AUSTRALIAN HIV OBSERVATIONAL DATABASE (AHOD) ANNUAL REPORT

(Volume 21, Number 1: October 2021)

Characteristics of heterosexually-acquired compared to homosexually-acquired HIV in AHOD.

In Australia the main mode of HIV acquisition is male to male sex (MSM), accounting for more than two thirds of HIV diagnoses in 2019, with diagnoses in MSM decreasing overall. While a quarter of HIV diagnoses in the same year were reported to be heterosexually acquired, slightly increasing from previous years. There is evidence that individuals with heterosexually acquired HIV have specific challenges which may affect their clinical care, however, beyond routinely collected surveillance data, little is known of the characteristics and HIV related clinical outcomes of people in Australia who acquired HIV through heterosexual contact.

Using data from the AHOD, S. Herbert and colleagues (2021)[1] explored clinical characteristics of people with heterosexually acquired HIV (Het-HIV) compared to people with homosexually acquired HIV (Hom-HIV). Included in these analyses were all patients who were recruited to AHOD up to April 2018, including a total of 513 Het-HIV and 1467 Hom-HIV patients. A significant greater proportion of Het-HIV were born overseas (x and y%), were slightly younger at HIV diagnose. Het-HIV, had also had lower CD4 counts than Hom-HIV at both HIV diagnosis, and at ART initiation. Het-HIV were also less likely to have a recent positive HCV serology result compared to Hom-HIV.

In terms of clinical outcomes, there were no significant differences between Het-HIV and Hom-HIV with respect to time to initiation ART, or time to virological suppression (HIV viral load (VL)<400 copies/mL), virological failure (VL > 400 copies/mL) after suppression, or all-cause mortality. (Figure 1). However, Het-HIV had a lower adjusted risk of loss-to-follow-up compared to Hom-HIV. Although, broadly comparable for some clinical outcomes, the differences observed with regard to patient characteristics at diagnosis and enrolment in AHOD, and more generally the paucity of data for these populations highlight the need to further examine factors associated with patient outcomes, and interventions to better inform care.

1. S. Herberta, R. Puhr, K. Petoumenos, D. A. Lewis, R. Varma, D. L. Couldwell, M. Law and D. J. Templeton. Characteristics of heterosexually-acquired compared to homosexually-acquired HIV and implications for clinical practice: results from the Australian HIV Observational Database. AIDS Care 2021 https://doi.org/10.1080/09540121.2021.1884181

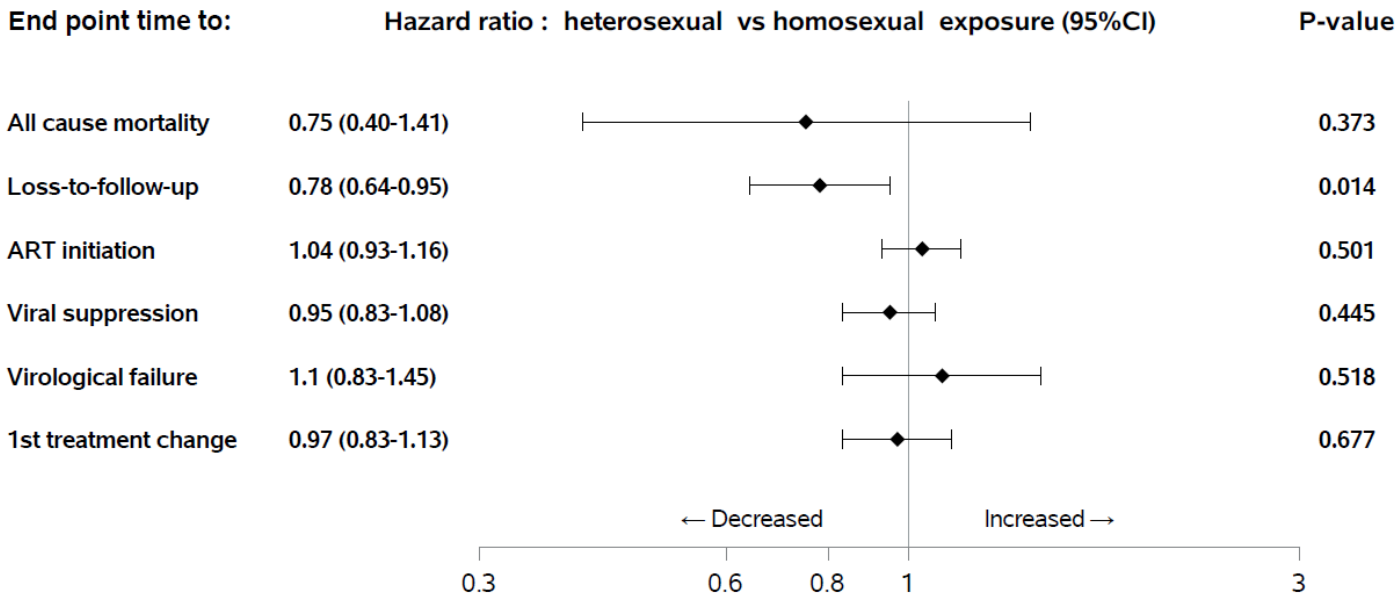


Figure 1: Clinical end-point univariate- and covariate-adjusted Cox proportional hazard ratios.

Recruitment and loss to follow up

In 2021, 24 sites in Australia provided data for the period between 1st April 2020 and 30th March 2021. Two sites from Australia (QLD and WA) and two sites from New Zealand ceased participation in AHOD study in 2020 and therefore did not contribute to the data this year (2020/2021). Data from these four sites moving forward will be censored at their last data transfer. In total, 4661 patients had been recruited between 01 Jan 1999 and 31 March 2021 (4660 patients up until the 31 December 2020), and of these, 1830 are being actively followed up as of the 31 March 2021

The largest recruitment numbers occurred between the years 1999 and 2000, with 282 patients or 15% of those recruited in 1999 and 240 patients or 13% of those recruited in 2000 still remaining in the cohort as of the 31st December 2020 (Figure 2). These numbers are significantly less than last year's active numbers due to clinics withdrawing from the AHOD study in 2020. There are 343 participants who were undergoing active follow up until their clinic withdrew from AHOD as a study site.

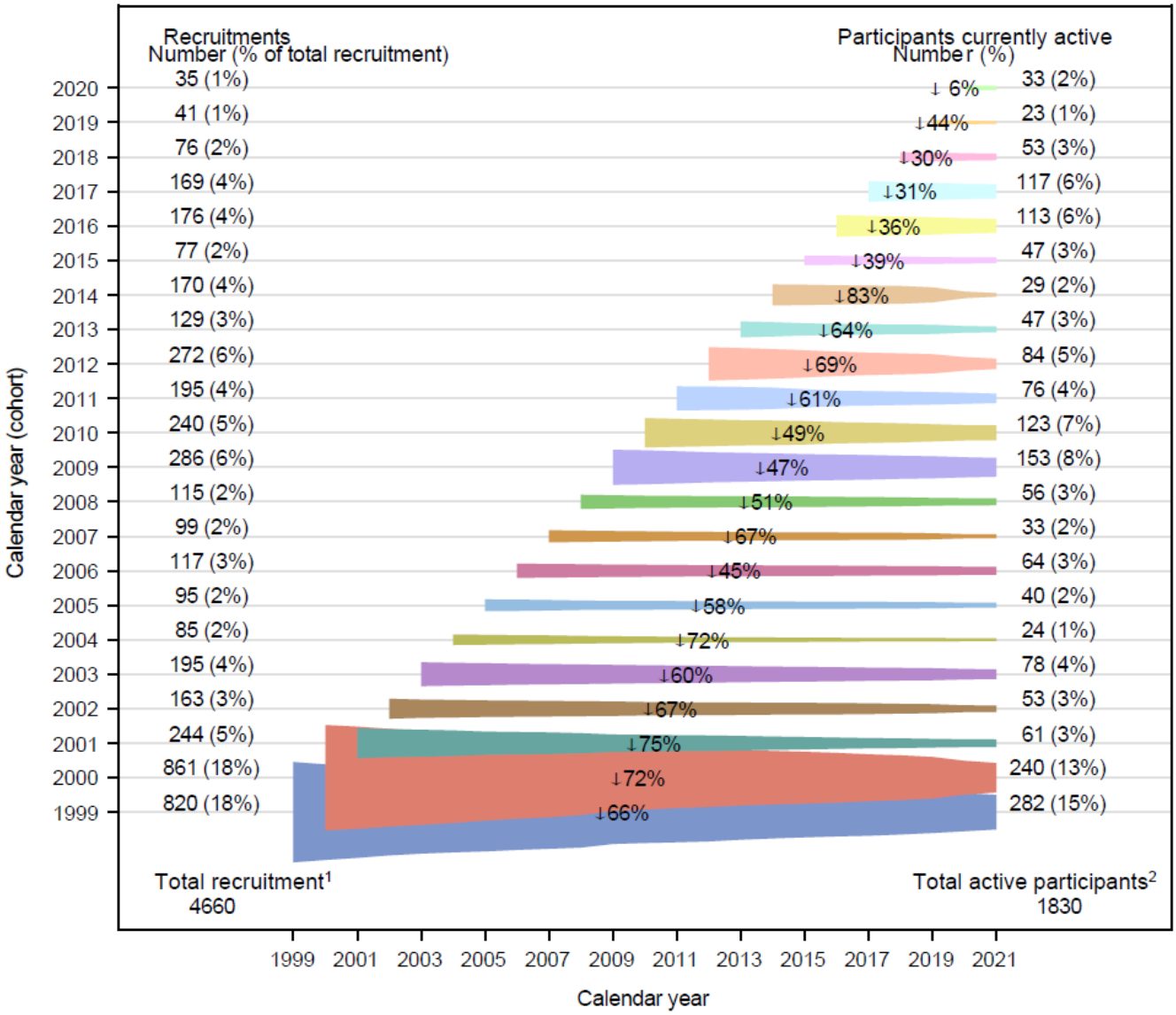
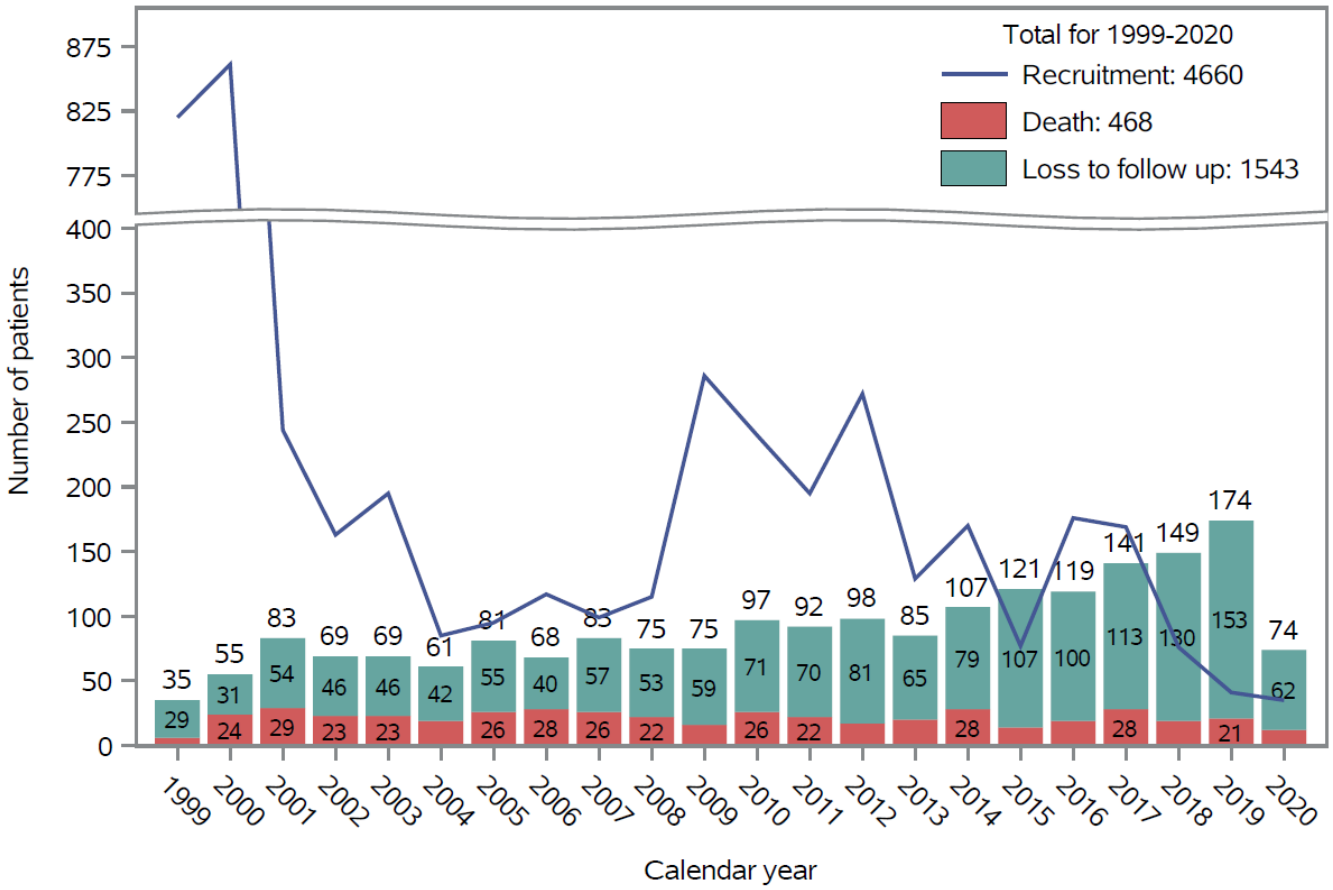


