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Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

Supplement to: Han WM, Law MG, Egger M, et al. Global estimates of viral suppression in children and adolescents and adults on antiretroviral therapy adjusted for missing viral load measurements: a multiregional, retrospective cohort study in 31 countries. *Lancet HIV* 2021; **8:** e766–75.

Supplementary Appendix

Supplementary Box 1. Steps taken to estimate the overall proportions of people living with HIV (PWH) alive* having viral load (VL) <1000 copies/mL in the IeDEA global consortium, by regions.

1) PWH in follow-up

a) With a viral load test:

- The number and proportion of PWH in care with VL <1000 copies/mL were obtained from available data at each time point.

- Plausible range of PWH with VL <1000 copies/mL was estimated by multiplying the number of PWH in our study who had VL test by the lowest and highest percentages suppressed, extracted from the literature on PWH on ART as follows:

Asia-Pacific: 68-89% for children/adolescents (1) and 80-96% for adults (2, 3)

CCASAnet: 57-91% for children/adolescents (4, 5) and 52-92% for adults (6)

NA-ACCORD: 73-89% for adults (7, 8)

Central, East, Southern, West Africa: 48-92% for children (9, 10) and 60-97% for adults (11, 12)

b) Without a viral load test:

- The number of PWH with VL <1000 copies/mL at each time point was obtained by multiplying the number with no VL test by the proportion with VL <1000 copies/mL in our study. - Plausible range was estimated by multiplying the number of PWH without a VL test in our data by the lowest and highest percentages suppressed, extracted from the literature on PWH on ART.

2) PWH transferred out

- We estimated number of deaths among those transferred by applying the percent of death in PWH in follow-up in our data to the number of transferred PWH.

- Plausible range of death was obtained by applying the lowest and highest percentages of death reported for PWH on ART in the literature to the number of transferred PWH in our data as follow:

Asia-Pacific: 5-9% for children/adolescents (13, 14) and 4-6% for adults (15)

CCASAnet: 5-16% children/adolescents (16) and 1-9% for adults (6, 17)

Central, East, Southern, West Africa: 4-17% for children/adolescents (18, 19) and 1-18% for adults (20, 21)

- The estimated death was removed from those transferred.
- Number of PWH with VL <1000 copies/mL among transferred assumed to be alive was then obtained at each time point by using percent suppressed in our data.
- Plausible range with VL <1000 copies/mL among transferred PWH assumed to be alive, was obtained by applying the lowest and highest percent suppressed reported in literature on PWH on ART (the same figures as the PWH in care with viral load measurements).

3) PWH lost to follow-up

- The number of lost to follow-up PWH with known outcomes was obtained by applying the average (plausible range) percentages with known status among LTFU PWH reported in the tracing studies (75% [71%-86%]) (22-24).
- We estimated number of deaths among LTFU with known status by multiplying the average percentage of death among LTFU PWH reported in the tracing studies (75%) (22-24).
- Plausible range of death was obtained using the lowest and highest percentage of death among LTFU PWH reported in the tracing studies (71-86%) (22-24).
- The estimated number of deaths was removed from the total LTFU with known outcomes.
- Number of PWH with VL <1000 copies/mL in those who re-connected to care (unofficial transfers) was estimated by applying the percentage of suppressed VL (51%) reported for reconnected PWH in the tracing studies (24).
- Sensitivity analyses varying the common estimate of viral suppression among re-connected to care PWH were provided in the supplementary figures S1 and S2 (appendix pp 19-20).

Total estimated number with suppressed VL

This is the sum of PWH with VL <1000 copies estimated among the above 3 groups: PWH in follow-up (a and b), PWH who were transferred out and PWH who were classified as LTFU and reconnected to care.

*The included studies used different threshold to define viral suppression and the majority provided an overall proportion of virologically suppressed PWH among those in care, or LTFU without taking the duration of ART treatment into account.

Table S1. Unweighted and inverse-variance weighted of the proportions of VL outcomes, transfers, LTFU and mortality of children/adolescents and adults at year 1, 2 and 3 after ART initiation in the IeDEA global consortium

Children/Adolescents						
	VL<1000 copies/mL	**VL≥1000 copies/mL**	**No VL measurement**	**Transfer out**	**LTFU**	**Death**
Year 1	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)
Unweighted average	35.7 (35.00-36.3)	12.7 (12.2-13.2)	22.8 (22.3-23.4)	7.2 (6.8-7.5)	18.6 (18.0-19.1)	3.1 (2.9-3.3)
Fixed effects	35.9 (35.2-36.6)	12.7 (12.3-13.2)	23.0 (22.5-23.6)	7.9 (7.5-8.3)	20.1 (19.6-20.7)	3.6 (3.4-3.9)
Random effects	40.7 (33.2-48.6)	12.2 (11.2-13.3)	19.5 (16.4-23.0)	4.0 (2.3-7.1)	15.8 (10.2-23.7)	2.2 (1.1-4.2)
Year 2	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)
Unweighted average	29.8 (29.2-30.5)	10.1 (9.7-10.6)	18.2 (17.6-18.7)	12.4 (11.9-12.9)	25.8 (25.2-26.4)	3.7 (3.4-3.9)
Fixed effects	30.2 (29.5-30.9)	10.2 (9.8-10.6)	18.5 (17.9-19.1)	13.6 (13.1-14.1)	27.3 (26.6-28.0)	4.2 (3.9-4.5)
Random effects	33.1 (25.2-42.2)	10.0 (8.7-11.5)	15.5 (12.1-19.6)	6.8 (3.9-11.8)	25.5 (17.1-36.0)	2.7 (1.4-5.0)
Year 3	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)
Unweighted average	24.4 (23.7-25.0)	7.7 (7.3-8.1)	13.2 (12.7-13.7)	17.5 (16.9-18.1)	33.1 (32.4-33.8)	4.2 (3.9-4.5)
Fixed effects	25.2 (24.6-25.9)	7.8 (7.4 - 8.2)	13.9 (13.3-14.4)	18.9 (18.3 - 19.6)	33.9 (33.2-34.7)	4.8 (4.5-5.2)
Random effects	24.8 (16.2 - 36.0)	7.9 (6.7 - 9.3)	12.3 (8.4-17.7)	9.6 (5.6 - 16.1)	38.8 (27.1-52.0)	3.1 (1.7-5.7)
Adults						
Year 1	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)
Unweighted average	44.3 (44.1-44.5)	5.5 (5.4-5.6)	20.8 (20.7-21.0)	6.9 (6.8-7.0)	19.4 (19.3-19.6)	3.05 (3.0-3.1)
Fixed effects	44.1 (43.9-44.3)	5.6 (5.5-5.6)	21.3 (21.1-21.5)	8.0 (7.9-8.1)	19.8 (19.7-20.0)	3.1 (3.1-3.2)
Random effects	48.2 (40.9-55.5)	4.9 (4.0-5.9)	16.1 (12.7-20.1)	2.3 (1.3-4.2)	19.4 (14.7-25.2)	3.0 (2.3-3.8)

Year 2	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)
Unweighted average	35.8 (35.6-36.0)	4.2 (4.1-4.3)	16.9 (16.7-17.0)	11.2 (11.0-11.3)	28.0 (27.8-28.1)	4.0 (3.9-4.1)
Fixed effects	35.9 (35.7-36.1)	4.3 (4.2-4.4)	17.4 (17.2-17.5)	12.7 (12.5-12.8)	28.1 (28.0-28.3)	4.1 (4.0-4.2)
Random effects	38.3 (30.9-46.2)	3.4 (2.6-4.3)	12.3 (9.1-16.4)	3.9 (2.2-6.9)	31.3 (24.4-39.1)	3.9 (3.1-4.9)
Year 3	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)	Proportions (95% CI)
Unweighted average	28.8 (28.6-29.0)	3.2 (3.2-3.3)	12.2 (12.0-12.3)	15.0 (14.8-15.1)	36.0 (35.8-36.2)	4.8 (4.7-4.9)
Fixed effects	29.3 (29.1-29.5)	3.4 (3.3-3.5)	12.9 (12.7-13.0)	16.8 (16.7-17.0)	35.6 (35.4-35.8)	5.0 (4.9-5.1)
Random effects	24.7 (18.5-32.2)	2.7 (2.0-3.7)	10.6 (6.9-15.9)	5.4 (3.1-9.2)	48.1 (39.3-57.0)	4.7 (3.6-6.1)

Note: An inverse variance weighted meta-analysis of the proportions was conducted across regions to account for the differences between the sizes of the cohorts. As significant heterogeneity was observed, a random-effects meta-analysis was also conducted. Estimates from these meta-analyses are also provided. The random-effects meta-analyses estimates resulted in wide confidence intervals that reflect the level of heterogeneity. Nevertheless, the point estimates remained largely similar to the overall cohort estimates.

