



Public Health
England

Assessing the clinical complexity of a national cohort of adults accessing HIV outpatient care

Peter Kirwan, Cuong Chau, Zheng Yin, Alison Brown and Valerie Delpech
on behalf of the HIV & STI Department, Public Health England



Background

- People living with HIV receive excellent specialist care through HIV clinics
- A substantial number of people may have additional co-morbidities and other complex needs
- The HIV & AIDS Reporting System (HARS) has collected fields to capture clinical complexity, as agreed upon in collaboration with HIV clinicians and commissioners

Aim:

For the first time we analyse clinical complexities reported to HARS to better inform the delivery and commissioning of health services for people living with HIV



HARS variables

Demographic information	Site information	Diagnosis information	Treatment information	Patient information
Patient ID	Org ID	New diagnosis UK	First ARV UK	CD4 count taken
GP Practice code	Site code	UK diagnosis date	First ARV start	CD4 count
GP disclosure	Care status	Dx abroad year	Site ARV start	Viral load taken
Soundex code	Previous HIV site	First seen date	PEP/PREP	Viral load
First initial	Referred to org	Patient exposure	ARV code	AIDS illness
Date of birth	Consultation information	Country of infection	ARV band	TB treatment
Gender at birth		Year of UK arrival	Home delivery	Liver antiviral treatment
Gender identity		Diagnosis setting	Clinical trial	Malignancy treatment
Ethnicity		Previous test	Death information	End organ disease
Country of Birth	HIV care type	Last HIV neg date		Psychiatric care
LSOA	HIV care Date	Seroconversion		Pregnancy
Prisoner		TRI result	Date of death	Social care
Sex worker		CN number	Death cause	Hepatitis B
Disability		CN contact		Hepatitis C
		CN tested		