Figure 2: Recruitment and loss to follow up/death by calendar year
1. Total number recruited between 1999 and 2020.
2. Active patients as of 31st April 2021 by calendar year.
Left column: total Number recruited, and percentage of total recruited by calendar year between 1999 and 2019.
Right column: Active patients and percentage of total active patients as of 31st March 2021 by calendar year.
Number in the middle of each bar represents percentage attrition due to deaths and loss to follow up.
Active patients are defined as having had a visit between the dates 01 April 2020 and 31st March 2021.

There were 74 new patients recruited into AHOD during the 2020 calendar year with 12 deaths (Figure 3). Lost to follow up is defined as a patient who has indicated they will no longer be attending a study clinic or has not had a visit to a study clinic within the required amount of time (between the dates 01 April 2019 and 31st March 2020). Patients who were still being actively followed up by a clinic that has since withdrawn from the study, or patients who have died are not considered lost to follow up.



Complete follow-up (percentage of patients): 66.9%
Loss to follow-up (per 100 person years): 3.58 (95% CI: 3.40-3.76)
Mortality (per 100 person years): 1.11 (95% CI: 1.01-1.21)

Figure 3: Follow up status by calendar year[1]
1. Patients who have died or any patients seen at clinic site within the last 12 months (1st April 2020 – 31st March 2021) are considered to have completed follow-up.

Demographics

Table 1: All AHOD demographics[1] (Total – 4661 as of 01 April 2021)

	Number *(%)*		Number *(%)*
Sex		**CD4 at enrolment (cells/µl)[1]**	
Male	4225 (90.6)	<200	422 (9.2)
Female	426 (9.1)	200-299	431 (9.4)
Transgender	10 (0.2)	300-499	1284 (28.0)
		500+	2117 (46.2)
Age at enrollment (Years)		Missing	332 (7.2)
<20	12 (0.3)	Mean [SD]	532.0 [286.4]
20-29	511 (11.0)		
30-39	1632 (35.0)	**HIV viral load at enrolment (copies/ml)[1]**	
40-49	1466 (31.5)	<=50	1978 (43.1)
50+	1040 (22.3)	51-400	791 (17.2)
Mean [SD]	41.8 [10.8]	401-10000	664 (14.5)
		>10000	853 (18.6)
Aboriginal and Torres Straight Islander		Missing	300 (6.5)
Yes	77 (1.7)	Median [LQ - UQ]	120 [49 - 4226]
No	3445 (73.9)		
Missing	1139 (24.4)	**Prior AIDS defining illness[1]**	
		Yes	763 (16.4)
Exposure Category		No	3898 (83.6)
Male to male sex	3276 (70.3)		
Male to male sex and IDU	189 (4.1)	**Hepatitis B ever**	
Injecting drug user (IDU)	107 (2.3)	Yes	189 (4.1)
Heterosexual contact	822 (17.6)	No	3645 (78.2)
Receipt of blood/blood products	36 (0.8)	No Test	827 (17.7)
Other	122 (2.6)		
Missing	109 (2.3)	**Hepatitis C ever**	
		Yes	476 (10.2)
Year of HIV diagnosis		No	3653 (78.4)
<1990	827 (17.7)	No Test	532 (11.4)
1990-1999	1725 (37.0)		
2000-2009	1289 (27.7)	Total patients under active follow up in 12 months (N=1821)[4]	
2010-2019	796 (17.1)		
2020	5 (0.1)		
Missing	19 (0.4)	**Recent CD4 (cells/µl)[5]**	
		<200	33 (1.8)
Patient care setting		200-299	48 (2.7)
General Practitioner	1568 (33.6)	300-499	174 (9.7)
Hospital Tertiary Centre	990 (21.2)	500+	851 (47.2)
Sexual Health Clinic	2104 (45.1)	Missing	696 (38.6)
		Mean [SD]	731.7 [324.3]
Region of birth			
Australia and New Zealand	2617 (56.1)	**Recent HIV viral load (copies/ml)[5]**	
Asia and Oceania	423 (9.1)	<=50	1352 (75.0)
Britain and Ireland	179 (3.8)	51-400	104 (5.8)
Europe (except Britain and Ireland)	132 (2.8)	401-10000	17 (0.9)
Africa and Middle East	170 (3.6)	>10000	14 (0.8)
North America	50 (1.1)	Missing	315 (17.5)
South and Central America	64 (1.4)	Median [LQ - UQ]	20 [19 - 40]
Missing	1026 (22.0)		

1. CD4 count and HIV viral load closest to and within 3 months of cohort enrolment date.
2. Year of HIV diagnosis is based on the earliest blood test consistent with a positive HIV status.
3. LQ = Lower quartile UQ = Upper quartile.
4. Patients who had the most recent visit between 1 April 2020 and 31 March 2021 and have not died. 5. Most recent CD4 count and HIV viral load between 1 April 2020 and 31 March 2021.

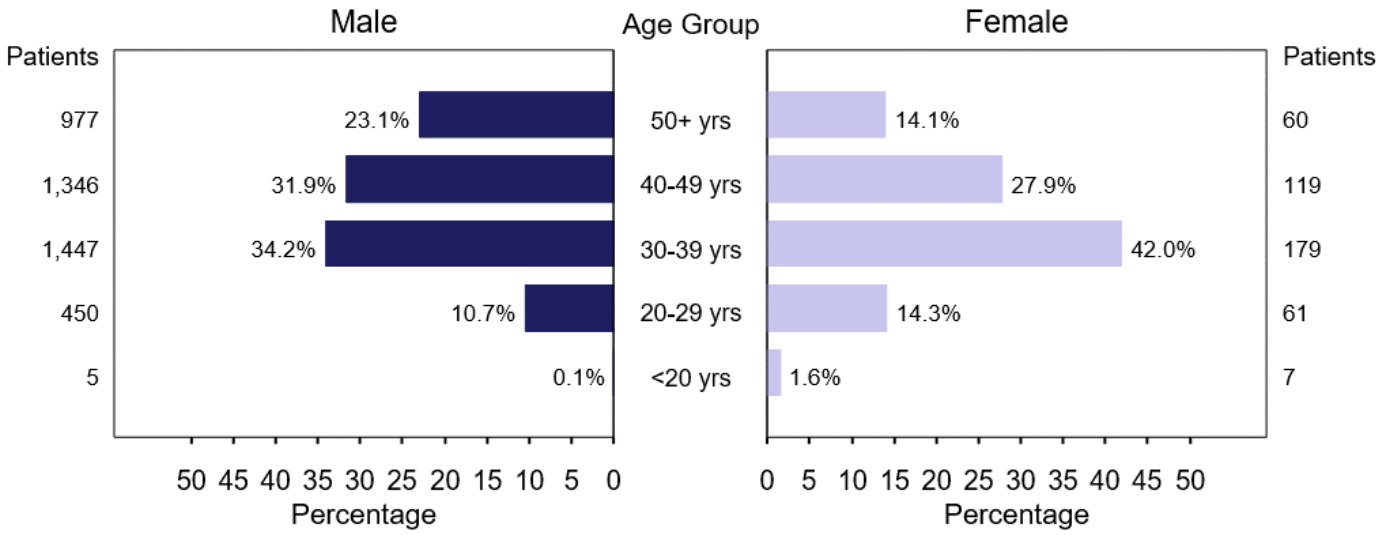


Figure 4: Age distribution of all AHOD patients, grouped by sex. Ten (0.2%) patients are identified as transgender.