Table S2. Estimated proportions of children/adolescents still alive with suppressed HIV viral load (VL) <1000 copies/mL by years on ART, stratified by IeDEA region

	Year 1		Year 2		Year 3	
Asia-Pacific	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**
Total with suppressed VL	***789*** (636-833)	0.84 (0.68-0.89)	***729*** (577-755)	0.86 (0.68-0.89)	***646*** (507-663)	0.87 (0.68-0.89)
Total with unsuppressed VL	***147***		***119***		***99***	
Total deaths (cumulative)	***11***		***17***		***18***	
Total with No VL	***429***		***357***		***245***	
Estimated suppressed VL	362 (292-382)	0.84 (0.68-0.89)	307 (243-318)	0.86 (0.68-0.89)	212 (167-218)	0.87 (0.68-0.89)
Total transfers (cumulative)	***45***		***94***		***146***	
Estimated deaths	0 (0-4)	0.01 (0.01-0.09)	1 (1-9)	0.01 (0.01--0.09)	2 (2-14)	0.01 (0.01-0.09)
Estimated suppressed VL	38 (31-40)	0.84 (0.68-0.89)	80 (63-83)	0.86 (0.68-0.89)	125 (98-128)	0.87 (0.68-0.89)
Total LTFU (cumulative)	***19***		***41***		***71***	
Estimated with known status	14 (13-16)	0.75 (0.71-0.86)	31 (29-35)	0.75 (0.71-0.86)	53 (50-61)	0.75 (0.71-0.86)
Estimated death	3 (3-4)	0.21 (0.19-0.32)	7 (6-10)	0.21 (0.19-0.32)	11 (10-17)	0.21 (0.19-0.32)
Estimated re-connected to care (unofficial transfers)	6 (3-8)	0.55 (0.31-0.74)	13 (7-18)	0.55 (0.31-0.74)	23 (13-31)	0.55 (0.31-0.74)
Estimated suppressed VL among re-connected to care	3 (2-4)	0.51 (0.28-0.72)	7 (4-9)	0.51 (0.28-0.72)	12 (6-17)	0.51 (0.28-0.72)
Total estimated suppressed VL	**1192 (961-1259)**	**0.84 (0.67-0.88)**	**1123 (887-1165)**	**0.84 (0.67-0.87)**	**995 (778-1026)**	**0.83 (0.65-0.86)**
Total non-deaths	**1426**		**1332**		**1194**	

	Year 1		Year 2		Year 3	
CCASAnet	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**
Total with suppressed VL	***143*** (103-165)	0.79 (0.57-0.91)	***112*** (83-132)	0.77 (0.57-0.91)	***86*** (62-98)	0.80 (0.57-0.91)
Total with unsuppressed VL	***38***		***33***		***22***	
Total deaths (cumulative)	***2***		***2***		***2***	

Total with no VL	***28***		***34***		***32***	
Estimated suppressed VL	22 (16-25)	0.79 (0.57-0.91)	26 (19-31)	0.77 (0.57-0.91)	25 (18-29)	0.80 (0.57-0.91)
Total transfers (cumulative)	***5***		***7***		***7***	
Estimated deaths	0 (0-1)	0.01 (0.01-0.13)	0 (0-1)	0.0 (0.01-0.13)	0 (0-1)	0.0 (0.01-0.13)
Estimated suppressed VL	4 (3-5)	0.79 (0.57-0.91)	5 (4-6)	0.77 (0.57-0.91)	6 (4-6)	0.80 (0.57-0.91)
Total LTFU (cumulative)	**29**		**48**		**75**	
Estimated with known status	22 (21-25)	0.75 (0.71-0.86)	36 (34-41)	0.75 (0.71-0.86)	56 (53-65)	0.75 (0.71-0.86)
Estimated death	5 (4-7)	0.21 (0.19-0.32)	8 (7-12)	0.21 (0.19-0.32)	12 (11-18)	0.21 (0.19-0.32)
Estimated re-connected to care (unofficial transfers)	9 (5-13)	0.55 (0.31-0.74)	15 (9-21)	0.55 (0.31-0.74)	24 (14-33)	0.55 (0.31-0.74)
Estimated suppressed VL among re-connected to care	5 (3-6)	0.51 (0.28-0.72)	8 (4-11)	0.51 (0.28-0.72)	12 (7-17)	0.51 (0.28-0.72)
Total estimated suppressed VL	**174 (125-201)**	**0.73 (0.53-0.84)**	**151 (110-180)**	**0.67 (0.49-0.80)**	**129 (91-150)**	**0.61 (0.43-0.71)**
Total non-deaths	**238**		**226**		**210**	

	Year 1		Year 2		Year 3	
Central Africa	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**
Total with suppressed VL	72 (42-81)	0.82 (0.48-0.92)	40 (22-42)	0.87 (0.48-0.92)		
Total with unsuppressed VL	***16***		***6***			
Total deaths (cumulative)	***1***		***1***			
Total with no VL	***14***		***9***			
Estimated suppressed VL	11 (7-13)	0.82 (0.48-0.92)	8 (4-8)	0.87 (0.48-0.92)		
Total transfers (cumulative)	0		***0***			
Total LTFU (cumulative)	***64***		***103***			
Estimated with known status	48 (45-55)	0.75 (0.71-0.86)	77 (73-89)	0.75 (0.71-0.86)		
Estimated death	10 (9-15)	0.21 (0.19-0.32)	16 (15-25)	0.21 (0.19-0.32)		
Estimated re-connected to care (unofficial transfers)	21 (12-28)	0.55 (0.31-0.74)	34 (19-45)	0.55 (0.31-0.74)		
Estimated suppressed VL among re-connected to care	11 (6-15)	0.51 (0.28-0.72)	17 (10-24)	0.51 (0.28-0.72)		
Total estimated suppressed VL	94 (55-109)	0.60 (0.35-0.70)	65 (36-74)	0.46 (0.25-0.52)		

Total non-deaths	**156**		**142**			

East Africa	**Year 1**		**Year 2**		**Year 3**	
	Total (plausible ranges)	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**
Total with suppressed VL	***1995*** (1292-2476)	0.74 (0.48-0.92)	***1560*** (1017-1949)	0.74 (0.48-0.92)	***1146*** (728-1395)	0.76 (0.48-0.92)
Total with unsuppressed VL	***696***		***558***		***370***	
Total deaths (cumulative)	***174***		***201***		***216***	
Total with No VL	***1257***		***721***		***308***	
Estimated suppressed VL	932 (603-1156)	0.74 (0.48-0.92)	531 (346-663)	0.74 (0.48-0.92)	233 (148-283)	0.76 (0.48-0.92)
Total transfers (cumulative)	***270***		***419***		***518***	
Estimated deaths	10 (10-46)	0.04 (0.04-0.17)	19 (17-72)	0.05 (0.04-0.17)	27 (21-89)	0.05 (0.04-0.17)
Estimated suppressed VL	193 (125-239)	0.74 (0.48-0.92)	295 (192-368)	0.74 (0.48-0.92)	371 (236-452)	0.76 (0.48-0.92)
Total LTFU (cumulative)	***1041***		***1274***		***1380***	
Estimated with known status	781 (739-895)	0.75 (0.71-0.86)	956 (905-1096)	0.75 (0.71-0.86)	1035 (980-1187)	0.75 (0.71-0.86)
Estimated deaths	164 (148-250)	0.21 (0.19-0.32)	201 (182-306)	0.21 (0.19-0.32)	217 (197-331)	0.21 (0.19-0.32)
Estimated re-connected to care (unofficial transfers)	339 (191-457)	0.55 (0.31-0.74)	415 (234-559)	0.55 (0.31-0.74)	450 (254-605)	0.55 (0.31-0.74)
Estimated suppressed VL among re-connected to care	173 (95-244)	0.51 (0.28-0.72)	212 (116-299)	0.51 (0.28-0.72)	230 (126-324)	0.51 (0.28-0.72)
Total estimated suppressed VL	**3293 (2115-4115)**	**0.65 (0.42-0.81)**	**2598 (1671-3279)**	**0.60 (0.39-0.76)**	**1980 (1238-2454)**	**0.57 (0.36-0.71)**
Total non-deaths	**5085**		**4312**		**3478**	

