Adolescents and young adults appear less likely to benefit from antiretroviral therapy compared with adults, according to a small Northwestern University Feinberg School of Medicine study published ahead of print by the Journal of Acquired Immune Deficiency Syndromes. Future studies will be needed to better understand this disparity and define support programs for young people, many of whom are being treated in adult clinics and potentially not receiving services addressing the needs of adolescents.

According to the U.S. Centers for Disease Control and prevention, about 68,000 people living with HIV in the United States are adolescents or young adults between ages 13 and 24. In fact, the highest number of new HIV diagnoses now occurs in those 13 to 29 years old.

Much of what is known about treatment outcomes in this population comes from studies conducted at clinics intended for adolescents and young adults, which offer tailored services—such as social support and trained medical providers—to maximize care. However, many clinics in the United States do not have adolescent HIV programs and therefore typically treat young people in adult programs. Little is known about treatment outcomes in this particular circumstance.

Patrick Ryscavage, MD, and his Northwestern colleagues conducted a retrospective study comparing the treatment outcomes of adolescents and young adults (17 to 24 years old) and older adults (25 to 40 years old) at the university’s outpatient HIV clinic. The clinic, Ryscavage reports, provides comprehensive HIV-related care to more than 1,500 patients in the Chicago metropolitan area. About 5 percent of the clinic population is adolescent or young adult. There are no structured on-site programs targeting HIV-positive youth.

Forty-six adolescents and young adults, averaging 21 years old, were included in the analysis. They were compared with 46 older adults, averaging 31 years old. Roughly 61 percent were women, and 54 percent were African American. CD4 cells, upon entry in the study, averaged 353 and 312, respectively. Nearly half had a mental health disorder, and about 52 percent and 39 percent, respectively, reported using illicit substances (including tobacco, alcohol, marijuana or intravenously administered drugs).

About 15 percent of the adolescents/young adults acquired HIV around the time of birth, and roughly 17 percent had been referred to the Northwestern adult clinic from a pediatric/adolescent
Compared with older adults, the adolescents and young adults were less likely to have undetectable viral loads within six months of entering the study (78 percent versus 59 percent, respectively). And while fewer adolescents had undetectable viral loads at any time point in the study, compared with older adults (70 versus 83 percent, respectively), this difference was not statistically significant, meaning it could have been due to chance.

Viral load rebounds were more likely to occur among adolescents/young adults (56 percent) compared with older adults (13 percent) during the follow-up period. What’s more, many more adolescents/young adults were lost to follow-up—they failed to return to the clinic for care—compared with older adults (44 versus 11 percent).

In an analysis conducted by the researchers, African-American adolescents and young adults had the lowest rates of undetectable viral loads after six months: 44 percent compared with 71 percent of older African-American adults, and 77 percent for non-African-American adolescents/young adults compared with 91 percent for non-African-American older adults. African-American adolescents and young adults were also much more likely to experience virologic rebounds in the study.

According to Ryscavage, these sobering results are similar to those of other studies, showing relatively poor outcomes in HIV-positive youths.

Though this particular study didn’t evaluate the factors associated with poor outcomes, the authors note that “adolescents often experience feelings of invulnerability which can increase their risk of HIV acquisition, reduce rates of HIV testing, and reinforce negative health care behaviors after diagnosis. In addition many of these patients are burdened with socioeconomic stressors and mental health comorbidities. Other potential barriers to optimal outcomes among [adolescents and young adults] include HIV-associated stigma, reluctance to disclose HIV diagnosis to family and friends, housing instability, lack of insurance, physical and sexual abuse, fractured family support and poor organizational skills.

“Though differing age-related [metabolism of ARVs] has been suggested as an explanation for poor virologic outcomes in HIV-infected youth, poor antiretroviral and clinic adherence are likely more important factors.” According to studies cited by Ryscavage’s group, ARV adherence rates among youth, predominantly those who were infected as a result of risky behavior and not perinatally, have been between 26 and 78 percent, with a majority of the studies reporting rates under 50 percent.

“The poor rates of clinical retention among [adolescents/young adults] in our study suggest that barriers exist to full engagement in adult HIV care,” the authors conclude. “Because many [adolescents/young adults] will receive care in adult-oriented HIV clinics, these patients will benefit from careful study and additional resources directed to improve outcomes. Potential strategies to improve outcomes may include improved social support, provider training, and systems-based
quality improvements. Future studies should also aim to determine specific barriers to successful HIV treatment success among African-American [adolescents/young adults].”