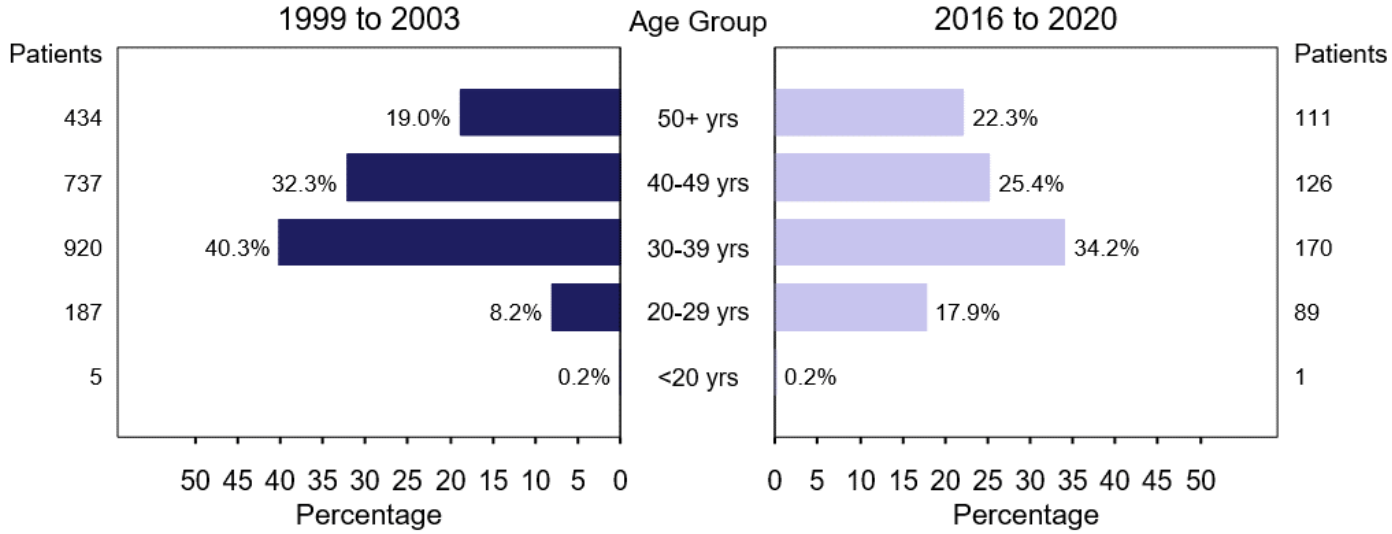


Figure 5: Age at enrolment 1999-2003 and 2015-2019

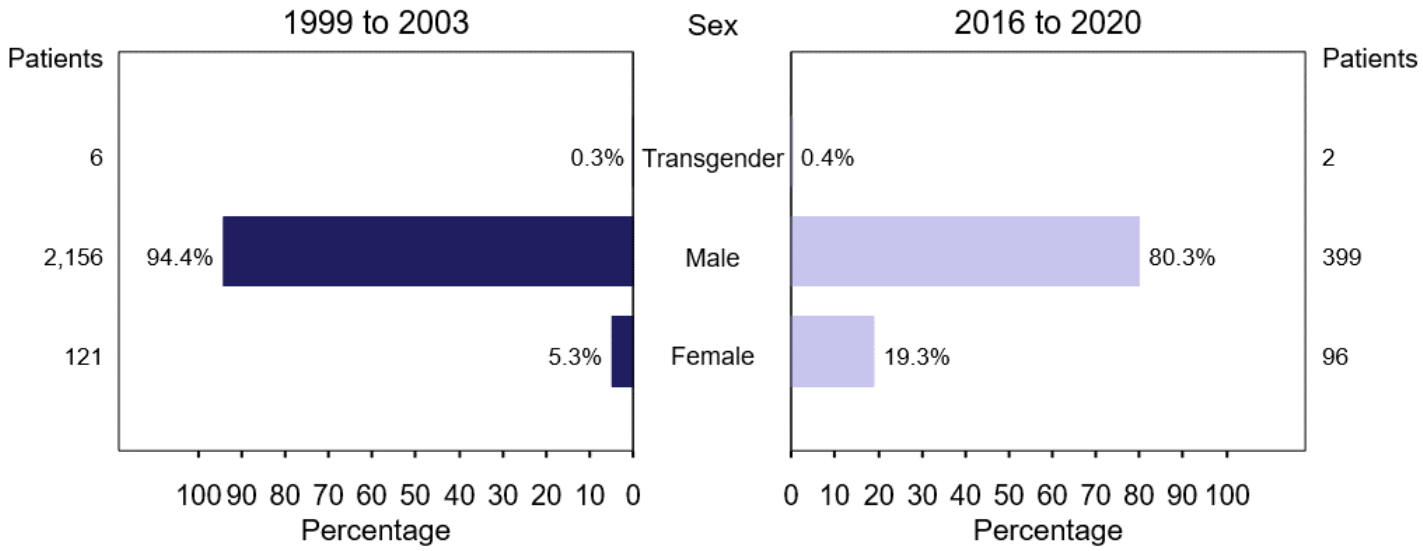


Figure 6: Gender at enrolment 1999-2003 and 2015-2019

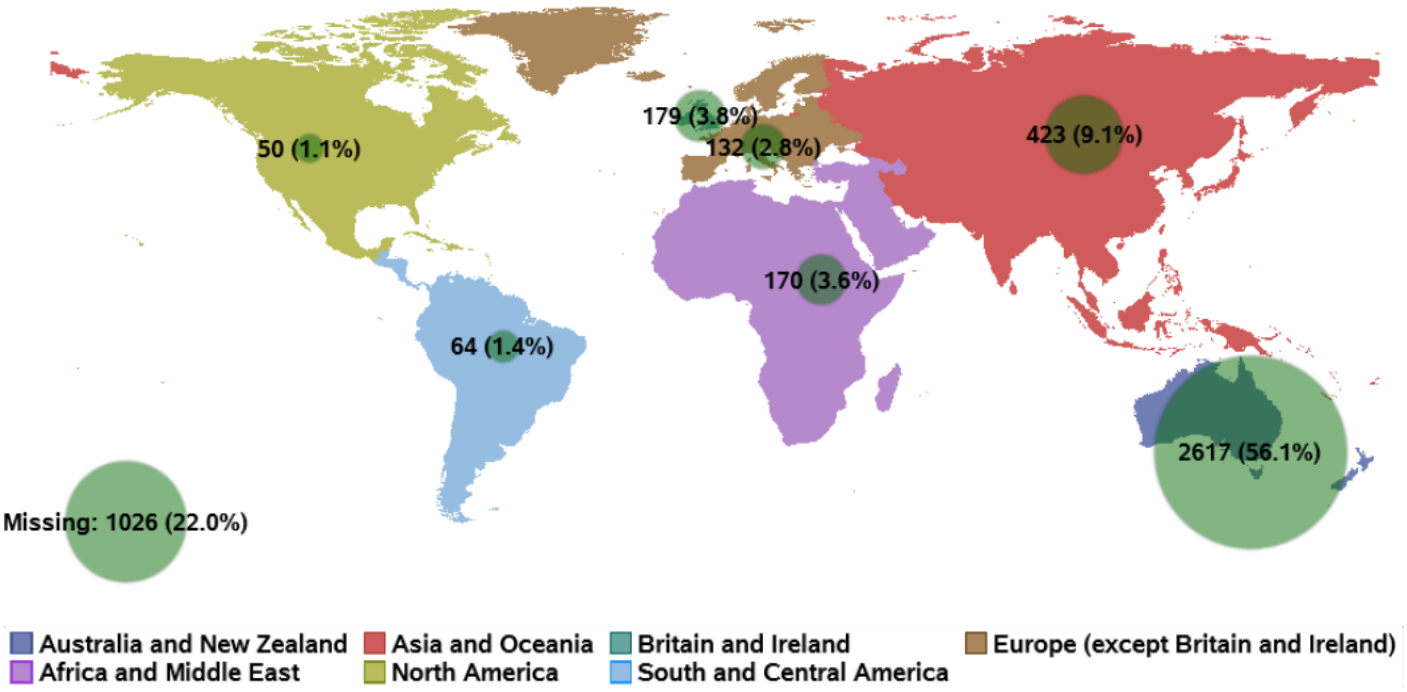


Figure 7: Map of region of birth of patients

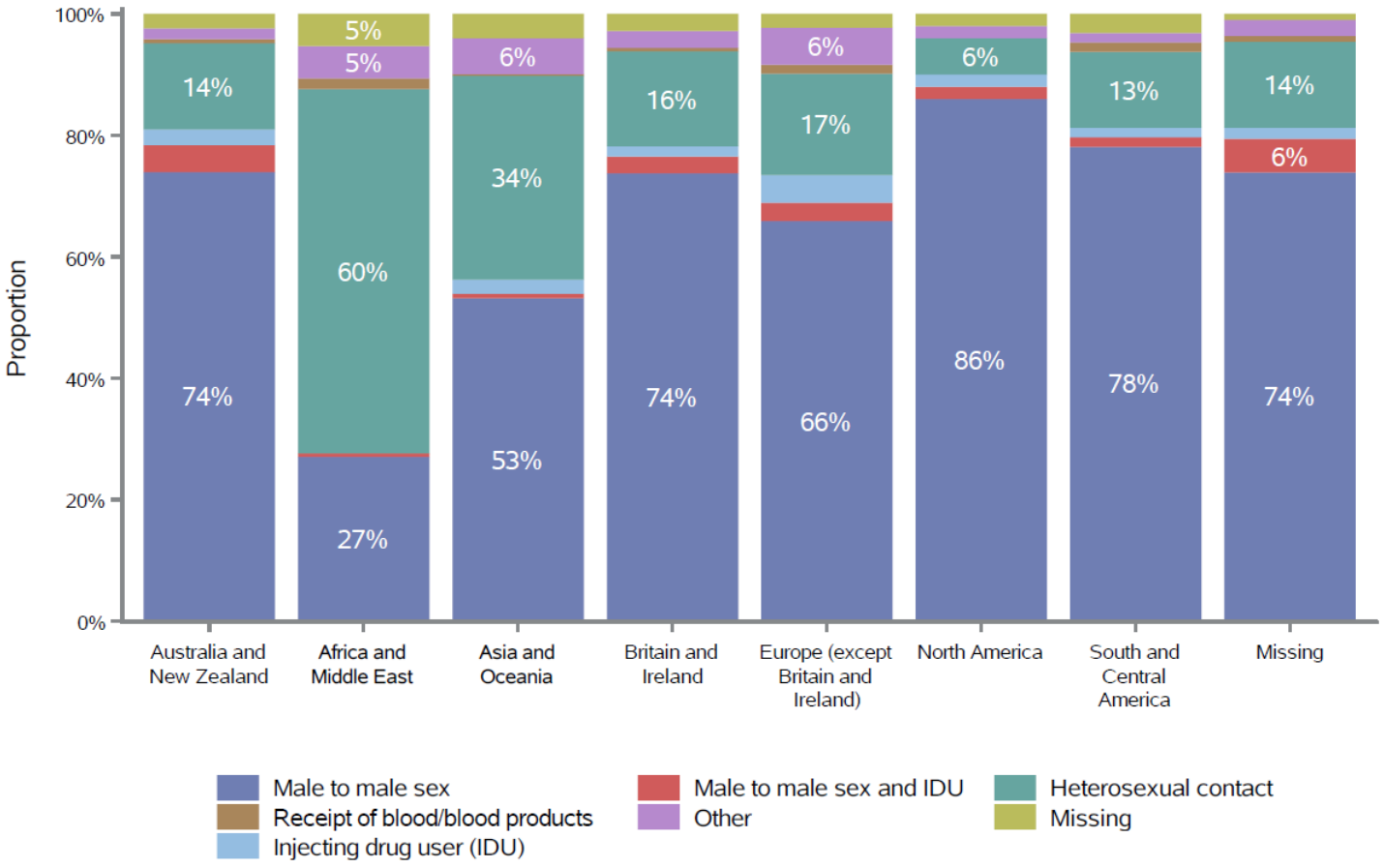


Figure 8: HIV risk factors by region of birth for all AHOD patients

Table 2: Hepatitis B and Hepatitis C status[1] by region of birth

	Hep B Surface Antigen[2] %			Hep C Antibody[2] %		
Region	**Positive**	**Negative**	**Missing**	**Positive**	**Negative**	**Missing**
Australia and New Zealand	3.6	78.8	17.6	10.7	77.8	11.5
Africa and Middle East	4.1	81.8	14.1	1.2	84.7	14.1
Asia and Oceania	6.4	71.2	22.5	5.7	80.6	13.7
Britain and Ireland	5.0	82.1	12.8	7.8	84.9	7.3
Europe (except Britain and Ireland)	1.5	81.1	17.4	13.6	74.2	12.1
North America	2.0	72.0	26.0	8.0	80.0	12.0
South and Central America	3.1	73.4	23.4	3.1	87.5	9.4
Missing	4.6	78.6	16.9	13.0	76.5	10.5

1. Hepatitis (Hep) B and C status is the latest available and can represent infection before or after enrolment.
2. All numbers are percentages

Death

Deaths are reported by AHOD sites using Coding of Death classification (CoDe) forms. Deaths classified as 'No CoDe form' were notified by a site without a completed CoDe form. Deaths are classified as 'Unknown' when a site has been unable to determine the cause of death based on available information.