Southern Africa	**Year 1**		**Year 2**		**Year 3**	
	Total (plausible ranges)	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**
Total with suppressed VL	***3489*** (2378-4559)	0.72 (0.48-0.92)	***2899*** (1890-3623***)***	0.74 (0.48-0.92)	***2163*** (1387-2659)	0.75 (0.48-0.92)
Total with unsuppressed VL	***1466***		***1039***		***727***	
Total deaths (cumulative)	***263***		***287***		***300***	
Total with No VL	***2615***		***2123***		***1582***	
Estimated suppressed VL	1894 (1255-2406)	0.72 (0.48-0.92)	1563 (1019-1953)	0.74 (0.48-0.92)	1184 (759-1455)	0.75 (0.48-0.92)

Total transfers (cumulative)	***1093***		***1780***		***2311***	
Estimated deaths	34 (34-187)	0.03 (0.03-0.17)	72 (72-304)	0.04 (0.04-0.17)	114 (95-395)	0.05 (0.04-0.17)
Estimated suppressed VL	767 (508-974)	0.72 (0.48-0.92)	1257 (820-1571)	0.74 (0.48-0.92)	1644 (1055-2021)	0.75 (0.48-0.92)
Total LTFU (cumulative)	***1858***		***2531***		***3071***	
Estimated with known status	1394 (1319-1598)	0.75 (0.71-0.86)	1898 (1797-2177)	0.75 (0.71-0.86)	2303 (2180-2641)	0.75 (0.71-0.86)
Estimated deaths	293 (265-446)	0.21 (0.19-0.32)	399 (361-607)	0.21 (0.19-0.32)	484 (438-737)	0.21 (0.19-0.32)
Estimated re-connected to care (unofficial transfers)	606 (341-815)	0.55 (0.31-0.74)	824 (465-1109)	0.55 (0.31-0.74)	1000 (564-1346)	0.55 (0.31-0.74)
Estimated suppressed VL among re-connected to care	309 (170-436)	0.51 (0.28-0.72)	420 (231-593)	0.51 (0.28-0.72)	510 (280-720)	0.51 (0.28-0.72)
Total estimated suppressed VL	**6459 (4311-8375)**	**0.63 (0.42-0.82)**	**6139 (3960-7740)**	**0.62 (0.40-0.78)**	**5501 (3481-6855)**	**0.59 (0.38-0.74)**
Total non-deaths	10194		**9901**		**9256**	

	Year 1		**Year 2**		**Year 3**	
West Africa	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	***Proportions (plausible ranges)***
Total with suppressed VL	***455*** (332-636)	0.66 (0.48-0.92)	***369*** (266-510)	0.67 (0.48-0.92)	***245*** (182-350)	0.64 (0.48-0.92)
Total with unsuppressed VL	***236***		***185***		**135**	
Total deaths (cumulative)	***181***		***191***		**198**	
Total with No VL	***333***		***231***		**151**	
Estimated suppressed VL	219 (160-306)	0.66 (0.48-0.92)	154 (111-213)	0.67 (0.48-0.92)	97 (72-139)	0.64 (0.48-0.92
Total transfers (cumulative)	***52***		***72***		**94**	
Estimated deaths	7 (2-9)	0.14 (0.04-0.17)	12 (3-12)	0.16 (0.04-0.17)	19 (4-19)	0.20 (0.04-0.20)
Estimated suppressed VL	30 (22-41)	0.66 (0.48-0.92)	40 (29-55)	0.67 (0.48-0.92)	48 (36-69)	0.64 (0.48-0.92)
Total LTFU (cumulative)	***792***		***943***		**1095**	
Estimated with known status	594 (562-681)	0.75 (0.71-0.86)	707 (670-811)	0.75 (0.71-0.86)	821 (777-942)	0.75 (0.71-0.86)
Estimated deaths	125 (113-190)	0.21 (0.19-0.32)	148 (134-226)	0.21 (0.19-0.32)	172 (156-263)	0.21 (0.19-0.32)
Estimated re-connected to care (unofficial transfers)	258 (145-347)	0.55 (0.31-0.74)	307 (173-414)	0.55 (0.31-0.74)	357 (201-480)	0.55 (0.31-0.74)
Estimated suppressed VL among re-connected to care	132 (72-186)	0.51 (0.28-0.72)	157 (86-221)	0.51 (0.28-0.72)	182 (100-257)	0.51 (0.28-0.72)

Total estimated suppressed VL	**836 (586-1169)**	**0.48 (0.34-0.67)**	**720 (492-999)**	**0.44 (0.30-0.61)**	**572 (390-815)**	**0.37 (0.26-0.53)**
Total non-deaths	**1736**		**1640**		**1529**	

Children, <18 years at ART initiation; ART, consists of the combination of at least three antiretrovirals.

Note: Plausible ranges of estimated suppressed VL among re-connected to care were extracted from 95% CI of the tracing study (24).

Abbreviations: IQR, Interquartile range; CCASAnet, Caribbean/Central and South America.

Table S3. Estimated proportions of adults still alive with suppressed HIV viral load (VL) <1000 copies/mL) by years on ART, stratified by IeDEA region

Asia-Pacific	**Year 1**		**Year 2**		**Year 3**	
	Total (plausible ranges)	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**
Total with suppressed VL	***981*** (833-1000)	0.94 (0.80-0.96)	***847*** (697-847)	0.97 (0.80-0.97)	***891*** (734-891)	0.97 (0.80-0.97)
Total with unsuppressed VL	***61***		***24***		***26***	
Total deaths (cumulative)	***65***		***78***		***90***	
Total with No VL	***861***		***772***		***541***	
Estimated suppressed VL	809 (689-827)	0.94 (0.80-0.96)	749 (618-749)	0.97 (0.80-0.97)	525 (433-525)	0.97 (0.80-0.97)
Total transfers (cumulative)	***45***		***63***		***85***	
Estimated deaths	1 (1-3)	0.03 (0.03-0.06)	2 (2-4)	0.04 (0.04-0.06)	4 (3-5)	0.05 (0.04-0.06)
Estimated suppressed VL	41 (35-42)	0.94 (0.80-0.96)	59 (50-59)	0.97 (0.80-0.97)	79 (65-79)	0.97 (0.80-0.97)
Total LTFU (cumulative)	***122***		***214***		***263***	
Estimated with known status	92 (87-105)	0.75 (0.71-0.86)	161 (152-184)	0.75 (0.71-0.86)	197 (187-226)	0.75 (0.71-0.86)
Estimated deaths	19 (17-29)	0.21 (0.19-0.32)	34 (31-52)	0.21 (0.19-0.32)	41 (37-63)	0.21 (0.19-0.32)
Estimated re-connected to care (unofficial transfers)	40 (23-54)	0.55 (0.31-0.74)	70 (39-94)	0.55 (0.31-0.74)	86 (48-115)	0.55 (0.31-0.74)
Estimated suppressed VL among re-connected to care	20 (11-29)	0.51 (0.28-0.72)	36 (20-50)	0.51 (0.28-0.72)	44 (24-62)	0.51 (0.28-0.72)
Total estimated suppressed VL	**1851 (1568-1898)**	**90% (77%-93%)**	**1691 (1385-1705)**	**90% (73%-90%)**	**1539 (1246-1557)**	**87% (71%-88%)**
Total non-deaths	**2050**		**1886**		**1761**	

CCASAnet	**Year 1**		**Year 2**		**Year 3**	
	Total (plausible ranges)	**Proportions (plausible ranges**	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**
Total with suppressed VL	***6207*** (3558-6295)	0.91 (0.52-0.92)	***5064*** (2919-5164)	0.90 (0.52-0.92)	***3979*** (2299-4067)	0.90 (0.52-0.92)
Total with unsuppressed VL	***635***		***549***		***442***	
Total deaths (cumulative)	***289***		***352***		***399***	
Total with No VL	***1306***		***999***		***764***	
Estimated suppressed VL	1188 (679-1201)	0.91 (0.52-0.92)	899 (519-919)	0.90 (0.52-0.92)	688 (397-703)	0.90 (0.52-0.92)

