkable, except blood urea nitrogen 35, creatinine 1.8. Troponin I 0.05. Prothrombin time and partial thromboplastin time normal, partial thromboplastin time 54. D-dimer positive. Chest x-ray: Basal atelectasis, otherwise unremarkable. There is some interstitial marking. Computerized tomography scan of the brain was unremarkable. Urine culture: multiple species, could be contaminated.

ASSESSMENT:
1. Shortness of breath on exertion, which could be related to obesity, chronic obstructive pulmonary disease, asthma, bronchitis, rule out pulmonary emboli, especially with the history of deep venous thrombosis.
2. History of deep venous thrombosis and renal insufficiency.
3. Dizziness, rule out benign positional vertigo, orthostatic hypotension, rule out bleeding, cerebrovascular accident, etc.

RECOMMENDATIONS:
1. Computerized tomography scan of brain.
3. Orthostatic check of blood pressure and pulse.
4. Check complete blood count, chemistry, and other laboratories.
5. Get pulmonary CT angiogram to rule out pulmonary emboli.
6. Check oxygen saturation on exertion.
7. Give nebulizer treatment and oxygen, insulin, and other medications as before.
Case Study 22

Consultation

DATE: 11/26/2014
REQUESTING PHYSICIAN: Dr. Chase William
CONSULTING PHYSICIAN: Dr. Lynn Pagano

HISTORY OF PRESENT ILLNESS: The patient is a 78-year-old white male with past history of diabetes mellitus type 1, history of hypertension, who was admitted to the hospital with dizziness. He denied any fall, any loss of consciousness, denied any slurring of the speech, he denied any weakness focally.

PAST MEDICAL HISTORY: Hypertension, diabetes mellitus type 1.

MEDICATIONS: He is on clonidine, Norvasc, Protonix, and insulin.

NEUROLOGICAL EXAMINATION:

GENERAL APPEARANCE: On examination, the patient is pleasant, awake, alert, oriented times three.

VITAL SIGNS: Temperature 98 degrees, blood pressure 133/74, pulse is 94 beats per minute.

HEENT: There is equal eye movement, reactive to light. No nystagmus, no carotid bruit. The left visual field is normal. No neck rigidity, no Kernig or Brudzinski sign.

CRANIAL NERVES: The cranial nerves are unremarkable. Palatal movement is intact with tongue midline. Corneal and gag reflexes are intact.

MOTOR SYSTEM: Normal tone and power, 5/5 in all four extremities proximally and distally. There is decreased pinprick and touch in bilateral upper and lower extremities distally, with decreased position and vibration. Deep tendon reflexes +2 in the lower extremities, +1 knee jerk, and absent ankle jerk, and absent ankle jerk. Plantar is both down going.

CEREBELLAR: Finger-to-nose, heel-to-shin normal. Speech is clear, alert, with normal naming, normal comprehensions, normal reading.
Case Study 22

Consultation

Continued:

LABORATORY DATA: Urinalysis: Hazy and many bacteria 2+, Chemistry: Sodium 135, potassium 4.8, blood urea nitrogen 35, creatinine 0.8, sugar 149, alkaline phosphatase 580, globulin 4.5. White blood cell count 11.5, hemoglobin 12.5, hematocrit 36.5, platelet count 268.

IMPRESSION:
The patient has hypertension, diabetes mellitus type 1, with severe peripheral neuropathy with complaints of feeling dizziness, lightheaded, without any acute focal motor or sensory deficit, without any nystagmus:

1. Rule out benign positional vertigo.
2. Rule out cardiac arrhythmia versus gastrointestinal, which is unlikely.
3. Rule out orthostatic hypotension.

RECOMMENDATIONS:
1. Computerized tomography scans of the head.
2. Meclezine 25 mg p.o. b.i.d.
3. Physical therapy, occupational therapy for gait training.
4. Diabetic control.
5. Check for orthostatic blood pressure every 6 hours.
### Case Study 22

#### Answer Sheet

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Case Study 23

Ambulatory Services

Face Sheet

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Case Study 23

History and Physical

DATE: 01/17/2015

CHIEF COMPLAINT: Palpitations

PRESENT ILLNESS: This is a 45-year-old male who had visited the emergency room at Sun City Hospital on January 6, 2015, for rapid palpitations. He has had three episodes of sudden, rapid palpitations. Usually, they break on their own. The last episode lasted 18 hours. Patient was given Cardizem without any response. He usually is completely asymptomatic, although he feels poorly the day afterward.

The arrhythmia seen on the electrocardiogram at Sun City Hospital was most consistent with classical flutter. Holter monitor was performed, which was normal. Ablation was recommended to the patient.

PAST MEDICAL HISTORY: Borderline hypertension, but he is not treated for it. No history of diabetes or pulmonary disease.

FAMILY HISTORY: Negative.

SOCIAL HISTORY: Denies cigarette use.

PHYSICAL EXAMINATION:

GENERAL: Overweight male in no acute distress. Blood pressure is high at 138/80; pulse is regular at 160 beats per minute.

NECK: Neck is supple without evidence of bruits. There is no thyromegaly.

CHEST: Clear to auscultation.

HEART: Cardiac examination revealed a normal S1 S2 without murmurs.

ABDOMEN: Benign.

EXTREMITIES: No evidence of clubbing, cyanosis, or edema.

His electrocardiogram at Sun City Hospital showed classical atrial flutter at 103 beats per minute.

IMPRESSION: The patient’s arrhythmia is fairly classic for atrial flutter.

PLAN: Patient is to be admitted as an outpatient for ablation.
**Case Study 23**

**Operative Report**

Date of Operation: January 17, 2015

Preoperative Diagnosis: Atrial Flutter

Postoperative Diagnosis:
1. Typical atrioventricular reentrant tachycardia
2. Classic type I atrial flutter

Operation:
1. Full electrophysiologic study with coronary sinus catheter
2. Follow-up programmed stimulation with isoproterenol
3. Electrical cardioversion of atrial flutter
4. Radiofrequency catheter ablation of the slow AV nodal pathway
5. Radiofrequency catheter ablation of the atrial flutter

Medications given:
- Heparin 1,000 units per hour
- Isoproterenol 2 mcg per minute

Findings:
1. Baseline normal sinus nodal and His-Purkinje function. Ventricular function was not completely studied. The corrected sinus nodal recovery time measured 154 milliseconds at baseline. The H-V interval measured 53 milliseconds at baseline.
2. On isoproterenol 2 mcg per minute, reproducible induced typical AV nodal reentrant tachycardia with a cycle length of 260 milliseconds (231 beats per minute) was induced by double atrial electric stimuli at the high right atrium. This produces systolic blood pressure of 83 mm Hg. The arrhythmia was terminated with ventricular burst pacing at 230 milliseconds. Dual AV nodal pathways were evident at baseline with a fast AV nodal effective refractory period measuring 500/310; the slow AV nodal effective refractory period measured 500/350/220.
3. Successful radiofrequency catheter ablation of the slow AV nodal pathway was accomplished after three applications of radiofrequency energy of 50 watts/60 degrees centigrade to the roof of the coronary sinus OS. Junctional tachycardia occurred within 6 seconds of radiofrequency application.
4. After slow AV nodal pathway ablation, antegrade AV nodal block measured 300 milliseconds. The AV nodal effective refractory period measured 400/240 and no slow AV nodal conduction could be seen. No inducible AV nodal reentrant tachycardia despite double atrial electric stimuli on isoproterenol 2 mcg per minute AV nodal refractoriness.
5. Induced atrial fibrillation with rapid atrial pacing at 230 milliseconds at the high right atrium on isoproterenol 2 mcg per minute; this organized to classic type I atrial flutter.
6. Successful creation of bidirectional conduction block was accomplished across the isthmus of the tricuspid annulus and inferior vena cava, coronary sinus os of the inferior vena cava, coronary sinus os of the tricuspid annulus. Conduction block was proven using coronary sinus os and low right atrial pacing.