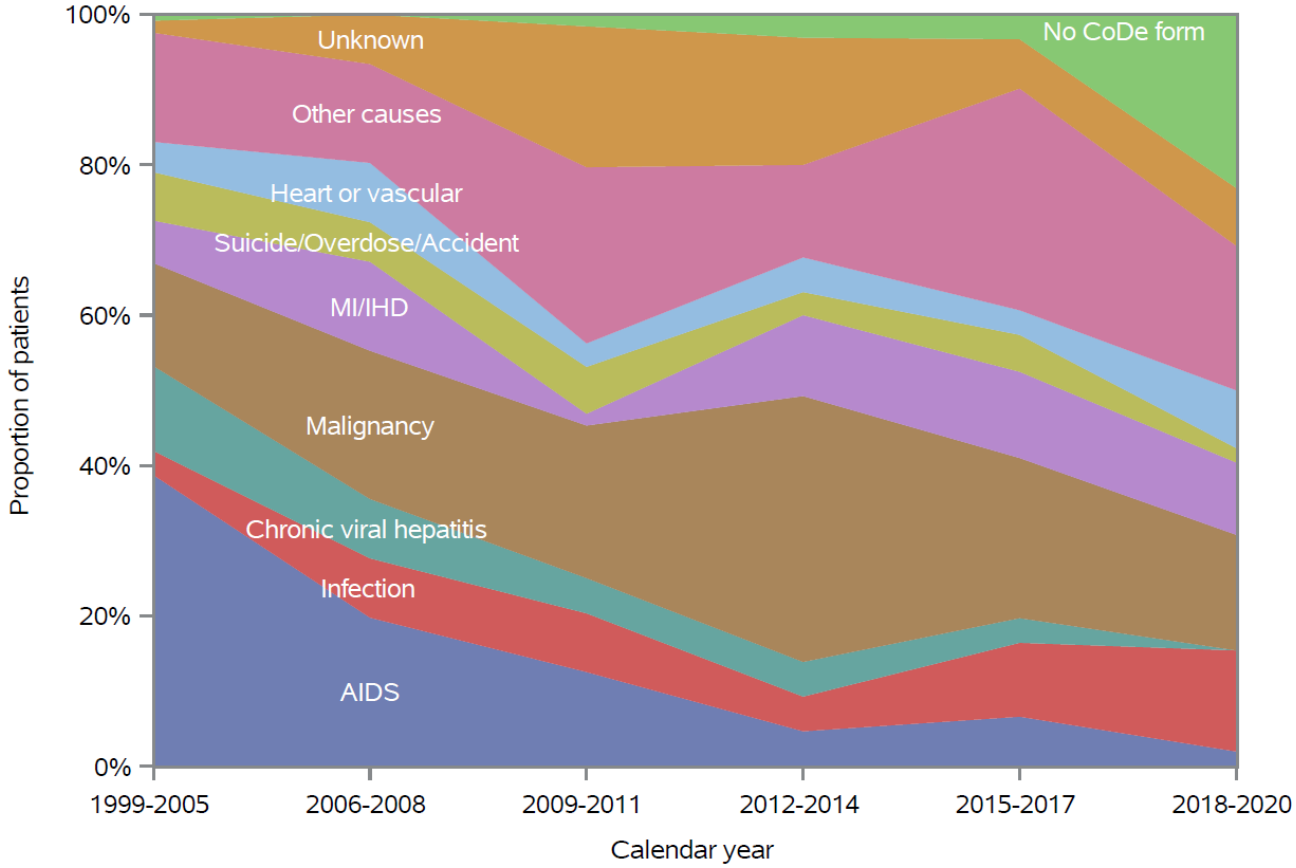


Figure 9: Distribution of cause of death by year
1. A list of 'Other causes' and their frequency can be found in Table 3.

Table 3: Other causes of death 1999-2019

Other cause of death	Number of deaths
Liver failure	11
Renal failure	10
Stroke	9
CNS disease	7
Respiratory disease	7
Chronic obstructive lung disease	6
Digestive system disease	3
Lactic acidosis	2
Unclassifiable causes	2
Gastro-intestinal haemorrhage	2
Diabetes Mellitus	1
Lung embolus	1

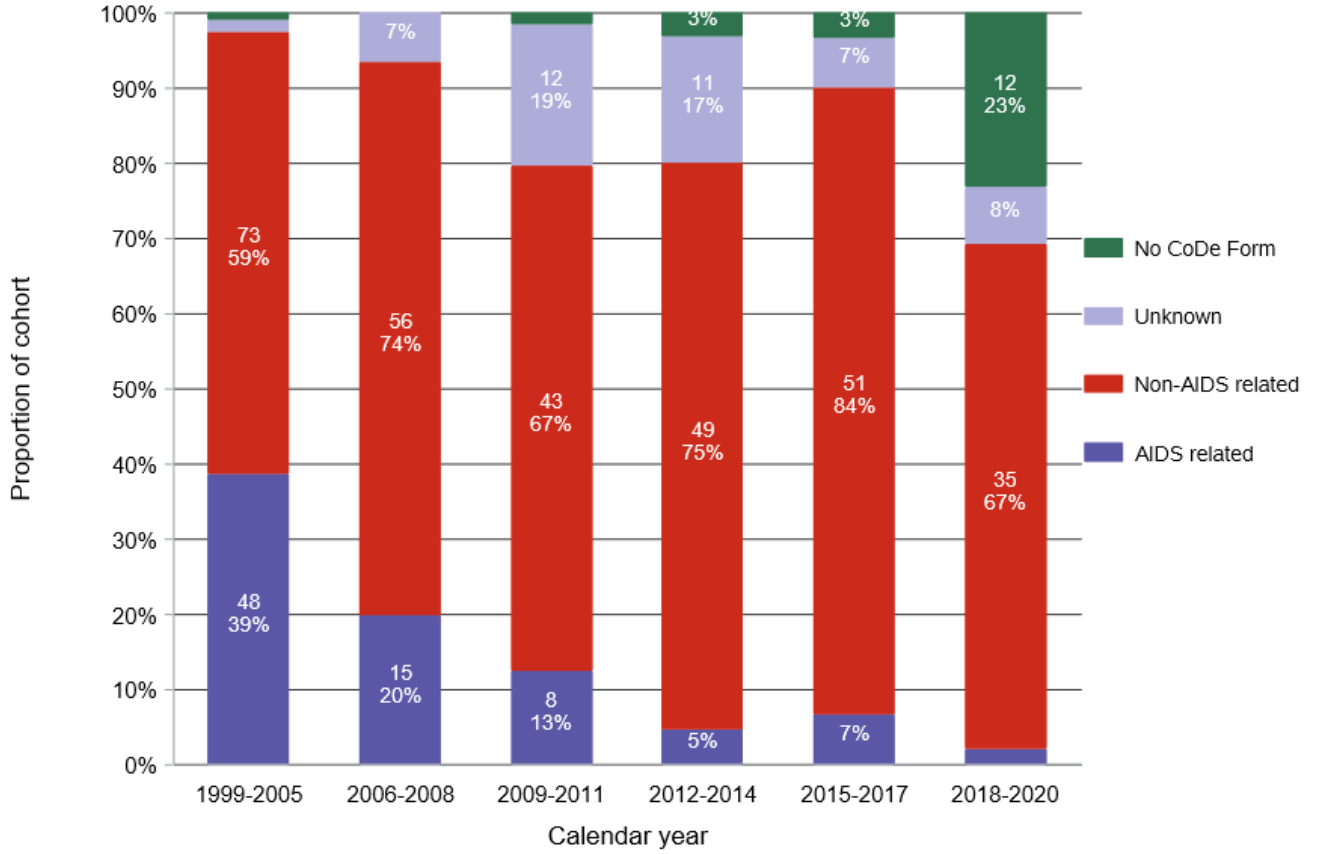


Figure 10: Distribution of AIDS and non-AIDS related deaths in AHOD since cohort inception, by calendar year grouping

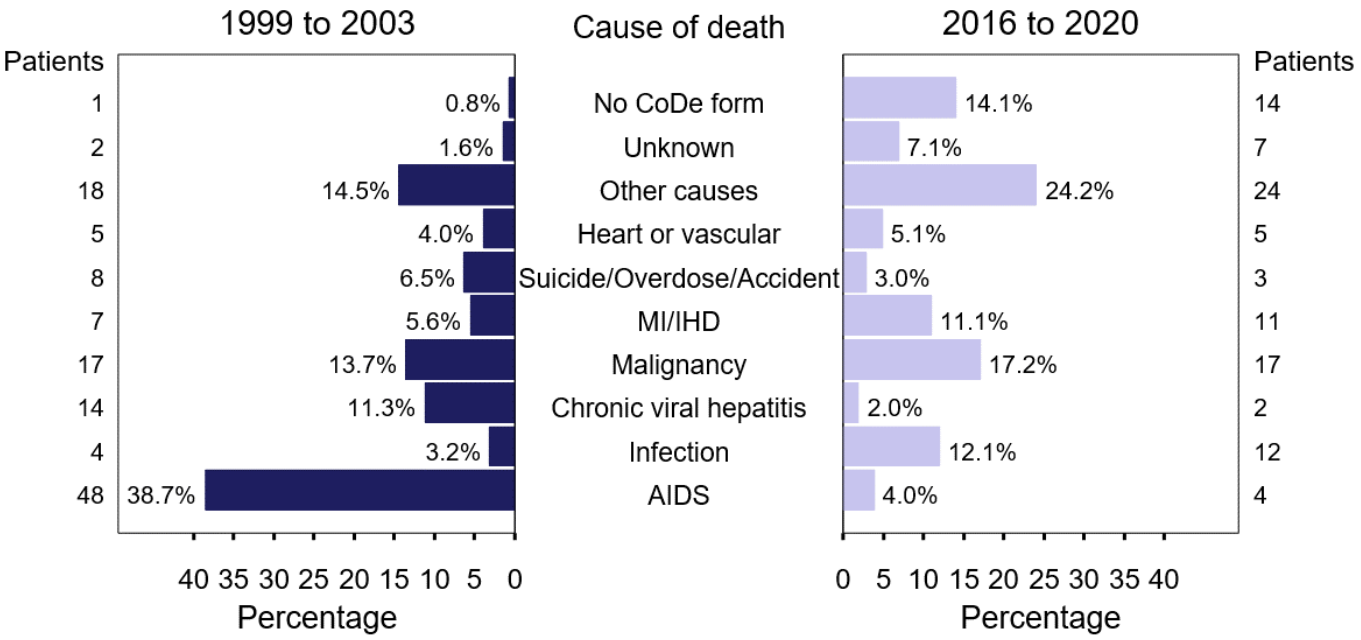


Figure 11: Cause of death 1999-2003 and 2016-2020

Immunological and virological trends

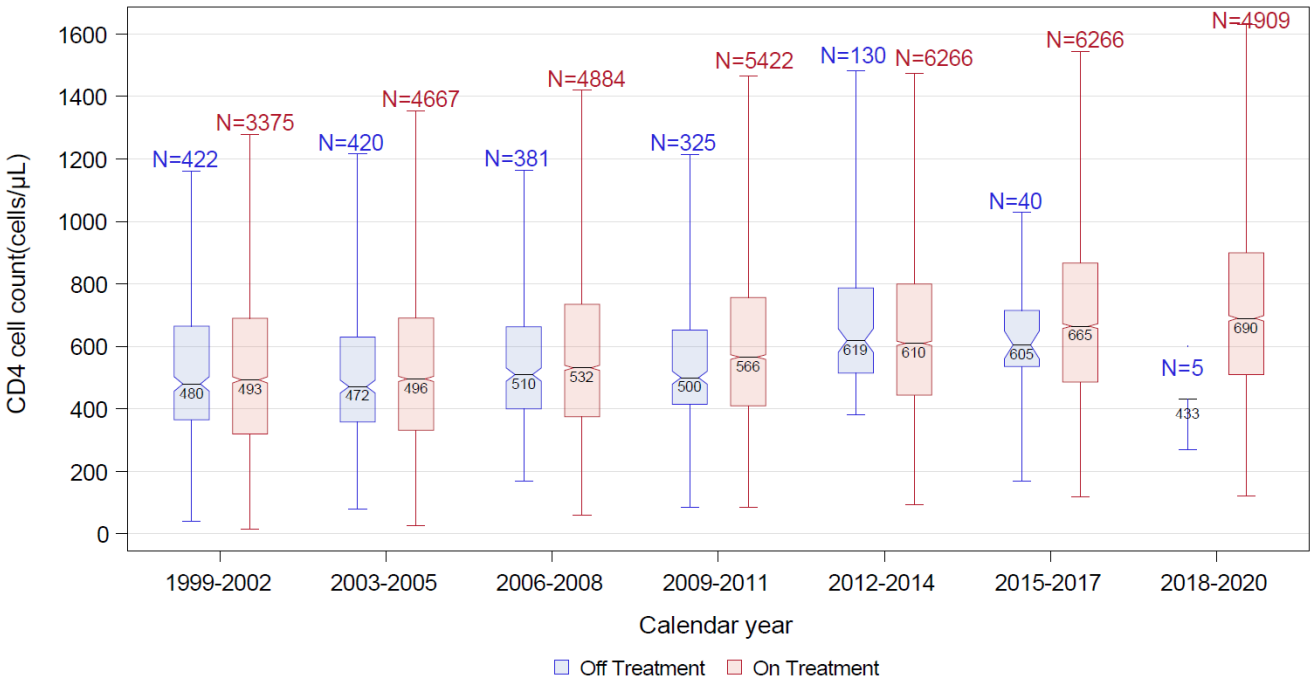


Figure 12: CD4 trends[1] for patients off[2] and on[3] treatment by calendar year groupings
1. Includes retrospective and prospective data. CD4 counts taken as median value during given calendar year.
2. Patients who have not received treatment of duration greater than 14 days during the calendar year
3. Patients who received treatment greater than 14 days during the calendar year.
'N=' value includes patients with a viral load/CD4 measured during the calendar year.

