

Progress toward HCV microelimination among HIV-positive patients in Taiwan

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BACKGROUND

Taiwan has committed to achieving HCV elimination by 2025. HCV testing and antiviral treatments are reimbursed by the National Health Insurance. Interferon/ribavirin used to be the standard regimen of antiviral treatment and direct-acting antivirals (DAAs) were not reimbursed until 2017. Criteria for enrollment in HCV treatment program had been revised on an annual basis to lift the restrictions on access to HCV care and DAA treatment. Acute HCV infections were included in the treatment program in 2019. Second-course DAA retreatment for HCV reinfection was implemented in 2021. We aimed to examine the progress toward HCV microelimination among people living with HIV (PLWH) who had HCV viremia.

METHODS

PLWH seeking care between 2011 and 2021 received HCV serological testing at least once annually (Figure 1). Those who tested HCV-seropositive at baseline or who received antiviral treatments with achievement of spontaneous clearance or sustained virological response (SVR) underwent HCV RNA testing at least once annually. Between 2019 and 2021, those with episodes of sexually transmitted infections, having achieved spontaneous clearance or (SVR), or elevated aminotransferases underwent HCV RNA testing every 12 weeks for 48 weeks. We estimated the annual incidence and prevalence of HCV viremia and HCV seroconversion from 2011 to 2021.

With regular HCV testing and improved access to antiviral treatments, particularly highly effective direct-acting antivirals (DAAs) in Taiwan, the incidence rate and prevalence of HCV viremia have declined by 80% among people living with HIV between 2011 and 2021.

RESULTS

1. The study flow is shown in Figure 1.
2. During the 11-year study period, the incidence rate of HCV seroconversion among those testing HCV-seronegative has declined from the peak of 25.79 per 1000 person-years of follow-up (PYFU) in 2018 to 8.27 per 1000 PYFU in 2021 (a decrease by 67.9%) (Figure 2).
3. The incidence rate of HCV viremia had decreased from the peak of 131.6 per 1000 PYFU in 2011 to 20.3 per 1000 PYFU in 2021 (a decrease by 84.6%) (Figure 3).
4. The prevalence of HCV viremia had declined from 14.73% of PLWH tested in 2012 to 7.04% in 2014 (interferon/ribavirin era), which further declined from 8.21% in 2018 to 3.30% in 2021 (DAA era) (a decrease by 77.6%) (Figure 4).

CONCLUSIONS

With the introduction of reimbursed HCV testing and anti-HCV treatments, particularly DAAs, significant declines of HCV viremia have been observed among PLWH who underwent regular HCV testing in Taiwan.

