

Kim's Crisis

Planning Notes:

- 1) **Teams:** 4-5 students
- 2) **Length:** 2-3 class periods (45-75 minutes each) *Note: Shorter class periods or fewer classes can accomplish the case with a greater homework load*
- 3) **Resources:** Student workbook; Computers/Internet for research

OVERVIEW:

Kim, a 21-year-old college student, is experiencing intense lower abdominal pain. Will the paramedics and emergency room team gather the right information to make a quick and accurate diagnosis to save Kim's life?

GOAL:

Gather a comprehensive SAMPLE history and determine an accurate diagnosis, using objective & subjective information.

Lesson 4.8, focusing on the SAMPLE history will be an important preparation for this case study. Encourage students to use their workbook and notes!

ROLE:

You will play two roles: First, you will act as the paramedic team picking up Kim to transport her to the hospital and taking her SAMPLE history. Second, you will be the Emergency Room team, working together to make a diagnosis for Kim.

OBJECTIVE:

PH4.9: Recognize, gather, and organize subjective and objective data in a complex patient case scenario.

DELIVERABLES:

- 1) SOAP Note
- 2) Presentation of SAMPLE history

ASSESSMENT:

The SOAP note Subjective & Objective section will be evaluated on a rubric, with a specific focus on the SAMPLE history. The presentation of the patient will be evaluated based on comprehensiveness, clarity, and concision.



Case Introduction:

Many of these details may not end up being completely relevant to the specific diagnosis, however solving a mystery like this requires that students are tracking all clues like sleuths, so at first, none should be overlooked!

Kim is a 21-year-old college student who has been in a relationship with her boyfriend, Luke for two years. Kim leads an active life on campus, as the president of the Pre-Nursing Club on campus and a pitcher for the school softball team. She works a part-time job at a local coffee shop as well. Her busy life forces her to drink lots of coffee though, as she rarely gets enough sleep.

Kim had a healthy youth with nothing beyond the usual childhood illnesses. She has had all her routine vaccinations. Her last visit to the doctor was four months ago for a routine physical for participating in athletic involvement, and no abnormalities or illnesses were discovered. Prior to that, she had a yearly gynecological exam and has been taking a hormonal contraceptive, the Pill, for 2.5 years. She was diagnosed and treated for chlamydia in her senior year of high school, a consequence of a sexually active relationship with her previous boyfriend.

Past history of chlamydia is a risk factor for ectopic pregnancy.

About a week ago, Kim started feeling some mild cramps. She wrote them off as no big deal, but in the past few days she has complained to Luke of a growing pain toward the right side of her lower abdomen. Today it got so bad that she was unable to move. As she tried to move to the bathroom she fainted briefly. This was the final straw; she agreed to allow Luke to call 9-1-1 to get some help.

Subjective & Objective:

Based on these symptoms, Kim is experiencing a LATE ectopic pregnancy, as opposed to showing the early signs. Because of the length of time, her level of pain, her vital signs (indicated for students in the SOAP), and fainting, she is likely experiencing some internal bleeding which can be extremely dangerous and requires immediate care. Calling 9-1-1 was the correct move!

Record the information from Kim's story in the SOAP note.

Another important point to emphasize is that excellent health care providers form relationships with patients which involves knowing them (their lifestyle, habits, interests, etc.). Sometimes the subtle details help health care provider see the nuances in their patients' health and notice symptom patterns that may not have struck them had they not had such comprehensive knowledge of their patient.

Use the ad

RED: Indicates details that can be found in the Introduction.
BLUE: Indicates information that can be given to students when they ask (either as Kim's answers to questions (subjective) or results from tests/labs (objective))

| Subjective: | |
|-------------------------------------|--|
| Signs & Symptoms | (see below) |
| Allergies | Peanuts and shellfish |
| Medications | Pill (2.5 years) Daily multivitamin; also took Ibuprofen to reduce pain - 3 doses over 12 hrs) |
| Past medical history | Chlamydia (treated) 4 years ago Routinely exercises, sometimes forgets pill |
| Last oral intake | Can't remember last menstrual cycle |
| Events leading to injury or illness | (see below) |
| Frequency | Constant |
| Associated Symptoms | Lightheaded;dizzy; fainted |
| Radiation | Slight pain in shoulder |
| Character | Throbbing/aching (difficult to describe) |
| Onset | Just under a week ago (unsure of exact date?) |
| Location | lower abdomen; right side (but feels in center of abdomen as well) |
| Duration | n/a (constant) |
| Exacerbating Factors | laying down |
| Relieving Factors | propped up against pillows or standing more comfortable Ibuprofen helped at beginning but not anymore |

Shoulder pain may be caused by free blood reaching the diaphragm (toward the top of the abdominal cavity). Once irritated, the diaphragm can cause referred pain in the shoulder, similar to a heart attack.