Impression:
1. Inducible typical atrioventricular nodal reentrant tachycardia
2. Inducible atrial flutter, classic type I
Case Study 23

Progress Notes:
Feels good
BP 140/84
Groins healing well
Cardiac normal
Will discharge home

Physician Orders:
1. Supine bed rest for 4 hours keeping left and right legs straight.
2. May elevate HOB no greater than 30 degrees.
3. Vital signs every 15 minutes x 4, every 30 minutes x 4, every hour x 4.
4. Change IV to Heplock.
5. 12 lead EKG.

Discharge Instructions:
1. Discharge home when stable.
2. ASA 325 mg daily.
3. Follow up with me in 1 month.
4. Regular diet and activity.

Case Study 23

Answer Sheet

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Case Study 24

Ambulatory Surgery

Face Sheet

Name: Elizabeth Cooper
Date: 01/03/2015
Age: 72
Insurance: Medicare
**Case Study 24**

**History and Physical**

DATE OF ADMISSION: 01/03/2015

HISTORY OF PRESENT ILLNESS:
Mrs. Cooper is returning to our office for follow-up of lightheadedness. The patient has been doing well since her last visit. She has not experienced any syncope or near syncope. No chest pain or pressure, PND, orthopnea, or dyspnea on exertion.

MEDICATIONS: She is taking aspirin 81 mg daily and Celexa 10 mg daily.

REVIEW OF SYSTEMS: General: No fevers or chills. Respiratory: No wheezing, cough, or shortness of breath. GI: No complaints. GU: No complaints. Extremities: No edema or other problems.

PREVIOUS TESTING RESULTS: Stress nuclear study showed an area of septal and also apical thinning with improvements in counts on delay. There was some motion artifact; however, one has to be concerned about the possibility of ischemia in this region, which would appear to be, if present, LAD. LV function was normal, and there appears to be LVH. Of concern, the patient did not exercise a great distance, got about 3 minutes on Bruce protocol, and had a dip near her starting blood pressure at peak exercise.

Holter monitor showed short runs of paroxysmal SVT versus atrial fibrillation up to 150 beats per minute. Echocardiogram showed normal LV function, mild to moderate MR, mild TR. I am concerned with the stress nuclear study showing a question of LAD ischemia and the fact that her blood pressure at peak exercise dropped back near starting level.

PHYSICAL EXAMINATION:
VITAL SIGNS: BP: 144/60; P: 72 and regular.
NECK: No JVD.
LUNGS: Clear bilaterally.
CARDIAC: Regular rate and rhythm. Grade 1/6 right upper sternal border systolic murmur and a positive S4.
ABDOMEN: Soft, nontender and benign.
EXTREMITIES: Femoral pulses appear to be 2+ without bruits. Distal extremities unremarkable. No significant edema.
NEUROLOGIC: Alert and oriented, grossly appears nonfocal.

IMPRESSION:
1. Coronary artery disease. Based on nuclear described above, I suspect there may be LAD coronary artery disease.
2. Mild to moderate MR by echo.
3. Probable hypertension.

PLAN:
1. Patient will be scheduled for outpatient cardiac catheterization.
2. Continue aspirin at this point.
Case Study 24

Procedure

Date of Procedure: 01/03/2015
Preoperative Diagnosis: Coronary artery disease
Postoperative Diagnosis: Coronary artery disease of mid lateral anterior descending artery
Procedure: Left heart catheterization
Coronary arteriograms
Left ventriculography
PTCA with stent

Patient was taken to the cardiac catheterization lab and was prepped and draped in the usual sterile manner. The right femoral artery was entered using the percutaneous technique. Left coronary arteriograms were performed using #6 French, JL4 catheters. Left ventriculography was performed using #6 French, JR4 catheters. Right coronary arteriograms were performed using #6 French, JR4.

#6 French sheath was sutured to right groin. Heparinized NaCl via pressure bag attached to #6 French sheath. The injection fraction was 79%.

Then #6 French RFA & FRV flex sheaths were placed. GFXB 3.5 guide & PT Graphix wire was used to cross lesion. IV NTG given. ACT baseline = 133. IV heparin 3 units given. Mid left anterior descending lesion was predilated with 2.5 × 20 mm Maverick balloon. Stented with 2.5 × 18 mm Bx Velocity stent immediately distal to diagonal. Post dilated with 2.75 × 15 mm Maverick balloon with 14 bars with good opposition.

Results: Residual 0%–5%. Side branch: Diagonal not jeopardized.

Complications: None.
Case Study 24

Progress Notes:

1/03 Heart catheterization showed 90% stenosis of LAD. PTCA was performed with insertion of 2.5 × 18 mm B × Velocity stent. Patient tolerated procedure well.

1/04 No problems or complications from catheterization. Pulses OK. Abdomen soft. No bleeding from femoral site.

Physician Orders:

1/03

1. Right groin check, right DP pulse q. 15 minutes × 4, then q. 30 minutes × 4; then q4h.
2. Monitor femoral artery line, swan if applicable.
3. NPO until fully alert, then liquids, then advance as tolerated to cardiac diet.
4. Bed rest with right leg extended; loose protective device right ankle. May elevate HOB 30 degrees while sheaths in.
5. Bed rest x 8 hours after sheaths out, then out of bed with assistance.
6. IV D5 1/2 NS at 125 mL/hour x 8 hours.
7. Tridil 10 mcg/minute per standard concentration. Wean at 6 a.m.
8. Uncoated ASA 325 mg PO q. a.m.
9. O₂ at 2 L/minute via nasal cannula prn, SOB, or O₂ sats < 90%. Oximeter if O₂ in use.

1/04

1. Discharge patient.
2. Script for Plavix 75 mg p.o. OD × 1 month.
3. Follow up with me in 2 weeks.

Case Study 24
Answer Sheet

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Code ICD-9-CM Diagnoses  
(Three diagnosis codes will be needed)

**Case Study 25**

**Emergency Room Visit**

**Face Sheet**

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<td>Admitting Diagnosis:</td>
<td>Nausea and vomiting</td>
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| Discharge Diagnosis: | Gastroenteritis, giardia  
|                 | Dehydration | |
|                 | Arthritis  | |
| Disposition:    | Home       |
Case Study 25

Emergency Room Visit

DATE OF ADMISSION: 01/14/2015

HISTORY:
This elderly female was brought to the emergency room today when she was out with some friends and developed nausea and vomiting. She also developed diarrhea last night. She has a slight fever and appears to be somewhat dehydrated. She was started on an IV in the emergency room.

PAST MEDICAL HISTORY:
She has had the usual childhood diseases. She has a history of arthritis. History of cataract extraction of the left eye.

ALLERGIES: No apparent allergies.

MEDICATIONS: She is on no medications.

SOCIAL HISTORY: She is a widow who lives alone.