Fig. 1. Study flow of HCV viremia among PLWH seeking care between 2011 and 2021

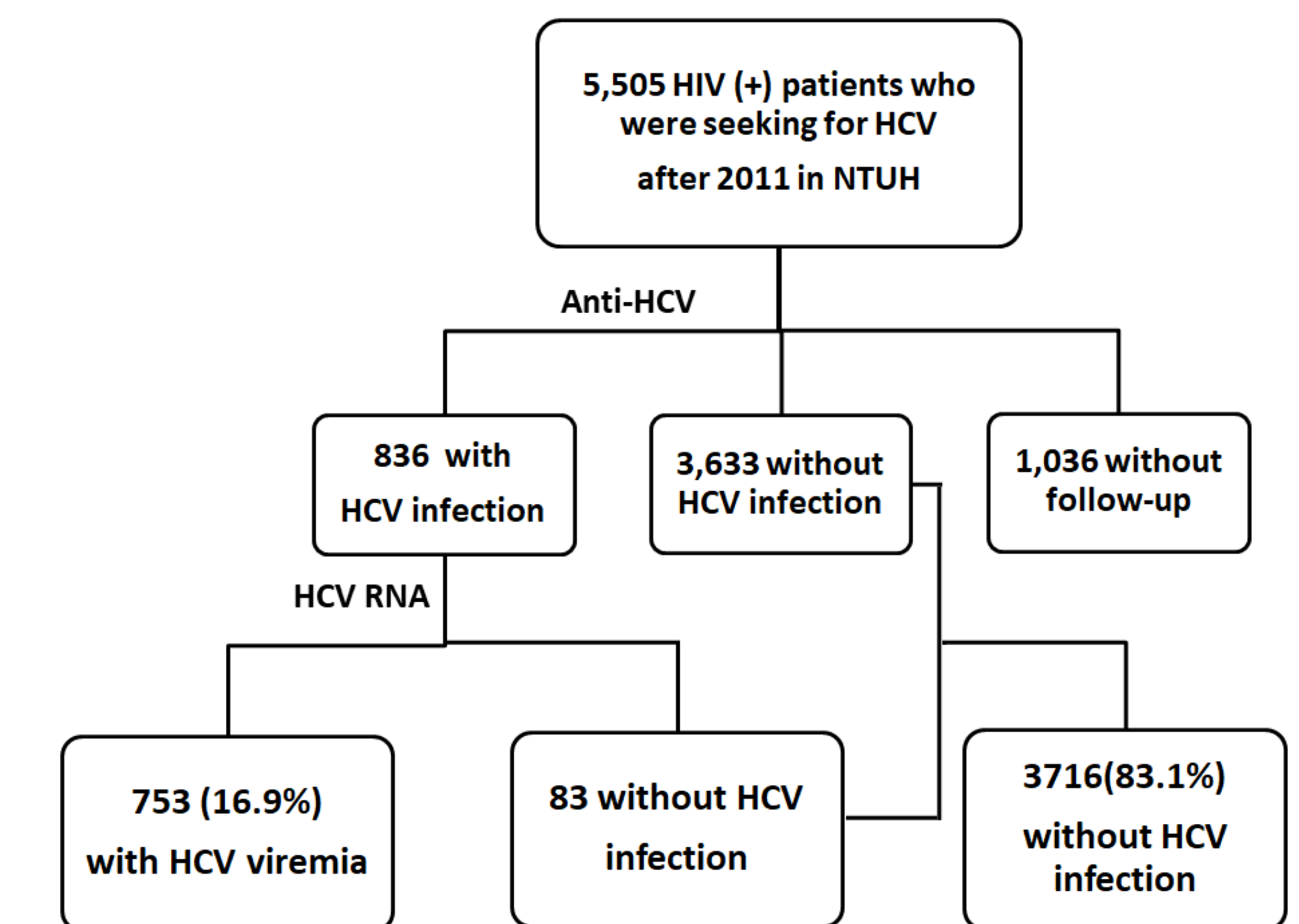
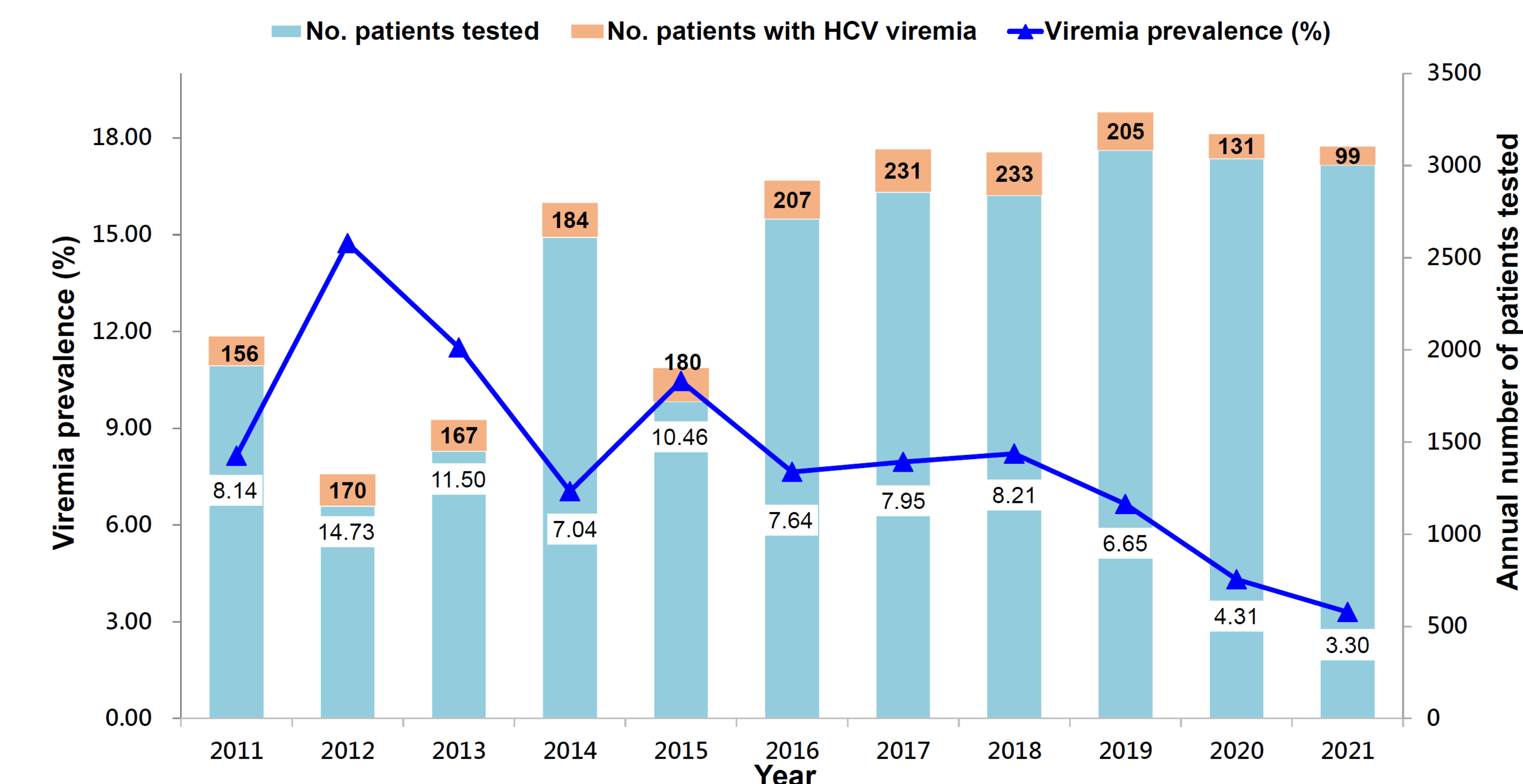