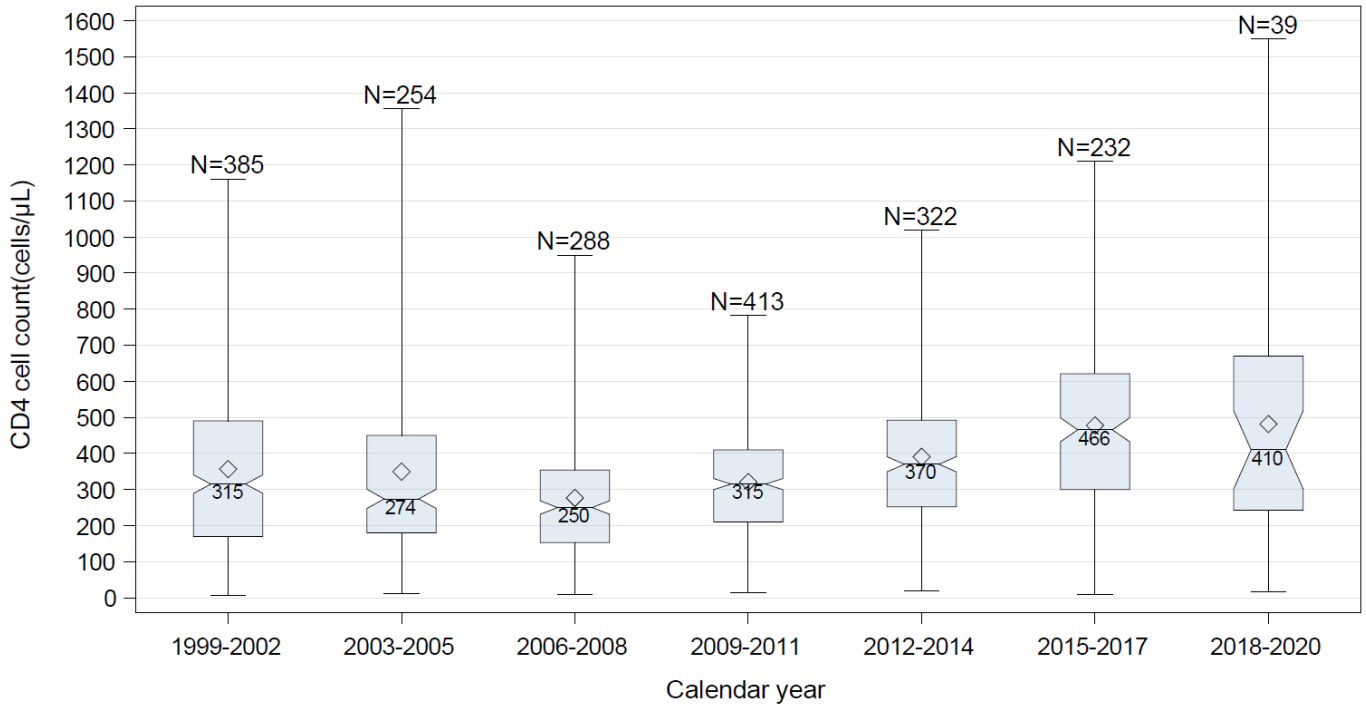


Figure 13: CD4 cell count distribution at antiretroviral therapy (ART) initiation by year of ART initation[1-3]
1.First ART defined as a combination of 3 or more antiretroviral agents or duo therapy and a duration of ART>14 days. Includes both retrospective and prospective data. Australian Temporary Residents Access Study (ATRAS) sub study patients excluded from analysis.
2.CD4 cell count selected from the observation closest to ART start date within a timeframe window of 12 months prior to ART start date and 7 days post ART start date.
3. Patients were excluded from the analysis if an undetectable viral load was recorded prior to initiating ART or was missing a viral load measurement prior to initiating ART.

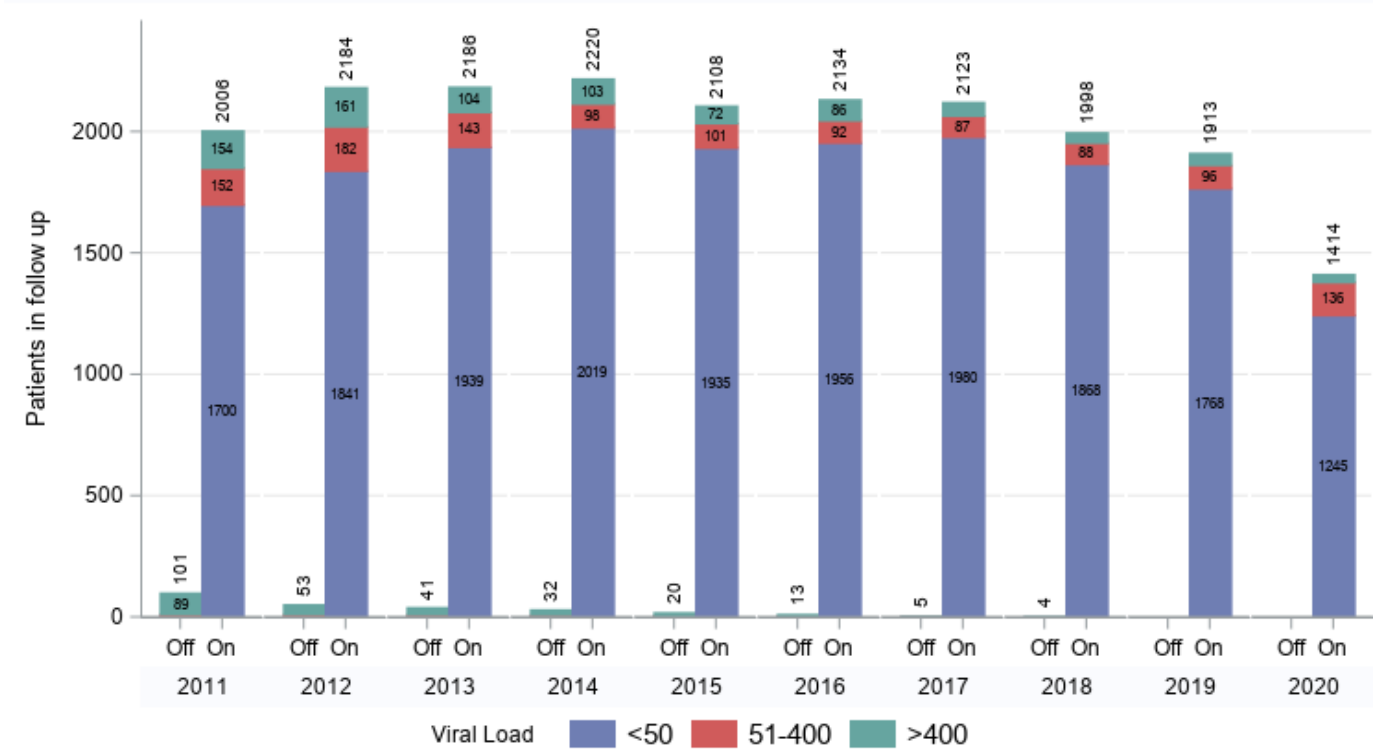


Figure 14: Patients with an undetectable viral load, by treatment status (off /on treatment) and year[1]
1.Off treatment if never on a regimen of duration greater than 14 days for given calendar year. Viral load taken as median value during regimen of longest duration for given calendar year.

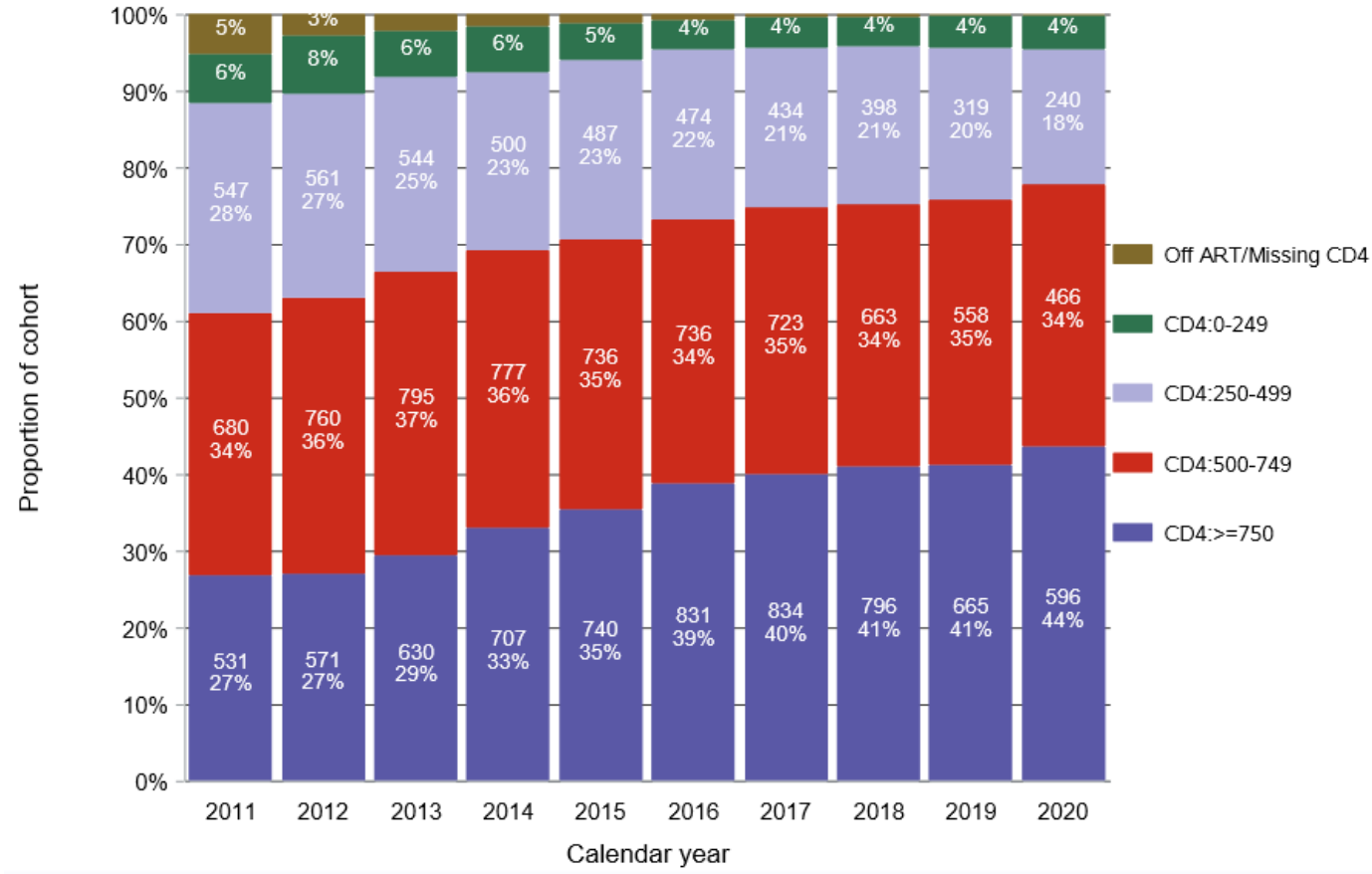


Figure 15: CD4 cell counts (cells/µl) in patients receiving treatment by calendar year[1-3]
1. Includes patients with a prospective CD4 measure during the relevant calendar year.
2. For patients on treatment, analysis based on the initial treatment intent, not on treatment administered (ITT), i.e. no adjustments are made for off-treatment following ART initiation.
3. Patients off treatment include those who have enrolled and have not initiated combination antiretroviral therapy.

