Annual quality outcome report for clients taking antiretroviral treatment at Melbourne Sexual Health Centre (2000 – 2013)

Background information

Currently there are no recommendations on clinical outcome indicators that clinical services should use for patients with HIV. Opportunistic infections and deaths are almost unheard of among patients diagnosed early with HIV in developed countries, making these largely irrelevant outcomes as a measure of HIV outpatient service quality.

A study at MSHC[1] compared 3 definitions of HIV treatment failure and concluded that the most important requirement of a quality measure is that it relates to a patient's prognosis and the most practical way is to monitor virological failure. The report that follows is based on these findings.

Plain language summary

Melbourne Sexual Health Centre provides an annual report of outcomes after starting HIV treatment. We are doing this because how well patients do on treatment can affect their health. How well patients do on treatment is also related to the quality of care that staff provide patients with HIV.

Since 2000, 657 patients started HIV treatment for the first time at Melbourne Sexual Health Centre. Of these 35 or about 5% failed treatment over a 13 year period and most of these were in the first 4 years. By international standards this is a very good result.

Taking your HIV treatment as prescribed and trying to never miss any doses is the best way to avoid your treatment failing.

Definition of treatment failure

Treatment is said to have failed if:

- Plasma HIV-1 RNA level (viral load) < 400 copies/mL was not achieved after 6 months of treatment

                                  or

- A confirmed virological rebound above 400 copies/mL on 2 consecutive readings

Note 1: Patients were permitted to change treatment or stop treatment so long as the viral load remained < 400 copies/mL while on treatment.

Note 2: A viral load of <400 copies/mL rather than <50 copies/mL was used because historical laboratory data has not always reported <50 copies/mL

Viral load measurements were performed at the Victorian Infectious Diseases Laboratory (VIDRL) using Roche Amplicor HIV Monitor Version 1.5. Each endpoint was analysed using a Kaplan-Meier survival analysis in SPSS version 19. Individuals who had not reached an endpoint by the time of their last viral load were censored.

Results

During January 2000 to December 2013, 657 patients commenced highly active antiretroviral therapy (HAART) for the first time. Of these 582 were male, 73 were female and 2 were transgender.

Of 657 patients, 112 patients discontinued follow-up (17%) and 14 elected to stop treatment. There were 37 patients diagnosed as treatment failures (5%) who never achieved viral load < 400 copies/mL within 6 months or rebounded above viral load $\leq$ 400 copies/mL on two consecutive occasions. Of 529 patients, 93% had a viral load consistently < 400 copies/mL while on treatment.

Figure 1 The Kaplan-Meier analysis demonstrates the percent of patients without treatment failure estimated at a mean time of 148.99 months (95% CI 144.58; 153.39)

Figure 1 Proportion of patients of patients without virological failure
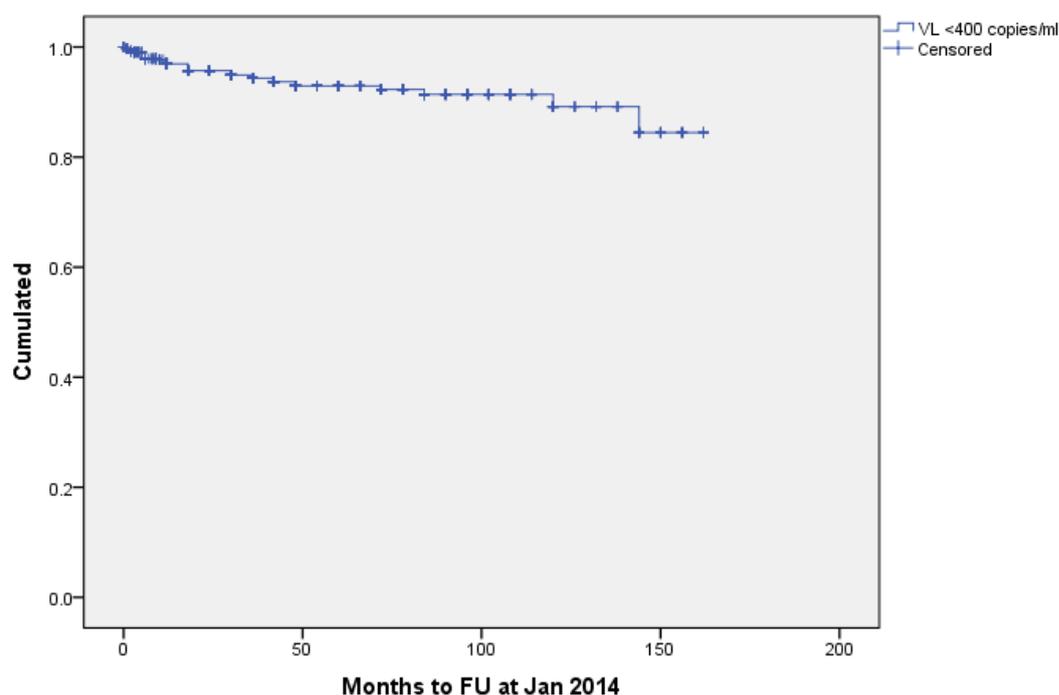
Reference

1. Samaranayake A, Chen M, McNeil J, Read T, Hocking JS, Bradshaw CS, Fairley CK. Definitions of reporting viral load responses to antiretroviral treatment for measuring quality outcomes. *HIV Medicine* 2010; 11(7): 427-431