Total transfers (cumulative)	***49***		***102***		***127***	
Estimated deaths	1 (1-4)	0.03 (0.01-0.09)	4 (1-9)	0.04 (0.01-0.09)	6 (1-11)	0.05 (0.01-0.09)
Estimated suppressed VL	44 (25-45)	0.91 (0.52-0.92)	88 (51-90)	0.90 (0.52-0.92)	109 (63-113)	0.90 (0.52-0.92)
Total LTFU (cumulative)	***1034***		***1663***		***2314***	
Estimated with known status	776 (734-889)	0.75 (0.71-0.86)	1247 (1181-1430)	0.75 (0.71-0.86)	1736 (1643-1990)	0.75 (0.71-0.86)
Estimated deaths	163 (147-248)	0.21 (0.19-0.32)	262 (237-399)	0.21 (0.19-0.32)	365 (330-556)	0.21 (0.19-0.32)
Estimated re-connected to care (unofficial transfers)	337 (190-454)	0.55 (0.31-0.74)	542 (305-729)	0.55 (0.31-0.74)	754 (425-1015)	0.55 (0.31-0.74)
Estimated suppressed VL among re-connected to care	172 (94-243)	0.51 (0.28-0.72)	276 (152-390)	0.51 (0.28-0.72)	385 (211-543)	0.51 (0.28-0.72)
Total estimated suppressed VL	**7611 (4356-7784)**	**84% (48%-86%)**	**6327 (3641-6563)**	**78% (45%-81%)**	**5161 (2970-5426)**	**71% (41%-75%)**
Total non-deaths	**9067**		**8111**		**7255**	

NA-ACCORD

	Year 1		Year 2		Year 3	
	Total (plausible ranges)	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**
Total with suppressed VL	***6899*** **(**5735-6991***)***	0.88 (0.73-0.89)	***5333*** (4401-5366)	0.88 (0.73-0.89)	***4248*** (3474-4248)	0.89 (0.73-0.89)
Total with unsuppressed VL	***957***		***696***		***511***	
Total deaths (cumulative)	***233***		***335***		***410***	
Total with No VL	***551***		***515***		***372***	
Estimated suppressed VL	485 (402-490)	0.88 (0.73-0.89)	453 (376-458)	0.88 (0.73-0.89)	331 (272-331)	0.89 (0.73-0.89)
Total transfers (cumulative)	**N/A**		**N/A**		**N/A**	
Estimated deaths	**N/A**		**N/A**		**N/A**	
Estimated suppressed VL	**N/A**		**N/A**		**N/A**	
Total LTFU (cumulative)	***1316***		***2003***		***2478***	
Estimated with known status	987 (934-1132)	0.75 (0.71-0.86)	1502 (1422-1723)	0.75 (0.71-0.86)	1859 (1759-2131)	0.75 (0.71-0.86)
Estimated deaths	207 (188-316)	0.21 (0.19-0.32)	315 (285-481)	0.21 (0.19-0.32)	390 (353-595)	0.21 (0.19-0.32)
Estimated re-connected to care (unofficial transfers)	429 (242-577)	0.55 (0.31-0.74)	653 (368-878)	0.55 (0.31-0.74)	808 (455-1087)	0.55 (0.31-0.74)
Estimated suppressed VL among re-connected to care	219 (120-309)	0.51 (0.28-0.72)	333 (183-470)	0.51 (0.28-0.72)	412 (226-582)	0.51 (0.28-0.72)
Total estimated suppressed VL	**7603 (6257-7790)**	**80% (66%-82%)**	**6119 (4960-6294)**	**74% (60%-76%)**	**4991 (3972-5161)**	**69% (55%-71%)**

Total non-deaths	**9516**	**8232**	**7219**

Central Africa

	Year 1		Year 2		Year 3	
	Total (plausible ranges)	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**
Total with suppressed VL	***1014*** (665-1075)	0.91 (0.60-0.97)	***504*** (322-521)	0.94 (0.60-0.97)	***19*** (12-19)	0.95 (0.60-0.97)
Total with unsuppressed VL	***95***		***33***		***1***	
Total deaths (cumulative)	***29***		***36***		***37***	
Total with No VL	***192***		***62***		***0***	
Estimated suppressed VL	175 (115-186)	0.91 (0.60-0.97)	58 (37-60)	0.94 (0.60-0.97)	0	0.95 (0.60-0.97)
Total transfers (cumulative)	***N/A***		***N/A***		***N/A***	
Estimated deaths	N/A		N/A		N/A	
Estimated suppressed VL	N/A	0.91 (0.60-0.97)	N/A	0.94 (0.60-0.97)	N/A	0.95 (0.60-0.97)
Total LTFU (cumulative)	***1104***		***1593***		***1924***	
Estimated with known status	828 (784-949)	0.75 (0.71-0.86)	1195 (1131-1370)	0.75 (0.71-0.86)	1443 (1366-1655)	0.75 (0.71-0.86)
Estimated deaths	174 (157-265)	0.21 (0.19-0.32)	251 (227-382)	0.21 (0.19-0.32)	303 (274-462)	0.21 (0.19-0.32)
Estimated re-connected to care (unofficial transfers)	360 (203-484)	0.55 (0.31-0.74)	519 (293-699)	0.55 (0.31-0.74)	627 (353-844)	0.55 (0.31-0.74)
Estimated suppressed VL among re-connected to care	184 (101-259)	0.51 (0.28-0.72)	265 (145-374)	0.51 (0.28-0.72)	320 (176-451)	0.51 (0.28-0.72)
Total estimated suppressed VL	**1373 (871-1520)**	**62% (39%-68%)**	**807 (504-955)**	**42% (26%-49%)**	**339 (188-470)**	**21% (11%-29%)**
Total non-deaths	**2231**		**1941**		**1641**	

East Africa

	Year 1		Year 2		Year 3	
	Total (plausible ranges)	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**
Total with suppressed VL	***23,928*** (16,023-25,905)	0.90 (0.60-0.97)	***17,269*** (11,451-18,512)	0.90 (0.60-0.97)	***10,979*** (7233-11,693)	0.91 (0.60-0.97)
Total with unsuppressed VL	***2778***		***1816***		***1076***	
Total deaths (cumulative)	***2282***		***2612***		***2770***	
Total with No VL	***10,870***		***6199***		***2507***	

Estimated suppressed VL	9783 (6522-10,544)	0.90 (0.60-0.97)	5579 (3719-6013)	0.90 (0.60-0.97)	2281 (1504-2432)	0.91 (0.60-0.97)
Total transfers (cumulative)	***2351***		***3438***		***4044***	
Estimated deaths	117 (25-456)	0.05 (0.01-0.18)	208 (34-619)	0.06 (0.01-0.18)	283 (40-728)	0.07 (0.01-0.18)
Estimated suppressed VL	2011 (1340-2167)	0.90 (0.60-0.97)	2907 (1938-3133)	0.90 (0.60-0.97)	3422 (2257-3648)	0.91 (0.60-0.97)
Total LTFU (cumulative)	***12,646***		***15,596***		***16,988***	
Estimated with known status	9485 (8979-10,876)	0.75 (0.71-0.86)	11,697 (11,073-13,413)	0.75 (0.71-0.86)	12,741 (12,061-14,610)	0.75 (0.71-0.86)
Estimated deaths	1931 (472-4668)	0.21 (0.19-0.32)	2361 (577-5705)	0.21 (0.19-0.32)	2512 (614-6071)	0.21 (0.19-0.32)
Estimated re-connected to care (unofficial transfers)	4121 (2323-5545)	0.55 (0.31-0.74)	5083 (2865-6838)	0.55 (0.31-0.74)	5536 (3120-7448)	0.55 (0.31-0.74)
Estimated suppressed VL among re-connected to care	2102 (1154-2967)	0.51 (0.28-0.72)	2592 (1423-3660)	0.51 (0.28-0.72)	2823 (1550-3986)	0.51 (0.28-0.72)
Total estimated suppressed VL	**37,824 (25,039-41,583)**	**75% (50%-82%)**	**30,354 (20,158-32,589)**	**73% (48%-78%)**	**19,505 (12,544-21,759)**	**59% (38%-66%)**
Total non-deaths	**50,525**		**41,749**		**32,799**	

