



Update: Pricing Analysis Year 2, Quarter 3

April – June 2007 (Year 2 Quarter 3)

September 25, 2007



Background: tracking global ARV prices

- ▶ **Lowering the cost of medicines reduces one of the key barriers to providing treatment and helps:**
 - Treat more people with the same amount of funds
 - Reach rapidly increasing scale-up requirements
- ▶ **Governments and donors worldwide are working to lower the cost of HIV/AIDS treatment. Success will depend on:**
 - **Collaboration** to make prices and transactions transparent
 - **Shared access** for all purchasers to prices and terms achieved by any organization

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SCMS strategy for reducing ARV prices

PEPFAR and its Supply Chain Management System (SCMS) project have secured lower prices for antiretroviral medications (ARVs) by:

- ▶ Pooling procurement (consolidating multiple orders to buy in larger volumes)
- ▶ Purchasing generics whenever possible
- ▶ Establishing long-term, indefinite quantity contracts (IQC) with manufacturers, leveraging lower prices through bulk purchases

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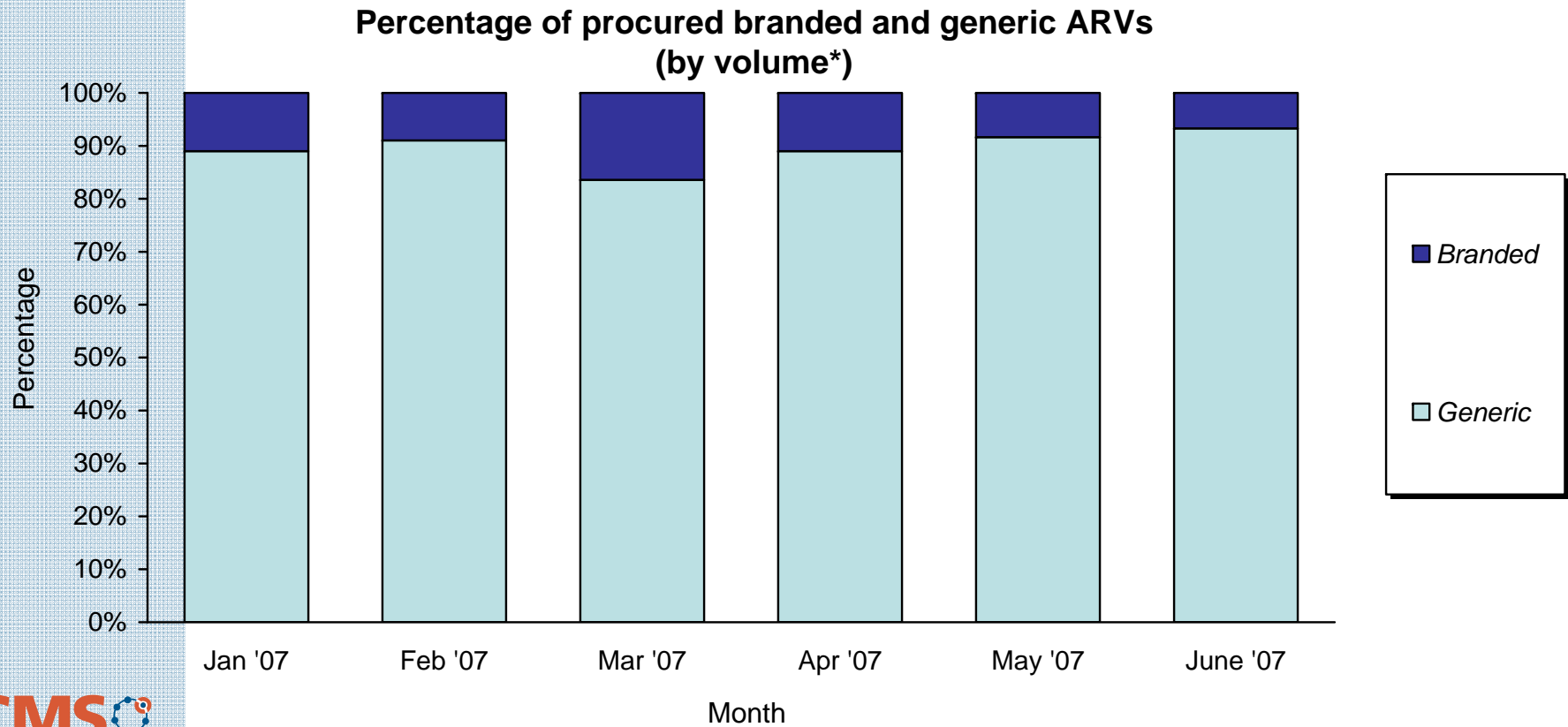
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Strategy 1: Pooling procurement through Regional Distribution Centers