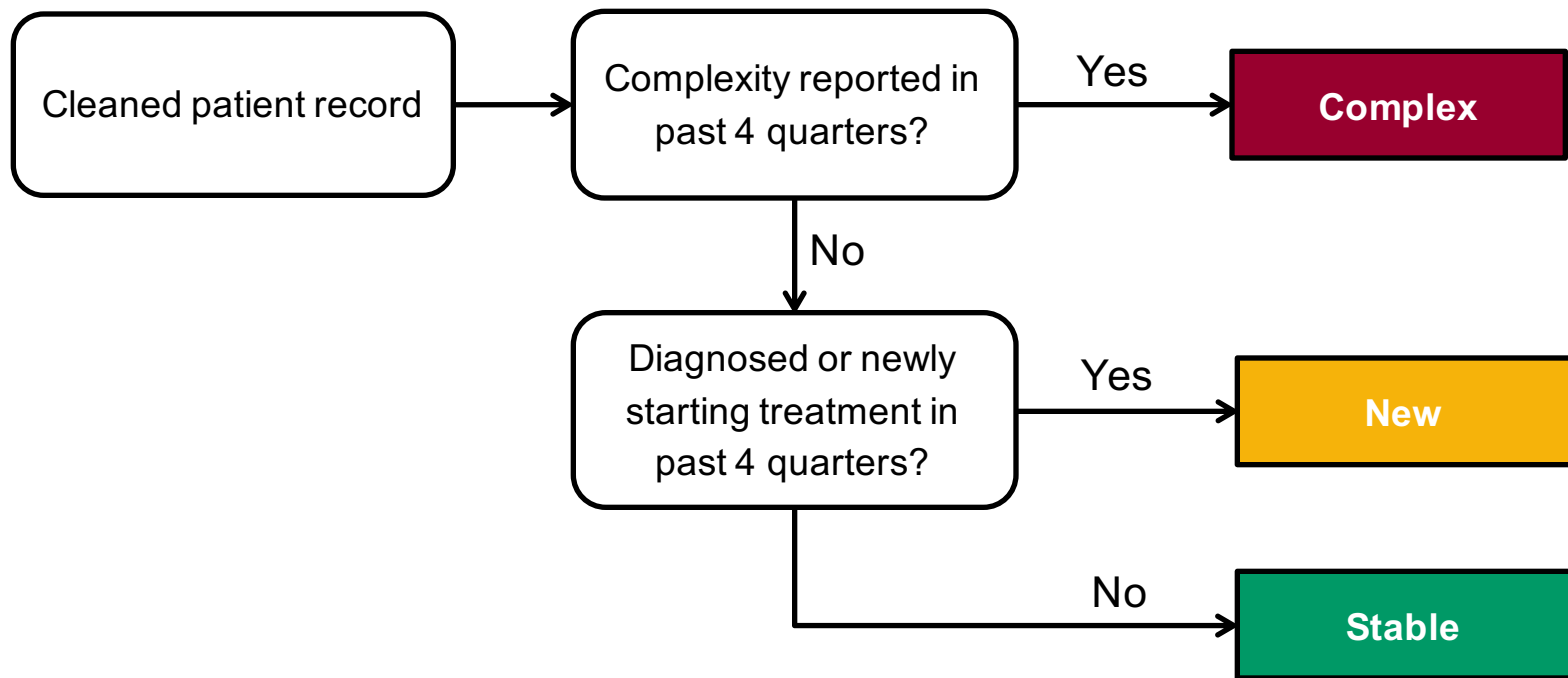
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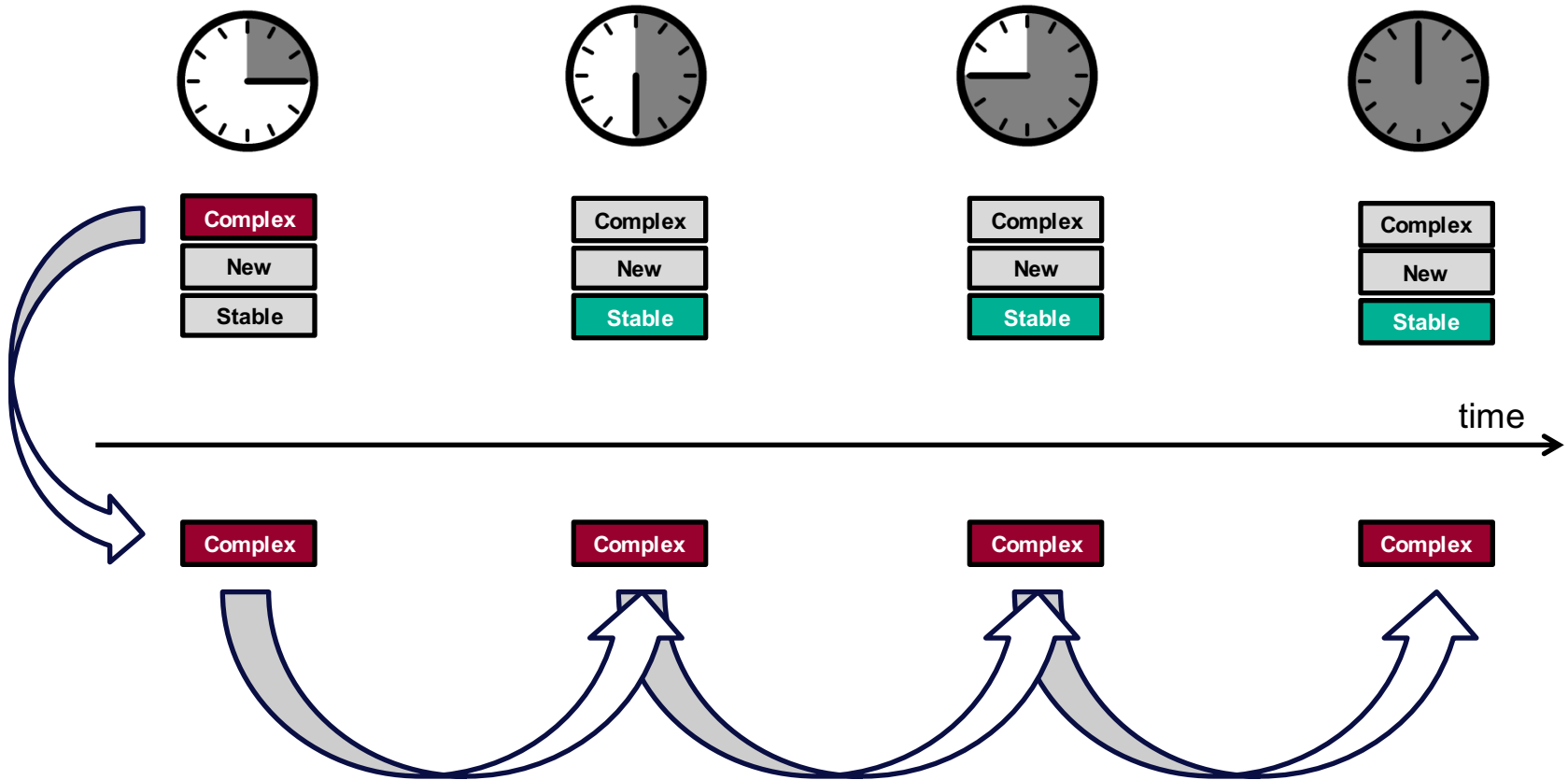
Methods