PHYSICAL EXAMINATION:
GENERAL: Well-developed, well-nourished female in no acute distress. Blood pressure is 100/74, pulse 70, temperature of 101, respirations 18.
HEAD: Normocephalic.
EYES: There is an opacity, right eye. Aphakia in the left.
NECK: Supple. No bruits.
SKIN: Negative.
CHEST: Few scattered rhonchi.
HEART: Normal rhythm. No murmurs appreciated.
ABDOMEN: Slightly distended with tenderness. Bowel sounds present.
EXTREMITIES: Negative.

IMPRESSION:
1. Gastroenteritis
2. Slight dehydration
3. Arthritis

The patient was discharged in good condition. No further nausea and vomiting. Patient was given a prescription for Flagyl 500 mg t.i.d. for 10 days.

LABORATORY EXAMINATION

Special Laboratory Examination: Stool.

Results: Stool shows moderate amount of Giardia lamblia cysts.
## Case Study 25

### Answer Sheet

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## Case Study 26

**Ambulatory Surgery**

**Face Sheet**

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<td>Dysphagia</td>
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<td>Acute and chronic gastritis</td>
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<td>Helicobacter</td>
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<tr>
<td>Procedure:</td>
<td>Esophagogastroduodenoscopy with biopsies</td>
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Case Study 26

History and Physical

DATE OF ADMISSION: 01/09/2015

ADMITTING DIAGNOSIS: Dyspepsia and dysphagia.

HISTORY OF PRESENT ILLNESS:
This gentleman has been complaining of dyspepsia for the past month. Now has developed difficulty in swallowing. Patient was treated conservatively with Riopan. With the difficulty in swallowing we will proceed with an esophagogastroduodenoscopy.

PAST MEDICAL HISTORY: History of basal cell carcinoma of the back, hypertension now not treated, diabetes.

ALLERGIES: None.

MEDICATIONS: Riopan and Glucotrol.

SOCIAL HISTORY: Patient does not smoke, alcohol is minimal.

PHYSICAL EXAMINATION:
GENERAL: This is an obese male. Vital signs are within normal limits.
HEENT: Extraocular movements are intact. No evidence of cataracts. Dysphagia and dyspepsia.
NECK: Without bruits, masses, or adenopathy.
CHEST: Clear to auscultation bilaterally without any crackles or wheezes.
HEART: Regular rate and rhythm. No murmurs or gallops.
ABDOMEN: Without hernias, masses, or hepatosplenomegaly. Bowel sound present in all four quadrants.
NEUROLOGICAL: Normal.
EXTREMITIES: Unremarkable.

PLAN:
Patient will be admitted to 1-day surgery for an esophagogastroduodenoscopy.
Case Study 26

Operative Report

Date of Operation: 01/09/2015

Preoperative Diagnosis: 1. Dyspepsia
2. Dysphagia

Postoperative Diagnosis: 1. Candidal esophagitis, biopsies taken for confirmation.
2. Upper GI endoscopy was otherwise unremarkable. Gastric biopsies were taken to exclude Helicobacter pylori infection.

Operation: Esophagogastroduodenoscopy
Surgeon: Rodney Verne, MD
Assistant: V. G. Smith, MD
Anesthesia: Demerol 50 mg intravenous, Versed 6 mg intravenous
Instrument: Olympus video gastroscope

PROCEDURE:
The risks and benefits of the procedure were explained to the patient and informed consent was obtained. The patient was placed in the left lateral decubitus position. Flexible video endoscope was gently advanced through the circopharyngeus into the esophagus. There are typical changes of candidal esophagitis in the mid and distal esophagus. Photographs and biopsies were taken. The GE junction was located at 38 cm from the incisors. Retroflexed views in the cardia showed no fundic mass.

The endoscope was placed in the forward viewing position and advanced from the greater curvature to the antrum, and there was no evidence of ulceration or mass. The pylorus was patent. The duodenal bulb is nondeformed and free of ulceration. Postbulbar duodenum is unremarkable. The endoscope was then withdrawn back into the stomach. Gastric biopsies were taken to exclude Helicobacter pylori, and the procedure was terminated. The patient tolerated the procedure well without evident complications.

RECOMMENDATIONS:
1. Await results of pathologic findings.
2. Diflucan therapy 100 mg daily x 3 weeks for treatment of candidiasis.
3. The patient will follow up with her primary physician.
Case Study 26

Pathology Report

Date: 01/09/2015
Physician: Rodney Verne, MD
Preoperative Diagnosis: Dyspepsia/dysphagia
Surgical Procedure: EGD
Postoperative Diagnosis: Candidal, esophagitis
Specimen(s): 1. Esophageal biopsy 2. Gastric biopsy

GROSS: There are two containers.
Container number one, labeled “biopsy esophagus,” consists of fragments of gray-white soft tissue. In aggregate, these measure $0.3 \times 0.3 \times 0.2$ cm and are submitted in cassette “1.”

Container number two, labeled “biopsy gastric,” consists of two fragments of gray-tan soft tissue in aggregate $0.3 \times 0.2 \times 0.2$ cm. Submitted in cassette “2.”

GROSS AND MICROSCOPIC EXAMINATION:
Biopsy of esophagus: Esophagitis.

COMMENT:
Special stain for fungal organisms is positive with fungal elements consistent with candidal esophagitis.

Gastric biopsies: Acute and chronic gastritis.

COMMENT:
Special stain for Helicobacter organism is strongly positive.
Case Study 26

Progress Notes:

Patient has a history of dyspepsia and dysphagia for a month. Taken to endoscopy room where an esophagogastroscopy was performed. Biopsies showed esophagitis, acute and chronic gastritis with Helicobacter present. Patient tolerated the procedure well.

Orders:

1. Standard postoperative orders.
2. Vital signs q. 15 minutes × 4; then q. 30 minutes × 2; then q. 1 hour until discharge.
4. Discharge when patient is stable.

Case Study 26

Answer Sheet

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Case Study 27

Skilled Nursing Facility Visit

Face Sheet

Patient Name: Cora Wilkinson
Admission Date: 01/15/2015
Age: 68
Sex: Female
Insurance: Medicare
Case Study 27

Skilled Nursing Facility Visit

ADMISSION DATE: 01/15/2015

HISTORY OF PRESENT ILLNESS:
This is a follow-up visit for this 68-year-old female. She was admitted to Oakdale Nursing Home 10 days ago with cellulitis of the left foot. She was placed in Oakdale for IV therapy of her cellulitis. She is recovering well, and the infection is about gone. She has a history of type 1 diabetes.

Allergies: None.

MEDICATIONS: Insulin 70/30, IV Vancomycin.

REVIEW OF SYSTEMS: Normal.

PHYSICAL EXAMINATION:

HEENT: Normal. No lesions noted.

SKIN: Left foot shows slight reddening on the upper surface. Infection had decreased significantly. All other areas are normal.

PLAN:
Patient is doing well and will be taken off IV Vancomycin.
She will be discharged home tomorrow and will be given a prescription for penicillin.
She is to follow up in my office in 1 week.

Case Study 27

Answer Sheet

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Code ICD-9-CM Diagnoses and CPT Procedures
(Two diagnosis codes and one CPT code will be needed)

Case Study 28

Ambulatory Surgery

Face Sheet

Patient’s Name: Georgia Phillips
Date of Visit: 01/17/2015
Age: 52
Sex: Female
Insurance: Medicare
Case Study 28

History and Physical

DATE OF ADMISSION: 01/17/2015

HISTORY OF PRESENT ILLNESS:
The patient has a history of bilateral breast cysts, and in a follow-up mammogram, a mass was discovered in the left breast. Patient also has some dimpling in the area demonstrated on mammogram in the upper outer quadrant.

