People living with HIV are at greater risk of complications associated with influenza, SARS-CoV-2 and pneumococcus than the general population. Current BHIVA guidelines recommend vaccinating all patients against these infections. The available vaccines for these infections include an annual flu vaccine, three initial COVID-19 vaccines followed by booster doses every 6 months after last vaccine dose, and a single dose of Prevenar-13. Within NHS Tayside flu and COVID-19 vaccines are provided by community-based vaccination teams to both the general population and high risk groups whereas Prevenar-13 is delivered to people living with HIV within specialist HIV out-patient clinics. The purpose of this audit was to determine factors associated with the uptake of these vaccines in order to inform local vaccine delivery models for people living with HIV. Data collected included: - Age - Gender - Local authority (urban, mixed, rural, other) - Scottish Index of Multiple Deprivation quintile - Years in HIV care - ART status - CD4 cell count (cells/mm³) - Most recent viral load (detectable, undetectable) - On “out of care list” in last 12 months - Known to harm reduction team - Known respiratory or cardiovascular co-morbidities

Overall Vaccine Uptake:

Vaccine uptake is illustrated in figure 1 showing lowest uptake of flu vaccine and highest uptake of Prevenar-13 within this cohort. Only 60% of patients completed all vaccines and 3% received no vaccines. Figure 1: Overall uptake of vaccines

Results:

The cohort consisted of 364 patients known to the service of which one was excluded as clinical information was not available. Sixty nine percent were male, the mean age was 51.3 years old and 97% were undetectable on ART (table 1). Table 1: Cohort demographics and vaccine uptake

Background:

Factors associated with poor HIV outcomes

Figure 2 shows that patients with optimal HIV care had higher uptake of vaccines. Lower uptake of flu and COVID-19 vaccines was seen in patients who had been out of care for the past 12 months, had a detectable viral load and who weren’t taking ART.

Factors associated with poor respiratory infection outcomes

Thirty percent of the cohort had additional cardiac or respiratory co-morbidities and the majority (59%) were aged over 50 years. Figure 3 shows good uptake in these groups.

Other health inequalities

Patients in the highest quintiles of social deprivations and those living in urban areas had lower uptake of flu and COVID-19 vaccines as seen in figure 4. There was low uptake of both flu and COVID-19 vaccines in the 12 patients who have their care delivered by the harm reduction service however all of them had received a Prevenar vaccine.

Figure 4: Uptake of vaccines by health inequality

Discussion and Conclusions:

This audit benefits from a very complete dataset including all but one patient in the cohort. Vaccine data is robust due to the use of the VMT which is the only recording system used by the vaccine management team. There are few published data on vaccine uptake in other cohorts however one UK study saw a 70% uptake of flu vaccine (2015/2016) in a cohort of people living with HIV. Data collected included:

- Age
- Gender
- Local authority (urban, mixed, rural, other)
- Scottish Index of Multiple Deprivation quintile
- Years in HIV care
- ART status
- CD4 cell count (cells/mm³)
- Most recent viral load (detectable, undetectable)
- On “out of care list” in last 12 months
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Overall Vaccine Uptake:

Vaccine uptake is illustrated in figure 1 showing lowest uptake of flu vaccine and highest uptake of Prevenar-13 within this cohort. Only 60% of patients completed all vaccines and 3% received no vaccines.

Figure 1: Overall uptake of vaccines

Uptake of flu, COVID-19, and pneumococcal vaccines in a cohort of people living with HIV

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References:


