

**TRANSACTION PRICES FOR
ANTIRETROVIRAL MEDICINES FROM 2009 TO 2012**
WHO AIDS MEDICINES AND DIAGNOSTICS SERVICES
Global Price Reporting Mechanism

SUMMARY REPORT NOVEMBER 2012



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INTRODUCTION AND METHODS

The Global Price Reporting Mechanism (GPRM) contains information on transaction prices, sources and quantities of antiretroviral medicines (ARVs), tuberculosis and malaria drugs and HIV/AIDS, tuberculosis and malaria diagnostics purchased by HIV/AIDS, tuberculosis and malaria programmes in low-income countries¹, lower middle-income countries² and upper middle-income countries³. Countries have been classified according to the World Bank Atlas calculation method (1) (2).

The GPRM complements reports of price quotes from pharmaceutical companies (3) (4) (5) as well as smaller sets of transaction prices published by other sources (6).

The data in the GPRM for the years 2009 and 2011 show at least 80% of all public procurement of ARVs. Data for 2012 and 2013 are still incomplete.

The present summary report features the transaction data for ARVs in 2009, 2010, 2011, and the first two quarters of 2012.

The transaction data were provided by: the Clinton Foundation HIV/AIDS Initiative; the Global Fund to Fight AIDS, Tuberculosis, and Malaria; the International Dispensary Association; Management Sciences for Health; Missionpharma; the President's Emergency Plan For AIDS Relief (PEPFAR); Supply Chain Management System; UNITAID; the United Nations Children's Fund (UNICEF); USAID/Deliver (formerly John Snow Inc./deliver); and the World Health Organization's Contracting and Procurement Service.

All transaction data used in this analysis have been compiled and stored in the searchable database developed and maintained by the Secretariat of the AIDS Medicines and Diagnostics Services (AMDS) in the WHO HIV/AIDS Department and is available at <http://apps.who.int/hiv/amds/price/hdd/>. The public interface of the database provides information on the quantity of drugs purchased, according to formulation, country or group of countries, and their Ex Works (EXW) transaction price. An additional interface is being developed to enable access to data that has been disaggregated to show individual procurement transactions. During the development of that additional interface, requests to access such data should be sent to amds@who.int.

The present report is limited to transactions of 35 adult formulations and 31 paediatric formulations of HIV/AIDS ARV treatments (7) (8) recommended or prequalified by WHO for first- and/or second-line regimens (9). In the body of the report, the prices of regimens are reported. Regimens are ranked by their uptake according to a 2012 WHO survey on country use of ARVs (10). The medicines used in a regimen are presented between square brackets when the price of their fixed dose regimen has been used in the calculation of the price of the regimen. The annex to this report provides information on the median price of the matching ARV formulations.

1 Countries with a gross national income (GNI) per capita of US\$ 1,025 or less.

2 Countries with a GNI per capita between US\$ 1,026 and US\$ 4,035.

3 Countries with a GNI per capita between US\$ 4,036 and US\$ 12,476.

The transaction prices represent the median price for each formulation (i.e. the price separating the 50% of transactions with higher prices from the 50% with lower prices); this calculation was chosen in view of the asymmetrically distributed nature of the data.

For the interpretation and use of the data in this report, it is important to note that:

1. All prices are shown in US Dollars (US\$) per person per year of a defined daily dose of each medicine for adults or children.

2. Statistics are not given for formulations with fewer than five worldwide transaction lines in a given calendar year.

3. The prices in this report are the international transaction prices and not those paid by end-users at country level. End-user prices are often higher than international transaction prices owing to tariffs, taxes, transportation costs, and mark-ups. However, at times, end-user prices may be lower because of subsidies (this is often the case for antiretroviral drugs). Health Action International provides more information on end-user prices on its web site, <http://www.haiweb.org/medicineprices> (11).

4. When prices were reported under other International Commercial Terms (INCOTERMS), prices have been converted to reflect the EX Works (EXW) price.

5. Individual transactions listed in the GPRM with a price of US\$ 0 could be either ARV donations or erroneous information and have been removed from the analysis, as were any transactions identified as duplications in reporting.

6. The median prices published in this report for a specific year may be different from those published for the same year in previous reports, as additional data continued to be made available.

7. The median price for specific regimens recommended by the new WHO guidelines and highlighted in this analysis is the sum of the median of specific formulations that make up the regimen or the median price of its fixed-dose combination.