PAST MEDICAL HISTORY: Patient has a history of mitral valve prolapse.

ALLERGIES: Demerol and Biaxin.

MEDICATIONS: V-Tabs prior to procedures for her mitral valve prolapse.

PHYSICAL EXAMINATION:
VITAL SIGNS: BP 146/80; respiration’s 17; pulse 77; temperature 99.

SKIN: Warm and dry.

EYES: The pupils are equal, round, reactive to light and accommodation.

Sclera is clear.

NECK: Supple. No masses, scars, or bruits.

LUNGS: Clear to auscultation and percussion.

HEART: Normal sinus rhythm. No murmurs or gallops.

BREASTS: Breasts are symmetrical. There is an area of slight skin retraction on the upper outer quadrant of the left breast. There is some thickness in the area. No other masses felt. No axillary lymphadenopathy.

EXTREMITIES: Good distal pulses.

PLAN: Patient will be brought to the ambulatory surgical center for a left breast biopsy.
Case Study 28

Operative Report

Date of Operation: 01/17/2015
Preoperative Diagnosis: Left Breast Mass
Postoperative Diagnosis: Infiltrating ductal cell carcinoma left breast
Procedure Performed: Excision of left breast mass
Surgeon: Cheryl Bottom, MD
Assistant: Jon Actor, MD

PROCEDURE:
The patient was placed on the supine position where anesthesia was administered. The left breast was prepped and draped in the usual sterile manner.

A transverse incision was made along the mass and was carried down through the skin and subcutaneous tissue. A firm mass was identified and was sharply excised from the surrounding breast tissue. Bleeding was controlled with electrocautery.

The wound was closed using interrupted sutures of 3-0 Vicryl for the deep layer. The subcutaneous tissue was closed with interrupted suture of 3-0 Vicryl and the skin was closed 4-0 Monocryl. Dressing was applied. The patient tolerated the procedure well.
Case Study 28

Pathology Report

Date: 01/17/2015
Physician: Cheryl Bottom, MD
Preoperative Diagnosis: Left breast mass
Surgical Procedure: Excision left breast mass
Postoperative Diagnosis: Infiltrating ductal carcinoma
Specimen(s): Left breast mass

GROSS:
Received directly from the operating room is a 4 × 3 × 3 cm ovoid pink-tan to yellow fibroadipose tissue, which is firm.

GROSS AND MICROSCOPIC EXAMINATION:
Excisional biopsy of left breast.
Invasive ductal carcinoma, 2.3 cm, histologic grade 2, nuclear grade 2, mitotic grade 1.
Focal lymph vascular space invasion is noted.
Diffuse fibrocystic changes are also noted.
Case Study 28

Progress Notes and Physician Orders

Progress Notes:
Patient has a left breast mass and was taken to the operating room where an excisional biopsy of the mass was performed. Pathology report is pending final determination, but preliminary report is ductal carcinoma.

Physician Orders:
Preoperative Orders
Diet: NPO
Consent to read: Excision left breast mass
Ancef 1 g IV before surgery

Postoperative Orders
Vicodin 1 q6h prn
Liquids as tolerated
Discharge when criteria are met

Case Study 28

Answer Sheet

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Case Study 29

Inpatient Face Sheet

Admit Date: 1/13/2015
Discharge Date: 1/16/2015
Sex: Female
Age: 86
Disposition: Home with home health care

Admitting Diagnoses:
1. Cellulitis, left lower extremity
2. Acute exacerbation of chronic obstructive pulmonary disease
3. Coronary artery disease
4. Hypothyroidism

Discharge Diagnoses:
1. Cellulitis left lower extremity
2. Acute exacerbation of chronic obstructive pulmonary disease
3. Coronary artery disease
4. Hypothyroidism
5. Gastroesophageal reflux disease
6. Depression
7. Degenerative joint disease
Case Study 29

Discharge Summary

Admitted: 1/13/2015
Discharged: 1/16/2015

DISCHARGE DIAGNOSES:
1. Cellulitis of the left lower extremity
2. Acute exacerbation of chronic obstructive pulmonary disease
3. Coronary artery disease
4. Hypothyroidism
5. Gastroesophageal reflux disease
6. Depression
7. Degenerative joint disease

HISTORY OF PRESENT ILLNESS:
Please see admission history and physical examination. This is an 86-year-old female with a 75-pack/year smoking history and severe chronic obstructive pulmonary disease who is seen for recurrent cellulitis in the left lower extremity, which has not responded to outpatient oral antibiotic and diuretic treatment.

HOSPITAL COURSE:
She was treated with intravenous Lasix, Aldactone, potassium supplement, bronchodilator treatment, Solu-Medrol, and intravenous Claforan. The inflammation of the left lower extremity resolved over the next few days. Her wheezing improved, and at rest her lungs were clear. With minimal exertion, she was noted to have wheezing and desaturation with O₂ saturation dropping to 84% on room air. She was advised to have home oxygen therapy.

The edema of the lower extremities resolved, and she will be continued on oral Lasix and Aldactone. The patient is discharged home with home health care to follow. Oxygen 2 L via nasal cannula. Her condition is improved.

DISCHARGE MEDICATIONS:
1. Imdur 60 mg 1/2 tablet q. a.m.
2. Synthroid 0.125 mg q.i.d.
3. Albuterol 2.5 mg plus Atrovent 500 mg via nebulizer q3h.
4. K-Dur 20 mEq b.i.d.
5. Aldactone 25 mg b.i.d.
6. Lasix 80 mg q. a.m. and noon
7. Flovent 220 4 puffs b.i.d. with aerochamber
8. Biaxin 250 mg b.i.d. times 3 days
9. Accolate 20 mg b.i.d.
10. Effexor XR 75 mg q.i.d. for depression

Diet: no added salt. Activity as tolerated.

Plan: She will follow up in my office in 10 days.
Case Study 29

History and Physical

DATE: 1/13/2015

CHIEF COMPLAINT: Swelling, redness, and heat of the left lower extremity.

HISTORY OF PRESENT ILLNESS:
Patient was seen in my office for swelling, erythema, and heat of the left lower extremity and started on oral antibiotics and diuretics as an outpatient. She has not responded to outpatient treatment, therefore, is admitted for inpatient therapy.

PAST MEDICAL HISTORY:
Surgeries include thyroidectomy, total hip replacement, and appendectomy. She also has severe COPD, hypothyroidism, peptic ulcer disease, diverticulosis, coronary artery disease, and mild congestive heart failure.

MEDICATIONS:
Current medications include Synthroid 0.125 mg q.i.d., Imdur 60 mg one-half tablet q.i.d., Azmacort 2 puffs q.i.d., potassium chloride 10 mEq t.i.d., Aldactone 25 mg b.i.d., Lasix 80 mg b.i.d., Colace 100 mg b.i.d., Accolate 20 mg b.i.d., albuterol 2.5 mg plus Atrovent 500 mcg nebulizer q3h.

ALLERGIES: Iodine.

FAMILY HISTORY: Noncontributory.

SOCIAL HISTORY: Previous smoker, no tobacco currently. No alcohol.

REVIEW OF SYSTEMS:
History of gastroesophageal reflux disease, peptic ulcer disease, and osteoarthritis.

PHYSICAL EXAMINATION:
VITAL SIGNS: Blood pressure 168/70, pulse 96, temperature 99.5, respirations 30. She is wheezing and appears dyspneic.

HEENT: Unremarkable.

