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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: Gupta RK, Jordan MR, Sultan BJ, et al. Global trends in antiretroviral resistance in treatment-naive individuals with HIV after rollout of antiretroviral treatment in resource-limited settings: a global collaborative study and meta-regression analysis. *Lancet* 2012; published online July 23. [http://dx.doi.org/10.1016/S0140-6736\(12\)61038-1](http://dx.doi.org/10.1016/S0140-6736(12)61038-1).

This appendix has been corrected. The corrected version first appeared at thelancet.com on Oct 5, 2012.

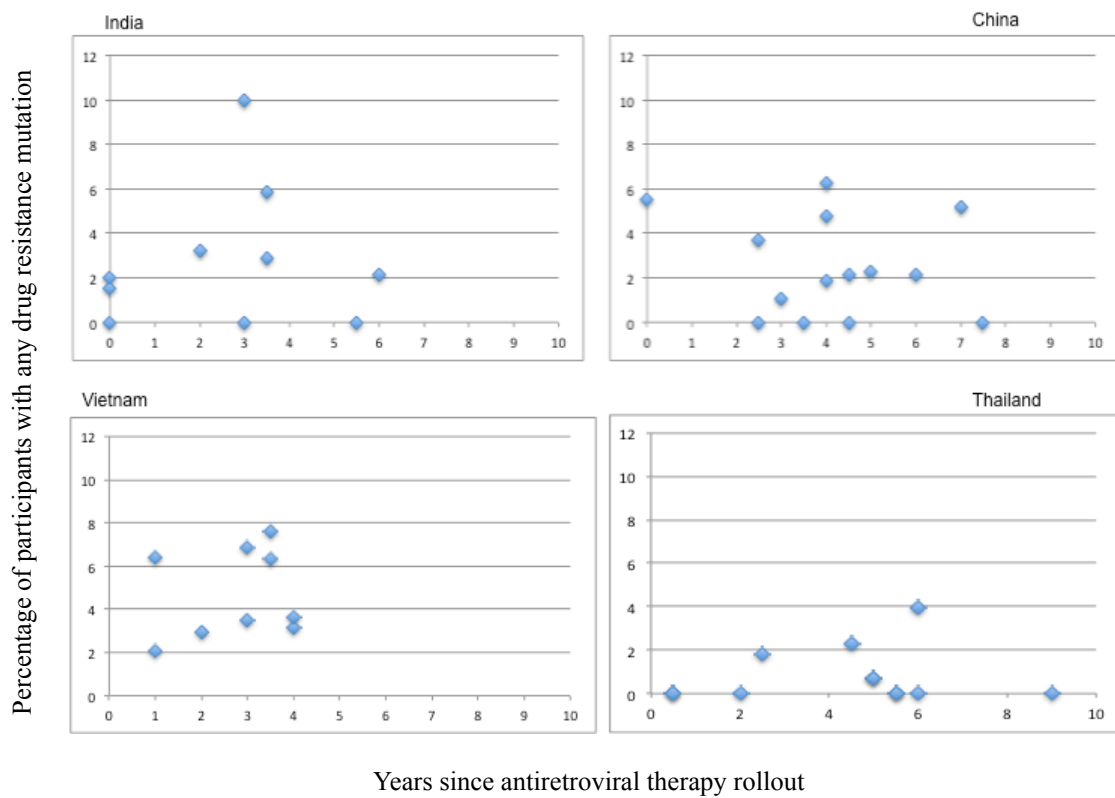
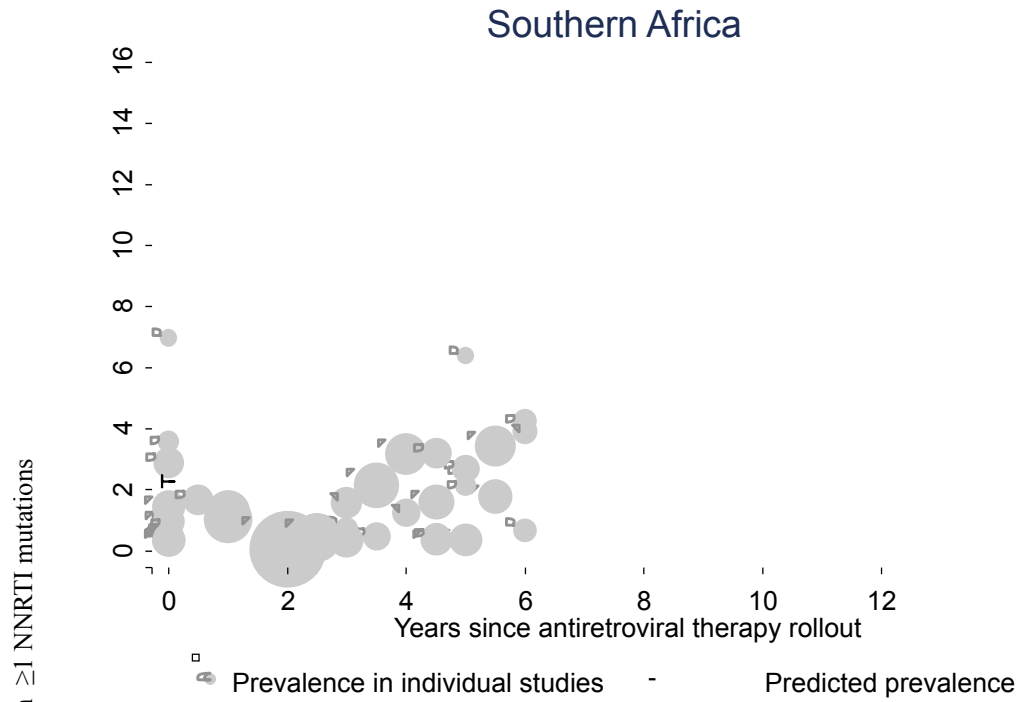