This summary report is intended to provide the pricing data of key ARVs to governments, nongovernmental organizations, donors, international organizations, academia, and individuals or institutions directly involved or interested in the procurement of ARVs in resource-poor settings.

Comments on this report would be greatly appreciated and should be sent to amds@who.int.

ABBREVIATIONS

International Nonproprietary Name	Abbreviation
abacavir	ABC
atazanavir	ATV
darunavir	DRV
didanosine	ddI
efavirenz	EFV
emtricitabine	FTC
etravirine	ETV
fosamprenavir	FPV
indinavir	IDV
lamivudine	3TC
lopinavir	LPV
nelfinavir	NFV
nevirapine	NVP
raltegravir	RAL
ritonavir	RTV
saquinavir	SQV
stavudine	d4T
tenofovir	TDF
zidovudine	ZDV

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PRICE AND PRICE TRENDS FOR ANTIRETROVIRAL TREATMENT REGIMENS

TABLE 1A: FIRST LINE TREATMENT FOR ADULTS: MEDIAN PRICE (IN US\$ PER PERSON-YEAR) OF MOST FREQUENTLY USED REGIMENS

First-line regimens	LOW-INCOME COUNTRIES AND/OR COUNTRIES WITH LOW HUMAN DEVELOPMENT ^a				LOWER-MIDDLE INCOME COUNTRIES				UPPER-MIDDLE INCOME COUNTRIES			
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
[3TC+NVP+d4T] [150+200+30]mg	74	62	59	59	80	65	62	59	70	65	60	—
3TC+NVP+ZDV [150+200+300]mg	137	131	128	130	139	135	131	119	139	131	124	—
EFV+[3TC+ZDV] 600mg+[150+300]mg	189	158	152	147	186	161	151	143	226	314	150	—
[EFV+3TC+TDF] [600+300+300]mg	—	192	174	156	—	208	172	165	—	—	—	—
EFV+FTC+TDF [600mg+200+300]mg	238	242	242	204	537	242	242	204	537	242	235	182
[FTC+TDF]+NVP [200+300]mg+200mg	325	176	147	137	356	173	158	129	356	574	168	—
[3TC+TDF]+NVP [300+300]mg+200mg	158	142	129	102	163	141	129	95	163	144	108	94
[3TC+ TDF]+EFV [300+300]+600mg	205	165	149	122	207	167	149	113	243	303	127	112

a According to the Human Development Index (United Nations Development Programme, 2011)

TABLE 1B: PRICE TRENDS IN FIRST-LINE TREATMENT FOR ADULTS: COMPARING 2012 TO 2009 (% DECREASE OR INCREASE)

REGIMEN AND FORMULATION USED	LOW-INCOME COUNTRIES AND/OR COUNTRIES WITH LOW HUMAN DEVELOPMENT ^a	LOWER-MIDDLE INCOME COUNTRIES	UPPER-MIDDLE INCOME COUNTRIES
[3TC+NVP+d4T] [150+200+30]mg	-21%	-26%	-13%
3TC+NVP+ZDV [150+200+300]mg	-5%	-14%	-11%
EFV+[3TC+ZDV] 600mg+[150+300]mg	-22%	-23%	-33%
[EFV+3TC+TDF] [600+300+300]mg	-19%	-21%	—
EFV+FTC+TDF [600mg+200+300]mg	-14%	-62%	-66%
[FTC+TDF]+NVP [200+300] mg+200mg	-58%	-64%	-53%
[3TC+TDF]+NVP [300+300] mg+200mg	-35%	-42%	-43%
[3TC+ TDF]+EFV [300+300]+600mg	-40%	-45%	-54%

a According to the Human Development Index (United Nations Development Programme, 2011)

