

July 2008

Transaction Prices for Antiretroviral Medicines and HIV Diagnostics from 2004 to 2007



A summary report from the Global
Price Reporting Mechanism
July 2008

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The Global Price Reporting Mechanism on anti-retroviral medicines and HIV diagnostics (GPRM) contains information on quantities and transaction prices for antiretroviral (ARV) medicines and HIV diagnostics purchased by HIV/AIDS programmes in low-income countries* and middle-income countries†. Prices are determined using 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^{6,7,8,‡}

This report features transactions data from 2004 to the end of December 2007 and is based on communications received by 15 May 2008. All transaction data have been compiled and stored in a searchable database by the AIDS Medicines & Diagnostics Service (AMDS) of WHO HIV/AIDS Department and are available at <http://www.who.int/hiv/amds/price/hdd/>.

The information provided in this report reflects transactions of:

- twenty-eight ARV formulations commonly used for adult HIV treatment
- thirty ARV formulations for paediatric treatment that are recommended by WHO for the first- and second-line regimens^{9,10,11}
- twenty HIV serology tests (fifteen rapid, six ELISA, and four confirmatory) purchased by low- and middle-income countries in 2007.

The GPRM also contains data for less frequently used ARV formulations, medicines for malaria and tuberculosis treatment, and other health commodities related to the treatment of HIV, TB and malaria. However, this summary report does not include those data due to limited transactions volumes for the relevant commodities.

* countries with a gross national income (GNI) per capita of US\$ 905 or less

† countries with a GNI per capita between US\$ 906 and US\$ 11,115

‡ The transaction data in the GPRM are provided by the following organizations: the Clinton Foundation; HIV/AIDS Initiative/UNITAID; the Global Fund to Fight AIDS, Tuberculosis, and Malaria; the International Dispensary Association; John Snow Inc./Deliver; Management Sciences for Health; Missionpharma; Supply Chain Management System; the United Nations Children's Fund; and the World Health Organization's Contracting and Procurement Service.

The prices in this report are reported as median prices with the inter-quartile range (IQR)[§]. The combination of the median value and the IQR, rather than the mean \pm standard deviation, was selected to present the data in view of an asymmetrical distribution 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 patient per year of a defined daily dose of each medicine for adults or children.

2) Taxes, tariffs, and/or International Commercial Terms (INCOTERMS: cost or condition of transport, insurance, etc.) are not consistently reported, and therefore are not considered. Previous investigations by the U.S. Government Accounting Office and Management Sciences for Health suggested that any variation in INCOTERMS constituted a 3% -15% increase over the factory or ex works (EXW) price⁸.



3) All transactions listed in the GPRM with a price of US\$ 0 or appearing as duplications were considered to be either ARV donations or wrongly filed information. Such transactions were removed from the analysis, along with their corresponding purchase volumes.

4) The prices in this report are international transaction prices, and not the prices paid by end-users at country level. End-user prices are often higher than international transaction prices due to tariffs, taxes, transportation costs, and mark-ups. However, in certain instances, end-user prices could be lower than international transaction prices due to subsidies. More

information on end-user prices can be found on the Health Action International website at <http://www.haiweb.org/medicineprices/>¹².

§ The IQR is a measure of statistical dispersion being equal to the difference between the third and first quartiles

Abbreviations

International Non-proprietary Name (INN)	Abbreviation
abacavir	ABC
atazanavir	ATV
didanosine	ddl
didanosine enteric-coated	ddl EC
efavirenz	EFV
emtricitabine	FTC
fos-amprenavir	FPV
indinavir	IDV
lamivudine	3TC
lopinavir	LPV
nelfinavir	NFV
nevirapine	NVP
ritonavir	RTV
saquinavir	SQV
stavudine	d4T
tenofovir	TDF
zidovudine	ZDV

Table 1 : Median transaction price of *first-line* ARV medicines for adult treatment per patient per year (US\$/ppy) at a WHO recommended adult defined daily dose (DDD)

a) Low-income countries

INN and strengths	Median transaction price (25th -75th Quartile range) (US\$/ppy)				
	DDD (tablets or capsules)	2004	2005	2006	2007
d4T 30 mg	2	49 (49-51)	45 (38-48)	36 (33-39)	23 (21-27)
d4T 40 mg*	2	55 (53-55)	49 (41-55)	39 (34-49)	23 (23-29)
3TC 150 mg	2	70 (70-75)	70 (65-79)	60 (53-60)	40 (38-41)
NVP 200 mg	2	88 (66-438)	84 (68-436)	63 (60-63)	44 (43-48)
3TC+d4T 150+30mg	2	89 (86-99)	88 (81-97)	76 (76-76)	49 (47-64)
3TC+d4T 150+40mg*	2	107 (99-107)	95 (87-98)	73 (73-78)	51 (51-60)
3TC+NVP+d4T 150+200+30 mg	2	153 (121-164)	166 (145-194)	100 (100-120)	91 (83-101)
3TC+NVP+d4T 150+200+40 mg*	2	159 (126-170)	165 (155-195)	105 (105-121)	80 (80-99)
ZDV 300 mg	2	147 (131-212)	141 (128-165)	149 (131-149)	104 (90-109)
3TC+ZDV 150+300 mg	2	234 (195-238)	211 (190-238)	152 (139-179)	120 (113-136)
3TC+NVP+ZDV 150+200+300 mg	2	232 (232-250)	156 (155-298)	242 (196-321)	212 (175-248)
EFV 200 mg	3	507 (507-550)	507 (501-542)	270 (235-394)	226 (206-254)
EFV 600 mg	1	347 (347-376)	347 (347-367)	245 (245-273)	164 (151-198)
ABC+3TC+ZDV 300+150+300 mg	2	1629 (1629-1629)	1241 (1241-1241)	1275 (1176-1311)	852 (852-852)

* d4T 40mg x 2/day : not recommended by WHO (<http://www.who.int/hiv/treatment/en/index.html>)

b) Middle-income countries

INN and strengths	Median transaction price (25th -75th Quartile range) (US\$/ppy)				
	DDD (tablets or capsules)	2004	2005	2006	2007
d4T 30 mg	2	41 (40-48)	50 (43-60)	39 (32-116)	27 (26-50)
d4T 40 mg*	2	45 (44-52)	55 (51-66)	46 (35-526)	32 (30-52)
3TC 150 mg	2	71 (70-75)	75 (69-96)	60 (50-186)	45 (40-66)
NVP 200 mg	2	103 (87-108)	95 (68-111)	61 (58-81)	50 (47-53)
3TC+d4T 150+30mg	2	90 (88-91)	153 (153-153)	77 (73-99)	85 (77-143)
3TC+d4T 150+40mg*	2	92 (92-92)	95 (93-99)	83 (79-125)	86 (79-150)
3TC+NVP+d4T 150+200+30 mg	2	154 (154-154)	187 (176-207)	147 (132-173)	97 (87-103)
3TC+NVP+d4T 150+200+40 mg*	2	160 (160-164)	213 (189-326)	154 (138-206)	95 (82-99)
ZDV 300 mg	2	141 (139-198)	212 (180-228)	145 (120-204)	113 (106-120)
3TC+ZDV 150+300 mg	2	238 (209-254)	234 (193-254)	177 (157-429)	136 (127-474)
3TC+NVP+ZDV 150+200+300 mg	2	303 (303-304)	273 (271-276)	277 (277-277)	182 (182-182)
EFV 200 mg	3	469 (469-487)	482 (431-653)	306 (231-507)	206 (205-558)
EFV 600 mg	1	347 (347-767)	438 (370-767)	338 (251-664)	218 (179-361)
ABC+3TC+ZDV 300+150+300 mg	2	1304 (1304-1311)	3612 (2482 -4741)	-	1825 (1825-1825)