NECK: Thyroidectomy scar, carotids 2+. No JVD.

CHEST: Wheezing bilaterally.

CARDIOVASCULAR: Regular rate and rhythm.

ABDOMEN: Benign.

EXTREMITIES: Pitting edema both lower extremities, left greater than right. Left anterior shin is hot, red, and indurated.

NEUROLOGIC: Unremarkable.
Case Study 29

History and Physical

Continued:

LABORATORY DATA:

ASSESSMENT:
1. Cellulitis, left lower extremity
2. Acute exacerbation of COPD
3. Coronary artery disease
4. Hypothyroidism
5. Degenerative joint disease
6. Gastroesophageal reflux disease

PLAN:
Admit for intravenous antibiotics, diuresis, and pulmonary rehab.
Case Study 29

Progress Notes:

1/13: Admit Note: 86-year-old female was seen in my office 1 week ago with recurrent cellulitis of her left foot. She was placed on antibiotics and diuretics; however, has had no response to outpatient therapy. She is now admitted for aggressive treatment.

1/14: S: Complains only of leg pain and SOB.
   O: Afebrile, vital signs stable, wheezing with minimal exertion.
   A: Leg looks better, less redness. COPD is severe, will probably require home O₂.
   P: Continue with present treatment.

1/15: S: Feeling much better, able to ambulate some but easily tires.
   O: Labs within normal limits, vitals remain stable, still with SOB and wheezing on exertion.
   A: Leg has responded well to IV medications.
   P: DC IV and start on p.o. Biaxin.

1/16: S: Patient desires discharge.
   O: Afebrile, vital signs stable.
   A: Leg looks much better.
   P: Discharge patient.

Orders:

1/13: 1. Admit patient to service of Sarah Stamper, MD.
   2. IV Lasix and Claforan.
   3. Respiratory treatments.
   4. WBC, CBC, EKG, CXR.

1/14: Continue current treatment regime.

1/15: 1. Increase ambulation.
   2. DC IV fluids.
   3. Biaxin 500 mg p.o. twice daily.

1/16: Discharge patient with home health care.
Case Study 29

Answer Sheet

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Case Study 30

Inpatient Face Sheet

Admit Date: 1/10/2015
Discharge Date: 1/13/2015
Sex: Female
Age: 79
Disposition: ACLF

Admitting Diagnoses:
1. Syncope
2. Hypertension
3. Chronic obstructive pulmonary disease
4. Hyperlipidemia
5. Congestive heart failure

Discharge Diagnoses:
1. Syncope, undetermined etiology
2. Chronic obstructive pulmonary disease
3. Congestive heart failure
4. Hypertension
5. Hyperlipidemia
Case Study 30

Discharge Summary

ADMITTED: 1/10/2015

DISCHARGED: 1/13/2015

DISCHARGE DIAGNOSES:
1. Syncope, undetermined etiology
2. Malnourishment
3. CHF
4. COPD
5. Hypertension
6. Hyperlipidemia

PROCEDURES: None

HISTORY OF PRESENT ILLNESS:
Patient presented to the emergency department (initial encounter) with complaint of weakness and feeling of passing out for 2 days duration. Patient was admitted to telemetry to rule out cardiac origin of syncope. Patient is also under current treatment for COPD, CHF, hypertension, and hyperlipidemia.

HOSPITAL COURSE:
Patient was continued on home medications for treatment of chronic illnesses as documented above. Lab values were within normal limits with the exception of low protein and albumin, indicative of mild malnourishment. In addition, the lipids were elevated. Patient was started on Ensure to address the malnourishment, and Pravacol was increased to 40 mg per day to bring the lipids under control. EKG and ECHO were insignificant in determining a cause of the syncope. The patient’s hypertension, COPD, and CHF remained under control while the patient was in the hospital. In light of not finding a cause of the syncope and the patient’s weakened state from the malnourishment, it was recommended that she enter an ACLF temporarily until her strength returned and she was able to return to her own home. She was in agreement with this, and arrangements were made for discharge to an ACLF. She is to follow a high-protein, low-fat diet and continue with ensure. Activity as tolerated.
Case Study 30

History and Physical

DATE: 1/10/2015

CHIEF COMPLAINT: Weakness and syncope.

HISTORY OF PRESENT ILLNESS:
This 79-year-old woman presented to the emergency room with complaints of weakness and syncope. She was accompanied by a friend who provided most of the current history. The friend states that the patient has had several episodes of “passing out” in the last 2 days. The patient has not fallen during these episodes so there has been no injury as a result of these syncopal episodes.

PAST MEDICAL HISTORY:
Significant for COPD for which she uses inhalers and nebulizer treatment. Also is treated for hypertension, CHF, and high cholesterol. Patient has had a hysterectomy and cholecystectomy.

FAMILY HISTORY:
Mother deceased at 82 years of age with a myocardial infarction. Father deceased at 45 due to coal miner’s disease. Patient has no siblings.

SOCIAL HISTORY: 100 pack/year smoking history, quit in 1995. No alcohol use.

MEDICATIONS: Lasix, Pravacol, potassium, and Cardizem.

ALLERGIES: None known.

PHYSICAL EXAMINATION: Blood pressure 110/75, pulse 88, respirations 18, temperature 98.2. Patient appears malnourished.

REVIEW OF SYSTEMS:
HEENT: Pupils equal and reactive to light. Pale conjunctiva. Moist mucous membranes.
NECK: Supple without masses.
LUNGS: Decreased breath sounds.
HEART: Regular rate and rhythm.
ADOMEN: Soft, nontender. Bowel sounds present.
EXTREMITIES: No cyanosis or clubbing.

IMPRESSION:
1. Syncope, etiology to be determined
2. Hypertension
3. COPD
4. Hyperlipidemia
5. CHF

PLAN:
1. Admit to telemetry.
2. Continue with home meds.
Case Study 30

Progress Notes:

1/10: Admit Note: Patient admitted via emergency room to telemetry for syncope, undetermined etiology. Patient to continue with home meds for CHF, COPD, hypertension, and hyperlipidemia.

1/11: S: No syncope while here.
O: EKG showed sinus rhythm with RBBB. ECHO WNL. Chest x-ray, no CHF, known COPD. Hypertension under control. Vital signs good. Chem profile significant for low protein and albumin with HDL of 281.
A: No cardiac reason for syncope. Patient is malnourished.
P: Continue with current treatment. Add Ensure to diet as a supplement.

1/12: S: No complaints. No further syncopal episodes.
O: Rhythm remains unchanged. Condition stable.
A: Repeat labs within normal limits, except for protein and albumin, which are still low.
P: Case management to arrange transfer to ACLF until patient can return home.

1/13: Discharge Note: No cardiac or chemical explanation for syncope. Patient to be discharged to an ACLF until she can return to her own home. Continue with dietary supplement in light of mild malnourishment.

Orders:

1/10:  1. Admit patient to service of Dr. James Mitchell, per Dr. Lyle Douglas, emergency room physician.
       2. Place patient on telemetry.
       3. Chem profile, CBC.
       4. Continue with patient’s home medications.
       5. EKG, chest x-ray, ECHO.

1/11:  1. Repeat labs.
       2. Provide patient with Ensure.
       3. Case management to assist with discharge plans.

1/12:  1. Discontinue telemetry.
       2. Arrange transfer to ACLF tomorrow.