Southern Africa

	Year 1		Year 2		Year 3	
	Total (plausible ranges)	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**
Total with suppressed VL	***65,908*** (44,634-72,158)	0.89 (0.60-0.97)	***48,984*** (33,046-53,425)	0.89 (0.60-0.97)	***37,233*** (24,977-36,116)	0.90 (0.60-0.97)
Total with unsuppressed VL	***8482***		***6093***		***4395***	
Total deaths (cumulative)	***4128***		***5053***		***5648***	
Total with No VL	***35,298***		***27,853***		***19,765***	
Estimated suppressed VL	31,415 (21,179-34,239)	0.89 (0.60-0.97)	24,789 (16,712-27,017)	0.89 (0.60-0.97)	17,788 (11,859-19,172)	0.90 (0.60-0.97)
Total transfers (cumulative)	***14,174***		***20,968***		***25,732***	
Estimated deaths	425 (142-2551)	0.03 (0.01-0.18)	1048 (210-3774)	0.05 (0.01-0.18)	1544 (257-4632)	0.06 (0.01-0.18)
Estimated suppressed VL	12,237 (8249-13,336)	0.89 (0.60-0.97)	17,729 (11,952-19,322)	0.89 (0.60-0.97)	19,339 (12,893-20,843)	0.90 (0.60-0.97)
Total LTFU (cumulative)	***28,223***		***37,850***		***44,956***	
Estimated with known status	21,167 (20,038-24,272)	0.75 (0.71-0.86)	28,388 (26,874-32,551)	0.75 (0.71-0.86)	33,717 (31,919-38,662)	0.75 (0.71-0.86)
Estimated deaths	4445 (4022-6773)	0.21 (0.19-0.32)	5961 (5394-9084)	0.21 (0.19-0.32)	7081 (6406-10,789)	0.21 (0.19-0.32)
Estimated re-connected to care (unofficial transfers)	9197 (5184-12,374)	0.55 (0.31-0.74)	12,335 (6952-16,596)	0.55 (0.31-0.74)	14,650 (8257-19,711)	0.55 (0.31-0.74)

Estimated suppressed VL among re-connected to care	4690 (2575-6622)	0.51 (0.28-0.72)	6291 (3454-8881)	0.51 (0.28-0.72)	7472 (4102-10,548)	0.51 (0.28-0.72)
Total estimated suppressed VL	**117,708 (79,580-116,654)**	**78% (52%-86%)**	**97,793 (65,164-10,8645)**	**73% (48%-81%)**	**81,832 (53,831-86,679)**	**66% (44%-70%)**
Total non-deaths	**147,215**		**134,739**		**123,456**	

West Africa	**Year 1**		**Year 2**		**Year 3**	
	Total (plausible ranges)	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**	**Total (plausible ranges)**	**Proportions (plausible ranges)**
Total with suppressed VL	***1604*** (1052-1701)	0.91 (0.60-0.97)	***1140*** (751-1213)	0.91 (0.60-0.97)	***721*** (472-763)	0.92 (0.60-0.97)
Total with unsuppressed VL	***150***		***111***		***66***	
Total deaths (cumulative)	***304***		***320***		***327***	
Total with No VL	***1049***		***842***		***540***	
Estimated suppressed VL	944 (629-1017)	0.90 (0.60-0.97)	758 (505-817)	0.90 (0.60-0.97)	491 (324-524)	0.91 (0.60-0.97)
Total transfers (cumulative)	***76***		***114***		***142***	
Estimated deaths	6 (1-14)	0.08 (0.01-0.18)	11 (1-20)	0.10 (0.01-0.18)	18 (1-26)	0.13 (0.01-0.18)
Estimated suppressed VL	63 (42-68)	0.90 (0.60-0.97)	93 (62-100)	0.90 (0.60-0.97)	113 (74-120)	0.91 (0.60-0.97)
Total LTFU (cumulative)	***2304***		***2830***		***3414***	
Estimated with known status	1728 (1636-1981)	0.75 (0.71-0.86)	2123 (2009-2434)	0.75 (0.71-0.86)	2561 (2424-2936	0.75 (0.71-0.86)
Estimated deaths	363 (328-553)	0.21 (0.19-0.32)	446 (403-679)	0.21 (0.19-0.32)	538 (487-820)	0.21 (0.19-0.32)
Estimated re-connected to care (unofficial transfers)	751 (423-1010)	0.55 (0.31-0.74)	922 (520-1241)	0.55 (0.31-0.74)	1113 (627-1497)	0.55 (0.31-0.74)
Estimated suppressed VL among re-connected to care	383 (210-541)	0.51 (0.28-0.72)	470 (258-664)	0.51 (0.28-0.72)	568 (312-801)	0.51 (0.28-0.72)
Total estimated suppressed VL	**2994 (1933-3327)**	**62% (40%-69%)**	**2461 (1576-2794)**	**54% (34%-61%)**	**1893 (1182-2208)**	**44% (27%-51%)**
Total non-deaths	**4814**		**4580**		**4327**	

Adults, ≥18 years at ART initiation; ART, consists of the combination of at least three antiretrovirals.

Note: Plausible ranges of estimated suppressed VL among re-connected to care were extracted from 95% CI of the tracing study (24).

Abbreviations: IQR, Interquartile range, CCASAnet, Caribbean/Central and South America; NA-ACCORD, The North American AIDS Cohort Collaboration on Research and Design

Table S4. Comparison of proportions of viral suppression (ITT, among VL measurement and adjusted), LTFU, transfer, mortality and without VL among children/adolescents

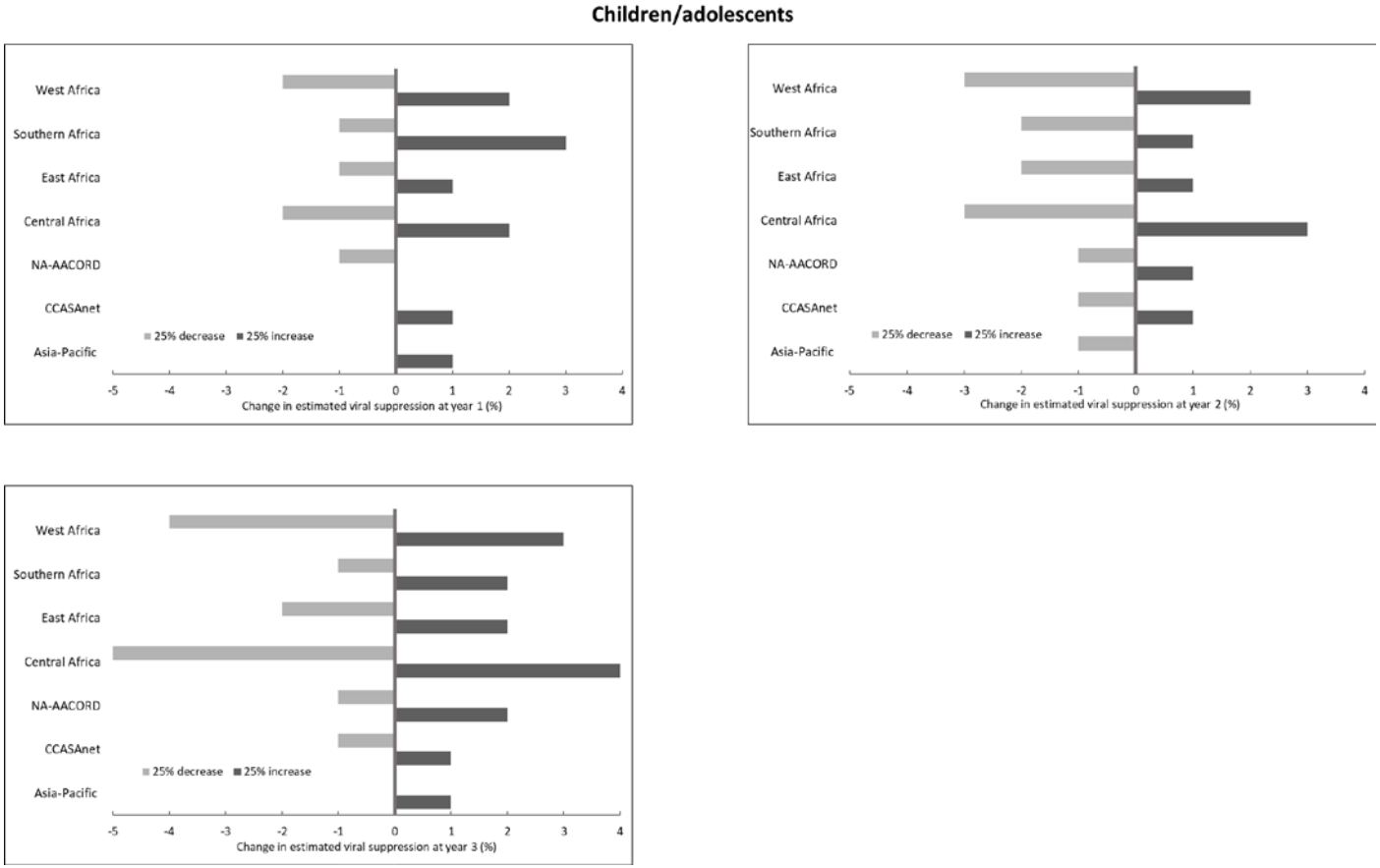
Year 1 (Children/Adolescents)	VL <1000 copies/mL) (ITT)	VL <1000 copies/mL (Among PWH with VL measurements)	VL <1000 copies/mL (Adjusted)	% LTFU	% Transfer	% Mortality	% Without VL testing
Asia-Pacific	55%	84%	84%	1.3%	3.1%	0.8%	29.8%
CCASAnet	58%	79%	73%	11.8%	2.0%	0.8%	11.4%
Central Africa	43%	82%	60%	38.3%	0.0%	0.6%	8.4%
East Africa	37%	74%	65%	19.2%	5.0%	3.2%	23.1%
Southern Africa	35%	72%	63%	16.7%	9.8%	2.4%	23.5%
West Africa	22%	66%	48%	38.7%	2.5%	8.8%	16.3%
Overall	36%	74%	64%	18.6%	7.2%	3.1%	22.8%
Year 2 (Children/Adolescents)	**VL <1000 copies/mL) (ITT)**	**VL <1000 copies/mL (Among PWH with VL measurements)**	**VL <1000 copies/mL (Adjusted)**	**% LTFU**	**% Transfer**	**% Mortality**	**% Without VL testing**
Asia-Pacific	54%	86%	84%	3.0%	6.9%	1.3%	26.3%
CCASAnet	47%	77%	67%	20.3%	3.0%	0.8%	14.4%
Central Africa	25%	87%	46%	64.8%	0.0%	0.6%	5.7%
East Africa	33%	74%	60%	26.9%	8.9%	4.2%	15.2%
Southern Africa	27%	74%	62%	23.7%	16.7%	2.7%	19.9%
West Africa	19%	67%	44%	47.4%	3.6%	9.6%	11.6%
Overall	30%	75%	62%	25.8%	12.4%	3.7%	18.2%
Year 3 (Children/Adolescents)	**VL <1000 copies/mL) (ITT)**	**VL <1000 copies/mL (Among PWH with VL measurements)**	**VL <1000 copies/mL (Adjusted)**	**% LTFU**	**% Transfer**	**% Mortality**	**% Without VL testing**
Asia-Pacific	53%	87%	83%	5.8%	11.9%	1.5%	20.0%
CCASAnet	38%	80%	61%	33.5%	3.1%	0.9%	14.3%
Central Africa	0%	0%	0%	NA	NA	NA	NA
East Africa	29%	76%	57%	35.0%	13.2%	5.5%	7.8%
Southern Africa	21%	75%	59%	30.2%	22.8%	3.0%	15.6%
West Africa	13%	64%	37%	57.1%	4.9%	10.3%	7.9%
Overall	24%	76%	59%	33.1%	17.5%	4.2%	13.2%