* d4T 40mg x 2/day : not recommended by WHO (<http://www.who.int/hiv/treatment/en/index.html>)

Table 2: Median transaction price of *second-line* ARV medicines (US\$/ppy) for adult treatment at a WHO recommended adult DDD

a) Low-income countries

INN and strengths	Median transaction price (25th -75th Quartile range) (US\$/ppy)				
	DDD (tablets or capsules)	2004	2005	2006	2007
ABC 300 mg	2	887 (887-887)	887 (887-887)	578 (540-887)	402 (356-436)
ddl 100 mg	4	311 (302-311)	311 (308-342)	260 (239-311)	243 (209-310)
ddl 200 mg	2	311 (311-350)	311 (218-311)	249 (228-310)	251 (208-310)
ddl 400 mg	1	253 (221-253)	288 (288-289)	288 (278-305)	288 (288-295)
IDV 400 mg*	4	406 (390-406)	406 (401-406)	422 (406-436)	406 (406-443)
LPV+RTV 133+33 mg	6	557 (536-594)	548 (500-607)	587 (500-610)	500 (500-587)
LPV+RTV 200+50 mg	4	-	-	500 (500-525)	496 (496-496)
NFV 250 mg**	10	990 (956-1074)	1005 (927-1093)	1013 (910-1108)	1052 (967-1078)
RTV 100 mg***	2	90 (89-306)	92 (84-98)	99 (84-129)	88 (83-125)
SQV 200 mg*	10	1108 (1027-1108)	1036 (941-1110)	1048 (999-1083)	1063 (1057-1090)
TDF 300mg	1	316 (307-322)	301 (301-310)	219 (208-239)	207 (200-228)
FTC+TDF 200+300mg	1	-	362 (362-362)	318 (318-319)	319 (319-319)
ATV 150mg*	2	-	-	-	-
ATV 200mg*	2	-	-	-	-

* Protease inhibitor to be used boosted with RTV

** NFV has been suspended from the list of WHO pre-qualified products (June 2007)

*** The dose of RTV is given for its use as a booster of other protease inhibitors only

b) Middle-income countries

INN and strengths	Median transaction price (25th -75th Quartile range) (US\$/ppy)				
	DDD (tablets or capsules)	2004	2005	2006	2007
ABC 300 mg	2	887 (841-919)	954 (921-968)	951 (601-965)	389 (357-468)
ddl 100 mg	4	580 (311-580)	678 (406-1566)	565 (442-621)	263 (190-565)
ddl 200 mg	2	235 (233-235)	176 (176-176)	175 (175-343)	248 (239-251)
ddl 400 mg	1	1876 (1119-1941)	902 (401-1676)	988 (507-1808)	1810 (1176-1898)
IDV 400 mg*	4	391 (391-686)	696 (433-696)	696 (696-746)	696 (501-696)
LPV+RTV 133+33 mg	6	4510 (4509-4705)	4608 (4441-5559)	4095 (2373-4468)	1134 (1092-2300)
LPV+RTV 200+50 mg	4	-	-	1489 (876-1489)	1020 1000-11184)
NFV 250 mg**	10	1633 (1620-3466)	2113 (1597-2325)	2113 (1621-2295)	1847 (1335-2277)
RTV 100 mg***	2	798 (779-908)	870 (600-1238)	774 (533-978)	863 (200-887)
SQV 200 mg*	10	2380 (2379-2390)	2544 (2404-2577)	2263 (2147-2459)	2315 (2216-2414)
TDF 300mg	1	279 (253-306)	234 (139-321)	344 (207-1278)	244 (222-365)
FTC+TDF 200+300mg	1	-	-	360 (340-461)	398 (357-523)
ATV 150mg*	2	-	3753 (3729-3778)	2208 (2208-2208)	2212 (2212-2212)
ATV 200mg*	2	-	-	2300 (2300-3157)	4010 (4010-4010)

* Protease inhibitor to be used boosted with RTV

** NFV has been suspended from the list of WHO pre-qualified products (June 2007)

*** The dose of RTV is given for its use as a booster of other protease inhibitors only

Table 3: Median transaction price of ARV medicines (US\$/ppy) for paediatric treatment (*infant weighing 5 kg*) at a WHO recommended paediatric DDD

a) Low-income countries

INN and strengths	Median transaction price (25th -75th Quartile range) (US\$/ppy)				
	DDD tablets or ml)	2004	2005	2006	2007
ABC 20 mg/ml	4	191 (191-191)	191 (191-196)	153 (145-191)	117 (116-131)
ddl 10 mg/ml	8	502 (343-502)	313 (312-365)	311 (184-365)	184 (183-216)
ddl 25 mg	4	170 (170-215)	183 (170-262)	170 (170-205)	170 (170-170)
ddl 50 mg	2	-	116 (116-128)	116 (116-122)	116 (116-116)
EFV 30 mg/ml	3	120 (119-120)	118 (112-122)	107 (107-112)	119 (107-119)
EFV 50 mg	2	-	90 (84-96)	81 (81-85)	67 (61-83)
3TC 10 mg/ml	6	61 (44-61)	48 (44-61)	32(26-44)	22(22-22)
LPV+RTV 80+20 mg/ml	2	139 (107-237)	111 (100-182)	113 (100-446)	100 (100-100)
NFV 50 mg/g	15	1282 (1192-1337)	1213 (1155-1285)	1145 (1144-1280)	805 (792-1159)
NFV 250 mg	4	396 (385-425)	402 (371-423)	408 (396-441)	421 (387-431)
NVP 10 mg/ml	12	319 (319-322)	319 (319-347)	58 (47-114)	39 (36-85)
d4T 1 mg/ml	12	219 (197-219)	33 (33-208)	35 (33-36)	33 (30-34)
ZDV 10 mg/ml	12	155 (67-156)	78 (66-155)	69 (57-75)	40 (39-72)
3TC+d4T 20+5 mg	3	-	-	-	37 (37-37)
3TC+d4T 40+10 mg	2	-	-	-	27 (27-27)
3TC+NVP+d4T 20+35+5 mg	3	-	-	49 (49-49)	49 (49-54)
3TC+NVP+d4T 40+70+10 mg	2	-	-	48 (48-48)	48 (48-50)
3TC+d4T 30+6 mg	2	-	-	23 (23-24)	27 (27-27)
3TC+NVP+d4T 30+50+6 mg	2	-	-	29 (28-29)	30 (27-30)
3TC+d4T 60+12 mg	1	-	-	-	27 (27-27)
3TC+NVP+d4T 60+100+12 mg	1	-	-	84 (84-84)	30 (27-30)

