Hip Pain Scenario:

A 44-year-old male presents to urgent care with pain in both of his hips. The triage nurse did not report any trauma.

Using the Epi-logical approach, what should be the probable diagnoses?

The clinician should consider all differentials on the list, except Leg-Calve-Perthe and SCFE. The fact that the patient's pain is in both of his hips makes some differentials slightly less likely (fracture, labral tear and avascular necrosis), but further information needs to be gathered before arriving at any conclusions.

How should a clinician address urgent/emergent situations?

The patients' vitals are BP 185/110, HR 104, T 98F, O2sat 100% and BMI 22. The patent appears to be uncomfortable, but he is in no distress, and he rates his pain 10 out of 10.

Based upon this information, the clinician cannot adequately rule out an urgent/emergent situation. The patient's blood pressure and heart rate suggest that he is in some degree of distress, although he is hemodynamically stable. The clinician should consider the following,

a) Contrary to some evidence against relatively severe conditions, such as fracture (there is no trauma), avascular necrosis (the pain is bilateral), or septic arthritis (there is no fever), the patient may have one of these conditions which is causing severe pain and a rise in his heart rate as well as his blood pressure.

b) The patient's rise in heart rate and blood pressure are from the perception of severe pain, although his diagnosis is not serious or life-threatening. The clinician knows that pain is very subjective, and severity varies from one person to another.

c) This patient might have a baseline high blood pressure and heart rate, and the pain might just have contributed to raise these further.

Whatever the situation, this patient does not feel well, and the clinician should keep a high index of suspicion in mind for a life-threatening/serious condition until proven otherwise.

Weighing and Removing Anchor Bias:

The Clinician's Questions	**The Patient's Responses**	**How does this information help with the diagnostic process?**
I am sorry to see that you have so much pain. Where exactly is it?	It's my hips, all the way around my hip joints.	The differentials which cause unilateral pain are less likely.
We will address that for sure, but first let me quickly ask you a couple of questions about your blood pressure.	Sure.	The clinician should get a second blood pressure measurement, and may administer a mild blood pressure lowering agent, and administer an oral/intramuscular analgesic, if applicable.
Is your blood pressure usually high?? Do you take any medicines?	My blood pressure tends to stay high, but it may be not this much. I have a lot of pain today.	No need to lower the blood pressure very fast.

Do you have any headache, chest pain, shortness of breath, or blurry vision?	No, none of that. Just hip pain.	Hypertensive emergency is unlikely.
Ok, while we arrange to give you something for pain. Let's talk about it. You said it's both hips. Where exactly is it?	The patient puts his hands around his hips in C-shapes and he says "both sides hurt."	Anterolateral causes of pain are more likely.
When did this pain start, and was it sudden or a gradual pain?	This has been going on for about a week now, and it just came on all of a sudden.	Acute and subacute causes (femoro-acetabular impingement, labral tear, avascular necrosis, and transient tenosynovitis, except that the patient is too old for transient synovitis) are more likely. Fracture and septic arthritis are less likely. Osteoarthritis is also unlikely.
Do you remember what you were doing at the time when the pain started?	I had just finished a 2-hour drive back home after visiting my mom. I had some pain when I got out of the car, and then it started to hurt bad when I sat on the couch to watch a football game.	Femoro-acetabular impingement is more likely than the rest of the diagnoses under consideration. Patients in this condition can have subacute or chronic pain.
Do you remember doing any activity prior to this that might have injured your hips?	I can't really think of anything. I was just doing routine activities.	Trauma related diagnoses (labral tear, fracture) are unlikely.
How do you describe this pain? Is it sharp or dull?	It's more dull than sharp, but at times I feel that it is sharp.	Neutral.
On a scale of 0 to 10, how bad is the pain?	It is at least a 9 right now.	Because pain is so subjective, the severity of pain helps more with management than with diagnosis.
So far, have you found anything that makes it better or worse?	Nothing is helping. I can't sit, stand, or sleep.	Impingement is just slightly unlikely because usually patients find at least one or two positions which are less comfortable than others.
What are your routine daily activities?	Prior to this pain, I have been going to work 7 days a week. I am basketball coach and am constantly jumping and moving, but I can't do much now.	This does slightly increase the likelihood of athletic groin, but it is very unusual to be bilateral. In addition, the constant nature of pain does not support this diagnosis.

At this point, the clinician is considering femoro-acetabular impingement and transient synovitis more than other diagnoses, although the patient's age is not consistent with transient synovitis. The clinician should ask additional questions to review risk factors and remove anchor bias.		
Do you take any medicines?	I am supposed to be taking a blood pressure medicine, but I am out.	This explains his high blood pressure to some degree.
Do you use any drugs, alcohol, or tobacco?	I do use marijuana, and I have done some cocaine in the past. I smoke a pack of cigarettes daily, and drink socially.	This information does not increase or decrease the likelihood of any diagnosis in particular, except that there is a possibility that while under the influence of drugs and/or alcohol, the patient sustained trauma which might have led to hip labral tear or a pelvic fracture.
Do you have previous medical conditions, surgeries, or hospitalization?	I have been admitted twice for drugs and alcohol, and one time I broke my right arm, but nothing else.	Another point in the favor of the diagnoses above.
Is there a possibility that you might have sustained some trauma this time again, but you do not remember? It is important for us to know.	No, I was totally clear-headed, and was just coming home after visiting my mom.	A traumatic injury is less likely.
In your family, is there a history of sickle cell disease or any disorder of this kind?	I don't really think so, but I am not sure.	Neutral.
At this point, the clinician has sufficient information. Impingement and transient synovitis are most likely. Avascular necrosis and labral tear are somewhat likely, and athletic groin is slightly likely. The clinician can proceed with the physical exam.		
Hip exam	Inspection normal. No signs of trauma, swelling or bony protuberance. Antalgic gait, and the patient needed wheelchair support to ambulate after a few steps. Palpation unremarkable for any point tenderness. Extremely limited range of motion in all directions bilaterally. FABER and FADIR not performed due to the pain. Positive leg roll on both sides.	An underlying serious pathology, such as avascular necrosis is more likely than transient synovitis or impingement. Labral tear and fracture are still somewhat likely due to the patient's severe limitation in ambulation and ROM.

Imaging is ordered, and plain X-ray shows non-specific inflammation around hip joints, without evidence of a fracture or fluid. At this point, an MRI must be ordered due to the lack of a definite diagnosis and the patient's condition.

The MRI shows bilateral avascular necrosis of the hip. This is a complex case because several features pointed against avascular necrosis, such as bi-laterality and the acuteness of the pain, the lack of risk factors for avascular necrosis, such as a history of sickle cell disease or steroid use. However, the severity of the pain and the physical exam findings point toward a serious pathology, and through the process of elimination, avascular necrosis turned out to be the most likely explanation of this patient's symptoms. This is a real case, and the patient did indeed present with bilateral disease affecting both hips within a one-week time frame.