1. The patient cohort is generated by linking patient attendances for clinics which had submitted 4 quarters of HARS data
2. A hierarchical algorithm is used to classify patients by clinical complexity over the previous 4 quarters





Example: “the tariff clock”





Results

 **168**

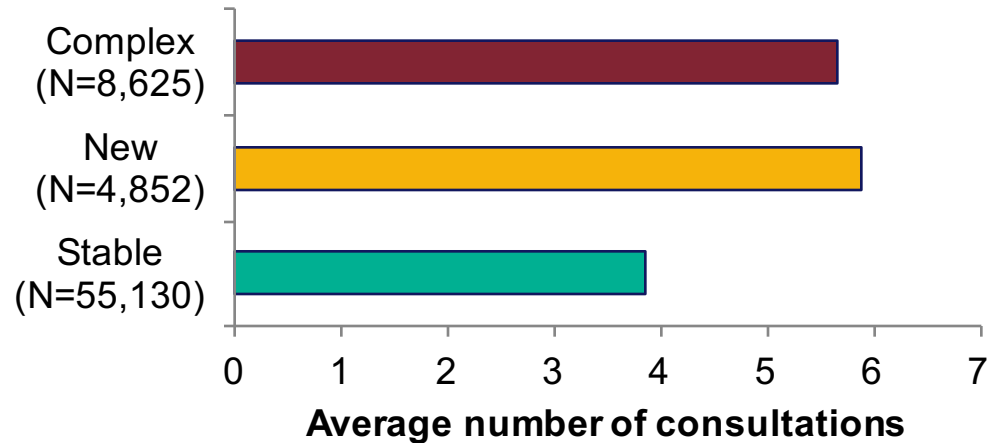
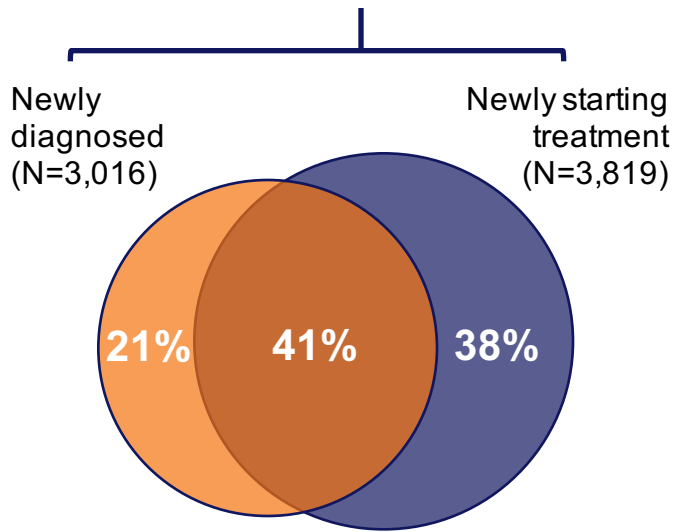
Clinics submitted 4 consecutive quarters of HARS data

 **68,607**

Patients in 2016 (85% of patients in 2015)