b) Middle-income countries

INN and strengths	Median transaction price (25th -75th Quartile range) (US\$/ppy)				
	DDD tablets or ml)	2004	2005	2006	2007
ABC 20 mg/ml	4	204 (191-217)	205 (191-206)	204 (166-206)	126 (106-152)
ddl 10 mg/ml	8	307 (124-468)	350 (309-940)	516 (273-809)	402 (122-493)
ddl 25 mg	4	170 (170-170)	260 (259-268)	215 (196-221)	28 (28-28)
ddl 50 mg	2	-	-	-	26 (26-26)
EFV 30 mg/ml	3	255 (255-255)	222 (205-237)	188 (188-188)	120 (120-120)
EFV 50 mg	2	-	90 (90-90)	91 (90-143)	80 (77-84)
3TC 10 mg/ml	6	61 (47-66)	52 (42-70)	43 (32-79)	33 (18-61)
LPV+RTV 80+20 mg/ ml	2	1186 (906-1186)	125 (113-505)	782 (745-890)	200 (147-248)
NFV 50 mg/g	15	1800 (1781-1855)	1347 (1172-1544)	1399 (1383-1407)	1437 (800-1437)
NFV 250 mg	4	757 (648-1386)	639 (574-905)	845 (623-910)	908 (569-918)
NVP 10 mg/ml	12	131 (131-482)	308 (139-410)	109 (54-316)	82 (53-143)
d4T 1 mg/ml	12	281 (262-428)	291 (167-537)	526 (87-672)	57 (41-526)
ZDV 10 mg/ml	12	131 (92-166)	107 (73-167)	98 (61-165)	62 (53-70)
3TC+d4T 20+5 mg	3	-	-	-	-
3TC+d4T 40+10 mg	2	-	-	-	-
3TC+NVP+d4T 20+35+5 mg	3	-	-	-	49 (49-49)
3TC+NVP+d4T 40+70+10 mg	2	-	-	-	-
3TC+d4T 30+6 mg	2	-	-	-	-
3TC+NVP+d4T 30+50+6 mg	2	-	-	-	-
3TC+d4T 60+12 mg	1	-	-	-	-
3TC+NVP+d4T 60+100+12 mg	1	-	-	-	27 (27-27)

Table 4: Median transaction price of ARV medicines (US\$/ppy) for paediatric treatment (*infant weighing 10 kg*) at a WHO recommended paediatric DDD

a) Low-income countries

INN and strengths	Median transaction price (25th -75th Quartile range) (US\$/ppy)				
	DDD (tablets or ml)	2004	2005	2006	2007
ABC 20 mg/ml	10	477 (476-510)	191 (191-196)	382 (361-476)	292 (256-329)
ddl 10 mg/ml	12	753 (514-753)	547 (546-551)	467 (276-547)	276 (275-324)
ddl 25 mg	5	213 (213-225)	213 (213-213)	213 (213-257)	213 (213-213)
ddl 50 mg	3	174 (156-195)	175 (173-192)	173 (173-183)	173 (173-174)
ddl 100 mg	2	-	-	127 (119-155)	76 (65-97)
ddl 125 mg EC	1	113 (105-150)	124 (86-131)	86 (86-86)	250 (250-250)
EFV 50 mg	4	181 (169-186)	169 (156-169)	-	133 (121-166)
EFV 100 mg	2	181 (181-181)	178 (178-178)	-	-
EFV 200 mg	1	169 (169-181)	169 (167-180)	90 (78-131)	75 (69-85)
3TC 10 mg/ml	10	92 (73-102)	80 (73-102)	53 (44-73)	28 (27-50)
LPV+RTV 80+20 mg/ml	3	200 (160-356)	173 (165-195)	169 (150-669)	150 (150-150)
LPV+RTV 100+25 mg	3	-	-	-	188 (188-188)
LPV+RTV 133+33 mg	2	190 (178-198)	183 (167-207)	195 (167-217)	250 (250-250)
NFV 250 mg	6	594 (578-638)	604 (556-659)	608 (549-687)	631 (580-647)
NVP 10 mg/ml	20	532 (532-537)	532 (291-578)	97 (79-190)	65 (59-142)
NVP 200 mg	1	44 (33-219)	44 (33-219)	31 (30-31)	22 (21-24)
d4T 15 mg	2	73 (58-102)	60 (60-69)	31 (18-60)	20 (18-20)
d4T 20 mg	2	68 (62-78)	69 (39-69)	31 (22-69)	24 (22-33)
ZDV 10 mg/ml	20	259 (112-259)	146 (146-292)	146 (73-146)	67 (65-120)
ZDV 100 mg	2	115 (115-131)	84 (55-121)	59 (58-75)	42 (40-44)
3TC+d4T 150+30 mg	1	44 (38-49)	43 (40-48)	38 (38-38)	23 (23-23)
3TC+NVP+d4T 150+200+30 mg	1	76 (60-82)	77 (69-91)	50 (50-60)	39 (39-39)
3TC+d4T 20+5 mg	5	-	-	-	61 (61-61)
3TC+d4T 40+10 mg	3	-	-	-	53 (53-53)
3TC+NVP+d4T 20+35+5 mg	5	-	-	82 (82-82)	82 (82-90)
3TC+NVP+d4T 40+70+10 mg	3	-	-	96 (96-96)	96 (96-100)
3TC+d4T 30+6 mg	4	-	-	47 (46-48)	54 (53-54)
3TC+NVP+d4T 30+50+6 mg	4	-	-	57 (56-59)	60 (55-60)
3TC+d4T 60+12 mg	2	-	-	-	54 (54-54)
3TC+NVP+d4T 60+100+12 mg	2	-	-	168 (168-168)	60 (55-60)

b) Middle-income countries

INN and strengths	Median transaction price (25th -75th Quartile range) (US\$/ppy)				
	DDD (tablets or ml)	2004	2005	2006	2007
ABC 20 mg/ml	10	510 (476-543)	512 (476-514)	511 (416-515)	315 (266-380)
ddl 10 mg/ml	12	460 (186-703)	526 (463-1411)	1006 (205-1267)	670 (182-873)
ddl 25 mg	5	213 (213-213)	325 (324-335)	268 (246-276)	35 (35-35)
ddl 50 mg	3	-	-	-	39 (39-39)
ddl 100 mg	2	-	-	282 (221-310)	131 (95-282)
ddl 125 mg EC	1	95 (95-97)	104 (103-106)	146 (146-146)	71 (71-71)
EFV 50 mg	4	-	-	-	161 (154-169)
EFV 100 mg	2	-	-	-	-
EFV 200 mg	1	156 (156-176)	179 (160-198)	102 (77-169)	69 (68-186)
3TC 10 mg/ml	10	102 (78-109)	87 (71-117)	71 (53-147)	55 (29-82)
LPV+RTV 80+20 mg/ ml	3	2373 (1813-2373)	251 (227-1011)	1173 (1117-1335)	300 (160-372)
LPV+RTV 100+25 mg	3	-	-	-	-
LPV+RTV 133+33 mg	2	1504 (1157-1540)	1325 (191-1791)	1231 (745-1489)	511 (496-591)
NFV 250 mg	6	1136 (972-2079)	959 (879-1358)	1268 (935-1364)	1363 (854-1377)
NVP 10 mg/ml	20	226 (191-808)	514 (231-684)	182 (89-506)	137 (88-239)
NVP 200 mg	1	49 (38-60)	44 (38-60)	30 (29-40)	25 (24-27)
d4T 15 mg	2	60 (60-60)	922 (702-925)	29 (29-29)	29 (29-29)
d4T 20 mg	2	0	0	0	419 (22-815)
ZDV 10 mg/ml	20	219 (154-277)	146 (146-292)	114 (93-244)	103 (88-117)
ZDV 100 mg	2	84 (78-121)	115 (72-131)	53 (50-65)	43 (40-48)
3TC+d4T 150+30 mg	1	45 (41-49)	47 (44-52)	38 (37-49)	71 (57-86)
3TC+NVP+d4T 150+200+30 mg	1	77 (77-77)	190 (156-210)	66 (66-66)	49 (44-51)
3TC+d4T 20+5 mg	5	-	-	-	-
3TC+d4T 40+10 mg	3	-	-	-	-
3TC+NVP+d4T 20+35+5 mg	5	-	-	-	82 (82-82)
3TC+NVP+d4T 40+70+10 mg	3	-	-	-	-
3TC+d4T 30+6 mg	4	-	-	-	-
3TC+NVP+d4T 30+50+6 mg	4	-	-	-	-
3TC+d4T 60+12 mg	2	-	-	-	-
3TC+NVP+d4T 60+100+12 mg	2	-	-	-	55 (55-55)

Table5: Median transaction price (US\$) of smallest unit of *rapid tests*

Product name	Median transaction price (25th -75th Quartile range) (US\$/ppy)			
	2004	2005	2006	2007
Capillus HIV 1/2	1.20 (1.18 - 1.23)	1.29 (1.21 - 1.29)	1.41 (1.38 - 1.45)	1.39 (1.39 - 1.45)
Clearview Complete HIV 1/2	-	-	-	3.00 (3.00 - 3.00)
Determine HIV 1/2	0.80 (0.80 - 0.80)	0.80 (0.80 - 0.80)	0.80 (0.80 - 0.80)	0.80 (0.66 - 0.80)
DoubleCheck Gold HIV 1/2	1.10 (1.00 - 1.20)	1.41 (1.41 - 1.41)	1.41 (1.41 - 1.41)	0.79 (0.79 - 0.79)
First Response HIV 1.2.0	-	0.67 (0.67 - 0.67)	0.70 (0.70 - 0.70)	0.70 (0.63 - 0.70)
Genie II HIV 1/2	2.54 (2.46 - 3.08)	2.59 (2.42 - 2.70)	2.53 (2.02 - 2.56)	2.68 (2.46 - 2.90)
HIV 1/2 Antibody Colloidal Gold	-	0.60 (0.60 - 0.60)	-	0.46 (0.46 - 0.46)
HIV Tri-dot	1.38 (1.35 - 1.42)	1.33 (1.33 - 1.34)	1.33 (1.32 - 1.36)	1.44 (1.43 - 1.45)
Immunocombll Bispot HIV 1/2	-	-	-	2.20 (2.20 - 2.20)
OraQuick HIV 1/2	-	4.00 (4.00 - 4.00)	4.00 (4.00 - 4.00)	4.00 (3.79 - 4.00)
Retrocheck HIV	-	0.70 (0.70 - 0.70)	-	0.55 (0.55 - 0.55)
SD Bioline HIV 1/2 3.0	0.47 (0.47 - 0.47)	0.47 (0.47 - 0.47)	0.80 (0.80 - 0.80)	0.80 (0.80 - 0.80)
Serodia HIV 1/2	1.30 (1.30 - 1.30)	1.24 (1.23 - 1.24)	1.11 (1.11 - 1.18)	1.18 (1.18 - 1.18)
Stat-Pak HIV 1/2	-	1.15 (1.15 - 1.15)	0.78 (0.65 - 1.15)	1.35 (0.90 - 1.35)
Uni-Gold HIV	1.41 (1.36 - 1.43)	1.39 (1.39 - 1.49)	1.61 (1.59 - 1.63)	1.93 (1.68 - 1.93)

Table 6: Median transaction price of *ELISA and confirmatory tests* in 2007 (25th -75th Quartile range) (US\$)

a) ELISA tests

Product name	Median transaction price (25th-75th) (2007)
Enzygnost Anti-HIV 1/2	0.99 (0.99-0.99)
Genedia HIV Ag-Ab	0.33 (0.33-0.33)
Genscreen HIV 1/2 V2	0.62 (0.60-0.66)
HIV EIA Elisa	0.47 (0.46-0.47)
Murex HIV Ag-Ab	0.80 (0.80-1.36)
Vironostika HIV Uni-form II	1.01 (0.82-1.07)

b) Confirmatory tests

Product name	Median transaction price (25th-75th) (2007)
HIV BLOT 2.2	11.0 (11.0-11.0)
Inno-Lia HIV 1/2	18.5 (18.0-19.8)
New LAV Blot	17.5 (17.1-17.7)
Pepti-LAV	23.9 (23.9-23.9)

Fig. 1a: The price trend for the most commonly used *first-line regimens in low-income countries (LIC)* for adult patients.

