BHIVA national clinical audit of ART

Dr Margaret Johnson,

Chair of BHIVA clinical audit committee

Dr Hilary Curtis,

BHIVA clinical audit co-ordinator

Committee: R Brettle, G Brook, P Bunting, J Deutsch, A Freedman, B Gazzard, C O'Mahony, F Mulcahy, A Pozniak, K Radcliffe, C Sabin, A Tang, J Welch, E Wilkins

A rolling annual programme

Today's presentation:

- 2001 audit results
- 2002 audit plans

Aims:

- Evaluate usefulness of BHIVA guidelines
- Yield national aggregate data on treatment patterns
- Enable individual units to compare their data with national aggregates in confidence

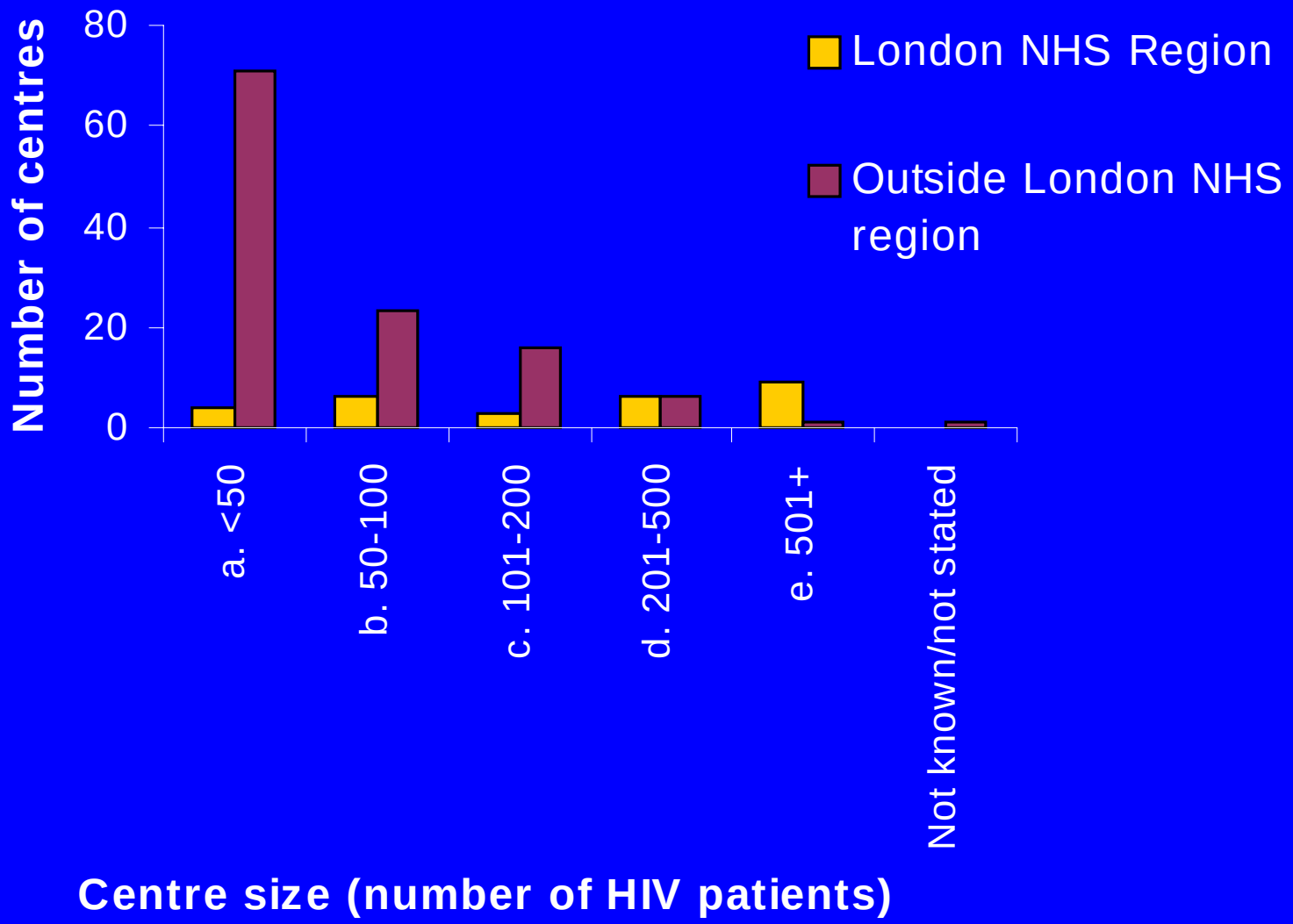
2001 audit results

Survey of centres including availability of drugs and investigations

Case review of patients:

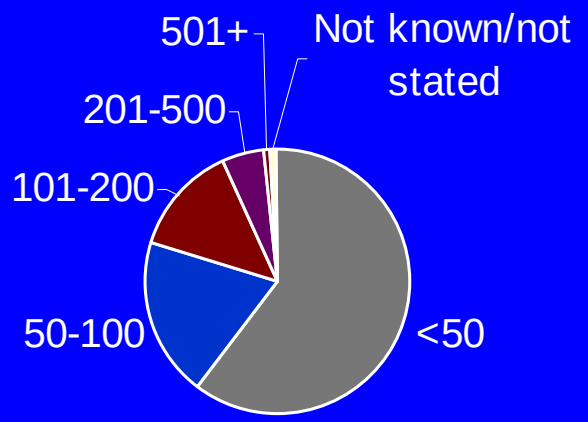
- Adherence to guidelines on when to start treatment
- Adherence to guidelines on what treatment to use
- Outcomes of therapy
- Survey of use of resistance testing

Participating centres by size

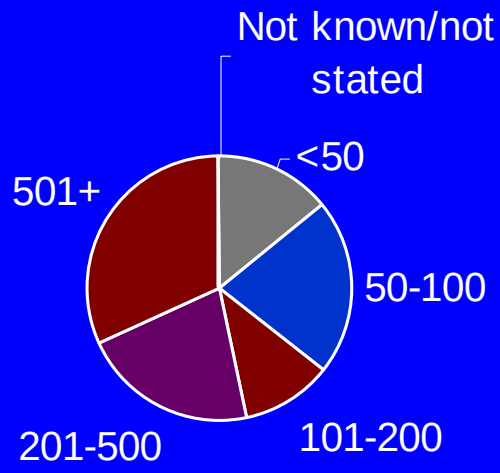


Participating centres by size (number of HIV patients

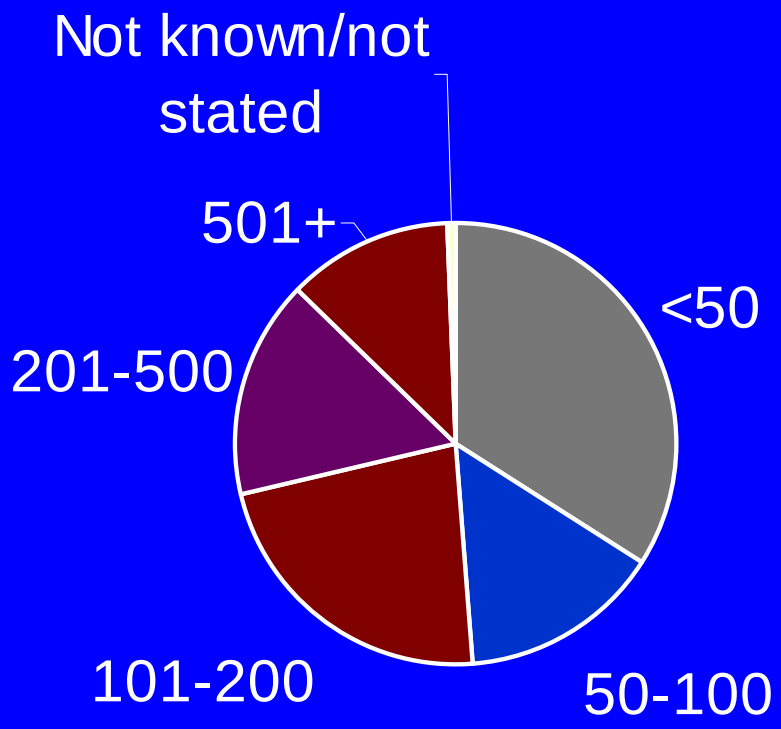
Top: Outside London



Bottom: London



Audited patients by size of participating centre



Impact of BHIVA guidelines

138 out of 147 (93.9%) of respondents said they had seen and read the guidelines

109 (74.1%) said the guidelines had influenced care at their centre

Availability of drugs and investigations

141 centres reported no prescribing restrictions.

- 3 reported problems with Trizivir®.
- 2 reported problems with Kaletra®/boosted PIs.
- 1 reported problems with tenofovir specifically for children.

Specialised viral load assays

Ultrasensitive viral load testing:

- 133 (90.5%) no access problems
- 1 (0.7%) “Use, but less than clinically desirable”
- 11 (7.5%) “No/limited access”

Viral load tests able to detect specific sub-types:

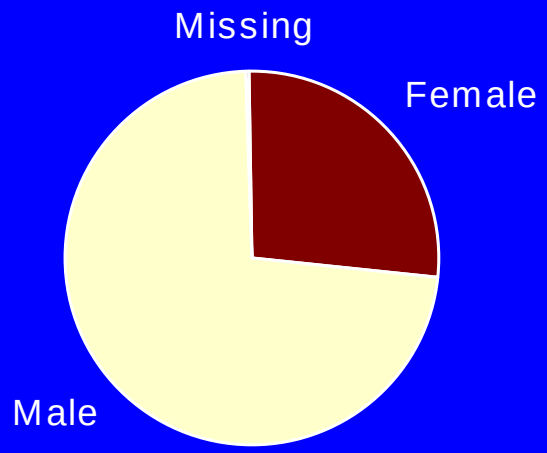
- 94 (63.9%) centres say they have access
- 23 (15.6%) say they do not have access
- 27 (18.4%) do not know if they have access

Resistance testing

- 121 (82.3%) use as clinically desirable
- 14 (9.5%) “Use, but less than clinically desirable”
- 3 (2.0%) “Have access, but rarely consider clinically desirable”
- 5 (3.4%) “No/limited access”

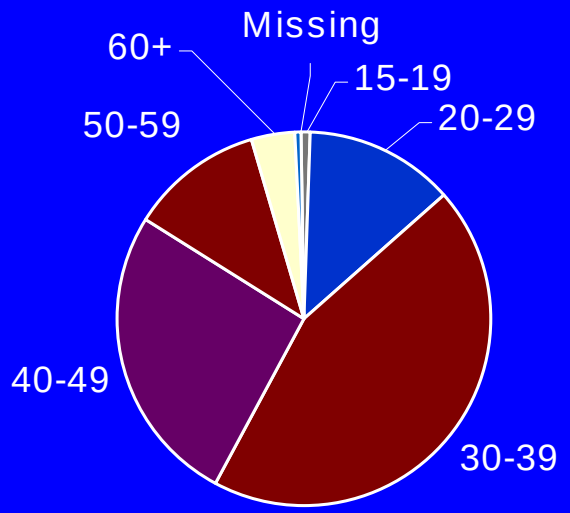
Audit sample:

72.6% male, 27.1% female



SOPHID adults:

77% male, 23% female

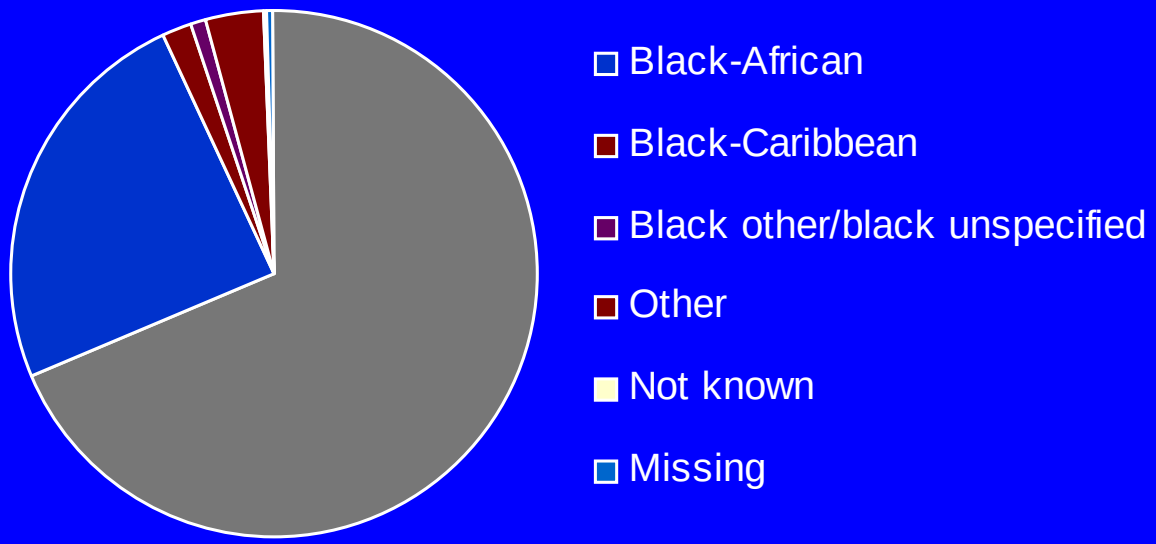


Audit sample:

68% white, 24.5% black-African

SOPHID:

59.8% white, 22.9% black-African

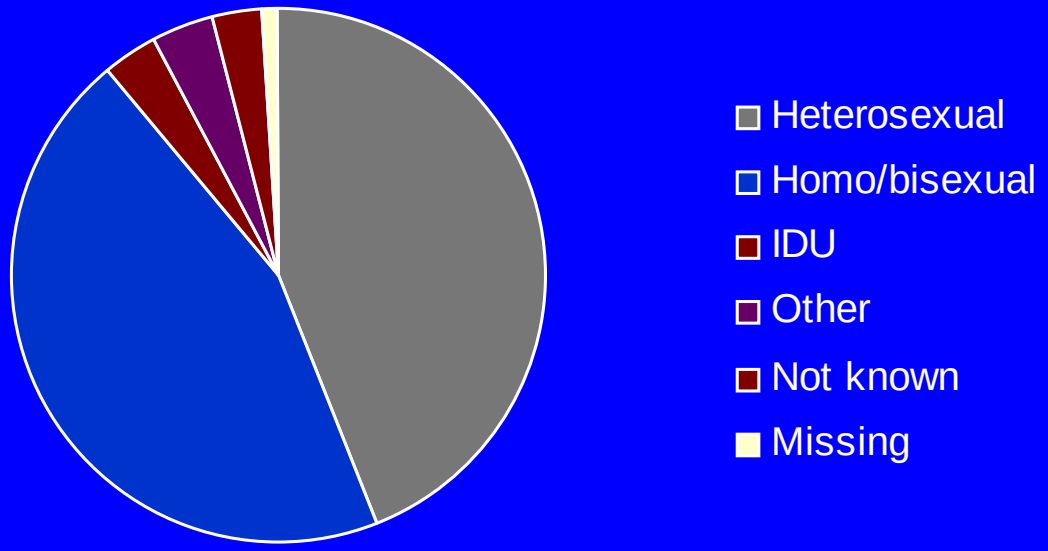


Audit sample:

43.8% heterosexual, 45.1% homo/bisexual, 3.3% IDU

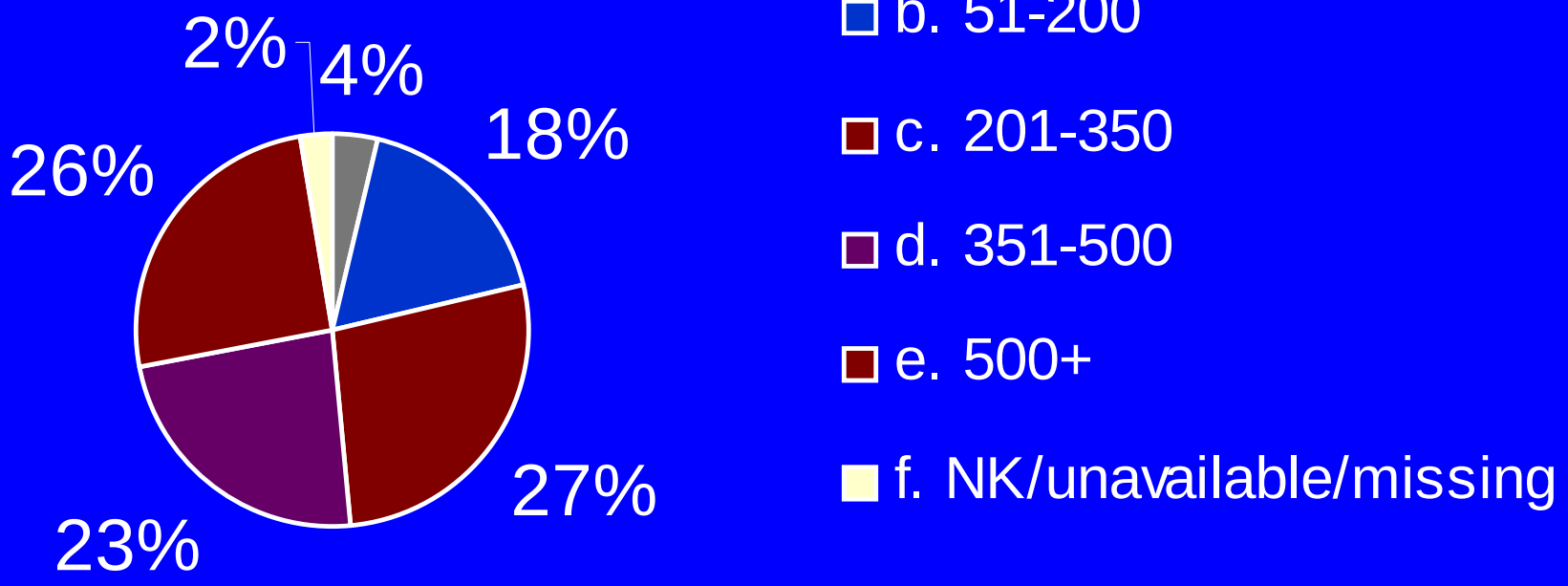
SOPHID (excluding vertical transmission from base):

32.4% heterosexual, 54.5% homo/bisexual, 4.2% IDU

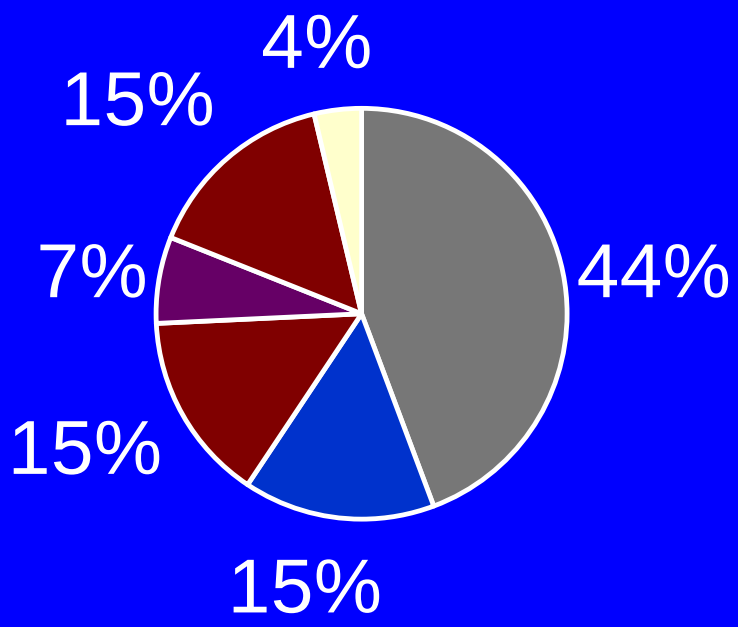


Current clinical and laboratory status

Current CD4

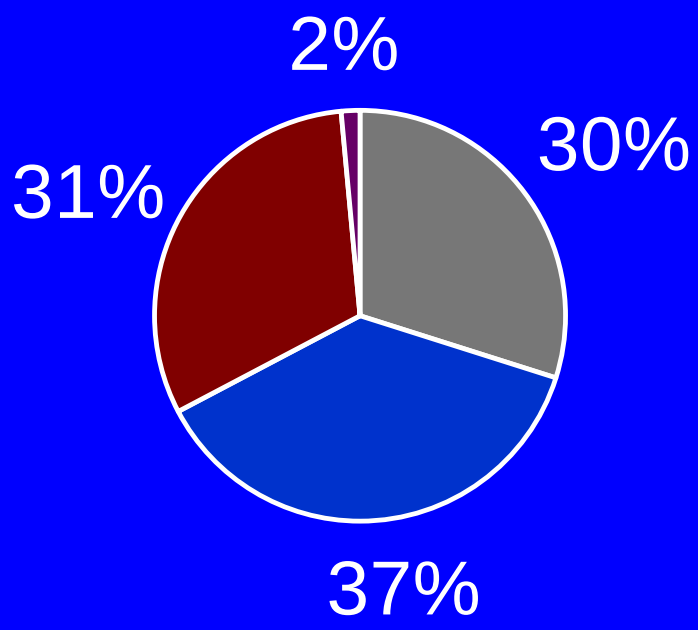


Latest VL



- a. below 50
- b. below 500
- c. 500-10,000
- d. 10,000-30,000
- e. 30,000+
- f. NK/unavailable/missing

Clinical status (worst reported)



- a. No symptoms
- b. Minor symptoms
- c. Severe symptoms/AIDS
- d. NK/missing

Current treatment	Total
1 drug	1
	0.0%
2 drugs	36
	1.8%
3+ drugs	1479
	72.4%
On ART, details unknown	2
	0.1%
None	513
	25.1%
Missing/NK	13
	0.6%
Total Number	**2044**
Total Percent	**100.0%**

When to start treatment

Standard from guidelines:

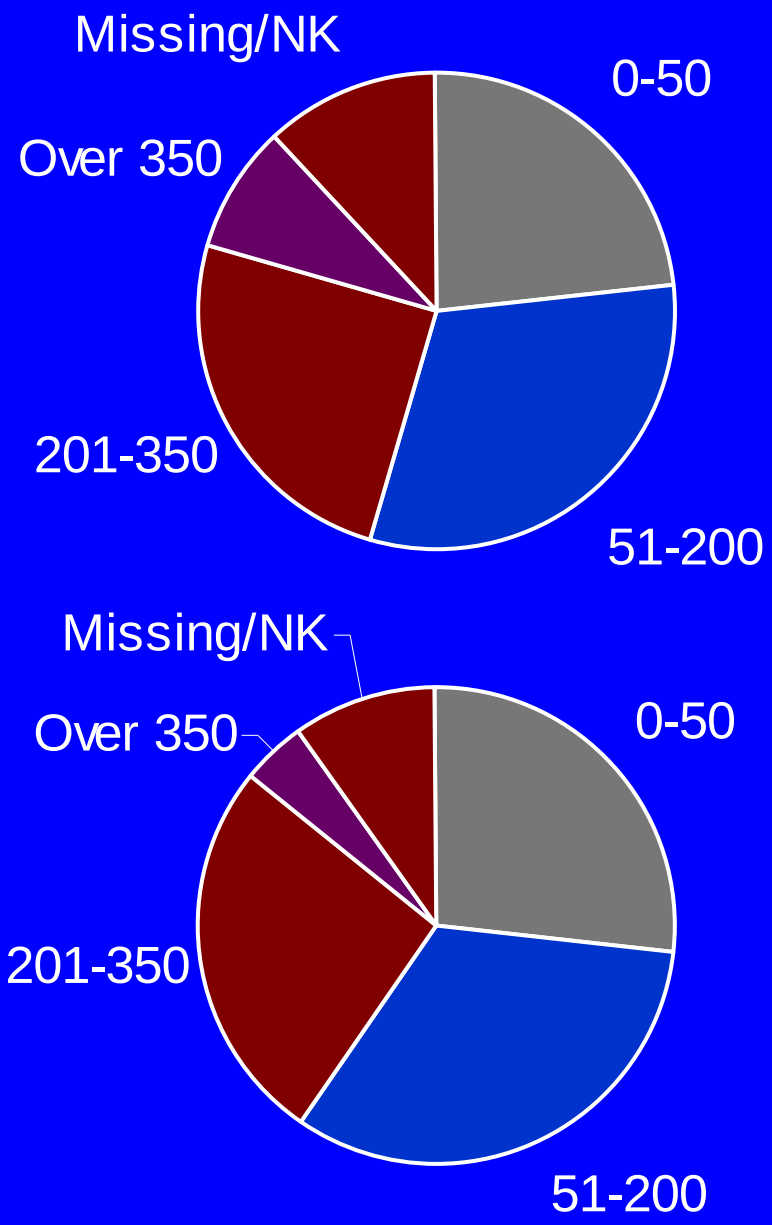
- At CD4 between 200 and 350
- Or with severe symptoms/AIDS (any symptoms in 2000 guidelines)
- Or possibly with VL above 30,000 (2000 guidelines).

Assess from audit of:

- Patients starting treatment during period covered by guidelines
- Patients not on treatment
- Patients on treatment

Treatment starters

CD4 just before starting treatment in patients who started for the first time in 2000 (top) and 2001 (bottom).



Late starters 2000-1

CD4 before starting ART	CD4 at diagnosis of HIV						
	0-50	51-200	201-350	351-500	500+	Missing/NK	Total
0-50	***131***	2	3	1	1	8	**146**
	39.7%	0.6%	0.9%	0.3%	0.3%	2.4%	**44.2%**
51-200	2	***141***	15	10	5	11	**184**
	0.6%	***42.7%***	4.5%	3.0%	1.5%	3.3%	**55.8%**
Total Number	**133**	**143**	**18**	**11**	**6**	**19**	**330**
Total Per cent	**40.3%**	**43.3%**	**5.5%**	**3.3%**	**1.8%**	**5.8%**	**100.0%**

Patients not on treatment

Of 513 patients not on treatment:

- 77 (15%) had latest CD4 under 200, with or without symptoms
- A further 9 (1.8%) had a history of severe symptoms.

Of these 86 patients, 26 (including 11 newly diagnosed) are described as considering or being about to (re)start ART, 45 have some reason given for not being on treatment, and 15 are unexplained.

Patients on treatment

Of 1516 patients on ART, 54 (3.6%) were not reported as ever having had symptoms or CD4 under 350.

12 of the 54 first started treatment in 2000:

- 6 had pre-treatment VL >30,000
- 1 had pre-treatment VL 10-30,000
- Data was missing for the remaining 5

5 of the 54 first started treatment in 2001:

- 3 were seroconvertors
- 2 had pre-treatment VL >30,000.

Conclusion: starting treatment

There is a major departure from the guidelines in that most patients start treatment late. However, this is predominantly due to late diagnosis.

What treatment to offer

Standard from guidelines:

- Patients starting treatment should normally do so on 3 or more drugs
- Patients who are currently on fewer than 3 drugs may continue this therapy provided VL is stable and CD4 is clinically safe.

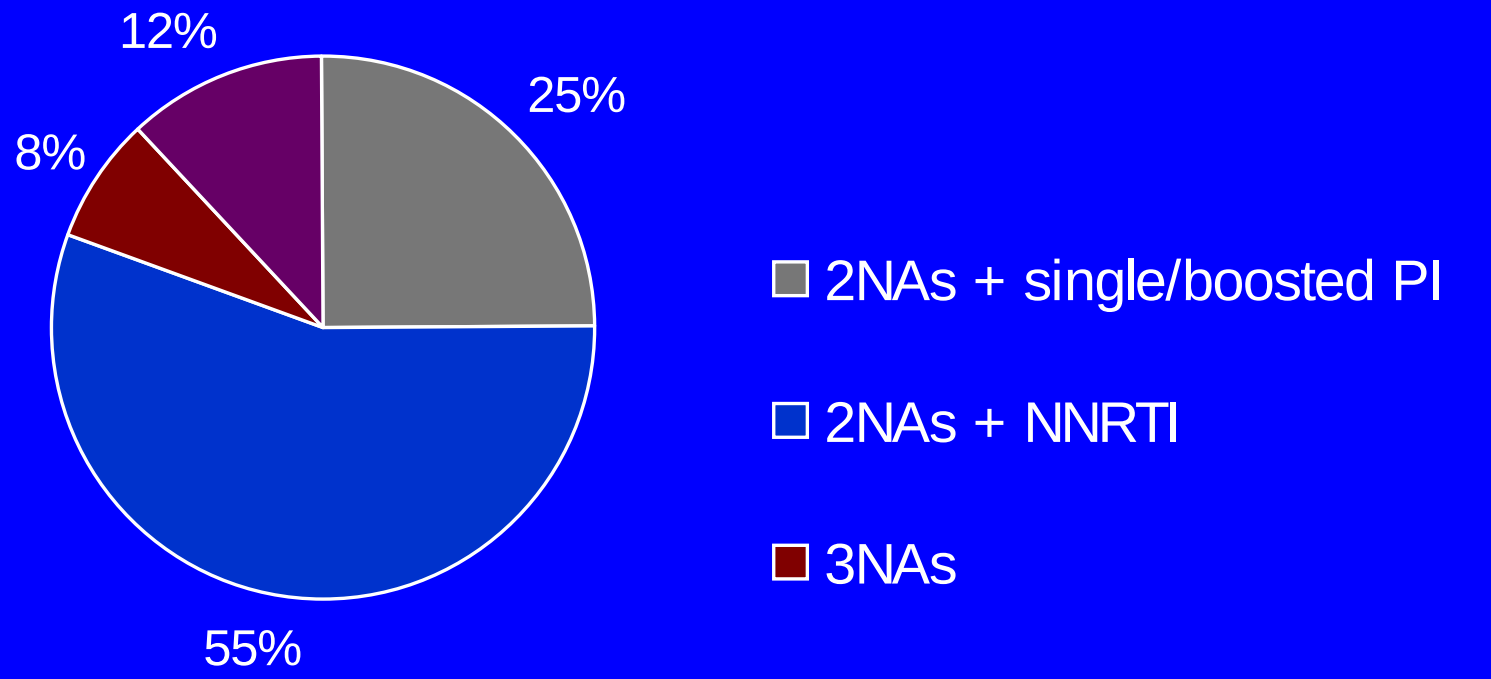
Patients on fewer than 3 drugs

Of 1516 patients on ART (other than for prevention of vertical transmission):

- 1 was on monotherapy – started at unknown date, current CD4 200-350, VL < 50, no symptoms, has declined switch to triple therapy.
- 36 patients were on dual therapy, of whom:
  - 8 had first started therapy in 2000-1. 6 of these started on 2 drugs and 2 started on 3 drugs and switched to 2.
  - 15 have latest CD4 <200 and/or history of severe symptoms/AIDS, including 6 with latest VL <50.

Patients on 3 or more drugs

1479 patients were on combinations of 3 or more ART drugs.



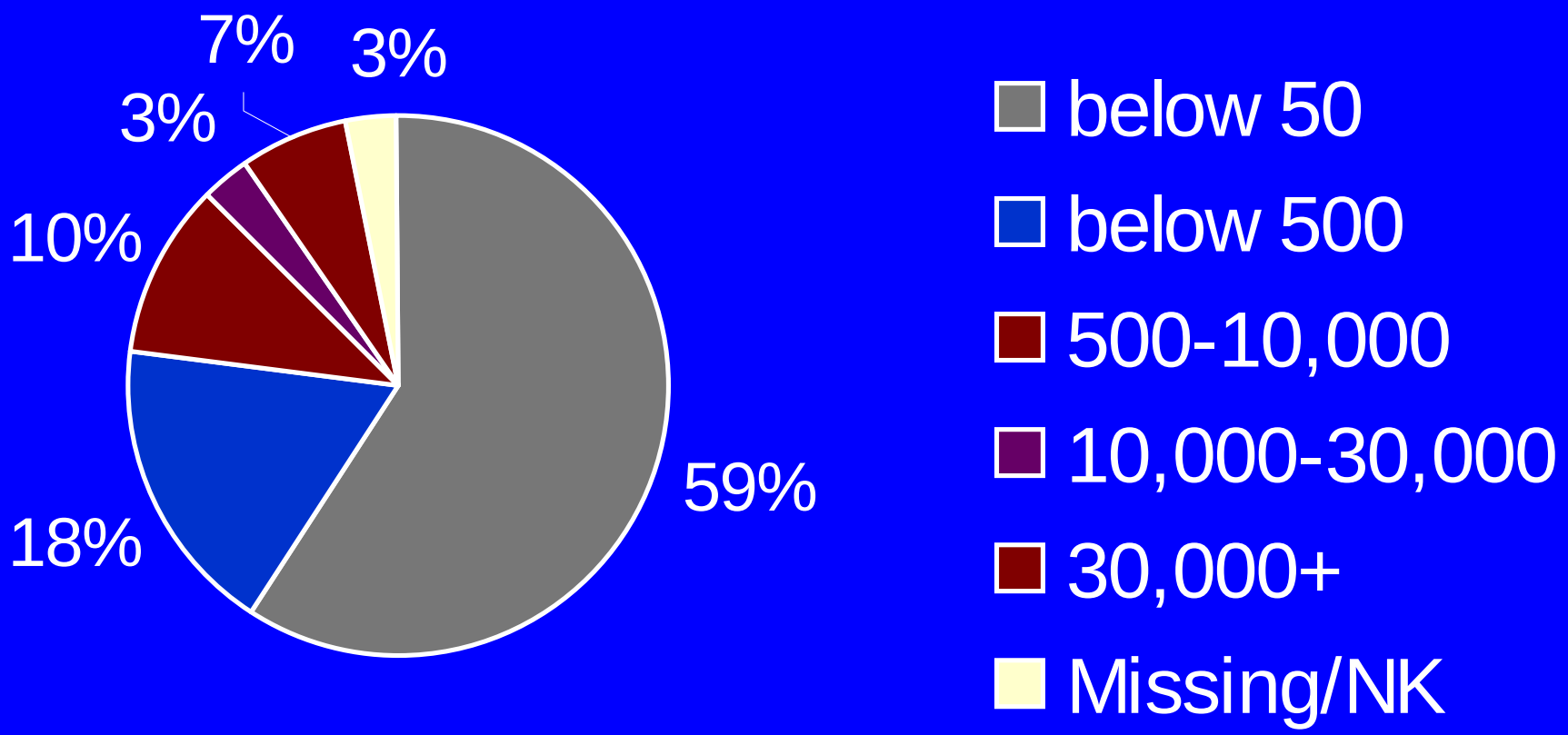
Conclusions: what treatment to offer

Of patients on treatment, 97.5% are receiving 3 or more drugs.

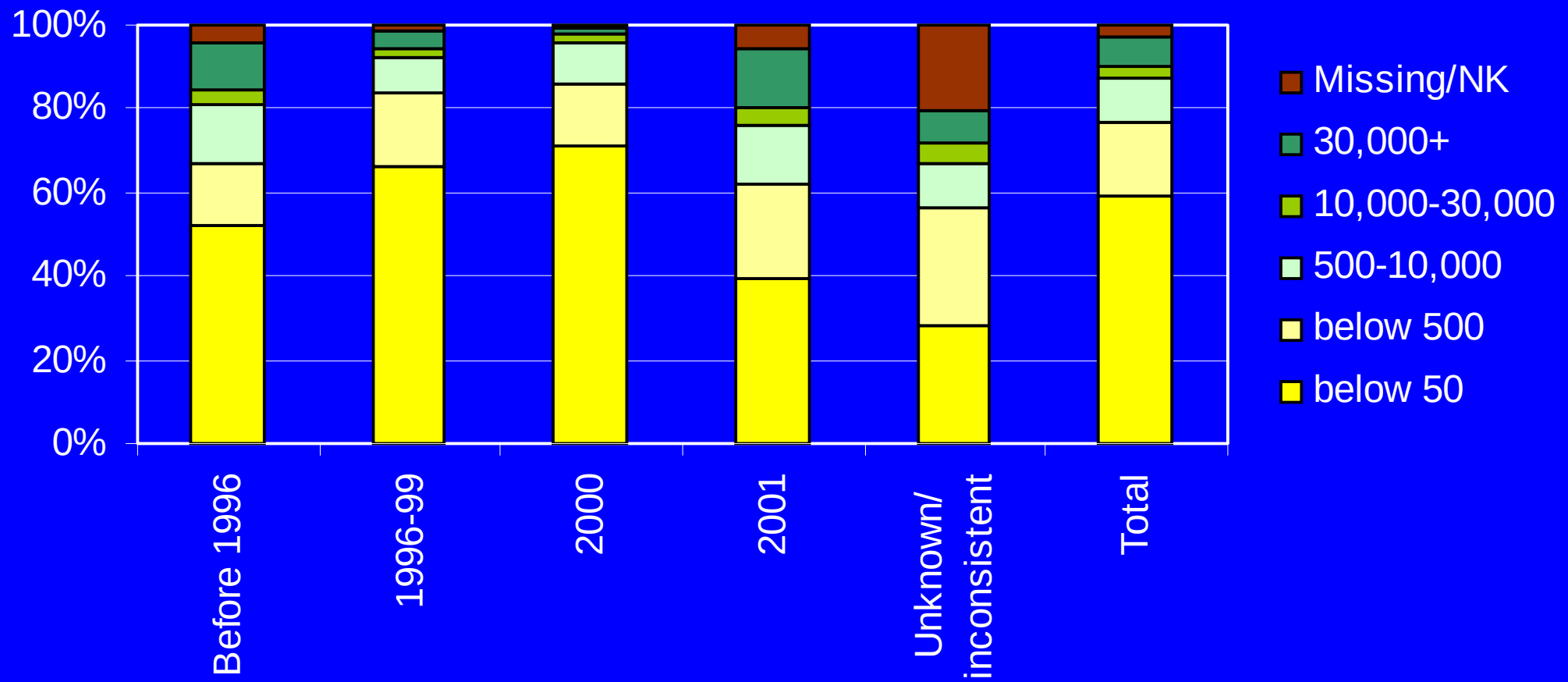
Most centres are making substantial use of NNRTI containing combinations.

A small number of centres started naïve patients on two drug combinations during 2000 and 2001.

Latest viral load for patients on 3 or more drugs



Latest VL by date of first starting ART, in patients taking 3 or more drugs



VL outcomes of current therapy for patients on 3 or more drugs

Number	VL just before starting current ART						
Latest VL	**below 50**	**below 500**	**500-10,000**	**10,000-30,000**	**30,000+**	**Missing/NK**	**Total**
below 50	219	63	95	59	350	85	**871**
below 500	19	35	39	19	127	29	**268**
500-10,000	3	6	35	17	76	17	**154**
10,000-30,000	1		7	13	18	4	**43**
30,000+	1	1	1	4	82	8	**97**
Missing/NK		2	2	6	18	18	**46**
Total	**243**	**107**	**179**	**118**	**671**	**161**	**1479**

CD4 outcomes of current therapy for patients on 3 or more drugs

Number of patients	CD4 just before starting current ART						
Latest CD4	**0-50**	**51-200**	**201-350**	**351-500**	**500+**	**Missing/NK**	**Total**
a. 0-50	40	3				3	**46**
b. 51-200	112	155	14	1		24	**306**
c. 201-350	60	149	161	10		30	**410**
d. 351-500	16	94	116	74	13	27	**340**
e. 500+	7	46	86	82	108	19	**348**
Missing/NK	2	6	3	1		17	**29**
Total	**237**	**453**	**380**	**168**	**121**	**120**	**1479**

Clinical outcomes of current therapy for patients on 3 or more drugs

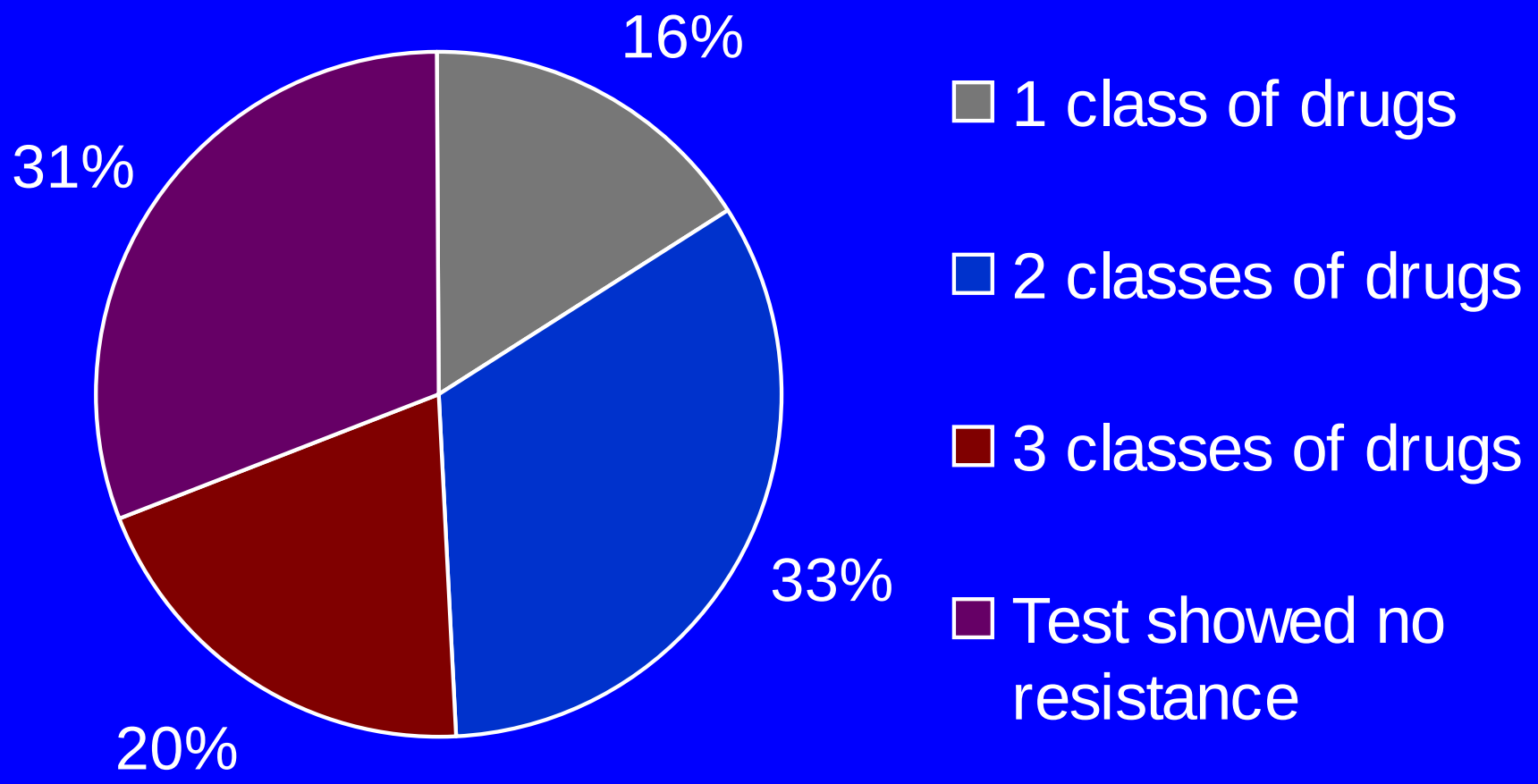
Number of patients	Symptoms just before starting current ART2				
Latest symptoms	**No symptoms**	**Minor symptoms**	**Severe symptoms/AIDS**	**Missing/NK**	**Total**
No symptoms	365	238	80	58	**741**
Minor symptoms	9	333	54	39	**435**
Severe symptoms/A	1	5	242	20	**268**
Missing/NK	2	4	5	24	**35**
Total	**377**	**580**	**381**	**141**	**1479**

NB: In theory, should be no reporting of symptom improvement

Use of resistance testing

395 (19.3) of patients had been tested for resistance, which was found in 255 (12.5%).

Patients with a resistance test result



Conclusions from the 2001 audit

The audit has shown broad support for and compliance with BHIVA clinical guidelines, and good patient outcomes.

More than a third of centres lack access or are unsure if they have access to VL tests able to detect HIV sub-types.

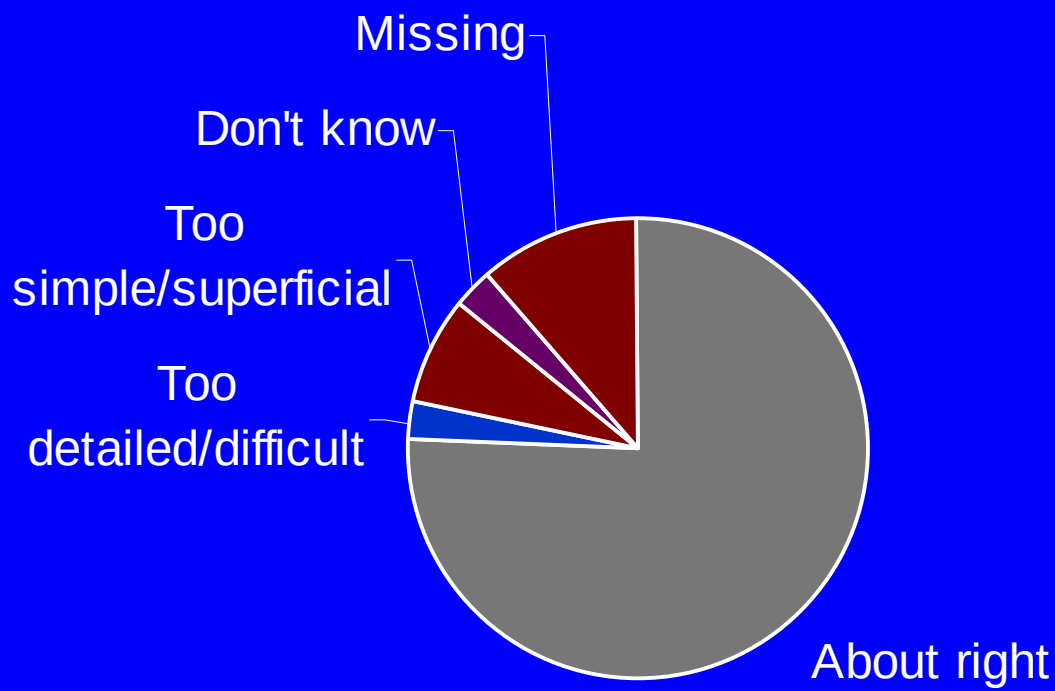
A significant minority of centres report limited access to resistance testing.

The only major departure from the guidelines is that most patients starting treatment do so at CD4 less than 200. This largely reflects late diagnosis.

Most centres are making extensive use of NNRTI combinations.

A small number of centres started naïve patients on two drug combinations during 2000 and 2001.

Evaluation of the 2001 Audit



Future plans and issues

Dissemination of confidential individual centre reports from 2001 audit

2002 audit to cover:

- Patients starting treatment from naïve – survey of clinic policy plus case note review
- Survey of arrangements for managing HIV in pregnancy

Establishment of BHIVA Clinical Audit Faculty