Antiretroviral treatment

In 2020, there were a total of 252 unique antiretroviral treatment (ART) combinations (5 of which contain trial drugs) among the 1924 AHOD patients on combination ART. A total of 2166 combination regimens were recorded among these patients throughout 2020.

Around 76% of AHOD patients were on a 3-drug regimen (excluding the boosters ritonavir and cobicistat) in 2020, which is consistent with other years. Around 6% where on a 2-drug regimen, which compares to 2% in 2011. Around 6% of patients were not on any medications in 2020, compared to 15% in 2011.

In 2020, 82% of those treated were on an Integrase Strand Transfer Inhibitor (INSTI), compared to 19% in 2011. The proportion on nucleoside reverse transcriptase inhibitors (NRTI) increased from 81% in 2011, to 94% in 2020. In contrast, the proportion of patients on a non-nucleoside reverse transcriptase inhibitors (NNRTI) decreased from 48% in 2011 to 26% in 2020 and those on a protease inhibitors (PI) decreased from 39% to 17% during the same period.

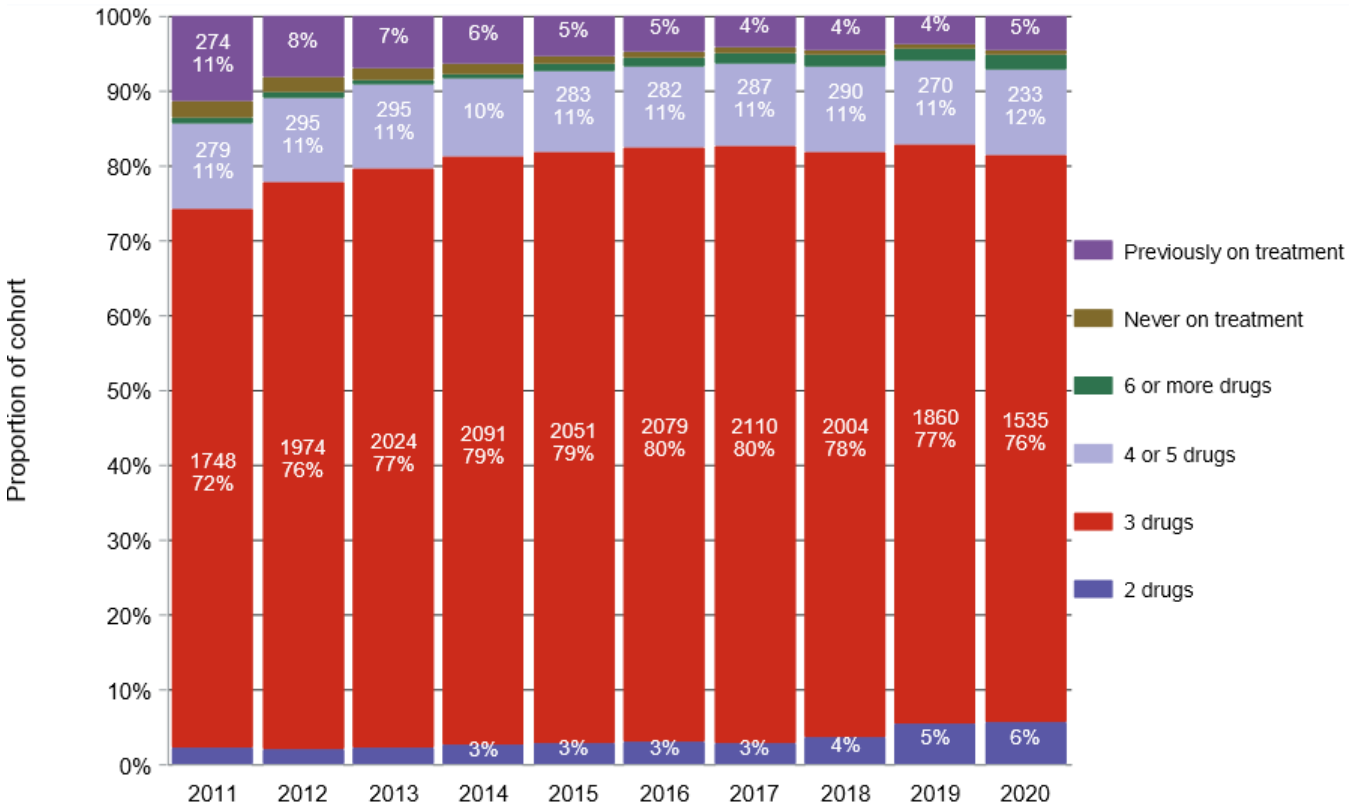


Figure 16: Trends in the number of drugs comprising antiretroviral treatment
For patients who switch regimes during a particular calendar year, the number of drugs is based on the regime of the latest switch for that year. Number of drugs excludes boosters (Cobicostat and Ritonavir).

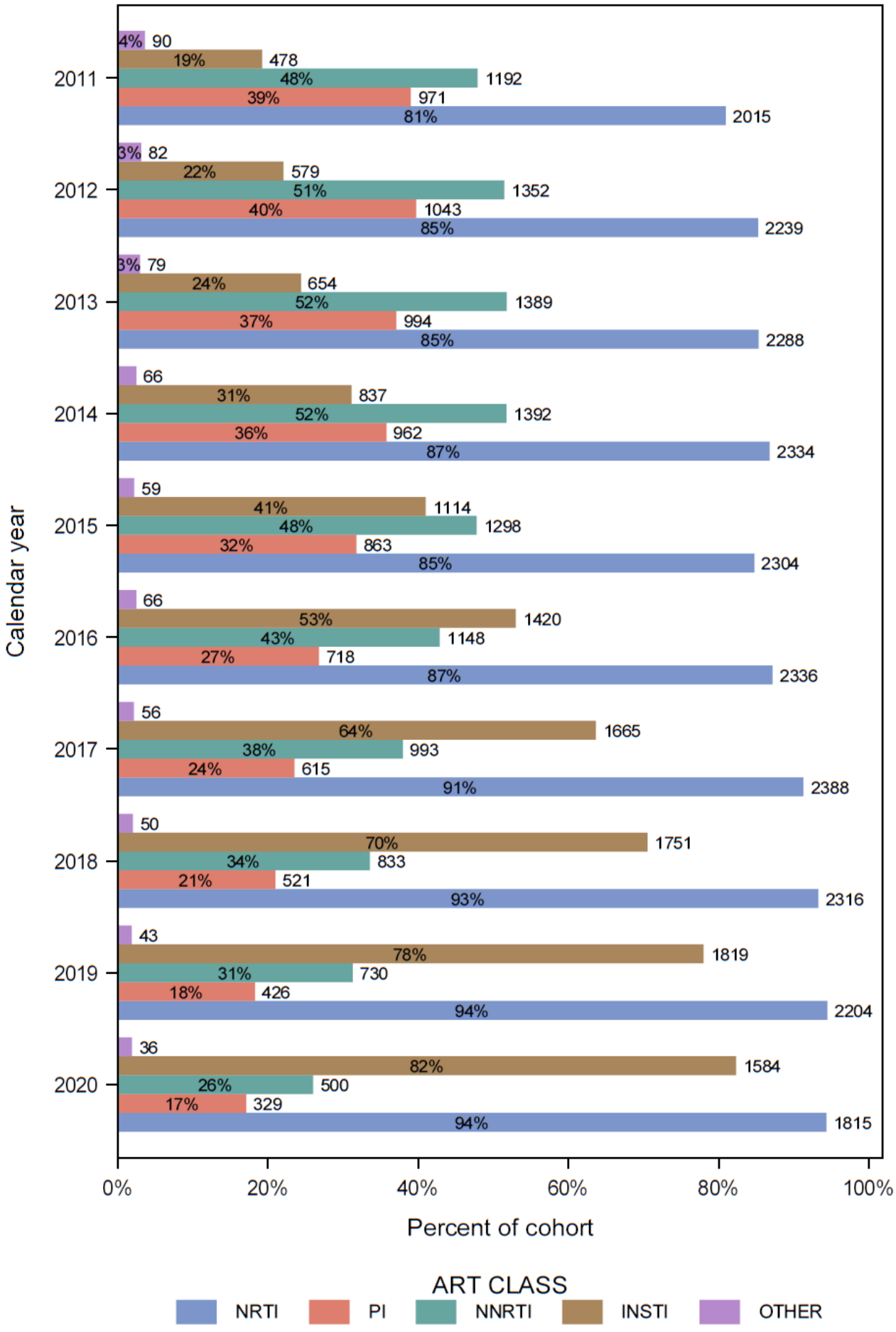


Figure 17: Trends in the classes of drugs making up combination antiretroviral treatment
Each class of drugs is counted once when more than one combination includes it within each calendar year. Boosters (Cobicostat and Ritonavir) are not included.
NRTI = nucleoside reverse transcriptase inhibitor, PI = protease inhibitor, NNRTI = non-nucleoside reverse transcriptase inhibitor, INSTI = Integrase Strand Transfer Inhibitor, OTHER = include entry inhibitor and CCR5 inhibitor

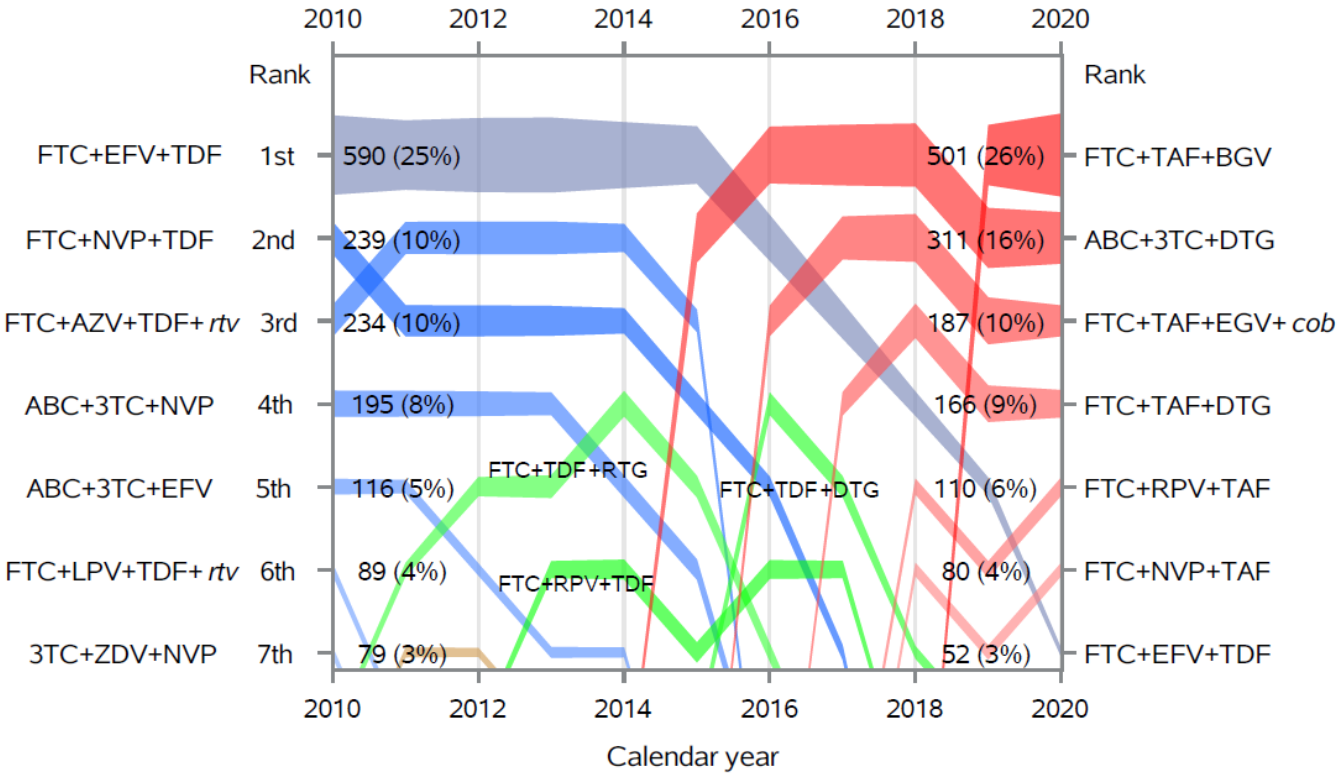


Figure 18: Top treatment combinations among the AHOD cohort[1] ranked by proportion[2] of total ART regimens

1. Includes retrospective and prospective data. Combinations include 3 or more antiretroviral drugs. Fixed dose (single tablet) combinations are separated into individual component antiretroviral drugs.
2. Proportion defined as frequency of ART line divided by total number of ART regimens recorded. Numbers in brackets represent number of patients on the regime.