Figure 1: Inverse variance weighted prevalence of ≥ 1 drug resistance mutation plotted against time following antiretroviral therapy rollout for studies conducted in India, China, Vietnam and Thailand.

A



B

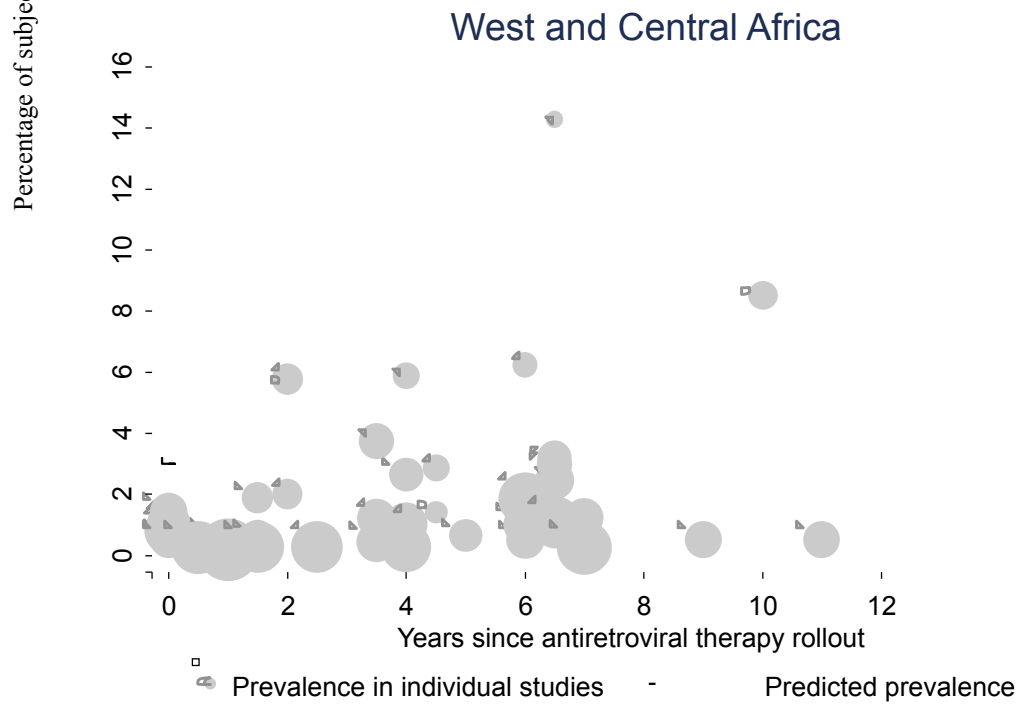


Figure 2: Weighted prevalence of untreated HIV-1 infected participants with one or more major NNRTI drug resistance mutations since antiretroviral rollout in (A) Southern Africa and (B) West/Central Africa. Each circle represents a study and size of the circle is proportional to the precision of the estimate from the individual study.

