Background In the Netherlands, transmission of hepatitis B virus occurs mainly within behavioural high-risk groups, such as in men who have sex with men. Therefore, a vaccination programme has targeted these high-risk groups. Previous evaluations of this programme up until 2006 (incidence trend analysis, mathematical modelling and molecular sequence models) could prove no impact. This study evaluates the impact of the vaccination programme targeting Amsterdam’s large population of men who have sex with men from 1998 through 2011.

Methods We used Amsterdam data from the national database of the vaccination programme for high-risk groups (January 1, 1998 to December 31, 2011). Programme and vaccination coverage were estimated with population statistics. Incidence of acute hepatitis B was analysed with notification data from the Amsterdam Public Health Service (1992 to 2011). Mathematical modelling accounting for vaccination data and trends in sexual risk behaviour was used to explore the impact of the programme.

Results At the end of 2011, programme coverage was estimated at 41% and vaccination coverage 30% to 38%. Most participants (67%) were recruited from the outpatient department for sexually transmitted infections and outreach locations such as saunas and gay bars. Incidence of acute hepatitis B dropped sharply after 2005. The mathematical model in which those who engage most in high-risk sex are vaccinated, best explained the decline in incidence.

Conclusions Transmission of hepatitis B virus among Amsterdam’s men who have sex with men has decreased, despite ongoing high-risk sexual behaviour. International concern also exists about the effectiveness of such programmes when the uptake or coverage remains low. This study proves that a targeted vaccination programme can be effective with vaccination coverage below 40%, as long as MSM who engage most in high-risk sex, such as clients of STI clinics, are reached.

Methods Data are drawn from two rounds of cross-sectional behavioural surveys of 7403 (round I: 3895, round II: 3508) self-identified MSM from three states of India, recruited through probability based sampling in 2005–06 and 2009–10 respectively. Logistic regression models were used to assess the relationship between socio-demographic characteristics, sexual behaviours, programme exposure and HIV testing. Significant factors were further parsed using decomposition analysis to examine the contribution of different components of that factor towards the change in HIV testing over time.

Results There was a significant increase in the proportion of MSM reporting HIV testing from round I to round II (13% vs. 77%; p < 0.001). Age, literacy, self-identified sexual identity, type of partner and exposure to intervention were significantly associated with HIV testing. Literates; those in the age groups of 25 to 34; kothis (predominantly receptive); those who had both commercial and non-commercial partners and those who were exposed to the intervention contributed the most to the increase in HIV testing over time.

Conclusions These study results underscore the potential of identifying and targeting segments within the at-risk MSM population which are currently not accessing HIV testing services. Voluntary HIV testing affects sexual behaviour leading to a positive motivation for safer sexual practises.