



Once Daily Dosing Improves Adherence to Antiretroviral Therapy

- Raboud J, Li M, Walmsley S, Cooper C, Blitz S, Bayoumi AM, Rourke S, Rueda S, Rachlis A, Mittman N, Smieja M, Collins E, Loutfy MR
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What research question is addressed by Once Daily Dosing Improves Adherence to Antiretroviral Therapy?

Adherence (taking medications as prescribed) is critical to ensuring the effectiveness of antiretroviral therapy (ART). Measures of effectiveness include: reducing the amount of virus in the blood (known as viral load) below the limit of detection, reducing the likelihood of disease progression and reducing the likelihood of developing of drug resistance among people living with HIV (PHAs). This study examines the correlation between only once daily dosing and adherence.

What was the study conclusion?

The study found that once daily dosing is associated with better adherence compared to ART regimens.

Why is this question important?

While ART has improved significantly since combination ART revolutionized care and treatment of HIV disease in 1996, current ART drug regimens require PHAs to take pills (or injections) daily or – depending on the regimen – two or three times daily, for the rest of their lives. This makes finding strategies to improve adherence important to maintaining treatment effectiveness.

How was the study conducted?

Researchers reviewed clinical data and administered surveys which collected a wide range of social, behavioural and demographic data from OCS participants. A total of 779 participants completed detailed (90 minute long) questionnaires (administered by researchers) between October 2007 and May 2009. Researchers defined non-adherence as missing one dose (or more) of ART during the four days before the interview. Questions from a number of standardized surveys were included in the questionnaire, including the MOS Support Survey, the Brief COPE instrument, the Centre for Epidemiological Studies Depression Scale, the Pearlin Mastery Scale, a modified version of the Berger Stigma Scale and the National Population Health Survey Stress Questionnaire.

What were the main results of the study?

Study investigators found that participants were more than twice as likely to be adherent (i.e., report no missed doses) if they were on ART drug regimens that required once-daily dosing (compared to regimens that required more frequent dosing). This finding is consistent with other studies and analyses which have found that once-daily dosing improves adherence. While only 15% of study participants reported suboptimal adherence in the four days before the questionnaire was administered, 70% reported ever missing a dose and 54% reported missing a dose



within the last four weeks. Researchers also found that younger participants (under 30 years of age) and those who consumed more than six drinks on one occasion more than once a month (defined as ‘binge drinking’) were also more likely to miss a dose.

What do the study results mean for the treatment and care of people living with HIV?

The study results were consistent with previous studies indicating a relationship between once-daily dosing and improved adherence, as well as correlations between youth and binge drinking and suboptimal adherence. One of the more interesting findings of the study is that younger participants were more likely to be on once-daily regimens.

Where can I find the full-length publication of this study?

This study was published in *AIDS and Behavior* in 2010. The full text version is available at:

<http://www.springerlink.com/content/0064648371133130/>

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The **Ontario HIV Treatment Network Cohort Study (OCS)** is an ongoing research study that collects clinical, social and behavioural information about people living with HIV (PHA) in Ontario. Participation in the study is voluntary, and all personally identifying information of study participants is removed to ensure confidentiality. The OCS was established to improve our understanding of HIV and to inform HIV prevention, care and treatment strategies for people living with HIV and groups at increased risk of HIV infection. For more information about the OCS, please contact the OCS Research Coordinator, Brooke Ellis at: bellis@ohtn.on.ca.