From Wikipedia: Patients may be excessively mobile w/ upright posturing, in order to avoid intrapelvic blood to swell further up the abdominal cavity and cause additional pain

| | |
|----------|--|
| S | Mild cramps (1 week); Pain in right side of lower abdomen (2 days) Unable to move (due to pain); fainted (1 hour ago) Small amount of bleeding 4-6 days ago (can't remember exactly) |
| A | hasn't had an allergic reaction in several years & carries EpiPen |
| M | |
| P | Social/Lifestyle: busy--athlete, works part-time, in school, in relationship, active on campus Medical: vaccines up to date, physical (4months ago) was normal |
| L | drinks a lot of coffee Breakfast: small amount of oatmeal (little appetite) |
| E | Lower back pain and cramping (approx 10 days ago) Increasing pain in abdomen; became severe/sharp yesterday; worsening |

Research:

(1) Make hypotheses regarding Kim's diagnosis. (2) Determine the subjective questions and objective data needed. (3) Request information. (4) Add new information to subjective and objective sections.

Hypotheses & Additional Information Needed:

| Hypothesized Diagnosis | Additional Questions and/or Objective Data Needed |
|------------------------|---|
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| Objective: | |
|--------------|--|
| Measurements | 5'6" 21-years-old 135 lb |
| Vital Signs | HR: 112 beats/min Temp: 96.9 deg F RR: 24 breaths/min BP: 80/56 |
| Exam Results | Abdominal exam: Swelling of abdomen Pelvic exam: tenderness upon palpating right fallopian tube & ovary |
| Lab Results | Pregnancy test: elevated levels of HCG Ultrasound: Gestational sac w/ fetal heart in fallopian tube Laparoscopy (surgical): Visual confirmation of ectopic pregnancy |

Do not give students the results of laparoscopy until all other tests are requested; although the situation is an emergency, other tests would most likely be quickly performed, even if surgery was deemed necessary and the patient was on the way to surgery.

Assessment:

Write a short summary of Kim's situation. Complete a differential diagnosis including your top three possible diagnoses. Then make your final diagnosis (claim) and support it with evidence and reasoning.

| Assessment: | |
|-------------------------------|--|
| Summary | <p>Presence of HCG (positive pregnancy test) usually rules out PID, because a pregnancy is rarely seen with an active PID</p> |
| Differential Diagnoses | <ol style="list-style-type: none"> 1. Pelvic Inflammatory Disease (PID) 2. Normal Pregnancy <p>Given pain and bleeding, any problem that is affecting Kim would also be affecting the fetus, so this is a concern.</p> 3. Miscarriage <p>Heavier external bleeding would be likely, but this cannot be ruled out.</p> |
| Final Diagnosis | <p>Claim: Ectopic Pregnancy (specifically a ruptured (late) ectopic pregnancy)</p> <p>Evidence: -Primary: Objective--Ultrasound, Laparoscopy, Pelvic & abdominal exam</p> <p>Reasoning: -Secondary: Subjective--Pain & Objective--Vitals showing that patient was nearing hypovolemic shock (low BP; high pulse & resp. rate--all signs that the body is losing blood (internally) and the heart is going into overdrive to try to compensate</p> |

(OPTIONAL: If time permits.)

Plan:

Create a plan for Kim, using information you research about the treatment and management of her diagnosed illness or disorder.

| Plan: | |
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| <p>Steps of Plan</p> <p><i>(Consider mental, social and physical health; short- and long-term needs, and follow-up care required)</i></p> | <p>Laposcopic surgery will be required and the Fallopian tube will have to be incised to remove the pregnancy or removed</p> <p>Methotrexate (used in ectopic pregnancies for the induction of medical abortions) can be used but surgery is also needed since internal hemorrhaging (bleeding) has already begun since the fallopian tube has ruptured</p> <p>Methotrexate is contraindicated if liver, kidney, or blood disease is present in patient or if embryonic mass is greater than 3.5 cm.</p> |

Patient Presentation:

You are the paramedics bringing Kim into the emergency room. When you arrive, you hand over the patient's SOAP note (including her SAMPLE history), but you also need to present the information to the emergency room team verbally. Assign one (or more) portions of the SAMPLE history to each team member, and prepare to present it out. Your presentation should not be long--being concise and clear is very important, especially in an emergency situation like this. But also be thorough--you do not want to miss any key information that might help the emergency room team.

| PRESENTATION PLANNING | | |
|-----------------------|-------------|-------|
| SAMPLE History | Team Member | Notes |
| S | | |
| A | | |
| M | | |
| P | | |
| L | | |
| E | | |

Rubric:

| PH1.9: Recognize, gather, and organize subjective and objective data in a complex patient case scenario | | | |
|---|---|--|--|
| Needs Improvement | Emerging Mastery | Partial Mastery | Mastery |
| <p>SOAP: Data is missing or very disorganized; SAMPLE history info is missing or very incomplete</p> <p>Presentation: Not concise, clear, or thorough; missing most relevant details; or major misalignment in SAMPLE history</p> | <p>SOAP: Data is somewhat disorganized and lacking in precision, clarity, and accuracy; SAMPLE history info is somewhat incomplete and misaligned</p> <p>Presentation: Not concise, clear, or thorough; includes some relevant details; some misalignment in SAMPLE history</p> | <p>SOAP: Most data is organized and recorded with precision, clarity, and accuracy; SAMPLE history info is nearly complete and mostly aligned</p> <p>Presentation: Concision, clarity, and thoroughness are adequate but could use some improvement; includes most relevant details; aligned to SAMPLE history</p> | <p>SOAP: All data is organized and recorded with precision, clarity, and accuracy; SAMPLE history info is complete and aligned</p> <p>Presentation: Concise, clear, and thorough; includes all relevant details; aligned to SAMPLE history</p> |

Post-Case Wrap-up Questions:**Module 4 Learning Objectives:**

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| Obj 4.1: Distinguish between the terms sex, gender, and sexuality. |
| Obj 4.2: Explain the anatomy & physiology of the male reproductive system. |
| Obj 4.3: Explain the anatomy & physiology of the female reproductive system. |
| Obj 4.4: Describe the events of pregnancy. |
| Obj 4.5: Compare and contrast the benefits of and barriers to practicing abstinence. |
| Obj 4.6: Compare the efficacy of various contraceptive methods |
| Obj 4.7: Identify the symptoms of STIs and their impact on physical, mental, and social health. |

ANSWER THE FOLLOWING QUESTIONS ON A SEPARATE SHEET OF PAPER.

Obj. 4.1: Suppose Kim identifies as bisexual. Explain this self-identification in terms of sex, gender, or sexuality.

Obj. 4.2: After this health scare, Kim and her partner decide that they are serious about a relationship, but do not want children. While they are not rushing into anything, they discuss the possibility of her partner getting a vasectomy in the future. Explain how the vasectomy works, in terms of the male reproductive anatomy and physiology.

Obj. 4.3: Kim is confused about what happened to her. Write an explanation of her diagnosis using the appropriate anatomical terms of the female reproductive system.

Obj. 4.4: Kim asks about what would have happened in a normal pregnancy. Write a short description of the first 9 days of pregnancy, assuming ovulation occurs on Day 0 and the egg is fertilized on Day 1. Be sure to describe fertilization, cell division, and implantation.

Obj. 4.5: Kim decides she wants to be abstinent for the near future. Explain two benefits of abstinence.

Obj. 4.6: Kim decides to start using Depo-Provera injectable birth control. Write a short explanation for Kim about the risks she still faces, even when using Depo, in terms of pregnancy and STIs.

Obj. 4.7: Kim may have had this problem due to untreated Pelvic Inflammatory Disease (PID). Name at least two STIs that could cause PID. For each STI, list its symptoms, possible long-term effects, and type of pathogen that causes it.