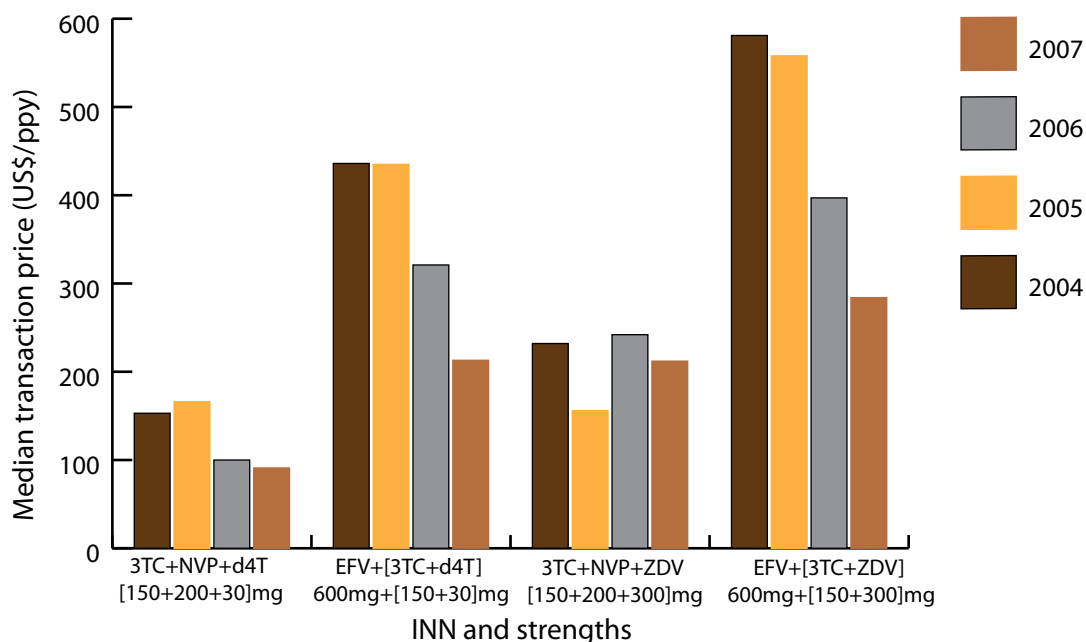


Fig. 1b: The price trend for the most commonly used *first-line regimens in middle-income countries (MIC)* for adult patients.

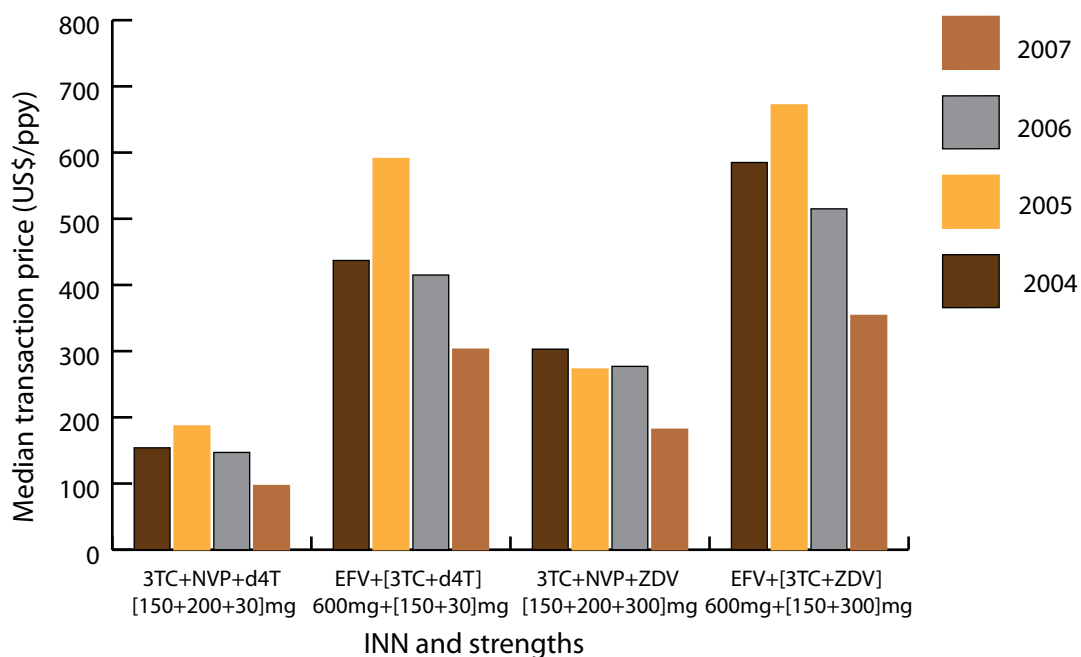
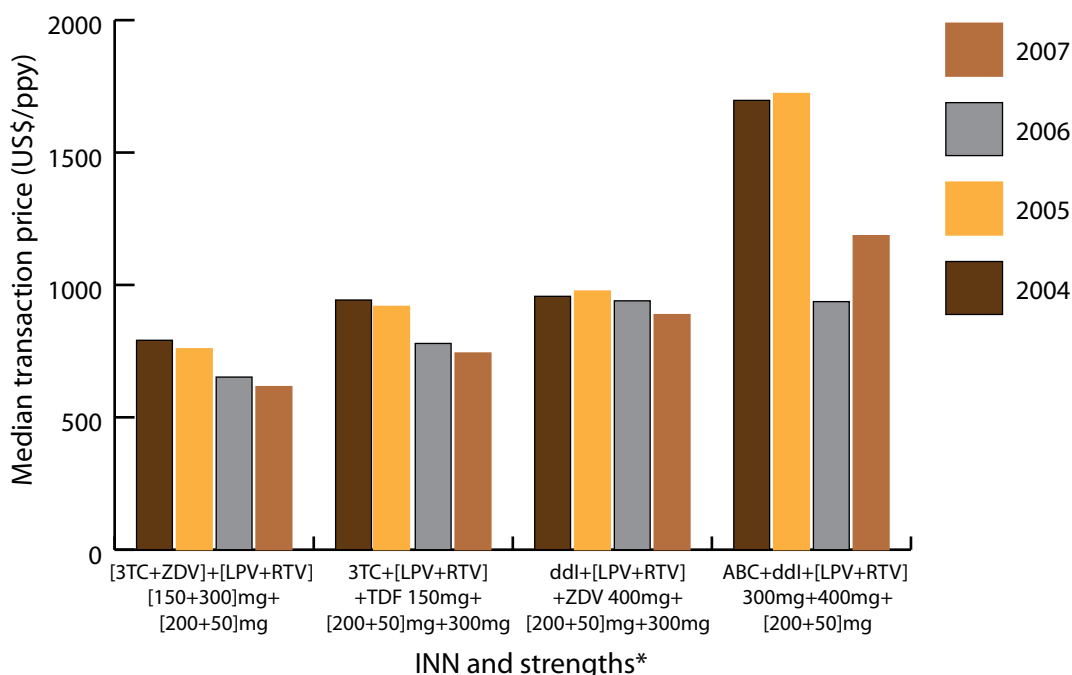
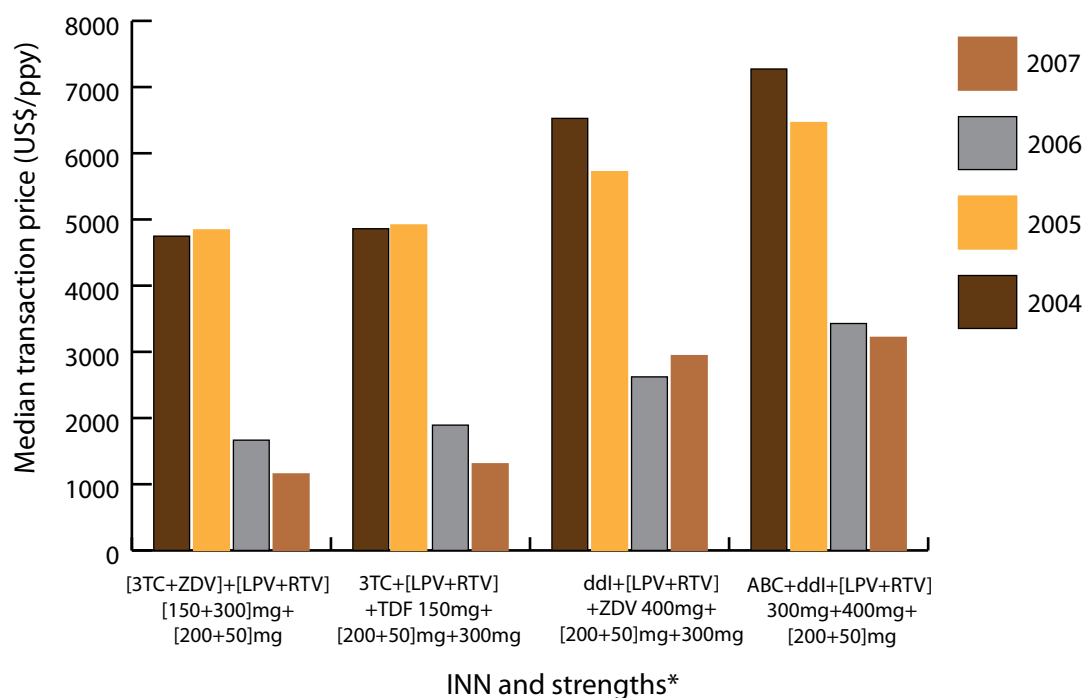