3TC = Lamivudine ; ABC = Abacavir ; AZV = Atazanavir ; BGV = Bictegravir ; COB = Cobicistat ; DTG = Dolutegravir ; EFV = Efavirenz ; EGV = Elvitegravir ; FTC = Emtricitabine ; LPV = Lopinavir ; NVP = Nevirapine ; RPV = Rilpivirine ; RTV = Ritonavir ; TAF = Tenofovir Alafenamide ; TDF = Tenofovir Disoproxil ; ZDV = Zidovudine

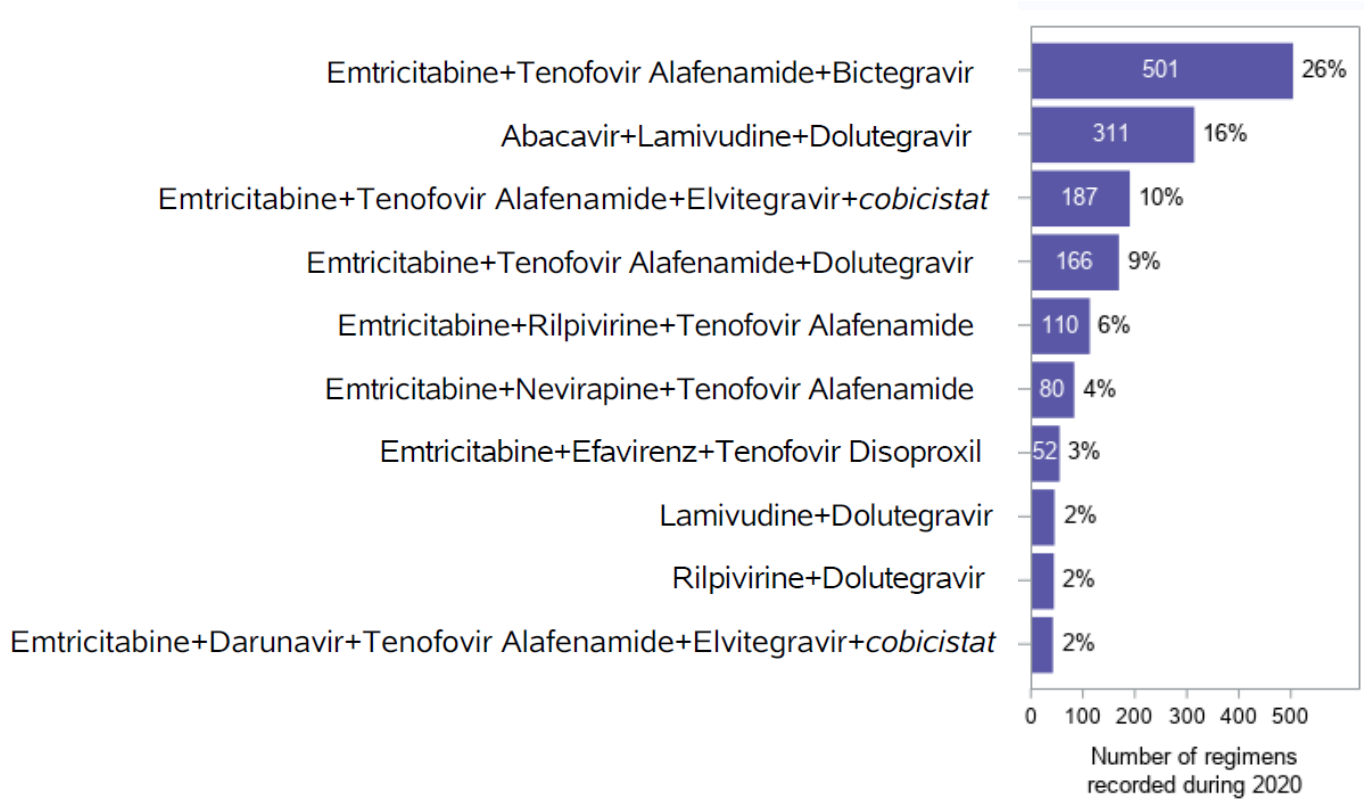


Figure 19: Top 10 ART regimes in 2020

Includes retrospective and prospective data. Fixed dose (single tablet) combinations are separated into individual component antiretroviral drugs.

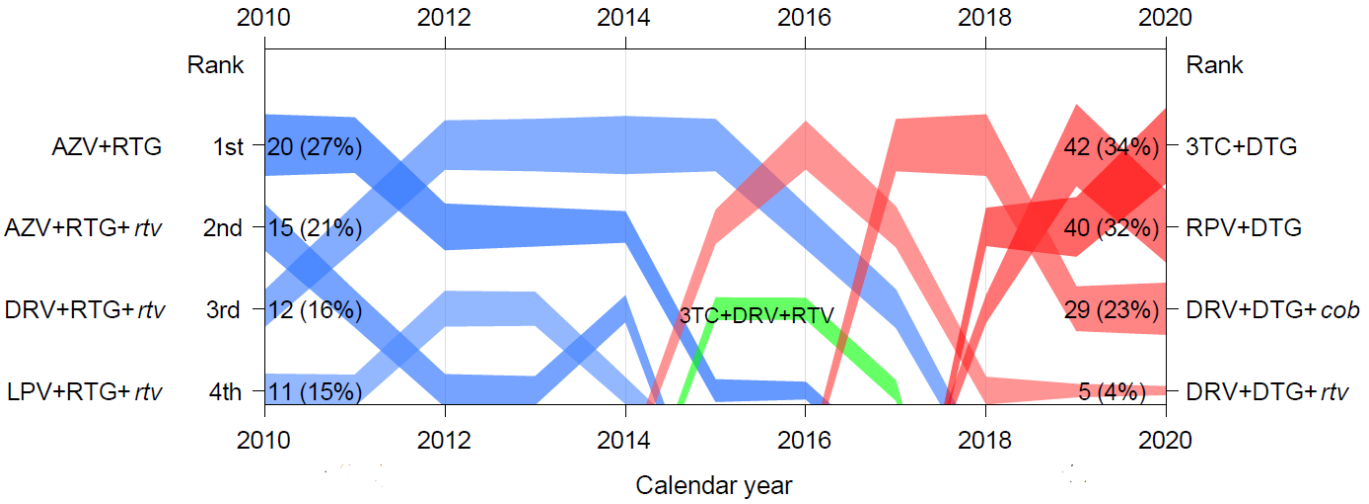


Figure 20: Top Duo ART regimes[1] among the AHOD cohort[2] ranked by proportion[3] of total ART regimens
1. Valid two drug therapy combination only were included.
2. Includes retrospective and prospective data. Fixed dose combinations are separated into individual component antiretroviral drugs.
3. Proportion defined as frequency of ART line divided by total number of ART regimens recorded. Numbers in brackets represent number of patients on the regime.
3TC = Lamivudine ; AZV = Atazanavir ; COB = Cobicistat ; DRV = Darunavir ; DTG = Dolutegravir ; LPV = Lopinavir ; RPV = Rilpivirine ; RTG = Raltegravir ; RTV = Ritonavir ; TDF = Tenofovir Disoproxil

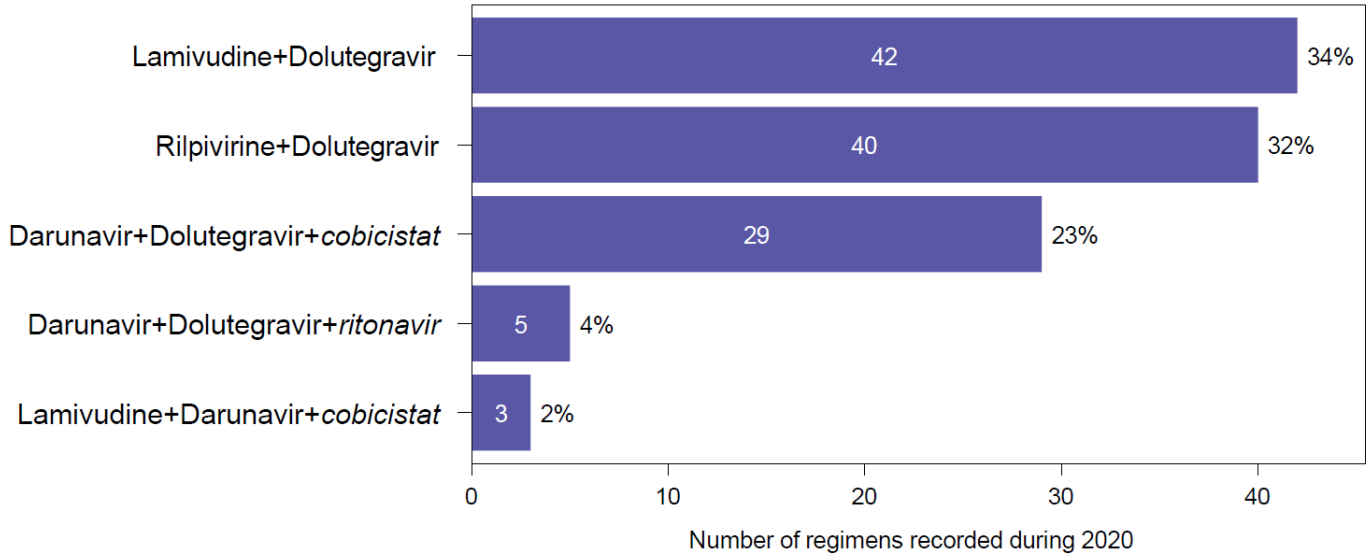


Figure 21: Top five Duo ART regimes (excluding boosters) in 2020
Includes retrospective and prospective data. Fixed dose (single tablet) combinations are separated into individual component antiretroviral drugs.