To pool procurement for multiple countries and then centrally store purchased medicines, SCMS has established regional distribution centers (RDCs) in Ghana, Kenya and South Africa



Strategy 2: Procuring generic rather than branded ARVs



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*Units represents the smallest unit delivered (i.e. capsule, tablet, mL)

Definition: Quantity of products and commodities delivered to clients by the respective product category. Volume is captured by individual dose, which is defined by the unit of measure

Strategy 3: Long-term contracts with ARV manufacturers

- ▶ Long-term contracts for the purchase of ARVs are now held with Aspen Pharmacare, Aurobindo, Cipla, Matrix and Strides Arcolab
- ▶ The project expects to see further price reductions as it increases its use of pooled procurement and the number of long-term contracts with producers
- ▶ **SCMS's long-term contracts with vendors will benefit all:**
 - Other buyers will be allowed to access SCMS-negotiated prices, even if SCMS is not the procurement agent

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Strategies bring results

- ▶ **SCMS was able to maintain or improve the per unit price point achieved between January and March 2007 on all 1st Line ARV purchases made from April through June 2007⁽¹⁾**
- ▶ **Comparing SCMS results with other selected benchmark pricing sources and buyers⁽²⁾ SCMS purchase prices were lower than all others for 54 percent of first-line ARVs**
- ▶ **The purchase of generic ARVs resulted in considerable savings for SCMS when compared against AAI prices⁽³⁾**
 - SCMS Estimated Savings (from April - June 2007): \$55.4 million
 - Since January 2007, SCMS estimated savings have totaled \$86 million

(1) SCMS performs a pricing analysis every 3 months. Analysis does not include all ARVs purchased by SCMS in the two time periods, but only those where purchases were made in both time periods

(2) Benchmark pricing sources and buyers include: OGAC (excluding SCMS purchases), the Global Price Reporting Mechanism, those prices reported by Medecins Sans Frontieres and the Clinton HIV/AIDS initiative

(3) SCMS savings are determined by calculating the difference between the actual cost of SCMS generic purchases and the cost of all generic ARVs if they had been purchased by SCMS at their AAI prices

SCMS achieved exceptionally low prices on many large purchases¹

SCMS average pack prices for large purchases (Y2Q3)²

ARV	Pack Size	SCMS Average Pack Price	SCMS Average Price per Patient Year
Efavirenz 600mg	30TAB	\$13.20	\$158.40
Lamivudine 150mg	60TAB	3.00	36.00
Lamivudine/Stavudine 150mg/30mg	30TAB	2.10	25.20
Lamivudine/Stavudine/Nevirapine 150mg/30mg/200mg	60TAB	7.20	86.40
Lamivudine/Zidovudine 150mg/300mg	60TAB	9.60	115.20
Lopinavir/Ritonavir 200mg/50mg [Aluvia]	120TAB	40.08	480.96
Nevirapine 200mg	60TAB	3.60	43.20

(1) Based on SCMS purchases of more than \$1 million in cost and/or 5 million units by volume

(2) Pack prices are commonly reported by manufacturers and the benchmark pricing sources and buyers. Prices are calculated using the SCMS average price per unit and the quantity contained in a pack. Reported prices do not include freight and insurance costs

Recommendations for future actions

- ▶ **In order to improve pooled procurement and leverage even greater price reductions, countries and programs should increase:**
 - Long-term forecasting and supply planning of ARVs and other HIV/AIDS-related medicines and supplies, including rapid test kits
 - Coordination of procurement activities of key stakeholders, including ministries of health, donors and NGOs
 - Transparency in reporting of transactions and prices paid to ensure global access to information on ARV prices

Appendix

- ▶ Selected Benchmark Pricing Sources and Buyers
- ▶ SCMS Historical Prices
- ▶ Generic Savings
- ▶ Patient years procured