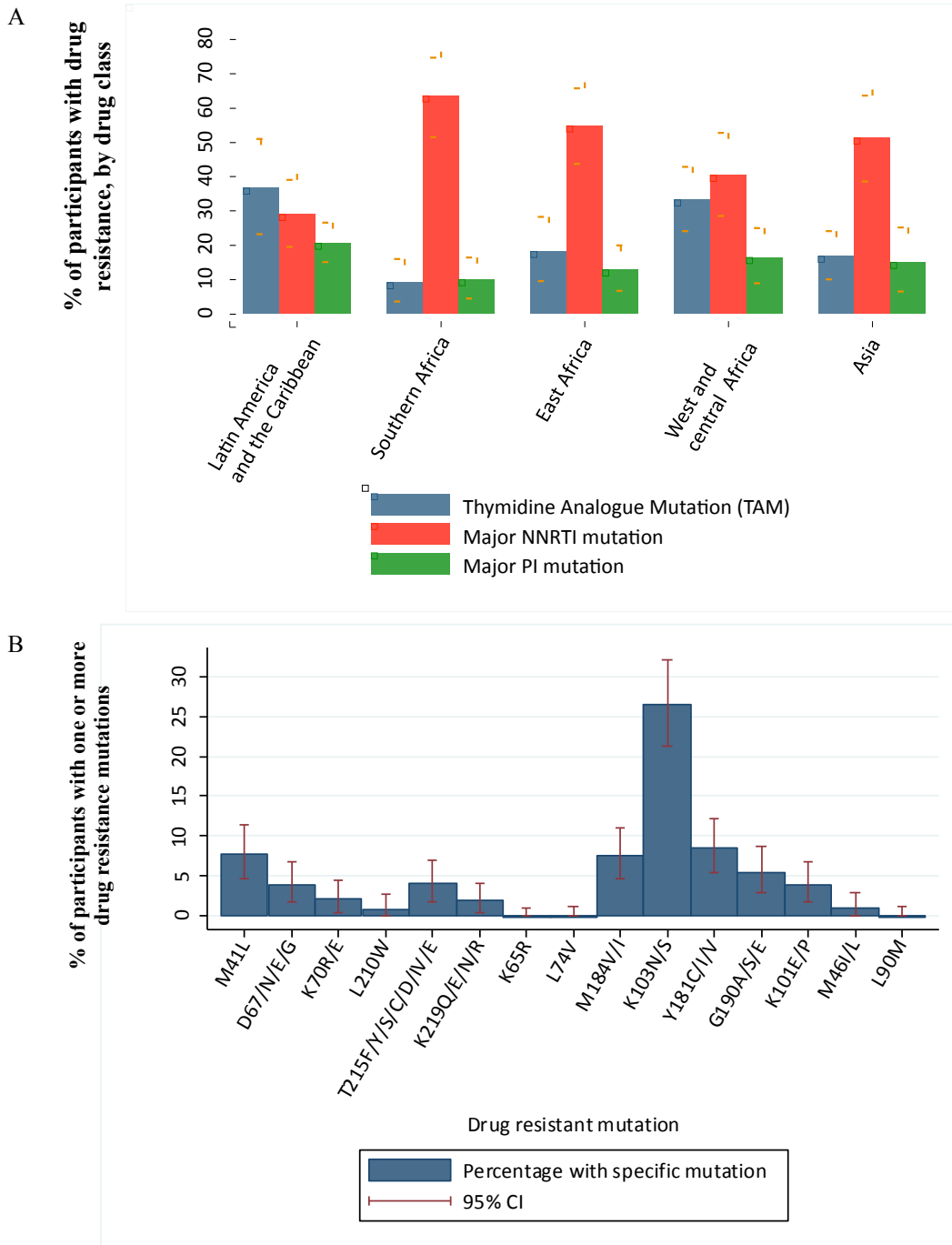


Figure 3 (A) Weighted prevalence of drug class-specific mutations amongst participants with drug resistance, by region (B) Weighted prevalence of specific HIV-1 mutations of potential public health importance in participants with drug resistance from sub-Saharan Africa. Bars represent 95% confidence intervals.