 **4.2**

Average annual number of consultations





Indicators of complexity

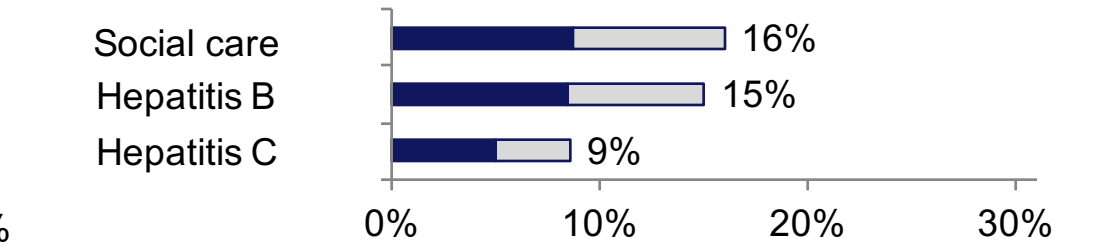
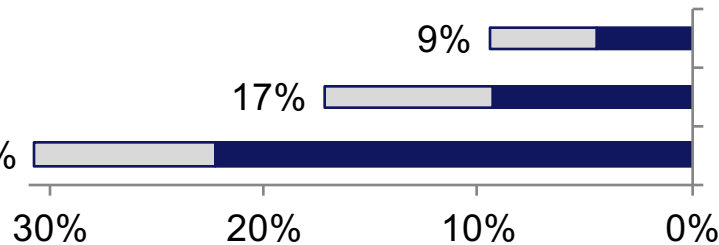
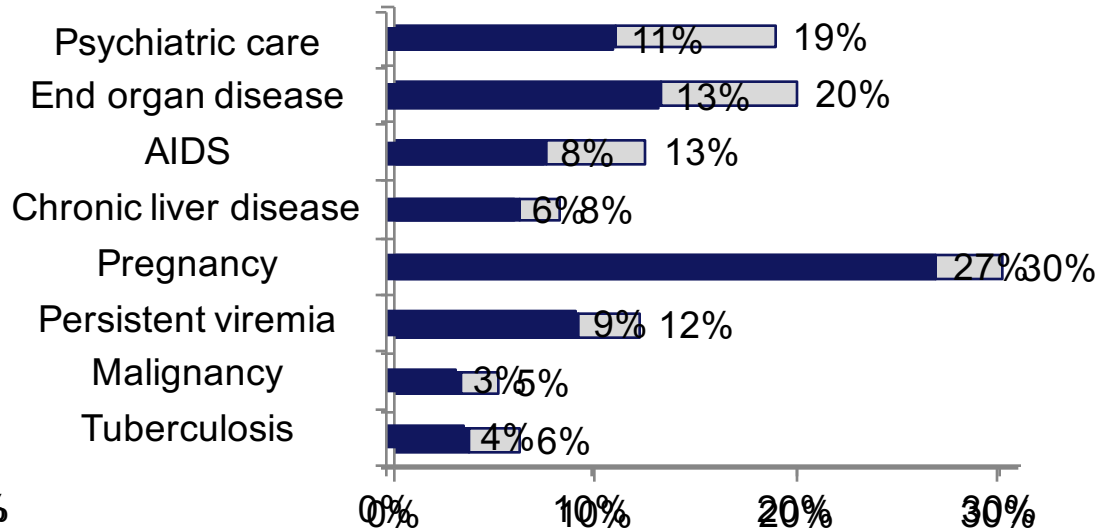
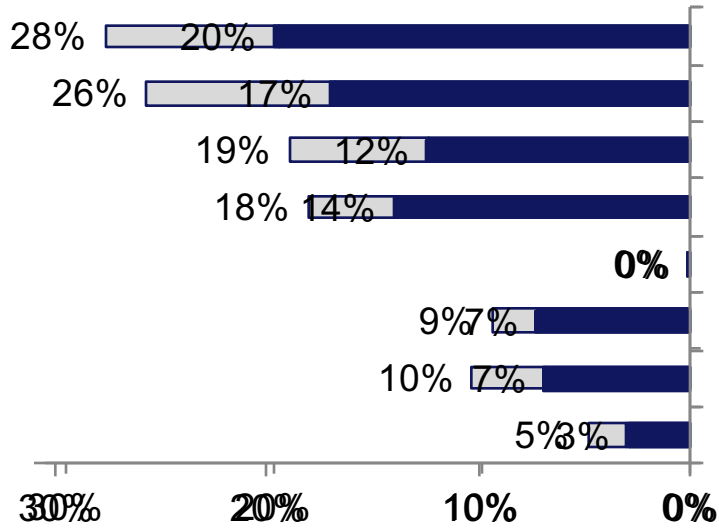
Men

11% (5,293/46,877)

Women

15% (3,323/21,677)

■ Sole reason for complexity □ Multiple complexities

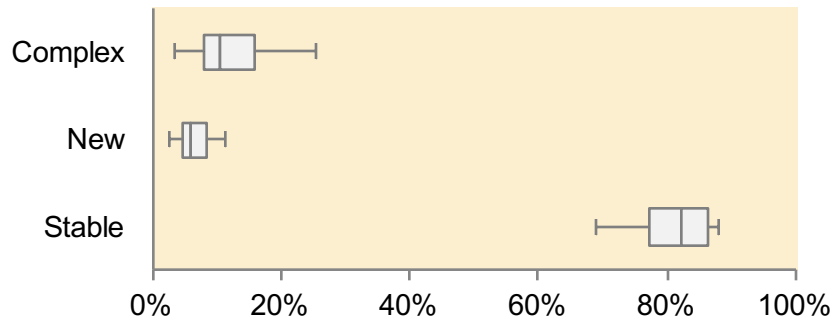




Regional results (NHS trust level)