Table S5. Comparison of proportions of viral suppression (ITT, among VL measurement and adjusted), LTFU, transfer, mortality and without VL among adults

Year 1 (Adults)	VL <1000 copies/mL) (ITT)	VL <1000 copies/mL (Among PWH with VL measurements)	VL <1000 copies/mL (Adjusted)	% LTFU	% Transfer	% Mortality	% Without VL testing
Asia-Pacific	46%	94%	90%	5.7%	2.1%	3.0%	40.3%
CCASAnet	65%	91%	84%	10.9%	0.5%	3.0%	13.7%
NA-ACCORD	69%	88%	80%	13.2%	0.0%	2.3%	5.5%
Central Africa	42%	91%	62%	45.3%	0.0%	1.2%	7.9%
East Africa	44%	90%	75%	23.0%	4.3%	4.2%	19.8%
Southern Africa	42%	88%	78%	18.1%	9.1%	2.6%	22.6%
West Africa	29%	91%	62%	42.0%	1.4%	5.5%	19.1%
Overall	44%	89%	79%	19.4%	6.9%	3.0%	20.8%
Year 2 (Adults)	**VL <1000 copies/mL) (ITT)**	**VL <1000 copies/mL (Among PWH with VL measurements)**	**VL <1000 copies/mL (Adjusted)**	**% LTFU**	**% Transfer**	**% Mortality**	**% Without VL testing**
Asia-Pacific	42%	97%	90%	10.7%	3.2%	3.9%	38.6%
CCASAnet	58%	90%	78%	19.1%	1.2%	4.0%	11.4%
NA-ACCORD	60%	88%	74%	22.6%	0.0%	3.8%	5.8%
Central Africa	23%	94%	42%	71.0%	0.0%	1.6%	2.8%
East Africa	37%	90%	68%	33.2%	7.3%	5.6%	13.2%
Southern Africa	33%	89%	73%	25.8%	14.3%	3.4%	19.0%
West Africa	21%	91%	54%	52.8%	2.1%	6.0%	15.7%
Overall	36%	89%	72%	27.9%	11.2%	4.0%	16.9%
Year 3 (Adults)	**VL <1000 copies/mL) (ITT)**	**VL <1000 copies/mL (Among PWH with VL measurements)**	**VL <1000 copies/mL (Adjusted)**	**% LTFU**	**% Transfer**	**% Mortality**	**% Without VL testing**
Asia-Pacific	47%	97%	87%	13.9%	4.5%	4.7%	28.5%
CCASAnet	50%	90%	71%	28.8%	1.6%	5.0%	9.5%
NA-ACCORD	52%	89%	69%	31.3%	0.0%	5.2%	4.7%
Central Africa	NA	NA	NA	NA	NA	NA	NA

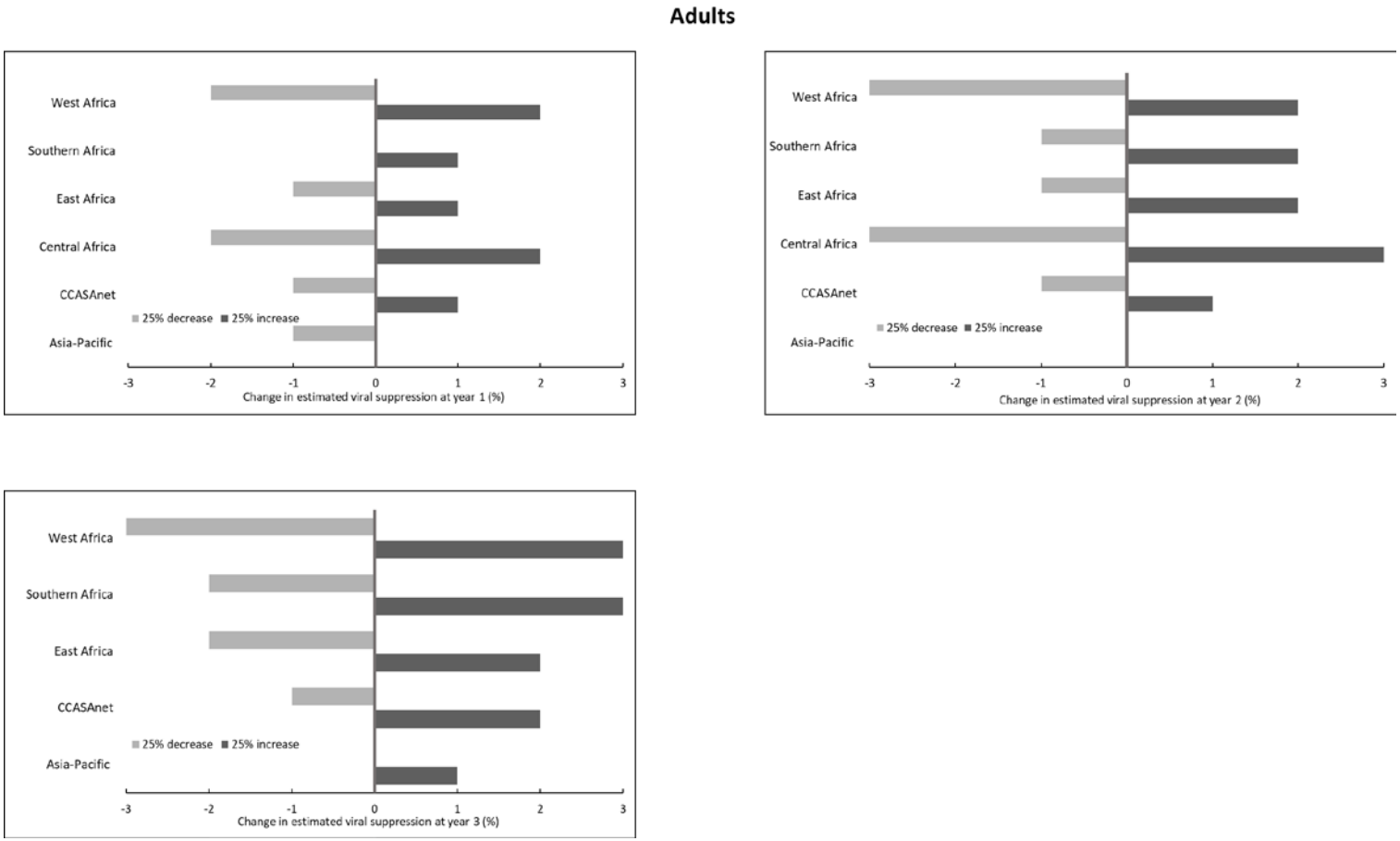
East Africa	29%	91%	59%	44.3%	10.5%	7.2%	6.5%
Southern Africa	27%	89%	66%	32.6%	18.7%	4.1%	14.3%
West Africa	14%	92%	44%	65.5%	2.7%	6.3%	10.4%
Overall	29%	90%	65%	36.0%	15.0%	4.8%	12.2%

