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How often do people attend for HIV care?

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INTRODUCTION

In the UK, a hierarchical method is used to classify people accessing HIV care by clinical complexity, based upon the previous 4 quarters of attendance (1) (figure 1). Clinical guidelines (2) recommend how frequently people attending HIV services should be monitored based upon clinical complexity, with "Stable" patients recommended to attend only 1-2 times per year.

We used national HIV cohort data to examine attendance patterns and factors associated with more frequent consultation.

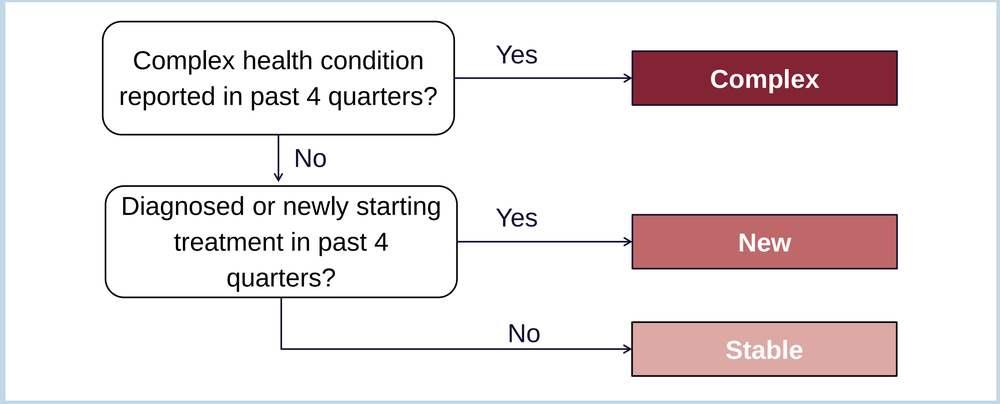

Figure 1. Hierarchy used to assign patients to a complex, new or stable category

METHODS & COHORT CHARACTERISTICS

We used quarterly attendance-based data on adults (aged 15+) attending specialist HIV clinics in 2016.
Clinics submitting all 4 quarters of data were included and attendances linked across quarters and people classified by clinical complexity (figure 2).

Consultation frequency was analysed by clinical and patient characteristics using multivariable regression.

Complex health condition: any of: tuberculosis, AIDS-defining illness, chronic viral liver disease, malignancy, end organ disease, psychiatric care or persistent viraemia.

Unsuppressed viral load (VL): viral load ≥200 copies/mL at the first attendance in 2016

Frequent attenders: Individuals who attended ≥12 times in 2016 (i.e. monthly and more often)

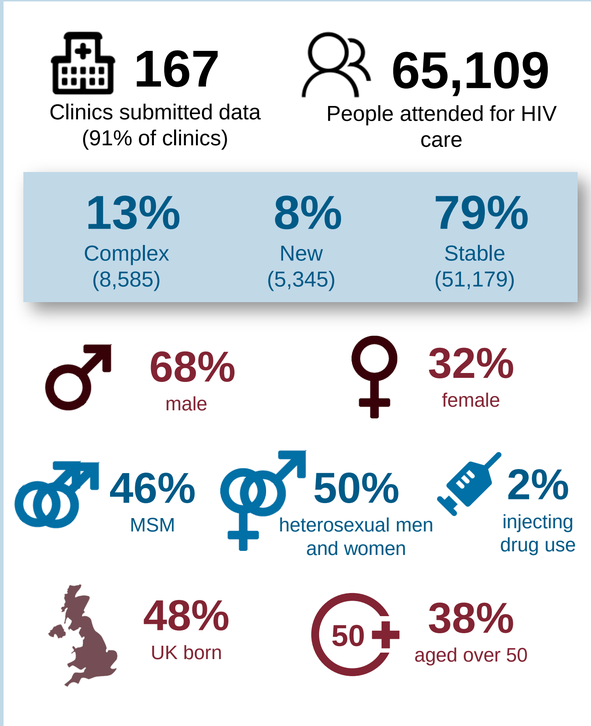

Figure 2. Characteristics of patient cohort

RESULTS: CONSULTATION FREQUENCY, CHARACTERISTICS & PREDICTORS

65,109 adults (77% of all people) were included in the study and accounted for a total of **229,557** consultations in 2016, split between face-to-face, telephone and email (figure 3).

