NARRATOR: In this program, Dr. Terry Buttaro, Associate Professor of Practice at Simmons School of Nursing and Health Sciences, discusses the importance of pathopharmacology for the advanced practice nurse. Let's listen as she provides her insights to this course.

TERRY BUTTARO: For all educators in the health professions education, what's really important is that they really understand the importance of advanced pathopharmacology, because we're prescribers. We're using medications every day for patients, and medications have so many drug-drug interactions, food interactions, and no medication's really safe.

I used to think when I was younger that Tylenol was safe, but we know Tylenol's not safe anymore. And there's really nothing that's safe. So you have to know, what does this drug do to the body, and then what does the body do to the drug? And what does the body to the drug if you add another drug on? So I think that that's essential.

And if educators don't understand that, how are out students going to understand it, and how are they going to be prepared in practice to care for patients. Because even though we want to use less drugs, drugs still are an important part of the way we keep people healthy.

Well, I thought when I went to school, because I was an RN initially and had graduated from a diploma program, I think thought I knew pretty much all I needed to know. But it wasn't until I went to school that I realized how little I know. So, in some programs. nursing students don't get a lot of pharmacology. They don't have a lot of experience in their education program about that.
Some do, but it's important, it's essential, that nurses at the bedside understand pharmacology and how drugs work and drug-drug interactions. I think when you're working as a nurse, you think you know how that is, but it's a different level as a prescriber. It's really being much more conscientious about what happens when the patient takes this drug.

How is it absorbed? How is it absorbed when somebody has an intestinal problem I like Crohn's disease or Ulcerative Colitis, or even if they're older, because older patients don't absorb things as well. We know that. I think also, what happens in the liver. What happens in the kidneys?

And older patients, or people with any kind of real disease, they have a problem excreting a lot of drugs. So what does it mean in terms of toxicity potential for the patients? So, it shouldn't be different, but it is a little bit different. It's so important, because you do not want to cause any harm to the patient when you prescribe.

So I think, in that respect, it's more complicated and you need a better understanding of advanced pathopharmacology to really be able to prescribe safely. And safety is really something we always have to keep in mind, because adverse drug events are one of the number one causes of hospitalizations in this country, increased morbidity in this country, particularly in older patients.

So, some tips for students would be, you can't possibly remember everything. You can't. None of us can remember everything we need to know. So I think that for all advanced practice nurses, they really need to, when they get out in practice, really think about having some kind of a handheld device, an electronic device, that will help them actually look up drug-drug interactions really quickly.

But there are some things you do have to memorize. So in terms of categories of medications when you're prescribing, you have to understand that diuretics do certain things to the kidneys, and those certain things involve electrolytes. And you never know how somebody's going to respond. I had a patient once, a young woman actually, who had high blood pressure.
And according to JNC 7, which are the guidelines for treating hypertension, this patient should be started on what they call a thiazide diuretic, hydrochlorothiazide. So I started her on a low dose, 12.5 milligrams on a Friday afternoon. And I said to her, you really need to go and have a blood test within five days after you start this medication, because we never know what's going to happen to somebody.

And this particular, patient I was worried about her potassium, but her sodium came back really low. Normal sodium is over 135 to about 145, and hers came back five days later at 116. Now, if she hadn't gone, or if I hadn't done that, if I hadn't realized what happens with that drug, she could have died.

But as it was, she went and had it, the lab called the office, and the office secretary immediately paged me and said, Terry, what am I supposed to do with this information? And it was interesting, because we had to track this woman down. We knew where she worked, and we had to have them page her and get her and send her right to the hospital.

So it's just essential that you memorize some things. You can't memorize everything, but you have to have a broad understanding. And that's why it's so important to really study this material and learn it, because you're never going to have the time to look up every single thing.