Figure S1. Sensitivity analysis of the overall viral suppression of adults by varying ±25% in the estimated viral suppression among those LTFU who reconnected to care



The estimated proportion of viral suppression among those who reconnected to care was 0.51 in the main adjusted analysis in children/adolescents. In the sensitivity analysis provided in the figure above, the upper bound (high) and lower bound (low) for the viral suppression proportions were applied as a 25% increase and decrease, respectively. For example, at year 3 after ART initiation, a 25% increase and a 25% decrease from the estimate used in the main analysis for viral suppression proportion among PWH reconnected to care for LTFU adults for Southern Africa would respectively result in a 2% increase and a 1% decrease in overall viral suppression estimates in the region.

Figure S2. Sensitivity analysis of the overall viral suppression of adults by varying ±25% in the estimated viral suppression among those LTFU who reconnected to care



The estimated viral suppression proportion among those who reconnected to care was estimated as 0.51 in the main adjusted analysis in adults. In the sensitivity analysis provided in the figure above, the upper bound (high) and lower bound (low) for the viral suppression proportion were applied as a 25% increase and decrease, respectively. For example, at year 3 after ART initiation, a 25% increase and 25% decrease from the estimate used in the main analysis for viral suppression proportions among PWH reconnected to care for LTFU adults for Southern Africa would result in a 3% increase and 2% decrease in overall viral suppression estimates in the region.

Figure S3. HIV viral suppression and treatment outcomes for children/adolescents with HIV in the IeDEA global consortium by region at years 1, 2, and 3 following ART initiation

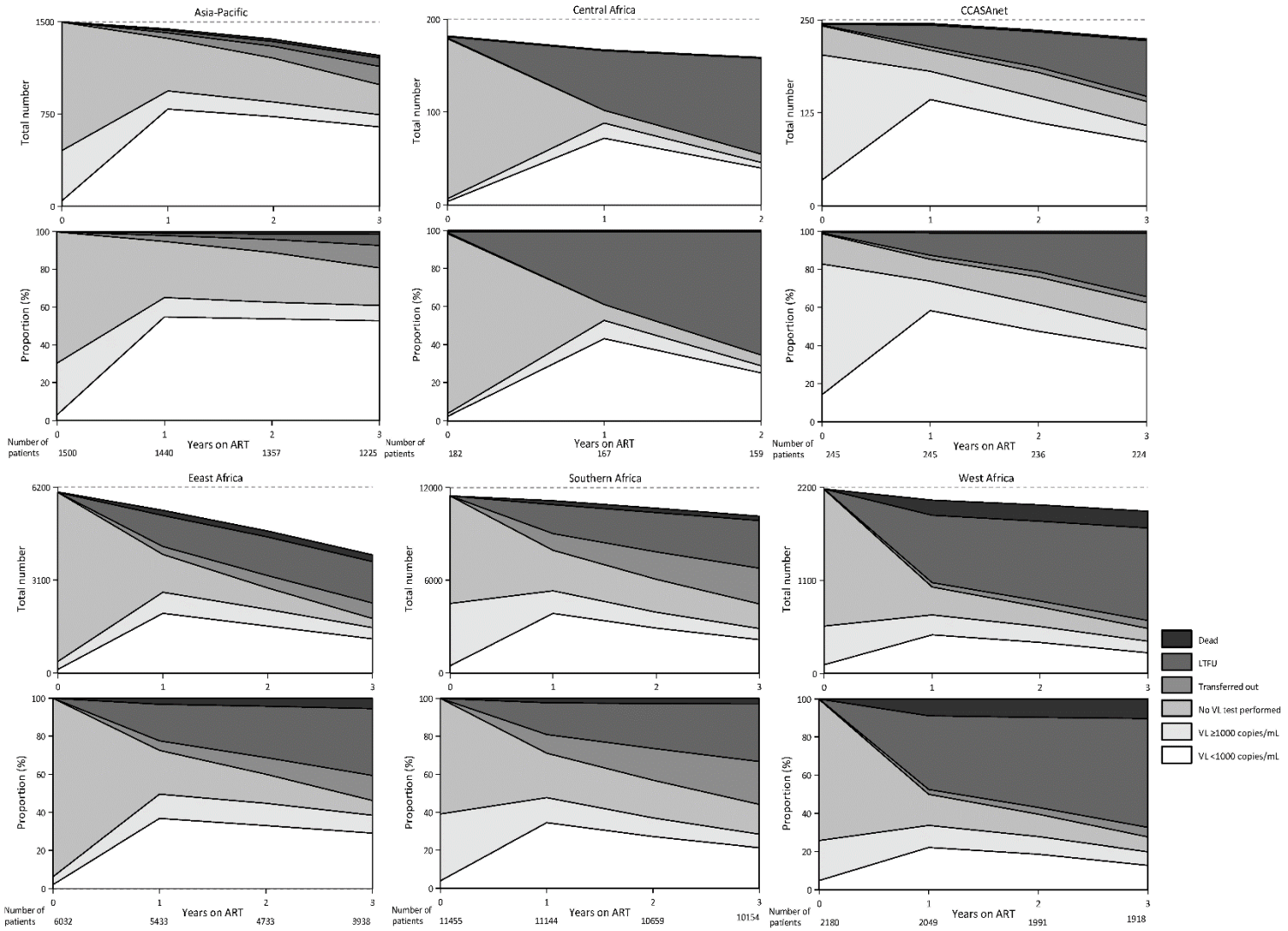
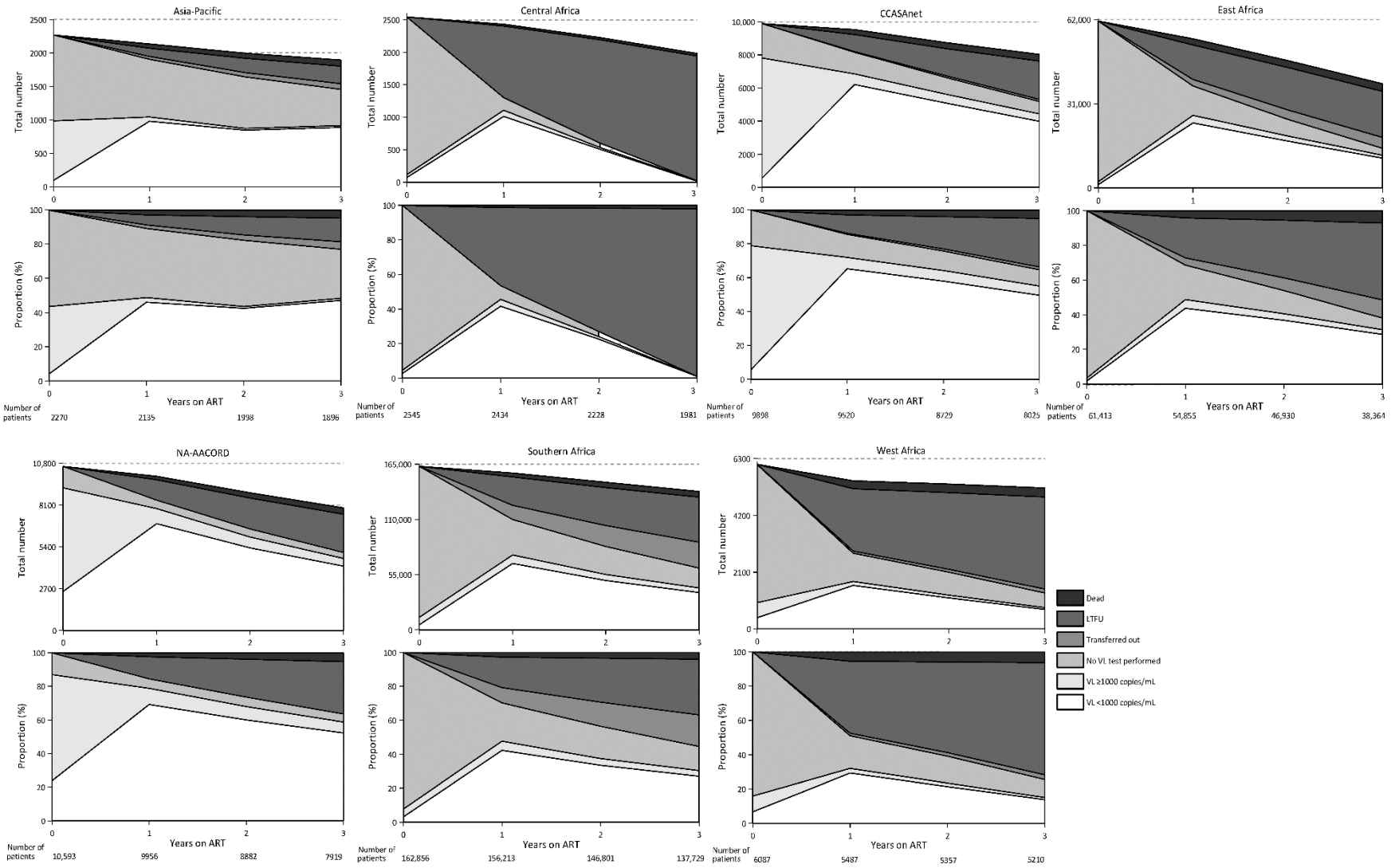


