under the microscope

by KAREN BURBACH

# Clinical researcher co-authors largest study on HIV drugs

Susan Swindells, M.D., diagnosed common illnesses and injuries in an indigent, city-run clinic in Columbus, Ohio, when HIV first emerged in the early 1980s.

"Patients started to turn up with symptoms we didn't know about and there was no one to ask," she said. "At that time, if you treated three people, you became an expert."

Thousands of patients later, Dr. Swindells is now an internationally renowned expert in human immunodeficiency virus, or HIV, and co-author of the largest study ever conducted to evaluate commonly used HIV drugs.

The study, which was led by researchers at the University of Pittsburgh School of Medicine and published in the New England Journal of Medicine this past summer, confirmed that one of the most frequently prescribed triple-drug combinations for initial HIV infection is the most effective for suppressing HIV, but that a two-drug regimen is comparable.

"The study showed that the triple-drug therapy currently preferred by clinicians is indeed the most effective treatment for HIV disease. It also is the simplest treatment regimen as all three drugs can be given once a day as one pill, compared to the two-drug regimen that requires seven pills a day. For those with prescription insurance, this means only one copayment each month," said Dr. Swindells, the Terry K. Watanabe Professor of Internal Medicine in the section of infectious diseases and medical director of the UNMC HIV Clinic.

Although, the one-a-day, three-drug regimen is preferred, it doesn't work with all patients, Dr. Swindells said, including pregnant women and individuals with viral resistance.

The study focused in part on nucleoside reverse transcriptase inhibitors (NRTIs), which are one of the first class of HIV drugs approved by the U.S. Food and Drug Administration. Although effective and commonly prescribed, NRTIs can produce severe side effects in some patients.

The study, which included 753 participants at 55 centers, found that the popular three-drug combination of efavirenz plus NRTI therapy was more effective at achieving and maintaining reduction of the virus than another commonly prescribed drug combination of lopinavir-ritonavir plus NRTI.

Interestingly, a two-drug combination of lopinavir-ritonavir plus efavirenz had a similar level of effectiveness as each of the triple-drug regimens that contained NRTIs.

The study was conducted as part of the AIDS Clinical Trials Group (ACTG) – the largest HIV clinical trials organization in the world – with funding from the National Institute of Allergy and Infectious Diseases.

Dr. Swindells, whose main research interests are in opportunistic infections, is chairwoman of ACTG's Optimization of Co-Infection and Co-Morbidity Management Committee.

The Manchester, England native also is involved with an international research study to determine how best to treat HIV and tuberculosis.

Unlike some health care workers who looked the other way, Dr. Swindells embraced the challenges posed by HIV in the 1980s. "When you're the clinic of last resort it's difficult to say 'go somewhere else' because there's nowhere else to go," she said.

In 2007, the UNMC HIV Clinic served 926 people, including 126 new cases. "We still see a steady trickle of new people – even in 2008 when we know how not to get HIV," she said.

But, unlike the early days, there is greater hope for today's patients.

"I tell my patients that HIV is a serious, chronic disease similar to diabetes in that you have to take care of yourself, eat right, take your medicine and go to the doctor," she said. "You may develop some complications, but the chances of living to 60 are good."