Proposed hazard functions for HIV-HCV co-infection model

Having HIV increases risk for HCV.

Updated hazard for HIV transmission

$$\text{hazard} = \exp(a + bV^{-C} + d_1 P_{\text{HIV-infected}} + d_2 P_{\text{HIV-uninfected}} + W f_1 \exp(f_2(A_{\text{woman}}(t_{ry}) - A_{\text{debut}})) + eH_{\text{HIV-infected}})$$

$H_{\text{HIV-infected}}$ = indicator for the HIV-infected person of being HCV infected

Updated hazard for HCV transmission

$$\text{hazard} = \exp(a_i + b(t - t_{\text{HCV-infected}}) + c_1 H_i + c_2 H_j))$$

HIV effect:

H_i: indicator for the HCV-infected person being HIV infected

H_j: indicator for the HCV-uninfected person (person that gets infected) being HIV infected