1/13: Discharge today to ACLF.
### Case Study 30

**Answer Sheet**

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Case Study 31

Inpatient Face Sheet

Admit Date: 1/01/2015
Discharge Date: 1/13/2015
Age: 79
Sex: Male
Disposition: Home with home health care

Admission Diagnoses:
1. Acute bronchial asthma in exacerbation
2. Hypoxemia, hypercapnia
3. Suspected chronic obstructive pulmonary disease
4. Rule out pulmonary embolism
5. Hypertension
6. Hyperlipidemia

Discharge Diagnoses:
1. Acute bronchial asthma with acute exacerbation
2. Tracheobronchitis
3. Chronic hypoxemia
4. Suspect underlying chronic obstructive pulmonary disease
5. History of hypertension
6. Hyperlipidemia

Procedures Performed:
1. Bronchoscopy with biopsies and lavage
Case Study 31

Discharge Summary

ADMITTED: 1/01/2015
DISCHARGED: 1/13/2015

DISCHARGE DIAGNOSES:
1. Acute bronchial asthma with acute exacerbation
2. Tracheobronchitis
3. Chronic hypoxemia
4. Suspect underlying chronic obstructive pulmonary disease
5. History of hypertension
6. Hyperlipidemia

ADMITTING DIAGNOSES:
1. Acute bronchial asthma in exacerbation
2. Hypoxemia, hypercapnia
3. Suspected chronic obstructive pulmonary disease
4. Rule out pulmonary embolism
5. Hypertension
6. Hyperlipidemia

PROCEDURE:
1. Bronchoscopy with lavage and biopsy

HISTORY OF PRESENT ILLNESS:
This is a 79-year-old male patient with above-mentioned medical problems who now presents with increasing shortness of breath, cough, wheezing, and respiratory distress. He has been on multiple bronchodilators and inhaled steroids, including Flovent, nebulizer, theophylline, and a small dose of prednisone.

HOSPITAL COURSE:
This patient was admitted with increasing shortness of breath. He was not responding to outpatient medical therapy. He was placed on albuterol nebulized respiratory treatment and started on a short course of pulse intravenous steroids, given mucolytics, expectorants, and continued on theophylline. He was cultured and placed on intravenous Claforan initially, empirically; he was otherwise continued on treatment for hypertension. At this initial encounter, a therapeutic bronchoscopy was performed with evidence of thick, purulent mucous plugs widespread on both sides, some narrowing of the left lower lobe bronchus also noted with some inflammation. Biopsies were negative for malignancy. He was continued on Mucomyst at this point, nebulized respiratory treatments, chest physiotherapy, and intravenous Solu-Medrol.

Following several days of aggressive treatment, he started to improve and was less short of breath, bronchospasm was resolving, and was discharged on January 13.
Case Study 31

Discharge Summary

Continued:

PERTINENT EXAM: Audible wheezing, coughed continuously, tachycardic, tachypneic, afebrile.

VITAL SIGNS: Blood pressure stable.

HEENT: Revealed postnasal drip.

NECK: No jugular venous distention.

LUNGS: Diffuse wheezing, rhonchi and rales.

HEART: Regular.

ABDOMEN: Soft.

EXTREMITIES: No edema.

REVIEW OF LABORATORY DATA:
The bronchoscopy cytology revealed no malignancy. The arterial blood gases on room air: pH 7.48, pCO₂ 36, pO₂ 56, bicarb 26.4, and saturation 92.3%. Complete blood count: white blood cell count 9,800. Hemoglobin 15, hematocrit 47.1, and platelet count normal. Follow-up complete blood count remained stable. Chemistries—blood urea nitrogen 17, creatinine 1.4. Troponin I normal on a serial basis. Albumin 2.4 to 3.3. Liver functions normal. Theophylline level 19.2. Urinalysis: yellow and clear; microscopic blood noted, protein negative, nitrite negative, leukocyte esterase a small amount detected. Sputum revealed Candida. Urine culture: no growth. Sputum for acid-fast bacilli: test still pending at this time although smears were negative. The chest revealed a new hazy opacity of the left mid lung, in the lower lung area, possibly fusion or atelectasis. This persisted on follow-up.

Electrocardiogram: sinus rhythm, sinus tachycardia. While on telemetry the patient was in sinus rhythm.

MEDICATIONS ON DISCHARGE:
1. Prednisone 30 mg daily for 4 days, then 20 mg daily for 4 days, then 10 mg daily
2. Flovent 220 mcg three puffs twice daily
3. Albuterol treatments four times daily
4. Norvasc 5 mg daily
5. Lasix 40 mg half tablet daily
6. Potassium 10 mEq daily
7. Nasonex spray two puffs daily
8. Theophylline 200 mg twice daily

ACIVITY: As tolerated.
Case Study 31

History and Physical

ADMISSION DATE:  1/01/2015

CHIEF COMPLAINT: Shortness of breath, wheezing, cough, and chest congestion.

HISTORY OF PRESENT ILLNESS:
This is a 79-year-old male with multiple admissions for respiratory problems and exacerbation of asthma. Presented to the emergency room because of increasing shortness of breath, cough, wheezing, and respiratory distress. Apparently he has been on multiple bronchodilators and inhaled steroids, including Flovent, nebulizer, theophylline, and a small dose of prednisone a day. In spite of the outpatient treatment, his symptoms continued to worsen. He was admitted to the hospital for further treatment.

PAST MEDICAL HISTORY:
Past medical history is positive for long-standing bronchial asthma with chronic exacerbation, steroid-dependent asthma. He also had history of tracheobronchitis, hypertension, and hyperlipidemia.

MEDICATIONS AT HOME:
Flovent 220 micrograms two puffs twice a day, but he is not using regularly. Nebulizer four times a day, Norvasc 5 mg once a day, Lasix 40 mg ½ tablet once a day, potassium 10 mEq once a day, calcium t.i.d., theophylline 200 mg b.i.d., and prednisone 5 mg once a day.

ALLERGIES: None.

SOCIAL HISTORY: Does not smoke. Never smoked.

REVIEW OF SYSTEMS:
HEENT: Revealed postnasal drip.
NECK: No jugular venous distension.
LUNGS: Bilateral diffuse wheezing, rhonchi, and rales.
HEART: Regular rhythm.
ABDOMEN: Soft.
EXTREMITIES: No edema.
GASTROINTESTINAL: No gastritis, gastroesophageal reflux, occasional indigestion, no ulcer.
RESPIRATORY: As mentioned in the history.
CARDIAC: History of hypertension, but no history of angina, coronary artery disease. Does not have any chest pain. He had an echocardiogram in 2001, which was normal with ejection fraction of 60%.
MUSCULOSKELETAL: Negative.
NEUROLOGIC: Negative for stroke, transient ischemic attack, headache, dizziness, or syncope.
GENITOURINARY: Negative. The rest of review of systems is negative.
Case Study 31

History and Physical

Continued:

PHYSICAL EXAMINATION:
Elderly male who is in acute distress with audible wheeze. He coughs continuously. He is tachycardiac, tachypneic, afebrile. Vitals stable otherwise.

The labs, x-rays, and so on, were reviewed.

IMPRESSION:
1. Acute bronchial asthma and exacerbation.
2. Severe hypoxemia, hypercapnia. Rule out due to chronic obstructive pulmonary disease, bronchospasm. Rule out other causes, such as pulmonary embolism.

