Management pathways for new HIV diagnoses

BHIVA National Audit 2019

Auditable standards

BHIVA Standards of Care 2013/18:

- Newly diagnosed people should have HIV status fully assessed within 2 weeks of positive test

BHIVA ART guidelines 2016 update:

- *"We recommend people with HIV start ART (1A)"*
- If CD4 <200 and AIDS-defining or serious bacterial infection, start within 2 weeks of antimicrobials
- In primary HIV, offer immediate ART
- Otherwise, timing guided by individual's readiness to start

NHS England Quality Dashboard

Process measures include:

- Proportion of newly diagnosed adults with a first HIV clinic attendance or CD4 count within one month of diagnosis date
- Proportion of HIV diagnosed adults seen for HIV care and receiving ART

Outcome measures include:

- Proportion of newly diagnosed adults starting ART within 3 months (91 days) of diagnosis

Main aims

To assess:

- Time from positive HIV test to specialist assessment
- Time from diagnosis to ART initiation

To explore reasons for variation in time to ART initiation.

Method

- Retrospective case-note review of adults (age 16 or over) assessed as newly diagnosed with HIV in UK HIV specialist services

- Last 40 cases per site assessed between 1 January 2018 and 31 March 2019, or all if fewer than 40

Participation

- 132 sites provided data for 2281 eligible individuals

- 3 sites reported that they had not assessed any eligible newly diagnosed individuals during the audit period

Characteristics of 2281 audited individuals

		Audit number	Audit percent	UK national data 2018 percent
Gender:	Male	1704	74.7	73.1
	Female (including 13 trans)	560	24.6	26.8
Age:	16-24 (15-24 in UK data)	220	9.6	10.7
	25-34	643	28.2	31.6
	35-49	818	35.9	36.5
	50-64	467	20.5	17.6
	65 and over	91	4.0	3.7
Ethnicity:	White	1368	60.0	47.4
	Black-African	436	19.1	18.2
	Other	407	17.8	19.6
Exposure:	Sex between men	1109	48.6	42.6
	Heterosexual	950	41.6	34.6
	Injecting drug use	46	2.0	2.1
	Other	37	1.6	2.2

Totals do not add because of missing data not shown.

Site of initial reactive/positive HIV test

	Number	Percent
GUM/sexual health or HIV clinic	968	42.4
In-patient setting	319	14.0
General practice	289	12.7
Other out-patient clinic setting (including antenatal)	273	12.0
Emergency department	84	3.7
Admissions unit/AMU	56	2.5
Community/voluntary organisation or outreach setting	56	2.5
Self-sampling, eg at home	54	2.4
Self-testing, eg at home	46	2.0
Other	66	2.9
Not known/answered	70	3.1

Initial results and clinical status

		No.	%
VL in copies/mL:	Undetectable or <50	66	2.9
	Detectable, but <1000	100	4.4
	1001-100,000	1116	48.9
	100,001-1 million	669	29.3
	>1 million	263	11.5
CD4 in cells/µL:	≤200	761	33.4
	201-350	474	20.8
	351-500	439	19.2
	>500	543	23.8
*Clinical:	Suspected or confirmed primary HIV	290	12.7
	AIDS-defining infection	309	13.5
	Other AIDS-defining illness	82	3.6
	Other serious bacterial infection	126	5.5
	Other signs or symptoms of possible HIV-related disease	417	18.3
	Any of the above	1070	46.9

Totals do not add because of missing data not shown.

*Some individuals had more than one clinical condition.

Late diagnosis “look-backs”

“Look-backs” had been conducted for 380 (49.9%) of 761 individuals with CD4 <200 cells/µL at diagnosis.

Of these:

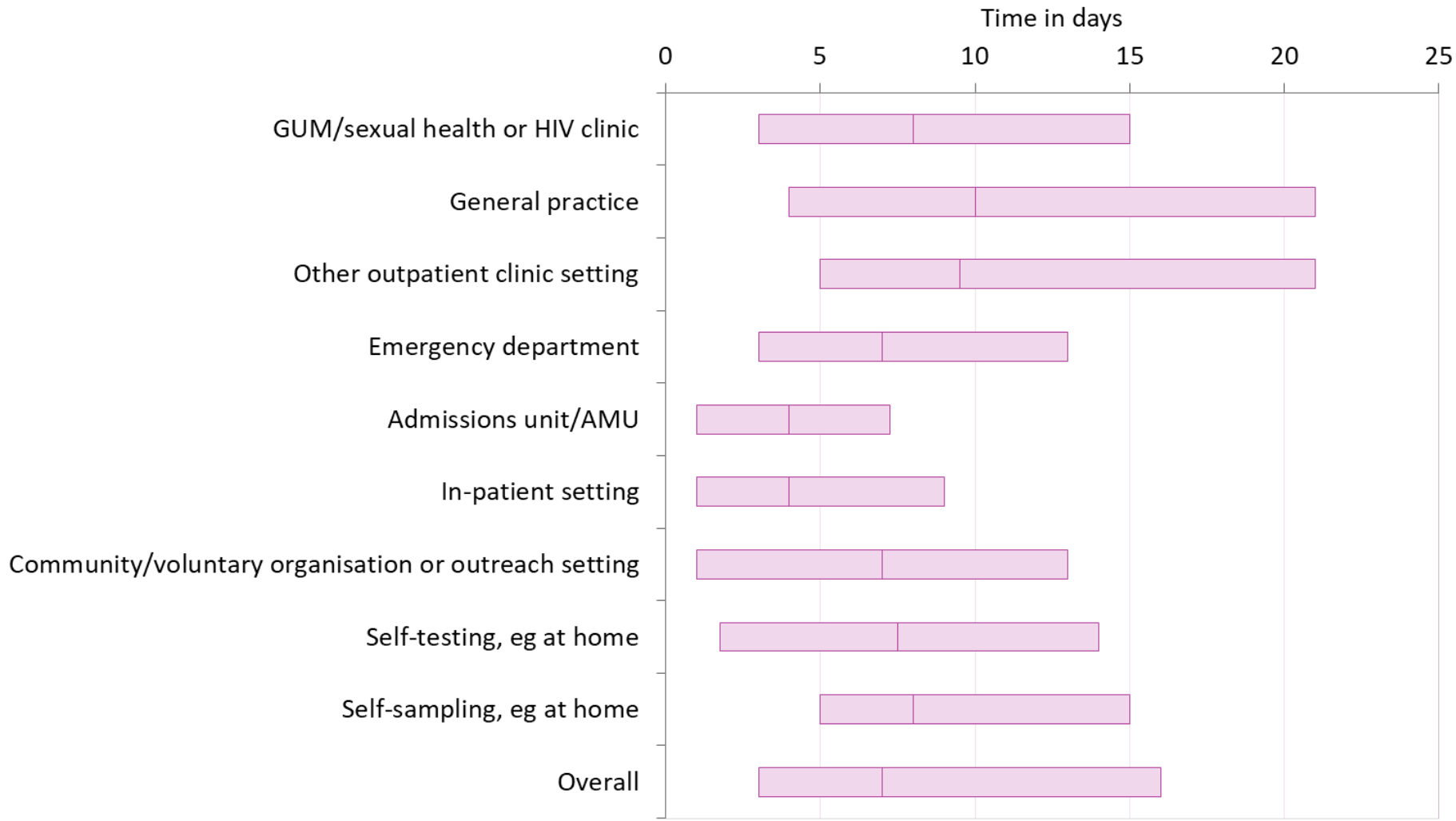
- 39.5% (150) had at least one definite missed opportunity for earlier HIV testing
- 18.9% (72) had possible missed opportunit(ies)