Region	Country	Rollout	World Bank Income level
Asia	Cambodia	2001	Low income
Asia	China	2002	Upper middle income
Asia	India	2004	Lower Middle income
Asia	Indonesia	2005	Lower Middle income
Asia	Thailand	2000	Upper middle income
Asia	Vietnam	2005	Lower Middle income
East Africa	Burundi	2004	Low income
East Africa	Ethiopia	2003	Low income
East Africa	Kenya	2001	Low income
East Africa	Rwanda	1999	Low income
East Africa	Tanzania	2004	Low income
East Africa	Uganda	1998	Low income
Latin America & Caribbean	Argentina	1997	Upper middle income
Latin America & Caribbean	Brazil	1998	Upper middle income
Latin America & Caribbean	Cuba	1996	Upper middle income
Latin America & Caribbean	Honduras	2002	Lower Middle income
Latin America & Caribbean	Mexico	2003	Upper middle income
Latin America & Caribbean	Panama	1999	Upper middle income
Latin America & Caribbean	Peru	2004	Upper middle income
Southern Africa	Botswana	2002	Upper middle income
Southern Africa	Madagascar	2004	Low income
Southern Africa	Malawi	2003	Low income
Southern Africa	Mozambique	2004	Low income
Southern Africa	Swaziland	2003	Low income
Southern Africa	Zimbabwe	2004	Low income
Southern Africa	Lesotho	2004	Low income
Southern Africa	Namibia	2003	Upper middle income
Southern Africa	South Africa	2004	Upper middle income
Southern Africa	Zambia	2002	Lower Middle income
West and Central Africa	Angola	2004	Upper middle income
West and Central Africa	Burkina Faso	2003	Low income
West and Central Africa	Cameroon	2000	Lower Middle income
West and Central Africa	Cape Verde	2004	Lower Middle income
West and Central Africa	Central African Republic	2004	Low income
West and Central Africa	Chad	2000	Low income
West and Central Africa	Cote d'Ivoire	1998	Lower Middle income
West and Central Africa	Democratic Republic of the Congo	2002	Low income
West and Central Africa	Guinea-Conakry	1999	Lower Middle income
West and Central Africa	Mali	2001	Low income
West and Central Africa	Nigeria	2002	Lower Middle income
West and Central Africa	Senegal	1998	Lower Middle income
West and Central Africa	Togo	2003	Low income

Table 1: Rollout dates in low and middle income countries included in analysis

Region	ART availability measure	Any DRM	P value	NNRTI mutation (OR and 95% CI)	P value	TAM (OR and 95% CI)	P value
East Africa	Time since roll-out (n=34)	1.29 (1.15 to 1.45)	0.0001	1.36 (1.21 to 1.52)	0	1.31 (1.04 to 1.66)	0.0205
	ART % coverage (n=26)	1.07 (1.03 to 1.12)	0.0013	1.09 (1.04 to 1.13)	0.0002	1.02 (0.93 to 1.12)	0.6856
Southern Africa	Time since roll-out (n=47)	1.14 (1.00 to 1.29)	0.054	1.23 (1.07 to 1.42)	0.0049	0.98 (0.70 to 1.37)	0.9199
	ART % coverage (n=36)	1.00 (0.97 to 1.04)	0.878	1.03 (0.99 to 1.07)	0.194	0.97 (0.89 to 1.05)	0.4103
West/Central Africa	Time since roll-out (n=40)	1.03 (0.91 to 1.16)	0.618	1.15 (0.99 to 1.32)	0.0646	0.98 (0.83 to 1.15)	0.7879
	ART % coverage (n=29)	0.98 (0.91 to 1.05)	0.5482	1.06 (0.98 to 1.14)	0.1553	0.97 (0.88 to 1.07)	0.5561
Latin America	Time since roll-out (n=47)	1.00 (0.95 to 1.05)	0.9595	1.08 (0.99 to 1.18)	0.0553	0.99 (0.90 to 1.09)	0.8548
	ART % coverage (n=25)	1.02 (1.00 to 1.04)	0.0518	1.03 (0.99 to 1.07)	0.0796	1.00 (0.95 to 1.05)	0.8597

Table 2: Modelled odds ratios (with 95% confidence intervals) for drug resistance prevalence changes according to (i) time since roll-out (per year since roll-out) and (ii) ART coverage (per % increase in ART coverage). As the proportion of individuals with the outcome measure (resistance) is small, the OR approximates to % increase, therefore an OR of 1.10 corresponds to an increase of 10% per year since roll-out / or 10% per 1% increase in ART coverage.