SCMS prices were compared to prices from four sources

Data Attributes	Supply Chain Management System (SCMS)	Office of the U.S. Global AIDS Coordinator (OGAC)	WHO Global Price Reporting Mechanism (GPRM)	Medecins Sans Frontieres (MSF)	Clinton HIV/AIDS Initiative (CHAI)
Number of transactions	124 ⁽¹⁾	2,450 ⁽²⁾	69 ^(1,3)	Not Applicable	Not Applicable
Date Range	04/01/07 – 06/30/07	10/01/06 – 09/30/06 ⁽³⁾	04/01/07 – 06/30/07	Documented dated July 2007	Document dated May 2007
Pricing Eligibility	15 PEPFAR Countries	Botswana, Cote D'Ivoire, Ethiopia, Guyana, Haiti, Kenya, Mozambique, Namibia, Nigeria, Rwanda, South Africa, Tanzania, Uganda, Vietnam, Zambia	Prices compiled from sources working with developing countries	Price may not be available to all countries - data compiled from manufacturers with different restrictions on pricing	Prices offered to members of the CHAI's Procurement Consortium
Pricing Methodology	Comparison prices represent a weighted average purchase price from the manufacturer calculated using the total items purchased on a unit level (i.e. tablet, capsule, ml) and unit price paid per item	Comparison prices are a weighted average per unit price using the smallest unit available (i.e. tablet, capsule, ml.) SCMS prices were excluded from the data set when computing the OGAC weighted averaged price	Comparison prices are the unit price for the smallest unit available (i.e. tablet, capsule, pill, ml) calculated by dividing total value by number of units	Comparison prices are an average of the unit price offered by manufacturers to eligible developing countries; Prices are reported by manufacturers and not based on actual transactions	Comparison prices are the "per pill" prices provided for all adult and some pediatric formulations and the per pack/per bottle divided by the pack/bottle size for the remainder of the pediatric formulations; Prices are reported by CHAI as a ceiling price and not based on actual transactions
Source	SCMS Purchase Order History ⁽⁴⁾	SCMS compiled OGAC data ⁽⁴⁾	WHO GPRM Database ⁽⁴⁾	<i>Untangling the web of price reductions 10th Edition, July 2007</i> ⁽⁴⁾	<i>Antiretroviral (ARV) Price List, May 2007</i>

(1) Average unit prices for each ARV were often based on less than 5 transactions