Time to assessment by an HIV specialist clinician

Initial positive/reactive HIV test to first seen by HIV specialist clinician

Time in weeks	National No.	National %	Median (IQR) for individual sites
Within 2	1544	67.7	73% (58-87%)
Within 4 (cumulative)	1896	83.1	88% (80-100%)
Within 6 (cumulative)	2022	88.6	93% (85-100%)
Longer than 6	113	5.0	0% (0-5%)
Missing data	146	6.4	0% (0-8%)

Median and IQR days to be first seen by specialist by where specimen taken for initial reactive/positive HIV test (missing data excluded)



Initiation of ART

Discussion and initiation of ART

- 55.7% (1271) individuals: ART initiation was *discussed* on the day they were first seen post-diagnosis by a specialist HIV clinician

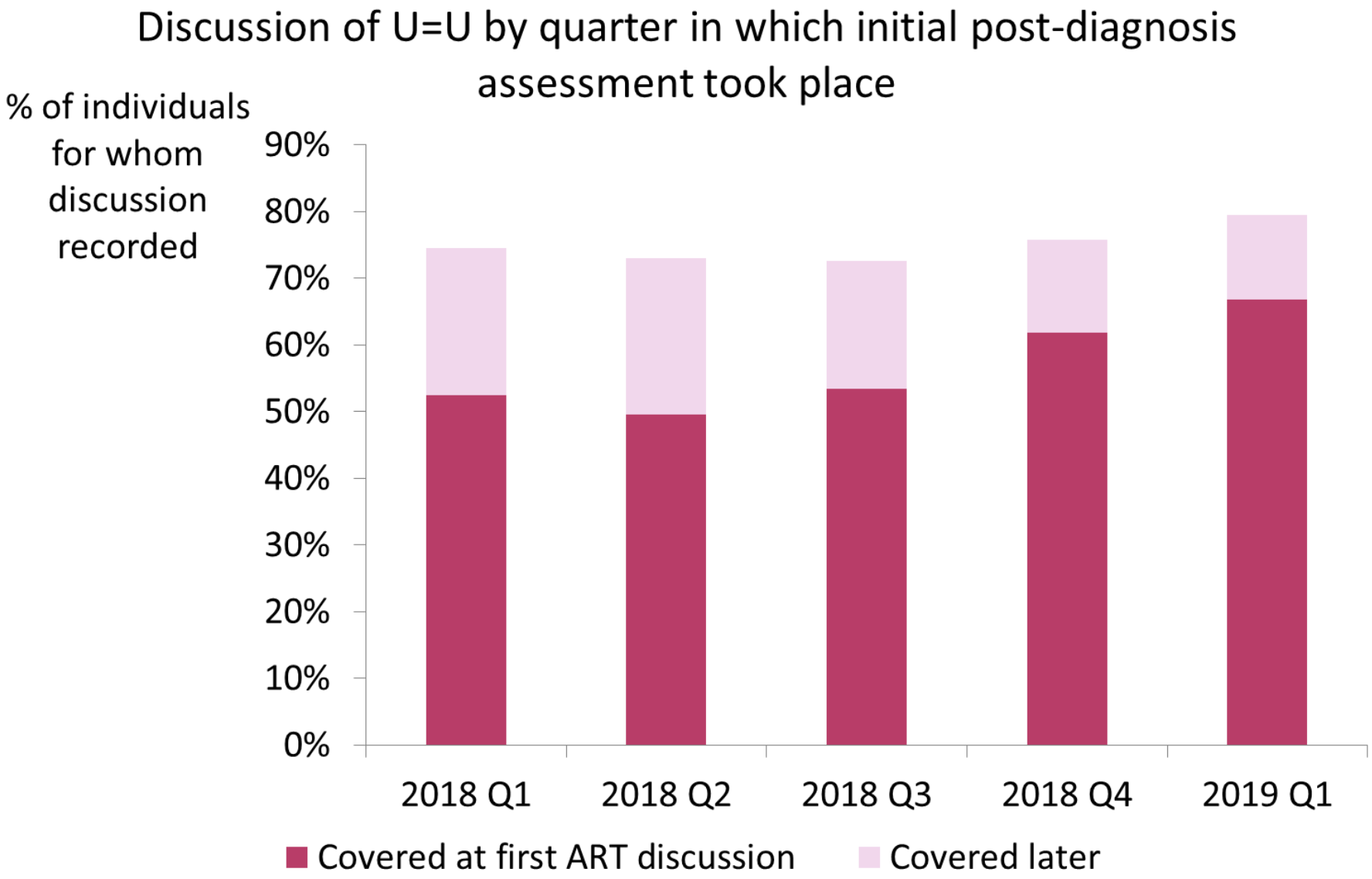
- 17.2% (392) individuals: ART was *initiated* on the day they were first seen post-diagnosis by a specialist HIV clinician

Availability of results at first discussion of ART initiation

	Available %	Not yet available %	Not recorded/ answered %
Confirmatory HIV	80.4	14.5	5.1
VL	61.2	34.0	4.8
CD4	63.9	31.2	4.9
Genotypic resistance	31.4	61.6	7.0
HLA-B*57:01	36.6	56.1	7.3
Hepatitis B/C serology (or known status)	73.5	21.4	5.1
STI screening	61.5	24.9	13.6
All results available	22.2	NA	NA

Topics covered at (or before) first discussion of ART initiation

	National No.	National %	Median (IQR) for individual sites
Benefits of ART to individual	1957	85.8	92% (79-100%)
Evidence of U=U discussion	1290	56.6	56% (35-84%)
Partner notification	1954	85.7	93% (83-100%)
Availability of peer/ community support	1401	61.4	65% (44-86%)


Discussion of U=U by quarter in which initial post-diagnosis assessment took place
% of individuals for whom discussion recorded
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2018 Q1
2018 Q2
2018 Q3
2018 Q4
2019 Q1
Covered at first ART discussion
Covered later

Site variation in time to ART initiation

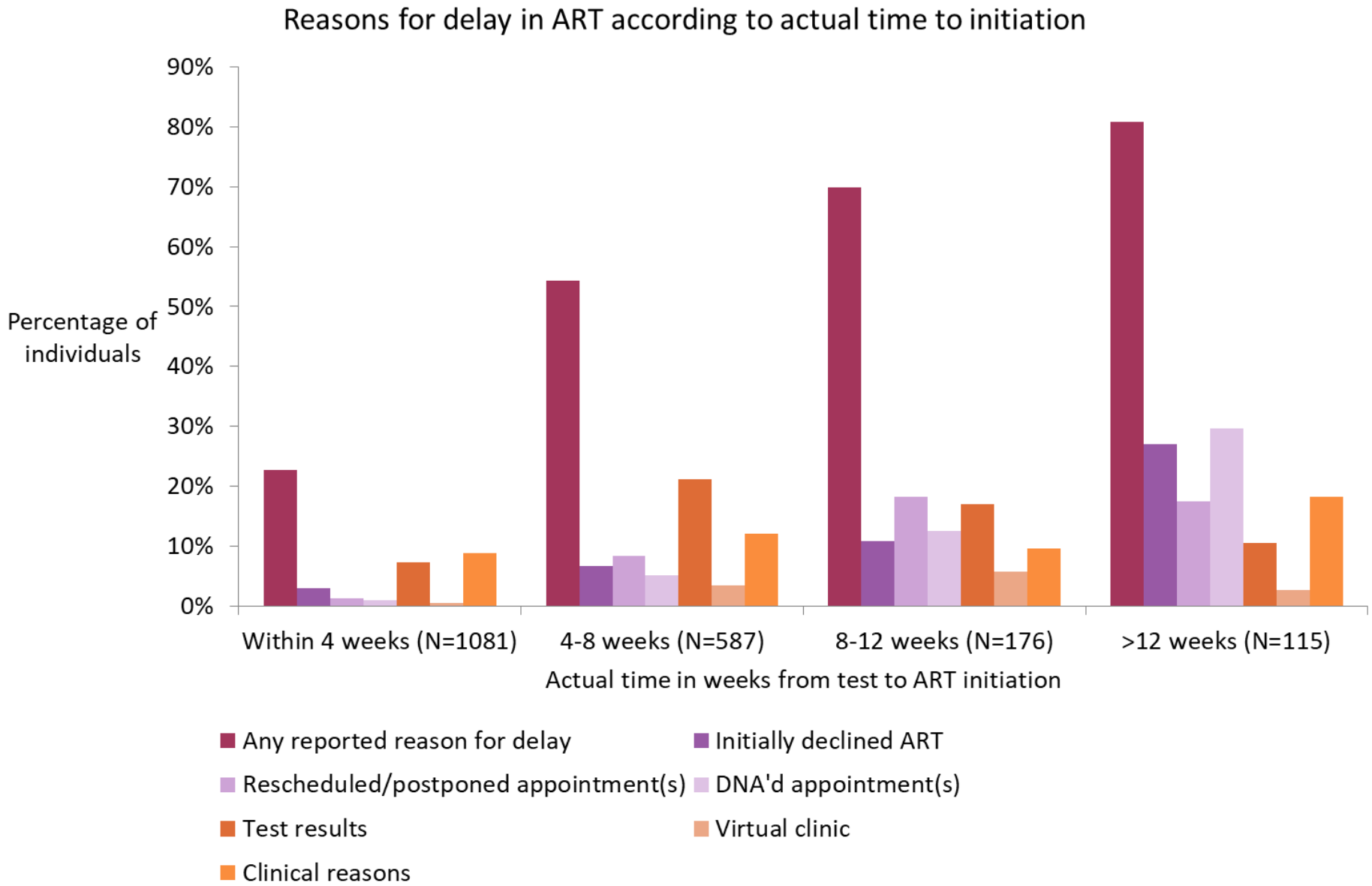
Time in weeks from test to ART initiation	National %	Median (IQR) for individual sites
Within 4	48.2	49% (28-60%)
Within 8 (cumulative)	74.5	78% (67-89%)
Within 12 (cumulative)	82.4	86% (78-95%)
Longer than 12	5.2	0% (0-7%)
Missing data	12.5	9% (0-18%)

Factors associated with ART initiation within 4 weeks of diagnosis

% of individuals starting ART within 4 weeks:	If present	If absent	P (χ^2)
CD4 ≤350 cells/mm^3 at diagnosis	60.4	48.7	<0.001
Clinical status at diagnosis:			
Primary HIV infection	62.8	54.0	<0.01
AIDS-defining infection	70.0	52.8	<0.001
Other AIDS-defining illness	72.1	54.6	<0.01
Other serious bacterial infection	62.5	54.7	NS
Other HIV-related disease	59.7	54.1	NS

NB: missing data excluded.

In univariate analysis, gender (male/female), ethnicity (White/Black-African) and age (<40/≥40) were *not* associated with starting ART within 4 weeks.



NB: some individuals had more than one reported reason for delaying ART.

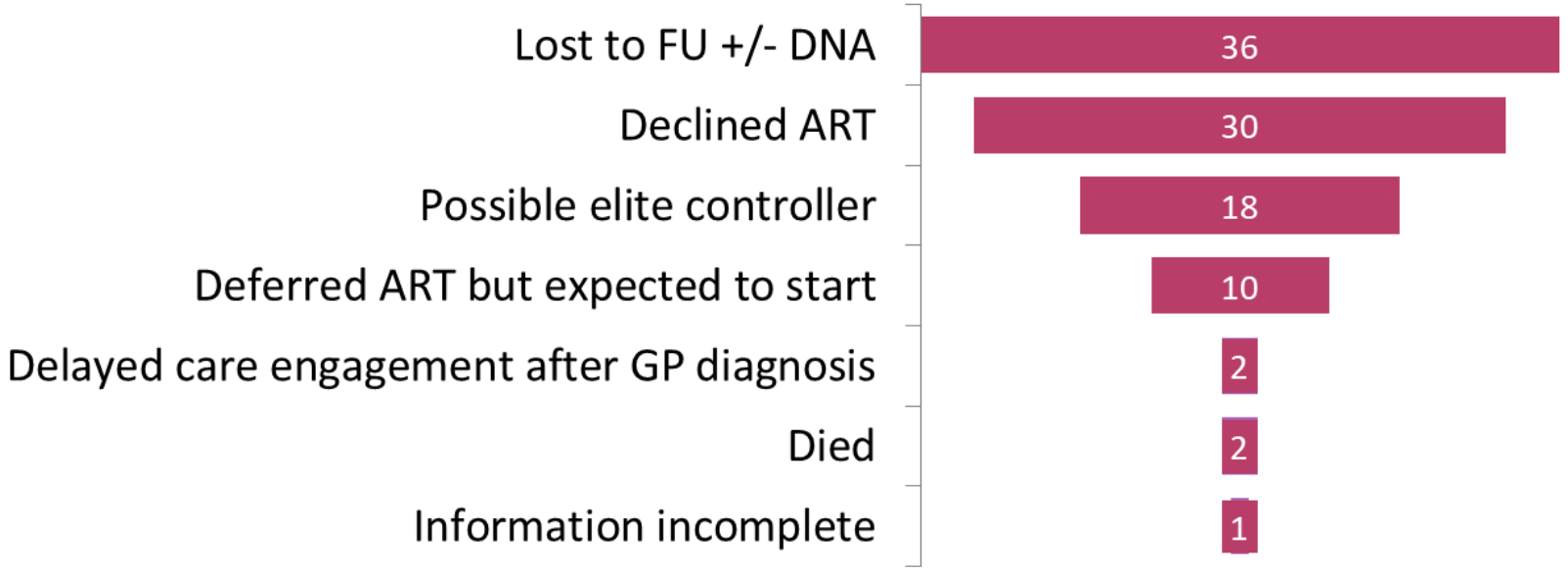
Non-initiation of ART

At the time of audit:

141 (6.2% of total)
had not initiated ART at the reporting site

62
had definitely or probably done so elsewhere

79
had not initiated ART



More than one response possible per patient

Conclusions

- Only two thirds of individuals were seen by a HIV specialist within 2 weeks of testing positive
- This varied substantially between sites
- Delays were commonest among those tested in GP and non-GUM/HIV OP
- Those tested in ED/admissions or as inpatients were mostly seen more promptly

Conclusions (continued)

- There was wide variation between sites in the proportion of individuals for whom U=U and availability of peer support were discussed before ART initiation

- However discussion of U=U improved between Q1 2018 and Q1 2019