PLAN: Will give IV steroids, IV antibiotics, nebulizer treatment, and oxygen.
    Get a spiral CT scan to rule out pulmonary emboli.
    Continue other treatment, and will follow him closely.
Case Study 31

Procedure Report

DATE: 1/02/2015
ENDOSCOPIST: Dr. Brandon Douglas
PROCEDURE: Bronchoscopy with diagnostic biopsy
INDICATION: Left lower lobe collapse, due to mucous plug
ANESTHESIA: Dr. Jeffrey Cottrell

DESCRIPTION OF PROCEDURE:
After the anesthesiologist anesthetized the patient, the Olympus bronchoscope was introduced through the bite block into the oral cavity. The upper airway was seen and was unremarkable. Cords were sprayed with Xylocaine. The scope was passed through the cords into the trachea, which was free of lesion. Carina was sharp. The scope was passed into the right mid stem bronchus. The upper lobe and middle lobe segments were seen. They are remarkable for thick purulent mucous plugging of all the bronchial segments. Aggressive lavage with saline and Mucomyst were done. In spite of that, mucous plugs were quite thick, and it required manual removal of the mucous plugs through the scope. Subsequently the scope was withdrawn back to the left main stem, and left upper lobe, lingual lobe, and subsegments were seen. They were also remarkable for severe mucous plugs, which were removed manually. After complete evacuation of mucous plugs was done, bronchial segments were visualized again, and there was some narrowing of left lower segment with some inflamed, swollen mucosa. Diagnostic biopsies were done from that segment. Bronchial washings were done and sent for cytology and culture.

The patient tolerated the procedure well.

FINDINGS: Thick, purulent mucous pluggings were widespread on both sides. There was some narrowing of left lower lobe bronchus with inflamed, swollen mucosa with smooth margin.

SPECIMENS: Biopsies were done from left lobe bronchus. Washing was done. Bronchoscopic lavage was done using saline and Mucomyst, and all the mucous plugs were removed.
Case Study 31

Pathology Report

DATE: 1/02/2015
SPECIMEN TYPE: CYTO

SURGICAL PATHOLOGY/CYTOPATHOLOGY REPORT

PRE-OP DIAGNOSIS: Left lower lobe collapse
Inflamed swollen bronchial mucosa left lower lobe

POST-OP DIAGNOSIS: Left lower lobe collapse
Inflamed swollen bronchial mucosa left lower lobe

SPECIMEN(S)
BRONCHIAL WASHING MATERIAL:

GROSS DESCRIPTION:
Received 8 cc of hemorrhagic fluid in the laboratory. Two smears and 1 cell block are prepared for cytological evaluation.

MICROSCOPIC DESCRIPTION:
Microscopic examination of the specimen reveals groups of and single epithelial cells that appear poorly preserved, displaying nuclear enlargement, hyperchromasia, increased N/C bronchial columnar, metaplastic, and reserve cells: pulmonary macrophages, mixed inflammatory cells, necrotic debris, and fungal elements.

CYTOPATHOLOGICAL DIAGNOSIS:

BRONCHIAL WASHING:
Poorly preserved dysplastic epithelial cells present.
Candida species identified.
Case Study 31

SURGICAL PATHOLOGY/CYTOPATHOLOGY REPORT

PRE-OP DIAGNOSIS: Left lower lobe collapse: Inflamed swollen bronchial mucosa left lower lobe.

POST-OP DIAGNOSIS: Left lower lobe collapse: Inflamed swollen bronchial mucosa left lower lobe.

SPECIMEN(S):
Lung, left lower lobe–biopsy × 4

GROSS DESCRIPTION:
The specimen consists of four fragments of tan tissue ranging from 0.1 up to 0.6 cm in greatest dimension. Entirely submitted.

MICROSCOPIC DIAGNOSIS:
BIOPSY OF LEFT LOWER LOBE: Mild nonspecific chronic bronchitis with hypertrophy of the submucosal glands and thickening of the subepithelial basement membrane.
No tumor present.

FINAL DIAGNOSIS:
BIOPSY OF LEFT LOWER LOBE:
Minute detached fragment of dysplastic epithelium.
Mild nonspecific chronic bronchitis with hypertrophy of submucosal glands and thickened subepithelial basement membrane.
# Case Study 31

## Answer Sheet

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Case Study 32

Inpatient Face Sheet

ADMIT DATE: 01/02/2015
DISCHARGE DATE: 01/10/2015
AGE: 47
SEX: M
DISPOSITION: Home

ADMISSION DIAGNOSES:
1. Low back pain
2. L5-S1 radiculopathy

DISCHARGE DIAGNOSIS:
1. Herniated nucleus pulposus right-sided at L5-S1

OPERATION/PROCEDURE:
1. Lumbar laminectomy at L5 and S1
2. Right-sided L5-S1 micro-diskectomy
3. Use of operating microscope
Case Study 32

History and Physical

ADMISSION DATE: 01/02/2015

REASON FOR ADMISSION: The patient is a 47-year-old gentleman who presented with severe back pain.

HISTORY OF PRESENT ILLNESS:
The patient is a 47-year-old gentleman seen in my office in a severe state of pain. It was suspected that the patient had radiculopathy. The patient was sent for a MRI. The radiologist reported a very large disk herniation with right-sided disk protrusion and early extrusion of the disk material at L5-S1 with compression of the thecal sac.

MEDICATIONS PRIOR TO ADMISSION:
The patient’s medications prior to admission included Tylenol #3, Decadron, and Vicodin.

ALLERGIES: The patient has no known allergies.

SOCIAL HISTORY:
The patient is married and lives with his wife. The patient has a history of smoking one pack of cigarettes per day. The patient has a history of drinking alcoholic beverages occasionally.

REVIEW OF SYSTEMS:
The patient denied a history of chest pain. The patient denied a history of chest pressure. The patient denied a history of chest tightness. The patient denied a history of difficulty breathing.

PHYSICAL EXAMINATION:
VITAL SIGNS: The patient’s vital signs on admission were stable.
NECK: The neck was supple. There was no jugular venous distention. There were no carotid bruits.
LUNGS: The lungs were clear to auscultation and percussion. There were no signs of consolidation.
HEART: The heart was normal.
ABDOMEN: The abdomen was soft and nontender. The bowel sounds were positive.
EXTREMITIES: The examination of the extremities was negative for cyanosis, clubbing, or edema.
NEUROLOGICAL: The cranial nerves II through XII appeared to be intact. The tone was normal. The power was five by five in the upper extremities. The power was decreased in the right lower extremity secondary to maybe being in pain. The sensation on the right side revealed only one plus at the knee and ankle jerks. The straight leg raising was positive.

PLAN: Consultation with neurology and surgical consultation will be requested.
Case Study 32

Consultation

REQUESTING PHYSICIAN: Dr. Rosie Wags
DATE: 01/02/2015
CONSULTING PHYSICIAN: Dr. Zachary Service
CHIEF COMPLAINT: Right lower extremity pain

HISTORY OF PRESENT ILLNESS: This is a 47-year-old gentleman who has a past medical history significant for bulging disk at L5-L1. The patient was having this pain and was ultimately relieved with medication as well as chiropractic manipulation. The patient had magnetic resonance imaging done yesterday, which showed he had a bulging disk at L5-S1 on the right side. At the time of the examination, the patient is awake, alert, and oriented x 4. He denied any lower extremity weakness but complained of right lower extremity pain at the L5-S1 nerve root distribution. He denied any bowel or bladder dysfunction.

PAST MEDICAL HISTORY: No significant past medical history.

MEDICATIONS: Vicodin, Tylenol #3, Soma, Decadron.

SOCIAL HISTORY: Smokes one pack of cigarettes per day. Denies any alcohol use.