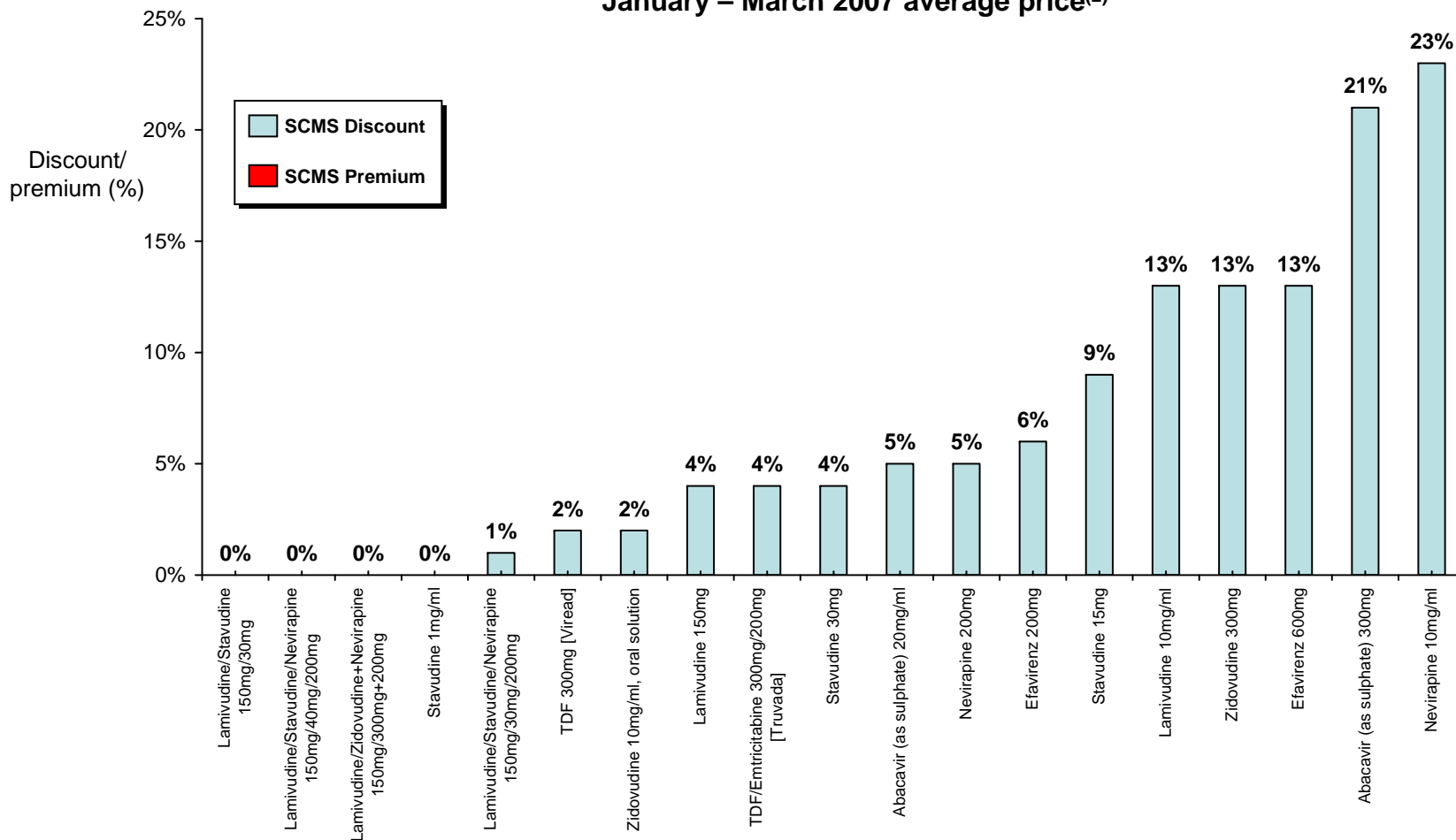
(2) SCMS prices have been excluded from the data set. Data for drugs not purchased by SCMS were eliminated

(3) Some purchases for Albania, Ukraine and Russia were removed from the dataset because the reported prices were well above the average and would have skewed the analysis.

(4) Some prices include CIP, "Carriage and Insurance Paid," (i.e. freight and insurance) costs

SCMS was able to maintain or improve the per unit price point achieved between January and March 2007 on all 1st Line ARVs¹