Median consultations: 3 (IQR [2-4]) per year

- **15%** attended **once** (9,721);
- **29%** attended **twice** (19,084);
- **20%** attended **three times** (12,854);
- **36%** attended **four times or more** (23,450).

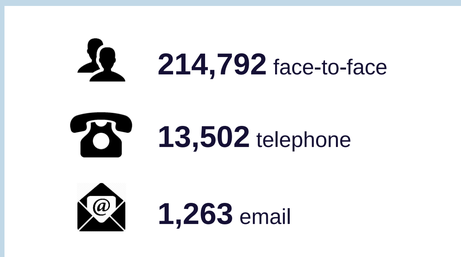

Figure 3. Consultation types and frequency

Median annual consultations were the same regardless of gender, route of exposure, region of birth (UK vs non-UK) or age (<50 vs 50+) (figure 4).

Median consultations were greater for those categorised as New : both for those diagnosed and starting treatment in the past 12 months (4 [2-5] and 5 [3-7] respectively).

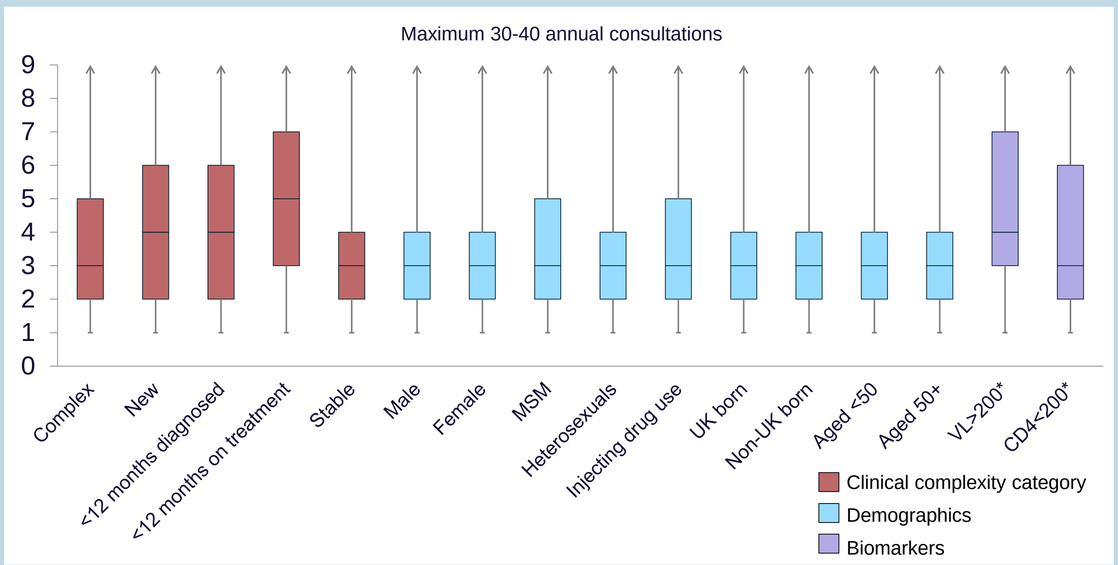

Figure 4. Median number of annual consultations by complexity, demographic and biomarker

*VL and CD4 count at the first attendance in 2016

Characteristics of frequent attenders

1,302 (2%) people attended for 12 or more consultations during 2016 (figure 5).
Compared to those attending less frequently, they were (figure 6):

- twice as likely to be complex or new;
- three times as likely to have an unsuppressed VL or low CD4 count (CD4 <200 cells/mm^3).