Fig. 2a: The price trend for the most commonly used *second-line* regimens in low-income countries (LIC) for adult patients.



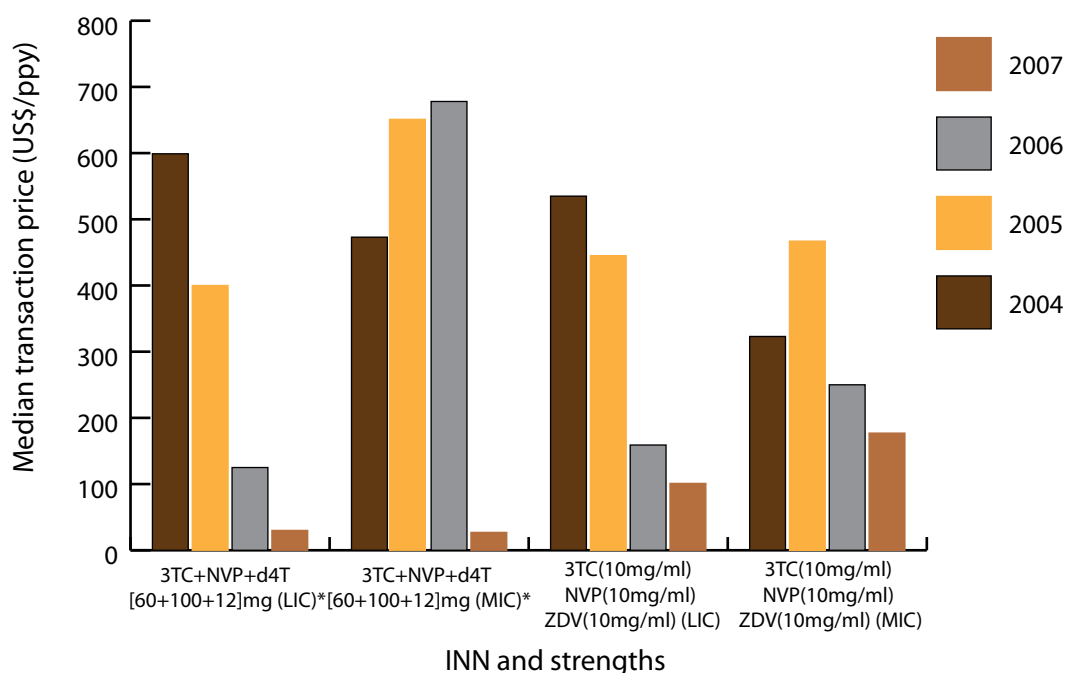
* calculated based on the median price of LPV+RTV [133+33] mg in 2004 and 2005, and LPV+RTV [200+50] mg in 2006 and 2007

Fig. 2b: The price trend for the most commonly used *second-line* regimens in middle-income countries (MIC) for adult patients



* calculated based on the median price of LPV+RTV [133+33] mg in 2004 and 2005, and LPV+RTV [200+50] mg in 2006 and 2007

Fig. 3a: The price trend for the most commonly used *first-line regimens in low- and middle-income countries (LIC/MIC) for paediatric patients (infant of 5 kg)*



* calculated based on the median price of 3TC(10mg/ml), NVP(10mg/ml) and d4T(1mg/ml) from 2004 to 2006, and that of 3TC+NVP+d4T [60+100+12]mg for 2007

Fig. 3b: The price trend for the most commonly used *second-line regimens in low- and middle-income countries (LIC/MIC) for paediatric patients (infant of 5 kg)*