Table 4: Current use of individual antiretroviral treatments[1]

	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Nucleoside analogue reverse transcriptase inhibitors (NRTI)																						
Abacavir	231	*(10)*	218	*(9)*	196	*(8)*	172	*(7)*	167	*(6)*	163	*(6)*	137	*(5)*	114	*(4)*	79	*(3)*	67	*(3)*	44	*(2)*
Apricitabine	1	*(0)*	1	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*
Combivir	89	*(4)*	78	*(3)*	67	*(3)*	58	*(2)*	48	*(2)*	47	*(2)*	37	*(1)*	33	*(1)*	23	*(1)*	14	*(1)*	5	*(0)*
Deskovy	1	*(0)*	1	*(0)*	1	*(0)*	1	*(0)*	2	*(0)*	3	*(0)*	54	*(2)*	397	*(15)*	487	*(19)*	474	*(20)*	344	*(17)*
Didanosine	54	*(2)*	36	*(1)*	32	*(1)*	23	*(1)*	24	*(1)*	21	*(1)*	15	*(1)*	11	*(0)*	11	*(0)*	9	*(0)*	5	*(0)*
Emtricitabine	110	*(5)*	111	*(5)*	115	*(4)*	122	*(5)*	127	*(5)*	133	*(5)*	141	*(5)*	173	*(7)*	146	*(6)*	145	*(6)*	108	*(5)*
Kivexa	329	*(14)*	353	*(15)*	389	*(15)*	396	*(15)*	433	*(16)*	409	*(16)*	252	*(10)*	202	*(8)*	162	*(6)*	129	*(5)*	74	*(4)*
Lamivudine	321	*(14)*	279	*(11)*	253	*(10)*	236	*(9)*	242	*(9)*	245	*(9)*	224	*(9)*	206	*(8)*	161	*(6)*	166	*(7)*	124	*(6)*
Stavudine	42	*(2)*	30	*(1)*	24	*(1)*	21	*(1)*	23	*(1)*	16	*(1)*	13	*(0)*	11	*(0)*	9	*(0)*	9	*(0)*	7	*(0)*
Tenofovir	0	*(0)*	0	*(0)*	0	*(0)*	1	*(0)*	1	*(0)*	1	*(0)*	16	*(1)*	67	*(3)*	80	*(3)*	89	*(4)*	77	*(4)*
Tenofovir	355	*(15)*	298	*(12)*	276	*(11)*	279	*(11)*	257	*(10)*	238	*(9)*	210	*(8)*	168	*(6)*	96	*(4)*	74	*(3)*	48	*(2)*
Trizivir	35	*(1)*	27	*(1)*	19	*(1)*	14	*(1)*	13	*(0)*	11	*(0)*	9	*(0)*	8	*(0)*	6	*(0)*	5	*(0)*	4	*(0)*
Truvada	665	*(28)*	627	*(26)*	695	*(27)*	697	*(27)*	714	*(27)*	672	*(26)*	594	*(23)*	447	*(17)*	191	*(7)*	135	*(6)*	63	*(3)*
Zidovudine	41	*(2)*	28	*(1)*	30	*(1)*	29	*(1)*	26	*(1)*	23	*(1)*	25	*(1)*	16	*(1)*	10	*(0)*	9	*(0)*	5	*(0)*
Non-nucleoside reverse transcriptase inhibitors (NNRTI)																						
Delavirdine	3	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*
Efavirenz	297	*(13)*	209	*(9)*	223	*(9)*	187	*(7)*	162	*(6)*	149	*(6)*	122	*(5)*	89	*(3)*	62	*(2)*	43	*(2)*	25	*(1)*
Etravirine	96	*(4)*	99	*(4)*	115	*(4)*	122	*(5)*	128	*(5)*	133	*(5)*	131	*(5)*	119	*(5)*	104	*(4)*	76	*(3)*	57	*(3)*
Nevirapine	503	*(22)*	497	*(20)*	488	*(19)*	459	*(18)*	423	*(16)*	391	*(15)*	353	*(14)*	361	*(14)*	275	*(11)*	233	*(10)*	156	*(8)*
Rilpivirine	3	*(0)*	5	*(0)*	10	*(0)*	23	*(1)*	24	*(1)*	31	*(1)*	40	*(2)*	62	*(2)*	59	*(2)*	64	*(3)*	49	*(2)*
Class Duo																						
Dovato	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	1	*(0)*	4	*(0)*	20	*(1)*
Juluca	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	1	*(0)*	8	*(0)*	54	*(2)*	47	*(2)*
Entry Inhibitor (EI)																						
Enfurvirtide	15	*(1)*	9	*(0)*	6	*(0)*	5	*(0)*	3	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*
Fostemsavir	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	1	*(0)*	2	*(0)*	2	*(0)*	1	*(0)*	2	*(0)*	2	*(0)*

1. All treatment records of ≥2 weeks of treatment in any calendar year were included in this analysis. The denominator includes all patients that could have been on antiretroviral therapy (i.e. HIV positive) in any calendar year. The proportion of patients on each drug in any calendar year does not add up to 100% across all ART drug groups in each calendar year as patients on more than one ARV during a calendar year period will be counted in all of the relevant ART groups. Includes retrospective and prospective data.
2. See table 5 for composition of fixed dose combination tablets (single tablets)

Table 4 continued: Current use of individual antiretroviral treatments[1]

	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Protease Inhibitors (PI)																						
Amprenavir	4	*(0)*	4	*(0)*	6	*(0)*	5	*(0)*	2	*(0)*	2	*(0)*	2	*(0)*	2	*(0)*	1	*(0)*	0	*(0)*	0	*(0)*
Atazanavir	491	*(21)*	480	*(20)*	460	*(18)*	460	*(18)*	425	*(16)*	353	*(14)*	256	*(10)*	183	*(7)*	113	*(4)*	85	*(4)*	51	*(3)*
Darunavir	186	*(8)*	219	*(9)*	269	*(10)*	290	*(11)*	345	*(13)*	376	*(15)*	372	*(14)*	373	*(14)*	269	*(11)*	216	*(9)*	152	*(8)*
Evotaz	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	16	*(1)*	35	*(1)*	27	*(1)*	28	*(1)*	11	*(1)*
Fosamprenavir	23	*(1)*	22	*(1)*	18	*(1)*	21	*(1)*	19	*(1)*	13	*(1)*	8	*(0)*	9	*(0)*	7	*(0)*	2	*(0)*	2	*(0)*
Indinavir	13	*(1)*	15	*(1)*	14	*(1)*	11	*(0)*	9	*(0)*	8	*(0)*	10	*(0)*	7	*(0)*	6	*(0)*	6	*(0)*	2	*(0)*
Kaletra	223	*(10)*	176	*(7)*	154	*(6)*	127	*(5)*	105	*(4)*	74	*(3)*	58	*(2)*	43	*(2)*	23	*(1)*	12	*(0)*	7	*(0)*
Lopinavir	67	*(3)*	58	*(2)*	58	*(2)*	51	*(2)*	43	*(2)*	34	*(1)*	21	*(1)*	13	*(0)*	8	*(0)*	8	*(0)*	5	*(0)*
Nelfinavir	5	*(0)*	6	*(0)*	5	*(0)*	4	*(0)*	6	*(0)*	7	*(0)*	6	*(0)*	7	*(0)*	5	*(0)*	5	*(0)*	2	*(0)*
Prezcobix	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	23	*(1)*	108	*(4)*	114	*(4)*	114	*(5)*	102	*(5)*
Saquinavir	16	*(1)*	16	*(1)*	12	*(0)*	12	*(0)*	12	*(0)*	11	*(0)*	10	*(0)*	7	*(0)*	4	*(0)*	6	*(0)*	3	*(0)*
Tipranavir	5	*(0)*	4	*(0)*	2	*(0)*	2	*(0)*	2	*(0)*	2	*(0)*	1	*(0)*	1	*(0)*	2	*(0)*	2	*(0)*	2	*(0)*
Intergrase Inhibitors (II)																						
Bictegravir	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	2	*(0)*	2	*(0)*	3	*(0)*	22	*(1)*	25	*(1)*
Cabotegravir	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	1	*(0)*	3	*(0)*	5	*(0)*	5	*(0)*	5	*(0)*
Dolutegravir	1	*(0)*	2	*(0)*	7	*(0)*	9	*(0)*	174	*(7)*	331	*(13)*	367	*(14)*	585	*(22)*	588	*(23)*	566	*(24)*	385	*(19)*
Elvitegravir	3	*(0)*	2	*(0)*	6	*(0)*	8	*(0)*	7	*(0)*	7	*(0)*	12	*(0)*	12	*(0)*	13	*(1)*	11	*(0)*	7	*(0)*
Raltegravir	388	*(17)*	453	*(19)*	534	*(20)*	593	*(23)*	610	*(23)*	527	*(20)*	451	*(17)*	433	*(16)*	302	*(12)*	225	*(9)*	150	*(7)*
Class Combinations[2]																						
Atripla	220	*(9)*	279	*(11)*	308	*(12)*	318	*(12)*	291	*(11)*	263	*(10)*	212	*(8)*	168	*(6)*	114	*(4)*	82	*(3)*	49	*(2)*
Biktarvy	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	1	*(0)*	0	*(0)*	15	*(1)*	423	*(18)*	504	*(25)*
Complera	0	*(0)*	1	*(0)*	49	*(2)*	99	*(4)*	127	*(5)*	136	*(5)*	134	*(5)*	128	*(5)*	47	*(2)*	22	*(1)*	11	*(1)*
Genvoy	1	*(0)*	1	*(0)*	1	*(0)*	15	*(1)*	14	*(1)*	20	*(1)*	249	*(10)*	359	*(14)*	398	*(16)*	378	*(16)*	220	*(11)*
Odefsey	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	1	*(0)*	1	*(0)*	94	*(4)*	126	*(5)*	124	*(5)*	113	*(6)*
Stribild	0	*(0)*	0	*(0)*	1	*(0)*	6	*(0)*	76	*(3)*	118	*(5)*	121	*(5)*	39	*(1)*	12	*(0)*	11	*(0)*	8	*(0)*
Symtuza	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	15	*(1)*
Triumeq	2	*(0)*	2	*(0)*	2	*(0)*	2	*(0)*	4	*(0)*	258	*(10)*	365	*(14)*	381	*(14)*	383	*(15)*	347	*(14)*	241	*(12)*
Symtuza	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	0	*(0)*	15	*(1)*
Triumeq	2	*(0)*	2	*(0)*	2	*(0)*	2	*(0)*	4	*(0)*	265	*(10)*	374	*(14)*	384	*(15)*	384	*(15)*	349	*(15)*	243	*(12)*
CCR5																						
Maraviroc	29	*(1)*	31	*(1)*	40	*(2)*	46	*(2)*	50	*(2)*	55	*(2)*	58	*(2)*	61	*(2)*	49	*(2)*	39	*(2)*	31	*(2)*

1. All treatment records of ≥2 weeks of treatment in any calendar year were included in this analysis. The denominator includes all patients that could have been on antiretroviral therapy (i.e. HIV positive) in any calendar year. The proportion of patients on each drug in any calendar year does not add up to 100% across all ART drug groups in each calendar year as patients on more than one ARV during a calendar year period will be counted in all of the relevant ART groups. Includes retrospective and prospective data.
2. See table 5 for composition of fixed dose combination tablets (single tablets)

Table 5: Composition of fixed dose combination (single tablets)

Single tablet name(s)	Regime
Atripla	Efavirenz+Emtricitabine+Tenofovir Disoproxil
Biktarvy	Bictegravir+Emtricitabine+Tenofovir Alafenamide
Combivir	Lamivudine+Zidovudine
Complera	Emtricitabine+Rilpivirine+Tenofovir Disoproxil
Deskovy	Emtricitabine+Tenofovir Alafenamide
Dovato	Dolutegravir+Lamivudine
Evotaz	Atazanavir+*cobicistat*
Genvoya	Elvitegravir+Emtricitabine+Tenofovir Alafenamide+*cobicistat*
Juluca	Dolutegravir+Rilpivirine
Kaletra	Lopinavir+*ritonavir*
Kivexa	Abacavir+Lamivudine
Odefsey	Emtricitabine+Rilpivirine+Tenofovir Alafenamide
Prezcobix	Darunavir+*cobicistat*
Stribild	Elvitegravir+Emtricitabine+Tenofovir Disoproxil+*cobicistat*
Symtuza	Darunavir+Emtricitabine+Tenofovir Alafenamide+*cobicistat*
Triumeq	Abacavir+Dolutegravir+Lamivudine
Trizivir	Abacavir+Lamivudine+Zidovudine
Truvada	Emtricitabine+Tenofovir Disoproxil

Boosters are italicised

A full list of AHOD publications is available online:
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