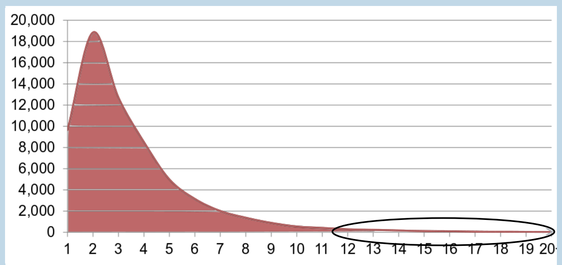

Figure 5. Distribution of attendances, circled region for ≥12 attendances

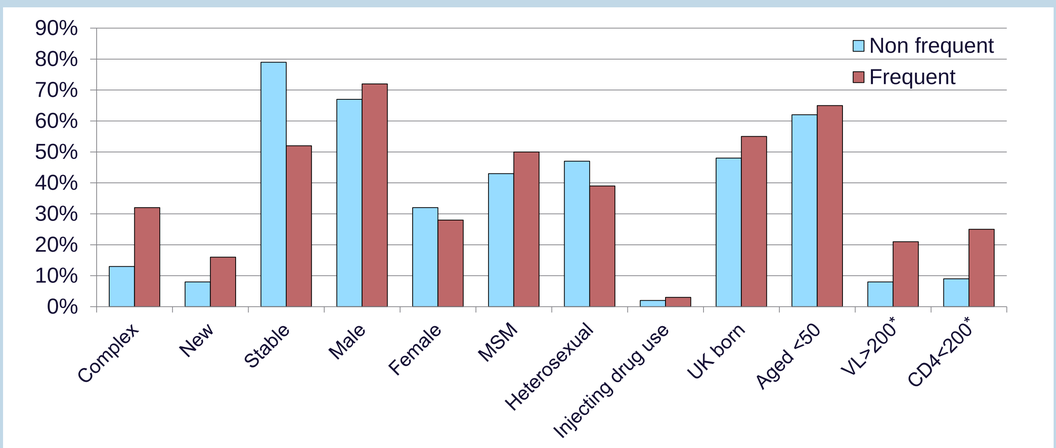

Figure 6. Characteristics of frequent and non-frequent attenders

*VL and CD4 count at the first attendance in 2016

Predictors of consultation frequency

- **Unsuppressed VL** was a predictor of **increased** consultation frequency (β=1.7**, 95% CI [1.6, 1.8], p<0.001).
- Being a **black African heterosexual** was a predictor of **fewer** consultations compared to white gay men (β=-0.7, [-0.8, -0.6], p<0.001).
- **Living outside of London** was a predictor of **reduced** consultation frequency (β=-0.6, [-0.6, -0.5], p<0.001).
- Consultation frequency was **not affected by age, region of birth (UK vs abroad) or residential deprivation**.

**β refers to the change in consultations for a given characteristic i.e. β of 1.7 means 1.7 additional consultations.

LIMITATIONS

- Despite a large cohort, 23% of people in HIV care in 2016 were not included due to incomplete data. There may be differences in patterns of attendance for these individuals therefore these analyses should be repeated for the entire population once data is available.
- Complexity relies on the available data in HARS where only a short list of complex health conditions are able to be captured. Future studies will link to data from the Positive Voices survey to investigate psychosocial factors.

DISCUSSION

- Around two-thirds of people attended three times or fewer during 2016. Those who were newly diagnosed or newly starting treatment attended more frequently (median of 4 and 5 attendances in 2016 respectively).
- People who began the year with an unsuppressed VL or a CD4 count <200 cells/mm^3 were likely to have an increased number of attendances.
- Demographic and geographical characteristics had a very minor impact on attendance frequency, clinical conditions being a more important factor, implying that access to care and patterns of attendance are equitable across England.
- People who attend very frequently (≥12 times per year) were more than twice as likely to have a complex health condition. Other work (3) has shown that persistent viraemia, hepatitis C and tuberculosis lead to the greatest increases in attendance frequency among complex patients.

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REFERENCES

1. Kirwan PD et al. Assessing the clinical complexity of a national cohort of adults accessing HIV outpatient care. April 2017. HIV Medicine, 18 (Suppl. S1) 3-13
2. Angus B et al. BHIVA guidelines on the routine investigation and monitoring of HIV-1-positive adults. 2016. British HIV Association.
3. Kirwan PD et al. Variation in HIV service use by co-morbidity, co-infection and persistent viraemia. Poster 377 (Fourth Joint Conference of BHIVA with BASHH).