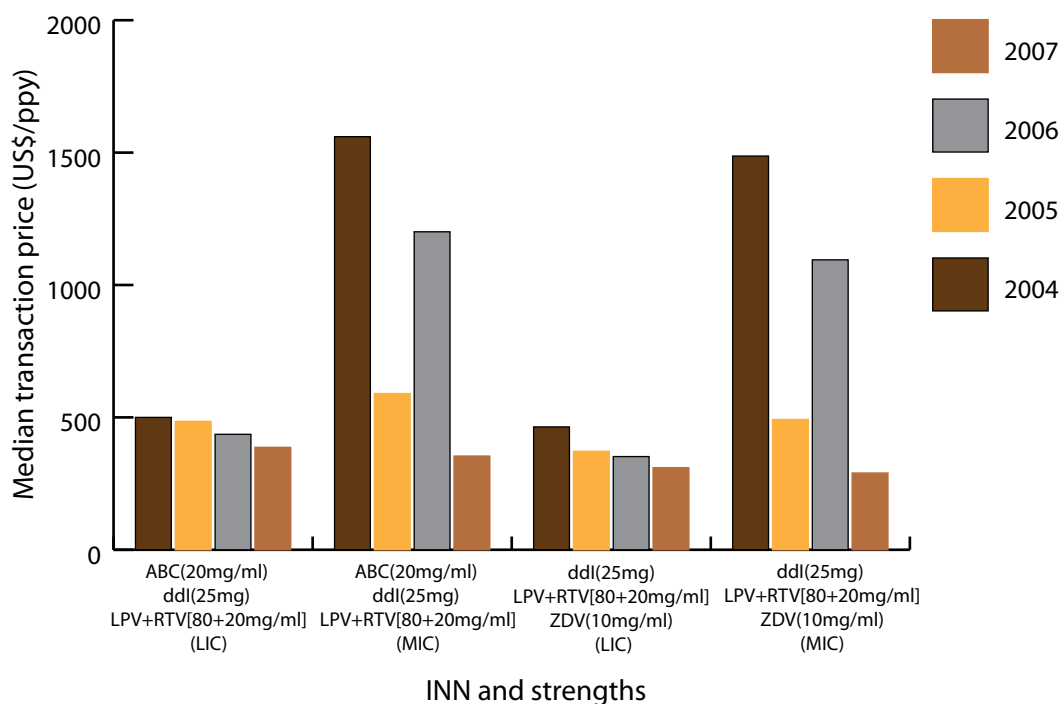
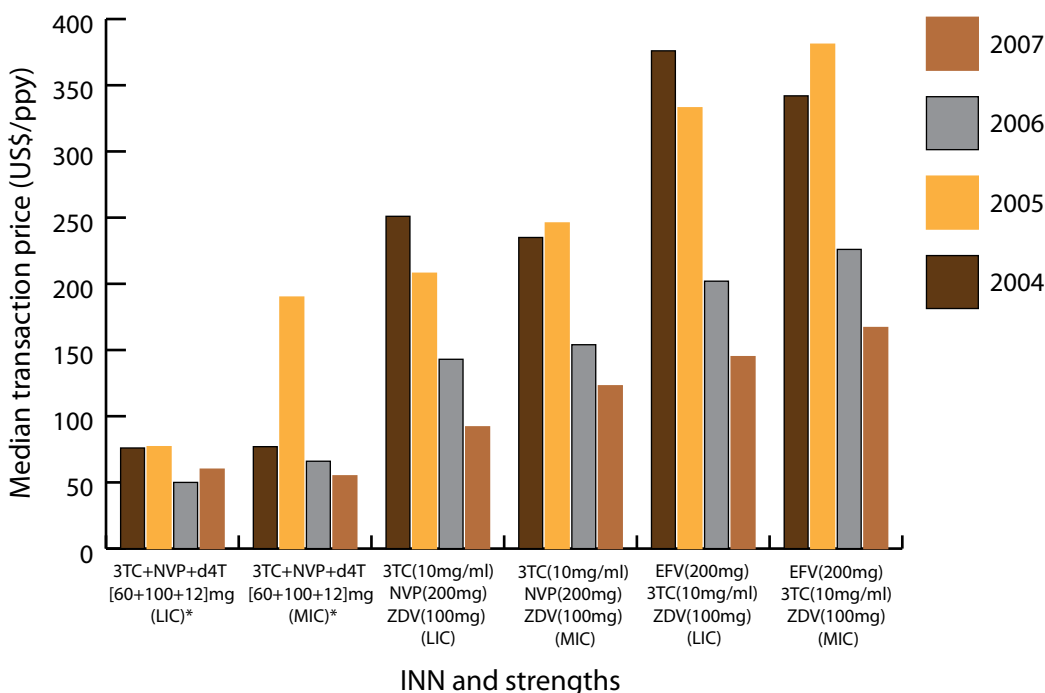


Fig. 4a: The price trend for the most commonly used *first-line regimens in low- and middle-income countries (LIC/MIC) for paediatric patients (infant of 10 kg)*



* calculated based on the median price of 3TC+NVP+d4T [150+200+30mg] from 2004 to 2006 and that of 3TC+NVP+d4T [60+100+12]mg for 2007

Fig. 4b: The price trend for the most commonly used *second-line regimens in low- and middle-income countries (LIC/MIC) for paediatric patients (infant of 10 kg)*

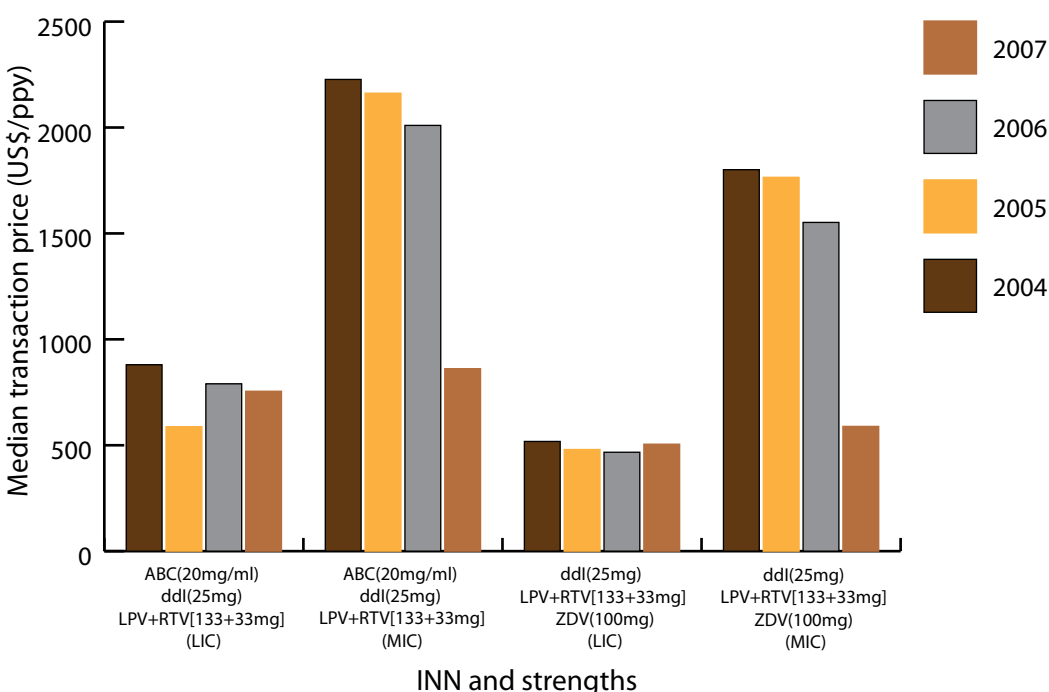
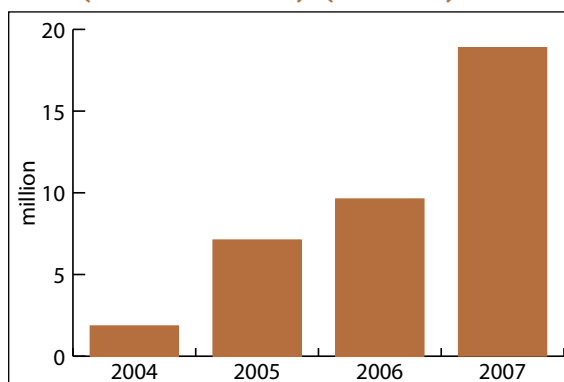


Figure 5: Number of HIV rapid test (2004 - 2007) (million)



Discussion

Formulations for adult first-line regimens

The median price of medicines for adult first-line regimens continued to decrease from 2004 to 2007 in both low- and middle-income countries. Prices for first-line medicines paid by middle-income countries have nearly reached prices paid by low-income countries. Some transactions by middle-income countries were in fact made at a price level lower than the median price paid by low-income countries. This was most notable for the ZDV-based fixed-dose combination (FDC): 3TC+NVP+ZDV (150+200+300mg), and for the single-dose formulation of EFV (200mg) (see table 1).

The median price of the most commonly prescribed FDC: 3TC+NVP+d4T (150+200+300 mg), has dropped by 40.5 % over the last four years (from US\$ 153 in 2004 to US\$ 91 in 2007) in low-income countries and by 37.0% (from US\$ 154 in 2004 to US\$ 97 in 2007) in middle-income countries (see table 1 and graph 1a,b).