Fig. 4. Trends of prevalence of HCV viremia prevalence from 2011 to 2021



KEYWORDS

HCV viremia; direct-acting antivirals; interferon; ribavirin

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Fig. 3. Trends of incidence of HCV viremia from 2011 to 2021

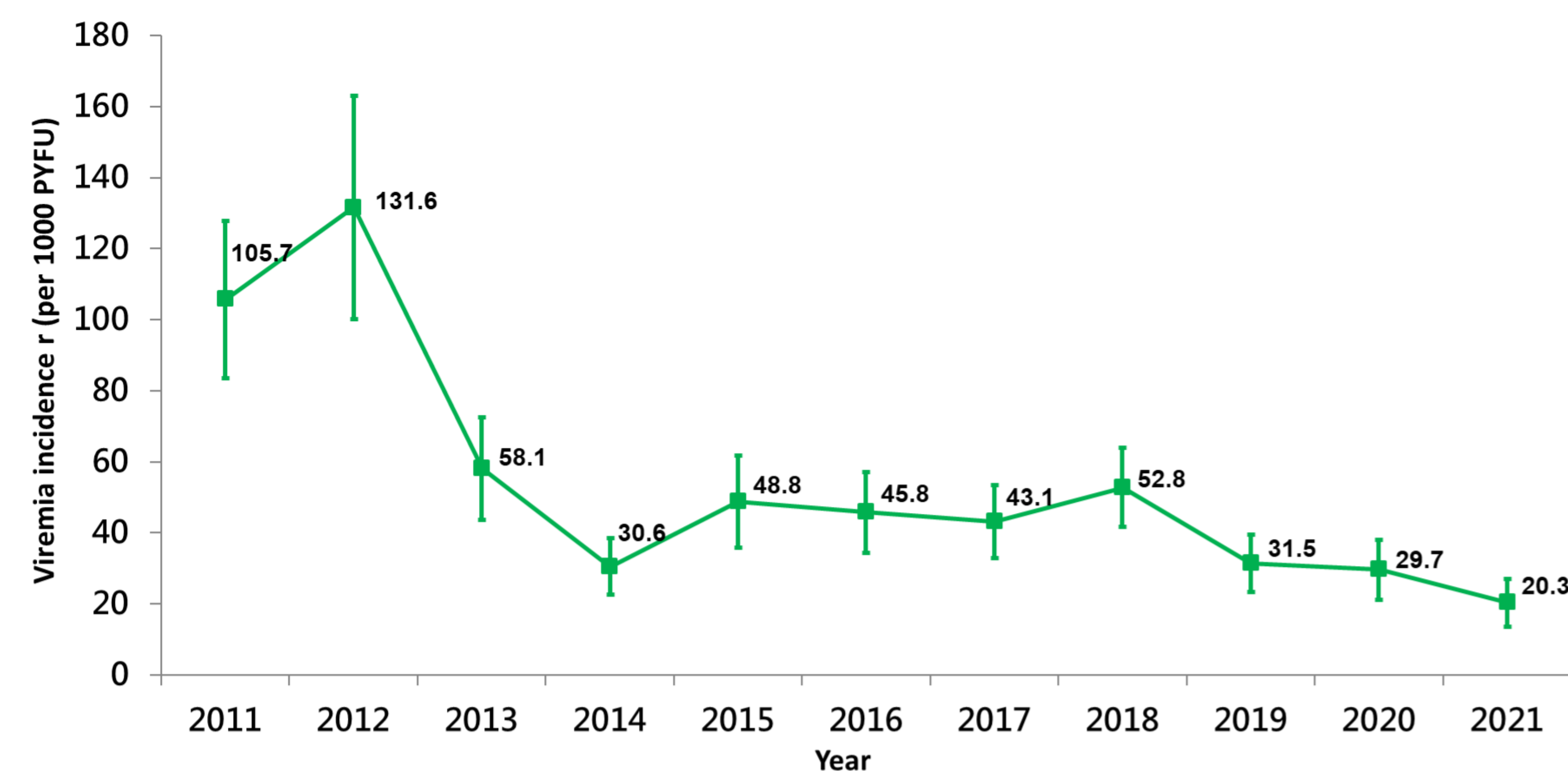


Fig. 2. Trends of HCV seroconversion from 2011 to 2021