Figure S4. HIV viral suppression and treatment outcomes for adults with HIV in the IeDEA global consortium by region at years 1, 2, and 3 following ART initiation



References

1. Teeraananchai S, Bunupuradah T, Puthanakit T, Kerr SJ, Ruxrungtham K, Chaivooth S, et al. First-Line Antiretroviral Treatment Outcomes and Durability in HIV-Infected Children Treated Through the Universal Coverage Health Program in Thailand. J Acquir Immune Defic Syndr. 2017;75(2):219-25.
2. Tanuma J, Matsumoto S, Haneuse S, Cuong DD, Vu TV, Thuy PTT, et al. Long-term viral suppression and immune recovery during first-line antiretroviral therapy: a study of an HIV-infected adult cohort in Hanoi, Vietnam. J Int AIDS Soc. 2017;20(4).
3. A Decade of Combination Antiretroviral Treatment in Asia: The TREAT Asia HIV Observational Database Cohort. AIDS research and human retroviruses. 2016;32(8):772-81.
4. Cruz ML, Cardoso CA, Darmont MQ, Souza E, Andrade SD, D'Al Fabbro MM, et al. Viral suppression and adherence among HIV-infected children and adolescents on antiretroviral therapy: results of a multicenter study. J Pediatr (Rio J). 2014;90(6):563-71.
5. Meireles MV, Pascom ARP, Duarte EC, McFarland W. Comparative effectiveness of first-line antiretroviral therapy: results from a large real-world cohort after the implementation of dolutegravir. Aids. 2019;33(10):1663-8.
6. Wolff MJ, Giganti MJ, Cortes CP, Cahn P, Grinsztejn B, Pape JW, et al. A decade of HAART in Latin America: Long term outcomes among the first wave of HIV patients to receive combination therapy. PLoS One. 2017;12(6):e0179769.
7. Boulle A, Schomaker M, May MT, Hogg RS, Shepherd BE, Monge S, et al. Mortality in patients with HIV-1 infection starting antiretroviral therapy in South Africa, Europe, or North America: a collaborative analysis of prospective studies. PLoS Med. 2014;11(9):e1001718.
8. Bhagwat P, Kapadia SN, Ribaudo HJ, Gulick RM, Currier JS. Racial Disparities in Virologic Failure and Tolerability During Firstline HIV Antiretroviral Therapy. Open Forum Infect Dis. 2019;6(2):ofz022.
9. Salou M, Dagnra AY, Butel C, Vidal N, Serrano L, Takassi E, et al. High rates of virological failure and drug resistance in perinatally HIV-1-infected children and adolescents receiving lifelong antiretroviral therapy in routine clinics in Togo. J Int AIDS Soc. 2016;19(1):20683.
10. Kwarisiima D, Kamya MR, Owaraganise A, Mwangwa F, Byonanebye DM, Ayieko J, et al. High rates of viral suppression in adults and children with high CD4+ counts using a streamlined ART delivery model in the SEARCH trial in rural Uganda and Kenya. J Int AIDS Soc. 2017;20(Suppl 4):21673.
11. Tsondai PR, Wilkinson LS, Grimsrud A, Mdlalo PT, Ullauri A, Boulle A. High rates of retention and viral suppression in the scale-up of antiretroviral therapy adherence clubs in Cape Town, South Africa. Journal of the International AIDS Society. 2017;20(Suppl 4):21649-.
12. Boullé C, Kouanfack C, Laborde-Balen G, Boyer S, Aghokeng AF, Carrieri MP, et al. Gender Differences in Adherence and Response to Antiretroviral Treatment in the Stratall Trial in Rural District Hospitals in Cameroon. J Acquir Immune Defic Syndr. 2015;69(3):355-64.
13. Sohn AH, Lumbiganon P, Kurniati N, Lapphra K, Law M, Do VC, et al. Determining standardized causes of death of infants, children, and adolescents living with HIV in Asia. Aids. 2020;34(10):1527-37.
14. Alvarez-Uria G. Description of the cascade of care and factors associated with attrition before and after initiating antiretroviral therapy of HIV infected children in a cohort study in India. PeerJ. 2014;2:e304.
15. Rahmalia A, Price MH, Hartantri Y, Alisjahbana B, Wisaksana R, van Crevel R, et al. Are there differences in HIV retention in care between female and male patients in

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16. Luque MT, Jenkins CA, Shepherd BE, Padgett D, Rouzier V, Succi RCM, et al. Mortality in Children with Human Immunodeficiency Virus Initiating Treatment: A Six-Cohort Study in Latin America. J Pediatr. 2017;182:245-52.e1.
17. Carriquiry G, Fink V, Koethe JR, Giganti MJ, Jayathilake K, Blevins M, et al. Mortality and loss to follow-up among HIV-infected persons on long-term antiretroviral therapy in Latin America and the Caribbean. Journal of the International AIDS Society. 2015;18(1):20016-.
18. McHugh G, Simms V, Dauya E, Bandason T, Chonzi P, Metaxa D, et al. Clinical outcomes in children and adolescents initiating antiretroviral therapy in decentralized healthcare settings in Zimbabwe. J Int AIDS Soc. 2017;20(1):21843.
19. Andargie AA, Asmleash Y. Survival time of human immunodeficiency virus (HIV) infected children under 15 years of age after initiation of antiretroviral therapy in the University of Gondar Comprehensive Specialized Hospital, Ethiopia. Journal of AIDS and HIV Research. 2018;10(4):49-55.
20. Holmes CB, Sikazwe I, Sikombe K, Eshun-Wilson I, Czaicki N, Beres LK, et al. Estimated mortality on HIV treatment among active patients and patients lost to follow-up in 4 provinces of Zambia: Findings from a multistage sampling-based survey. PLoS Med. 2018;15(1):e1002489.
21. Peterson I, Togun O, de Silva T, Oko F, Rowland-Jones S, Jaye A, et al. Mortality and immunovirological outcomes on antiretroviral therapy in HIV-1 and HIV-2-infected individuals in the Gambia. Aids. 2011;25(17):2167-75.
22. Geng EH, Odeny TA, Lyamuya RE, Nakiwogga-Muwanga A, Diero L, Bwana M, et al. Estimation of mortality among HIV-infected people on antiretroviral treatment in East Africa: a sampling based approach in an observational, multisite, cohort study. The lancet HIV. 2015;2(3):e107-e16.
23. Rachlis B, Ochieng D, Geng E, Rotich E, Ochieng V, Maritim B, et al. Implementation and operational research: evaluating outcomes of patients lost to follow-up in a large comprehensive care treatment program in western Kenya. Journal of acquired immune deficiency syndromes (1999). 2015;68(4):e46-e55.
24. Sikazwe I, Eshun-Wilson I, Sikombe K, Czaicki N, Somwe P, Mody A, et al. Retention and viral suppression in a cohort of HIV patients on antiretroviral therapy in Zambia: Regionally representative estimates using a multistage-sampling-based approach. PLoS Med. 2019;16(5):e1002811.

APPENDIX

IeDEA GLOBAL INVESTIGATOR ACKNOWLEDGEMENTS BY REGION

Asia-Pacific

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