3TC+NVP+ZDV (150+200+300 mg) is the second most commonly used FDC in low- and middle-income countries. The median price of this FDC has also decreased significantly between 2004 to 2007. It fell by 40% in middle-income countries and by 8.6% in low-income countries (table 1, figure 1ab). Similar reductions in the median price were observed in all formulations for the first-line regimens, except an ABC-based FDC: ABC+3TC+ZDV (300+150+300 mg).

Formulations for adult second-line regimens

The majority of medicines used for the second-line regimens also showed a substantial decrease between 2004 and 2007. However, the magnitude of price reduction is much more significant for middle-income countries than for low-income countries. The largest price reduction was reported for an FDC of protease inhibitors, LPV+ RTV (133+33mg), purchased by middle-income countries. The price of this formulation fell from US\$ 4510 in 2004 to US\$ 1134 in 2007, representing a reduction of nearly 75% of the price in 2004 (see table 2). Other key medicines used for the second-line regimens such as TDF (300mg) and ABC (300mg) also showed reductions in price during the same period. Prices for TDF were reduced by 34.5% in low-income countries and by 12.5% in middle-income countries. Prices for ABC fell by more than 55% in both low- and middle-income countries (table 2a, b).

Due to the large price reduction of LPV + RTV, the median treatment cost of the WHO recommended second-line regimen¹³ (ABC, ddl, and [LPV+RTV]) decreased by 70.6% (from US\$ 5,632 to US\$ 1,657) in middle-income countries. This brings the price paid by middle-income countries very close to the price paid by low-income countries (US\$ 1,141) in 2007 (see graph 2a, b). The aggregate median price for combination of 3TC, [LPV+RTV] and TDF - another WHO preferred treatment regimen - also decreased by 71% (from US\$ 4,510 to US\$ 1,309) in middle-income countries, thus becoming comparable to the price paid by low-income countries (US\$ 743) in 2007 (graph 2a, b).

Median prices of other formulations for second-line regimens have been very stable. Second-line treatment is still eight to thirteen times more expensive than the first-line treatment in both low- and middle-income countries.

Paediatric formulations

The introduction of low-dose FDCs in solid form has enabled a rapid decrease in the cost of treating children, especially very young children (body weight of less than 10 kg) who, in the past, were only able to use liquid formulations. A new low-dose FDC recommended by WHO for paediatric treatment¹⁰, 3TC+NVP+d4T (60+100+12mg), has become available on the market. The treatment cost of the first-line regimen (FDC consisting of

3TC+NVP+d4T) to treat young children with 5 kg weight has fallen by 95% (from US\$ 599 in 2004 to US\$ 30 in 2007) in low-income countries (table 3a, figure 3a) and by 94.3% (from US\$ 473 to US\$ 27) during the same period in middle-income countries (table 2b, figure 3a).

Paediatric second-line treatment is still significantly more expensive than first-line treatment in both low- and middle-income countries. However, the difference between the low- and middle-income countries has become much less pronounced in 2007. In some cases, the median price of the second-line treatment is lower in middle-income countries than in low-income countries. The treatment cost for young children (at 5 kg weight) using a combination of ABC, ddl, and LPV+RTV was US\$ 387 in low-income countries and US\$ 384 in middle-income countries in 2007. For older children (at 10 kg weight) the cost was US\$ 755 for low-income countries and US\$ 861 for middle income countries (figure 4a, b). This significant reduction in the cost of the second-line treatment for children, especially in middle-income countries, is mainly due to the lower price of the key formulation of LPV+RTV which has fallen by 83% (table 3b).

HIV diagnostics

The median transaction price and volume of HIV diagnostics procured by low- and middle-income countries was analysed for fifteen rapid tests during the period from 2004 to 2007 and for six ELISA and five confirmatory tests purchased in 2007.

The total volume of rapid tests purchased in 2007 through the procurement organizations participating in the GRPM was 18.88 million tests, almost twice the volume in 2006 (9.63 million tests) (figure 5). Determine HIV 1/2 has been the most popular test with 51.4 % of the sales volume in 2007, followed by HIV 1/2 Antibody Colloidal Gold (12.4%), Uni-Gold HIV (11.9%), Stat-Pak HIV 1/2 (9.1%), SD Bioline HIV 1/2 3.0 (7.0%), and Capillus HIV 1/2 (6.1%).

The median price of Determine was relatively constant at US\$ 0.80 per test from 2004 to 2007, but that of Colloidal Gold dropped by 23.3% from US\$ 0.60 in 2005 to US\$ 0.46 per test in 2007. Conversely, other major rapid tests with the market share above 5% such as Uni-Gold, Stat-Pak, SD Bioline, Capillus, showed substantial increases in their median prices by 16% to 70% compared to the 2004 or 2005 prices (table 5).

Approximately 1.71 million ELISA tests were procured through the procurement

organizations participating in the GRPM in 2007. Vironostika HIV Uni-form II and Genscreen HIV 1/2 V2 were the two most popular tests with 34.4% and 31.6 % of the sales volume, respectively. The median prices of ELISA tests were within a narrow range from US\$ 0.33 to US\$1.01 per test (table 6a).

The number of confirmatory tests, including the Western blot and other new tests, purchased by low- and middle-income countries was very small and

amounted to only 39,930 tests in 2007. Inno-Lia HIV is the leading brand with 72.2% of the total volume purchased and a median price of US\$ 18.5 per test, followed by HIV Blot 2.2 with 21.3% of the sales and a median price of US\$ 11.0 per test.



Conclusions

The downward trend in the price of ARV medicines seen between 2004 and 2006 continued in 2007 for both adult and paediatric HIV treatment. The median price for the FDC for paediatric first-line regimen has become less than US\$ 30 in 2007 in both low- and middle-income countries. The price difference between the low- and middle-income countries is now the lowest ever for both adult and paediatric treatments. Second-line regimens also became less expensive, but their cost remained 7 to 30 times higher than that of the least expensive first-line regimen in 2007.

The procurement data on HIV diagnostics in GPRM indicates that the market for HIV serology tests appears to be shifting towards rapid tests and away from ELISA and other confirmatory tests. This is probably due to the ongoing expansion of HIV programmes in many developing countries. It also could be due to the increasing use of rapid test as a second or third laboratory test to confirm HIV diagnosis. Significant improvements in the sensitivity and specificity of the rapid tests in the last few years have made this possible, especially in high HIV prevalence countries.

This summary report is intended to provide the pricing data of key ARVs and HIV diagnostics to governments, non-governmental organizations, donors, international organizations, academia, and individuals or institutions directly involved or interested in the procurement of ARVs in resource-poor settings. Any suggestions you may have would be greatly appreciated. Please send your comments to Mr Boniface Dongmo Nguimfack at dongmonguimfackb@who.int.



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Transaction Prices for Antiretroviral Medicines and
HIV Diagnostics from 2004 to 2007

