

PATH 370: SIGNATURE ASSIGNMENT – SP2 2018

Comprehensive Case Study on COPD, Heart Failure, Hypertension and Diabetes Mellitus

M.K. is a 45 year old female; measuring 5'5" and weighs 225 lbs. M.K. has a history of smoking about 22 years along with a poor diet. She has a history of Type II diabetes mellitus along with primary hypertension. M.K. has recently been diagnosed with chronic bronchitis. Her current symptoms include chronic cough, more severe in the mornings with sputum, light-headedness, distended neck veins, excessive peripheral edema, and increase urination at night. Her current medications include Lotensin and Lasix for the hypertension along with Glucophage for the Type II diabetes mellitus. The following are lab findings that are pertinent to this case:

Vitals	
BP	158/98 mm Hg
CBC	
Hematocrit	57%
Glycosylated hemoglobin (HbA1c)	7.3 %
Arterial Blood Gas Assessment	
PaCO ₂	52 mm Hg
PaO ₂	48 mm Hg
Lipid Panel	
Cholesterol	242 mg/dL
HDL	32 mg/dL
LDL	173 mg/dL
Triglycerides	184 mg/dL

There are 3 different components to this assignment:

1. Table of Normal Values (15 pts)
2. Treatment Options and All Questions Answered (30 pts)
3. Quiz on MK's case (100 pts)

You must submit #1 and #2 above online as a single document. This document must include the following:

Page 1 – Title page (APA format)

Page 2 – Table of Normal Values (see below)

Pages 3-4 – Treatment Options (see below)

Page 5 – Reference Section (APA format)

Pages 6+ - Answers to all questions (no references required)

Your assignment should be well written, without spelling or grammatical errors. It should be organized, in 12 pt font (Times New Roman) with 1" margins.

References (in-text and in a references section on a separate page at the end of your assignment) must be in APA format. You must use reputable sources for your information (textbooks, journals, .gov websites, CDC, Mayo Clinic, university websites, etc.) - NO WebMD, Wikipedia, newspapers, magazines, blogs, facebook posts, Buzzfeed, Huffington Post, etc. If you are in doubt if it is appropriate – ASK ME. You must have a minimum of 3 references with at least one non-internet source

YOU MUST CITE YOUR MATERIAL USING IN-TEXT CITATIONS AND PROVIDE A REFERENCE SECTION AT THE END OF YOUR ASSIGNMENT – PLAGIARISM WILL NOT BE TOLERATED AND MAY RESULT IN A GRADE OF ZERO FOR THE ASSIGNMENT AND SENT TO THE CONDUCT COMMITTEE.

PART 1: TABLE OF NORMAL VALUES: (15 pts)

1. Create a table with the normal values/ranges for each lab value provided. The ranges must be CORRECT and APPROPRIATE for MK's patient profile (gender, age, etc.).
2. Use the same units as those provided in the case study, and provide a reference for EACH lab value.
3. Your table must have a descriptive title.

PART 2: TREATMENT OPTIONS (20 pts) AND ALL QUESTIONS ANSWERED (10 pts)

A. Treatment Options: Answer the following questions below in paragraph form using full sentences regarding the treatment for MK's conditions.

- 1) List 5 treatments and/or recommendations would be appropriate for M.K.'s chronic bronchitis. Include both pharmacological and non-pharmacological options in your answer. Explain why you chose the particular treatments/recommendations you selected.
- 2) Explain the function (class/type of medication) and rationale (how do they each work specifically in the body) for her current hypertension medications (Lasix and Lotensin).
- 3) What type of medication could be given to help manage her lipid levels? Explain how this class of medication works in the body.
- 4) Name 2 other recommendations that M.K. could use to help manage her lipid levels, and explain how each would work.
- 5) Based on the normal range for HbA1c value in patients already diagnosed with diabetes, is M.K.'s diabetes well controlled? Explain her current medical status with her diabetes considering her lifestyle and glucophage.

B. All Questions Answered: Answer each of the following questions completely to prepare for the in-class quiz (worth 100 pts in class during week 6) on MK's case.

Chronic Bronchitis:

- 1) What clinical findings correlate with M.K.'s chronic bronchitis? Explain why each clinical finding would occur in a patient with chronic bronchitis.

Congestive Heart Failure:

- 2) Which type of congestive heart failure (left, right, or biventricular) is suspected with M.K.? What clinical findings does she exhibit to indicate this type of heart failure?
- 3) Explain the pathogenesis of how this type of heart failure develops. Include forward and backward effects in your answer, along with changes to the heart itself.

Hypertension:

- 4) According to the blood pressure value, what stage of hypertension is M. K. experiencing? Use the most current information available for your answer.
- 5) What is the prevalence of hypertension in the U.S. population? Use the most current information available for your answer.
- 6) Explain why M.K.'s blood pressure is still elevated despite taking medication.

Lipid Panel:

- 7) According to the lipid panel, what other conditions is M.K. at risk for developing? Why?
- 8) What additional findings (clinical manifestations, lifestyle, etc.) besides her lipid panel correlate for both hypertension and Type II diabetes mellitus?

HbA1c Interpretation:

- 9) What does HbA1c stand for?
- 10) What does the HbA1c test measure? Over what time frame?
- 11) Why is this test used to monitor diabetics instead of only fasting glucose levels?