REVIEW OF SYSTEMS: Completely reviewed and was negative.

PHYSICAL EXAMINATION: This is a 47-year-old gentleman lying in bed in no acute distress.

HEAD: Norma cephalic, traumatic.
ENT: Within normal limits.
NECK: Supple. No bruits are auscultated. No adenopathy.
CHEST: Clear to auscultation.
HEART: Regular rate and rhythm. No murmurs, rubs, or gallops.
ABDOMEN: Positive bowel sounds, nontender, no distended. No organomegaly.
EXTREMITIES: No cyanosis, edema, or clubbing.
NEUROLOGIC: The patient is alert and oriented x 3. Cranial nerves II–XII are grossly intact. Pupils are equal, round, and react to light and accommodation. Extraocular movements are intact. Cerebellar function is intact. Motor/sensory exam is intact.

There is negative Babinski. No pronator drift. Strength is 5/5 in all extremities in all ranges of motion. There was a positive straight-leg raise on the right. There was evidence of a decreased reflex knee jerk on the right, which was 1+. MRI scan of the lumbar spine revealed L5-S1 right-sided disk herniation.

IMPRESSION: Low back pain. L5-S1 radiculopathy.

RECOMMENDATIONS:
1. The patient is stable.
2. Continue current care.
3. Suggest an epidural steroid injection as well as physical therapy at this time.
Case Study 32

Consultation

REQUESTING PHYSICIAN:  Dr. Rosie Wags
DATE: 01/02/2015
CONSULTING PHYSICIAN:  Dr. Liza Gaige

REASON FOR CONSULTATION:
The patient is a 47-year-old gentleman who presented with lower back pain.

HISTORY OF PRESENT ILLNESS:
The patient is a 47-year-old gentleman whose past medical history was significant for a history of a bulging disk in 1994 at L5 and S1. He subsequently had a MRI that revealed L5 and S1, herniated disk. The patient was then admitted to the hospital for further management. A neurological consultation was then requested. At this time the patient is still having lower back pain with some pain radiating to the right lower extremity, all the way to the toes. The patient denied a history of chest pain. The patient denied a history of shortness of breath. There is no history of nausea or vomiting. The patient denied a history of dysphagia.

PAST MEDICAL AND SURGICAL HISTORY:
The patient has a history of a fall with lower back pain.

MEDICATIONS PRIOR TO ADMISSION:
The patient’s medications prior to admission included Vicodin and Tylenol #3 and Soma and Decadron.

ALLERGIES: The patient has no known allergies.

SOCIAL HISTORY:
The patient has a history of smoking approximately one pack of cigarettes per day. The patient has a history of drinking alcoholic beverages occasionally.

PHYSICAL EXAMINATION:
GENERAL APPEARANCE: On examination the patient is awake, alert, and oriented times three.

NEUROLOGICAL: Extraocular movements were intact. Pupils are equal, round, and reactive to light and accommodation. There was no nystagmus. There were no carotid bruits. The visual fields were within normal limits. There was no Kernig sign. There was no Brudzinski sign. The cranial nerves II through XII appeared to be intact. The tongue was midline. The corneal reflex was intact. The gag reflex was intact. Motor system revealed tone was normal. Power was five by five in left upper extremity and the right upper extremity. The power in the lower extremities was five by five distally but three plus to four by five because of the severe pain proximally. The sensory examination revealed normal pin prick, touch, and temperature. Normal position. Normal vibration. The reflexes were plus one at the right knee jerk and ankle jerk. The straight leg raising was a stronger positive in the right lower extremity than in the left lower extremity. The patient can walk but with a limp. The patient cannot walk on heel and tiptoes.
Case Study 32

Consultation

Continued:

LABORATORY INVESTIGATIONS:
The magnetic resonance imaging of the lumbar spine revealed L5-S1 central and right-side herniated disk.

IMPRESSION:
1. Severe lower back pain.
2. Severe radicular pain mainly of the right lower extremity secondary to herniated disk.
3. L5-S1 radiculopathy.
4. Straight leg raising positive.
5. Right knee jerk plus one, decreased compared to the left knee jerk.

RECOMMENDATION:
1. Immediate lumbar laminectomy
Case Study 32

Operative Report

DATE: 01/03/2015
SURGEON: Dr. Liza Gaige
PREOPERATIVE DIAGNOSIS:

1. Herniated nucleus pulposus right sided at L5-S1.

POSTOPERATIVE DIAGNOSIS:

1. Herniated nucleus pulposus right sided at L5-S1.

OPERATION/PROCEDURE:

Lumbar laminectomy at L5 and S1, right sided.
L5-S1 diskectomy.

ASSISTANT: Dr. Jeff Cottrell

COMPLICATIONS: There were no complications.

ANESTHESIA: General endotracheal anesthesia.

ESTIMATED BLOOD LOSS: Less than 50 cc.

INDICATIONS FOR THE PROCEDURE:
This is a young gentleman with intractable right sciatica of 8 years duration who has failed conservative treatment. The patient is now being taken to surgery for decompression and removal of the disk. The risks of the surgery and the limitations of the surgery were explained to the patient and the patient’s wife at length. They understand the risks and wish to proceed with procedure.

DESCRIPTION OF THE OPERATION:
Intravenous lines were started. Thigh-high TED and compression boots were placed on the lower extremities. The patient received general endotracheal anesthesia. The patient was placed in the prone position resting on the Wilson frame. All the pressure points were appropriately padded. The area in the lumbar spine was shaved, prepped, and draped in the usual sterile manner. An incision was made in the spinous process of L5 to S1 inclusive using the subperiosteal dissection. The lamina of right L5 and S1 were exposed. Intraoperative x-ray confirmed our level. Using the Anspach drill we thinned out the lamina arch to the level of the ligamentum flavum. We then proceeded to do the laminotomy of L5 on the right side of the inferior two-thirds and superior two-thirds of S1. This exposed the nerve root going out. The nerve root was retracted slightly medially. There was a large anterior compression of the nerve root pushing the nerve root posteriorly. Slightly moving the nerve root medially, we exposed the big rent in the angelus fibrosis, entered this big defect, and the diskectomy was performed.
Case Study 32

Operative Report

Continued:

There was a large disk herniation that had broken through the angelus and into the posterior part of the vertebral body of L5-S1. Once the diskectomy was performed, the wound was irrigated thoroughly using antibiotic solution. With a small nerve hook we went ahead and looked for any residual fragments, and there were none. The wound was then irrigated thoroughly using a copious amount of antibiotic solution. The wound was closed in serial layers using #0-Vicryl in an interrupted fashion on the muscle and fascial layers. We used #2-0 Vicryl sutures to close the subcutaneous tissues. We used #2-0 Nurolon vertical and multilocking sutures for the skin. All the sponge and needle counts were reported correct at the end of the procedure. The patient tolerated the procedure well. The patient was extubated in the operating room and was taken to the recovery room in stable condition moving all extremities.
SURGICAL PATHOLOGY REPORT

ACUTE HERNIATED DISK L5-S1
SPECIMENS(S) DISK NOS.—L5-S1

GROSS DESCRIPTION:
The specimen consists of multiple irregular fragments of fibrocartilaginous tissue weighing approximately 5 g in aggregate.

Representative sections are submitted in a single cassette for decalcification and processing.

MICROSCOPIC DIAGNOSIS:
Degenerated fibrocartilaginous tissue consistent with intervertebral disk. Clinically herniated disk L5-S1.
## Case Study 32

### Answer Sheet

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