TABLE 2A: SECOND LINE TREATMENT FOR ADULTS: MEDIAN PRICE (IN US\$ PER PERSON-YEAR) OF MOST FREQUENTLY USED REGIMENS

Second-line regimens	LOW-INCOME COUNTRIES AND/OR COUNTRIES WITH LOW HUMAN DEVELOPMENT ^a				LOWER-MIDDLE INCOME COUNTRIES				UPPER-MIDDLE INCOME COUNTRIES			
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
ZDV+ ddl+[LPV/r] 300mg+400mg +[200+50]mg	808	773	733	724	834	759	716	694	822	864	730	648
ABC+ ddl+[LPV/r] 300mg+400mg +[200+50]mg	957	881	825	816	989	877	809	770	1009	924	818	731
[FTC+TDF]+[LPV/r] [200+300]mg +[200+50]mg	753	583	520	483	814	567	515	464	788	987	540	—
[3TC+ZDV]+[LPV/r] [150+300]mg +[200+50]mg	571	542	504	474	601	529	488	459	578	568	503	—
[3TC+TDF]+[LPV/r] [300+300] mg+[200+50]mg	586	549	502	449	622	535	486	430	595	557	479	378
[3TC+ZDV]+[LPV/ r]+TDF [150+300]mg +[200+50]mg+300mg	706	627	581	537	741	620	567	524	786	871	575	—
[FTC+TDF]+[LPV/ r]+ZDV [200+300] mg+[200+50] mg+300mg	844	671	605	569	906	655	601	548	884	1134	622	—

a According to the Human Development Index (United Nations Development Programme, 2011)

TABLE 2B: PRICE TRENDS IN SECOND-LINE TREATMENT FOR ADULTS: COMPARING 2012 TO 2009 (% DECREASE OR INCREASE)

REGIMEN AND FORMULATION USED	LOW-INCOME COUNTRIES AND/OR COUNTRIES WITH LOW HUMAN DEVELOPMENT ^a	LOWER-MIDDLE INCOME COUNTRIES	UPPER-MIDDLE INCOME COUNTRIES
ZDV+ ddl+[LPV/r] 300mg+400mg +[200+50]mg	-10%	-17%	-21%
ABC+ddl+LPV/r] 300mg+400mg +[200+50]mg	-15%	-22%	-28%
[FTC+TDF]+[LPV/r][200+300] mg+[200+50]mg	-36%	-43%	-31%
[3TC+ZDV]+[LPV/r] [150+300]mg+[200+50]mg	-17%	-24%	-13%
[3TC+TDF]+[LPV/r] [300+300] mg+[200+50]mg	-23%	-31%	-36%
[3TC+ZDV]+[LPV/r]+TDF [150+300]mg+[200+50]mg +300mg	-24%	-29%	-27%
[FTC+TDF]+[LPV/r]+ZDV [200+300]mg+[200+50] mg+300mg	-33%	-39%	-30%

a According to the Human Development Index (United Nations Development Programme, 2011)

TABLE 3A: ARV TREATMENT FOR CHILDREN: MEDIAN PRICE (IN US\$ PER PERSON-YEAR) OF MOST FREQUENTLY USED REGIMENS IN CHILDREN (STANDARDIZED FOR A BODY WEIGHT OF 10 KG)

	LOW-INCOME COUNTRIES AND/OR COUNTRIES WITH LOW HUMAN DEVELOPMENT ^a				LOWER-MIDDLE INCOME COUNTRIES				UPPER-MIDDLE INCOME COUNTRIES			
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
First-line regimens												
[3TC+NVP+d4T] [60+100+12]mg	54	53	53	52	54	53	53	53	54	53	—	—
[3TC+NVP+ZDV] [30+50+60]mg	109	104	101	103	109	104	101	150	—	103	115	—
ABC+3TC+NVP 20 +10+10 mg/ml	306	297	273	278	309	295	275	—	505	369	217	300
EFV+[3TC+d4T] 50mg +[60 m+12]mg	155	150	147	148	155	149	147	—	—	225	—	—
EFV+[3TC+ZDV] 50 mg+[30+60]mg	197	183	179	187	197	189	180	—	235	265	188	—
Second-line regimens												
[3TC+ZDV]+ [LPV+RTV] [30+60] mg+[100+25]mg	275	239	213	214	274	252	221	—	437	246	234	—
ABC+3TC+[LPV+RTV] 20+10 mg/ ml+[100+25]mg	436	403	355	360	439	408	364	194	634	476	312	241
[3TC+d4T]+ [LPV+RTV] [60+12] mg+[100+25]mg	233	207	182	175	232	212	188	—	—	206	—	—

a According to the Human Development Index (United Nations Development Programme, 2011)

TABLE 3B: PRICE TRENDS IN ARV TREATMENT FOR CHILDREN: COMPARING 2012 TO 2009
(% DECREASE OR INCREASE) (REGIMENS STANDARDIZED FOR A BODY WEIGHT OF 10 KG)