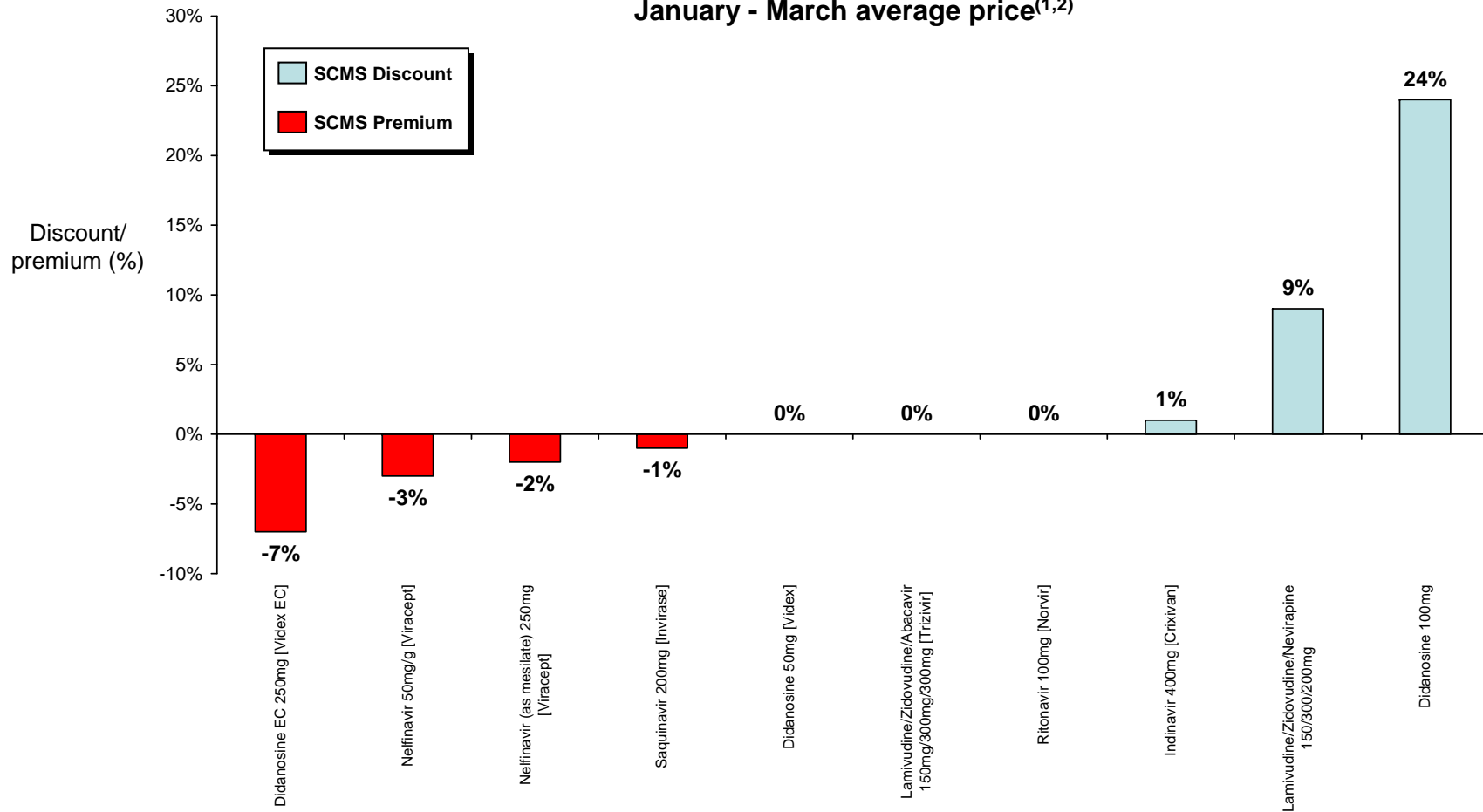
SCMS April – June 2007 average price comparison against January – March 2007 average price⁽²⁾



(1) Does not include all ARVs purchased by SCMS in the two time periods, but only those where purchases were made in both time periods

SCMS was able to maintain or improve the per unit price point achieved between January and March 2007 on six 2nd Line ARVs

SCMS April - June 2007 average price comparison against January - March average price^(1,2)



(1) Does not include all ARVs purchased by SCMS in both time periods, but only those where purchases were made in both time periods

(2) Premiums represented a difference of less than 1¢ for the Nelfinavir and Saquinavir products and 4¢ for Didanosine EC

SCMS Historical Price Comparison⁽¹⁾

Drug	(1) April – Sept 2006	(2) Oct – Dec 2007	(3) Jan – Mar 2007	(4) Price Change ⁽²⁾ (2 vs. 3)	(5) April – June 2007	(6) Price Change ⁽²⁾ (3 vs. 5)
Abacavir (as sulphate) 20mg/ml	\$0.13	\$0.08	\$0.07	12.5%	\$0.07	4.8%
Abacavir (as sulphate) 300mg	0.74	0.61	0.58	4.9%	0.46	21.3%
Didanosine 25mg [Videx]	0.12				0.12	
Didanosine 100mg		0.18	0.20	-11.1%	0.15	23.8%
Didanosine 200mg [Videx]					0.43	
Didanosine 200mg					0.27	
Didanosine 50mg [Videx]	0.16	0.16	0.16	0.0%	0.16	0.0%
Didanosine EC 250mg [Videx EC]			0.61		0.65	-6.5%
Didanosine 2g/237ml [Videx]					0.05	
Efavirenz 100mg			0.19			
Efavirenz 200mg	0.43	0.36	0.19	47.2%	0.18	5.6%
Efavirenz 30mg/ml [Stocrin/Sustiva]			0.09			
Efavirenz 50mg [Stocrin/Sustiva]					0.12	
Efavirenz 50mg					0.07	
Efavirenz 600mg	0.61	0.53	0.50	5.7%	0.44	13.3%

(1) Average per unit prices are rounded to the nearest cent. A negative percentage change represents an increase in price, a positive percentage change represents a discount achieved against the previous quarter's price