Conclusions (continued)

- Most individuals started ART promptly – 73% within 28 days and 87% within 56 days of initial specialist assessment
- As expected, primary and advanced HIV were associated with earlier ART initiation
- Demographic and exposure factors were not associated with time to ART initiation

Conclusions (continued)

- ART delays over 12 weeks from testing were uncommon, and mostly attributed to individuals initially declining ART, rescheduling/ postponing/not attending appointments, or clinical reasons
- This suggests that the proportion of individuals starting ART within 91 days is a poor indicator of quality of care
- However, non-initiation of ART within 8 weeks may be a sign of individual need for additional support

Recommendations

Clinical services should:

- Develop effective, timely pathways into HIV care especially for those testing positive in GP and OP settings
- Routinely discuss and document all relevant topics including U=U and availability of peer/community support with newly diagnosed individuals
- Review individuals who have not started ART within 6-8 weeks of diagnosis to identify possible support needs

Acknowledgements

- Thanks to all clinicians who participated in the audit

Membership of BHIVA Audit and Standards Sub-Committee: D Asboe, V Balasubramaniam, F Burns, D Chadwick (chair), M Chaponda, D Churchill, V Delpech, N Ekong, A Freedman, E Kaide, R Kulaseguram, N Larbalestier, R Mbewe, O Olarinde, E Ong, S Pires, C Sabin, A Sullivan (vice-chair), J Vera