

Studying HIV Antiretroviral Therapy



Combination antiretroviral therapy (ART) has turned HIV infection into a treatable, chronic condition, rather than one that is almost inevitably fatal. As a result, as they age, people with HIV often begin taking other medications to treat medical conditions ranging from heart disease to gastrointestinal problems to cancer. The increased number of medications creates a risk for drug-drug interactions. **Jason Schafer, PharmD**, professor and vice chair of pharmacy practice, is exploring

PharmD and **Aleena Santana, PharmD**—found that significant reductions in the incidence and severity of drug-drug interactions occurred when patients' ART regimens were changed to include a category of drugs known as integrase inhibitors.

In related research, Dr. Schafer—working with then-students **Kaitlin Sassa, PharmD** and **Jackie O'Connor, PharmD**—found that some patients experienced unintentional weight gain when

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combinations of ART drugs that can reduce the number and severity of those interactions.

One major study he led was a multicenter, retrospective study that analyzed patients on ART who were also taking medications for cardiovascular disease, neurologic and psychiatric disorders, chronic pain, inflammation, gastrointestinal/urologic conditions or conditions requiring hormonal therapy. Previously, 57 percent of the patients studied had experienced at least one interaction. However, the researchers—who included current pharmacy doctoral candidate **Ciara Walshe** and then-students **Nick Hastain,**

switching their ART medications. Exploring the effect further, the investigators evaluated those weight changes as well as changes in cholesterol, glycemic control and cardiovascular disease risk following specific ART switches. The results of the study suggested that patients may experience weight gain, increased cholesterol and increased Atherosclerotic Cardiovascular Disease Risk Scores. Dr. Schafer has since initiated a follow-up study evaluating long-term changes in weight and cholesterol following ART changes with doctor of pharmacy students **Matty Zimmerman,** **Ciara Walshe** and **Jessie Cerankowski.** ■