(2) % Price Change is calculated using the full average per unit price while the rounded price is represented on this chart

SCMS Historical Price Comparison⁽¹⁾

Drug	(1) April – Sept 2006	(2) Oct – Dec 2007	(3) Jan – Mar 2007	(4) Price Change ⁽²⁾ (2 vs. 3)	(5) April – June 2007	(6) Price Change ⁽²⁾ (3 vs. 5)
Indinavir 400mg [Crixivan]	\$0.28	\$0.27	\$0.28	-3.7%	\$0.27	1.2%
Lamivudine 10mg/ml	0.02	0.01	0.01	0.0%	0.01	12.5%
Lamivudine 150mg	0.07	0.06	0.05	16.7%	0.05	3.7%
Lamivudine/Stavudine 150mg/30mg			0.07		0.07	0.0%
Lamivudine/Stavudine 150mg/40mg			0.07			
Lamivudine/Stavudine/Nevirapine 150mg/30mg/200mg		0.13	0.13	0.0%	0.12	1.3%
Lamivudine/Stavudine/Nevirapine 150mg/40mg/200mg			0.13		0.13	0.0%
Lamivudine/Zidovudine + Nevirapine 150mg/300mg+200mg			0.17		0.17	0.0%
Lamivudine/Zidovudine 150mg/300mg [Combivir]					0.33	
Lamivudine/Zidovudine 150mg/300mg					0.16	
Lamivudine/Zidovudine/Abacavir 150mg/300mg/300mg [Trizivir]	1.43	1.17	1.17	0.0%	1.17	0.0%
Lamivudine/Zidovudine/Nevirapine 150/300/200mg		0.28	0.27	3.6%	0.24	8.7%

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(2) % Price Change is calculated using the full average per unit price while the rounded price is represented on this chart

SCMS Historical Price Comparison⁽¹⁾

Drug	(1) April – Sept 2006	(2) Oct – Dec 2007	(3) Jan – Mar 2007	(3) Price Change ⁽²⁾ (2 vs. 3)	(2) April – June 2007	(5) Price Change ⁽²⁾ (1 vs. 4)
Lopinavir/Ritonavir 133.3mg/33.3mg [Kaletra], Capsules	0.33	0.24				
Lopinavir/Ritonavir 200mg/50mg [Aluvia]		0.46	0.34	26.1%	0.34	0.0%
Lopinavir/Ritonavir 80mg/20mg/ml [Kaletra]		0.14			0.14	
Nelfinavir (as mesilate) 250mg [Viracept]	0.30	0.30	0.29	3.3%	0.30	-2.4%
Nelfinavir 50mg/g [Viracept]			0.22		0.22	-2.5%
Nevirapine 10mg/ml	0.03	0.01	0.01	0.0%	0.01	23.0%
Nevirapine 200mg	0.07	0.06	0.06	0.0%	0.06	5.3%
Ritonavir 100mg [Norvir]	0.16	0.11	0.11	0.0%	0.11	0.0%
Saquinavir 200mg [Invirase]	0.27	0.29	0.29	0.0%	0.29	-0.9%

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SCMS Historical Price Comparison⁽¹⁾

Drug	(1) April – Sept 2006	(2) Oct – Dec 2007	(3) Jan – Feb 2007	(3) Price Change ⁽²⁾ (2 vs. 3)	(2) April – June 2007	(5) Price Change ⁽²⁾ (1 vs. 4)
Stavudine 15mg	0.08	0.04	0.03	25.0%	0.03	16.7%
Stavudine 1mg/ml	0.01	0.01	0.01	0.0%	0.01	30.0%
Stavudine 20mg [Zerit]					0.09	
Stavudine 30mg	0.05	0.03	0.03	0.0%	0.03	15.3%
Stavudine 40mg		0.03	0.03	0.0%		
Tenofovir disoproxil fumarate 300mg [Viread]	0.57	0.57	0.55	3.5%	0.54	2.1%
TDF/Emtricitabine 300mg/200mg [Truvada]		0.88	0.86	2.3%	0.83	3.3%
Zidovudine 100mg	0.10		0.13			
Zidovudine 10mg/ml	0.02	0.01	0.01	0.0%	0.01	12.5%
Zidovudine 300mg		0.16	0.15	6.3%	0.13	11.1%