	LOW-INCOME COUNTRIES AND/OR COUNTRIES WITH LOW HUMAN DEVELOPMENT ^a	LOWER-MIDDLE INCOME COUNTRIES	UPPER-MIDDLE INCOME COUNTRIES
First-line regimens			
[3TC+NVP+d4T] [60+100+12]mg	-4%	-3%	-3%
[3TC+NVP+ZDV] [30+50+60]mg	-5%	+37%	—
ABC+3TC+NVP 20 +10+10 mg/ml	-9%	-11%	-57%
EFV+[3TC+d4T] 50mg +[60 m+12]mg	-5%	-5%	—
EFV+[3TC+ZDV] 50 mg +[30+60]mg	-5%	-8%	—
Second-line regimens			
[3TC+ZDV]+[LPV+RTV] [30+60] mg+[100+25]mg	-22%	-19%	-46%
ABC+3TC+[LPV+RTV] 20+10 mg/ml+[100+25]mg	-18%	-17%	-51%
[3TC+d4T]+[LPV+RTV] [60+12]mg+[100+25]mg	-25%	-19%	—

a According to the Human Development Index (United Nations Development Programme, 2011)

DISCUSSION

The price of antiretroviral medicines has never been lower than that observed today. Between 2009 and the first half of 2012, the median price of medicines for adults and children for major first- and second-line regimens decreased continuously in low-income, lower-middle, and upper-middle income countries: the price of the main regimens in low-income countries for adults decreased by 5% for 3TC+NVP+ZDV and 19% for EFV+FTC+TDF, while for second-line regimens a price reduction of 10% was seen for ZDV+ ddI+[LPV/r] and 36% for [FTC+TDF]+[LPV/r]. In paediatric treatment, the median price of major first-line regimens followed the same downward trend as those for adults: for example, the median price of the most commonly prescribed regimen for paediatric use, 3TC+NVP+d4T, dropped by 4% in low-income countries, 3% in lower-middle income countries and 3% in upper-middle income countries.

While the decrease in prices is a welcome development for treatment programmes, which are expanding and must continue to do so, it signals an increasingly competitive market and begs the question whether the companies producing antiretroviral medicines will be able to maintain high quality standards in the face of increasing price pressure.

ANNEX: PRICE EVOLUTION OF SELECTED ANTIRETROVIRAL FORMULATIONS

TABLE 1: MEDIAN TRANSACTION PRICE IN LOW- AND MIDDLE-INCOME COUNTRIES OF SELECTED 3-DRUG FIXED-DOSE COMBINATION MEDICINES FOR ADULT TREATMENT (IN US\$ PER PATIENT PER YEAR BASED ON THE WHO RECOMMENDED DEFINED DAILY DOSE (DDD))

	DDD	2009	2010	2011	2012
[ABC+3TC+ZDV] [300+150+300]mg	2	573	572	359	341
[EFV+FTC+TDF] [600+200+300]mg	1	537	242	235	183
[EFV+3TC+TDF] [600+300+300]mg	1	—	192	172	161
[3TC+NVP+ZDV] [150+200+300]mg	2	138	132	128	119
[3TC+NVP+D4T] [150+200+30]mg	2	77	64	59	57

TABLE 2: MEDIAN TRANSACTION PRICE IN LOW- AND MIDDLE-INCOME COUNTRIES OF SELECTED 2-DRUG FIXED-DOSE COMBINATION MEDICINES FOR ADULT TREATMENT (IN US\$ PER PATIENT PER YEAR BASED ON THE WHO RECOMMENDED DEFINED DAILY DOSE (DDD))

	DDD	2009	2010	2011	2012
ABC+3TC[600+300]mg	2	280	274	268	271
FTC+TDF[200+300]mg	1	297	143	118	89
3TC+TDF[300+300]mg	1	122	109	96	65
3TC+ ZDV[150+300]mg	2	107	104	99	94
LPV+RTV [200+50]mg	4	499	440	401	354

TABLE 3: MEDIAN TRANSACTION PRICE IN LOW- AND MIDDLE-INCOME COUNTRIES OF SELECTED SINGLE DRUG FORMULATIONS OF MEDICINES FOR ADULT TREATMENT (IN US\$ PER PATIENT PER YEAR BASED ON THE WHO RECOMMENDED DEFINED DAILY DOSE (DDD))

	DDD	2009	2010	2011	2012
ABC 300 mg	2	573	572	359	341
ATV 150 mg	2	2554	443	263	319
ddl 400 mg	1	253	269	239	243
EFV 600 mg	1	85	60	51	46
IDV 400 mg	4	374	366	383	399
3TC 150 mg	2	32	29	28	28
NVP 200 mg	2	37	33	31	30
RTV 100 mg	2	87	84	82	82
TDF 300 mg	1	155	94	78	59
ZDV 300mg	2	92	88	85	84

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