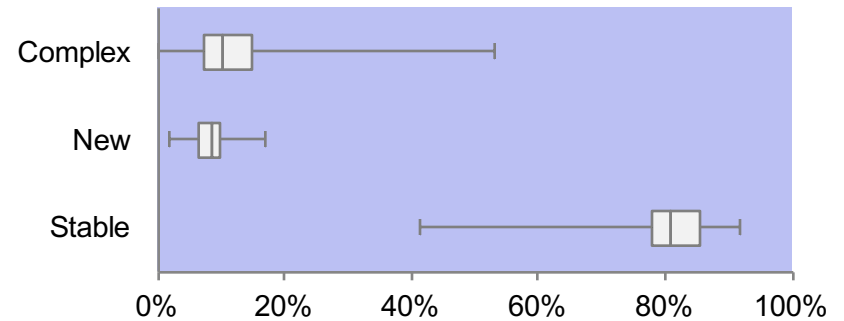
London

11 NHS trusts; 24,898 patients



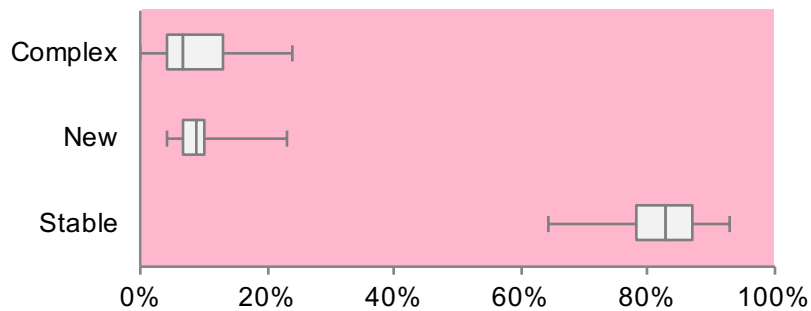
Midlands and East of England

35 NHS trusts; 15,627 patients



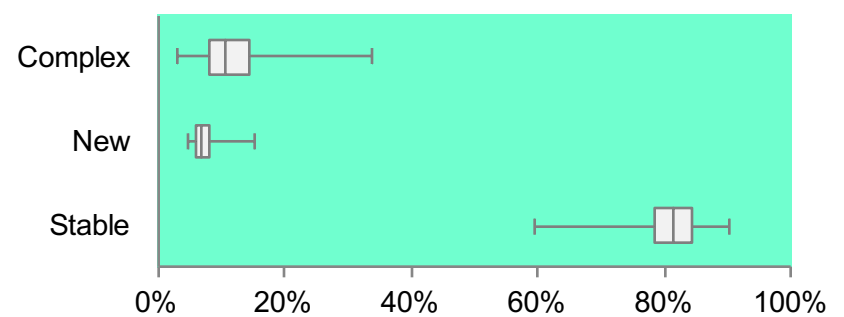
North of England

32 NHS trusts; 13,299 patients



South of England

30 NHS trusts; 14,783 patients





Conclusions

- Preliminary findings indicate that **the large majority of people accessing HIV specialist care in 2016 are stable**, with 1 in 8 categorised as complex and 1 in 14 newly diagnosed or starting ART
- Complex and new categories were associated with **increased numbers of attendances**
- Complexity breakdowns can be produced at clinic, NHS trust and regional level, once clinics have provided 4 consecutive quarters of data
- **This work will inform the national tariff with continued engagement with the CRG and NHSE**



Future work

Data validation

- Validation work is being undertaken with clinics to improve data quality
- Validation rules need to be developed, which may include clinical audits
- The updated dataset (HARS v1.2) will directly collect persistent viremia, which will be validated using viral load and ART markers

Assessment of complexity categories

- Investigate the impact of co-morbidity upon health outcomes and frequency of HIV clinic attendance
- Assess the effect of clinical complexity upon HIV service use
- Apply adjustments to clinical outcomes data to account for case mix, including complexity category



Acknowledgements

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