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(2) % Price Change is calculated using the full average per unit price while the rounded price is represented on this chart

SCMS achieved considerable savings through the purchase of generic ARVs

SCMS savings from generic purchases (April – June 2007)
Total Savings = \$55.4 million

ARV	AAI Unit Price ⁽¹⁾	Units Purchased by SCMS (Apr – June 2007)	AAI Cost ⁽²⁾	Actual SCMS Cost	Actual Savings at SCMS Prices ⁽³⁾
Abacavir (as sulphate) 20mg/ml	\$0.10	3,035,520	\$316,200	\$210,698	\$105,502
Abacavir (as sulphate) 300mg	0.87	2,150,220	1,873,917	988,771	885,146
Didanosine 100mg, tablets	0.21	330,240	70,176	49,125	21,051
Didanosine 200mg, tablets	0.43	471,720	200,481	127,510	72,971
Efavirenz 200mg, capsule	0.36	554,400	199,707	98,560	101,147
Efavirenz 50mg, capsule	0.12	147,600	17,072	11,021	6,052
Efavirenz 600mg, tablets	0.65	8,656,710	5,626,862	3,788,225	1,838,637
Lamivudine 10mg/ml	0.03	1,319,040	36,988	10,442	26,546
Lamivudine 150mg	0.10	7,033,320	668,165	357,956	310,209
Lamivudine/Stavudine 150mg/30mg, tablets	0.17	12,547,920	2,133,146	836,528	1,296,618
Lamivudine/Stavudine/Nevirapine 150mg/30mg/200mg, tablets	0.77	58,812,600	45,285,702	7,257,775	38,027,927
Lamivudine/Stavudine/Nevirapine 150mg/40mg/200mg, tablets	0.78	1,300,800	1,014,624	166,936	847,688

(1) AAI Prices are provided on a pack basis and converted to average per unit price using the smallest unit available (i.e. capsule, tablet, ml)

(2) AAI prices are rounded to the nearest cent on this table, but the AAI Cost is calculated using the full price

(3) SCMS savings are determined by calculating the difference between the actual cost of SCMS generic purchases (using Purchase Order history) and the cost of all generic ARVs purchased by SCMS at their AAI prices

SCMS achieved considerable savings through the purchase of generic ARVs

SCMS savings from generic purchases (April – June 2007)
Total Savings = \$55.4 million

ARV	AAI Unit Price ⁽¹⁾	Units Purchased by SCMS (Apr – June 2007)	AAI Cost ⁽²⁾	Actual SCMS Cost	Actual Savings at SCMS Prices ⁽³⁾
Lamivudine/Zidovudine + Nevirapine 150mg/300mg+200mg, tablets	0.99	2,400,000	2,376,000	410,000	1,966,000
Lamivudine/Zidovudine 150mg/300mg, tablets	0.33	24,793,860	8,058,005	3,952,371	4,105,633
Lamivudine/Zidovudine/Nevirapine 150/300/200mg, tablets	1.17	2,820,000	3,290,000	682,500	2,607,500
Nevirapine 10mg/ml, oral suspension	0.05	1,177,920	61,350	13,228	48,122
Nevirapine 200mg, tablets	0.30	10,279,260	3,083,778	567,740	2,516,038
Stavudine 15mg, capsules	0.08	307,440	25,261	7,686	17,575
Stavudine 1mg/ml, powder for oral solution	0.01	1,610,000	12,075	11,270	805
Stavudine 30mg, capsules	0.07	4,800,000	316,800	122,000	194,800
Zidovudine 10mg/ml, oral solution	0.06	3,848,640	215,684	33,676	182,009
Zidovudine 300mg, tablets	0.29	1,658,640	<u>481,006</u>	<u>221,152</u>	<u>259,854</u>
TOTALS:			75,362,999	19,925,170	55,437,829

(1) AAI Prices are provided on a pack basis and converted to average per unit price using the smallest unit available (i.e. capsule, tablet, ml)

(2) AAI prices are rounded to the nearest cent on this table, but the AAI Cost is calculated using the full price

(3) SCMS savings are determined by calculating the difference between the actual cost of SCMS generic purchases (using Purchase Order history) and the cost of all generic ARVs purchased by SCMS at their AAI prices

SCMS has achieved over \$86 million in savings since January 2007

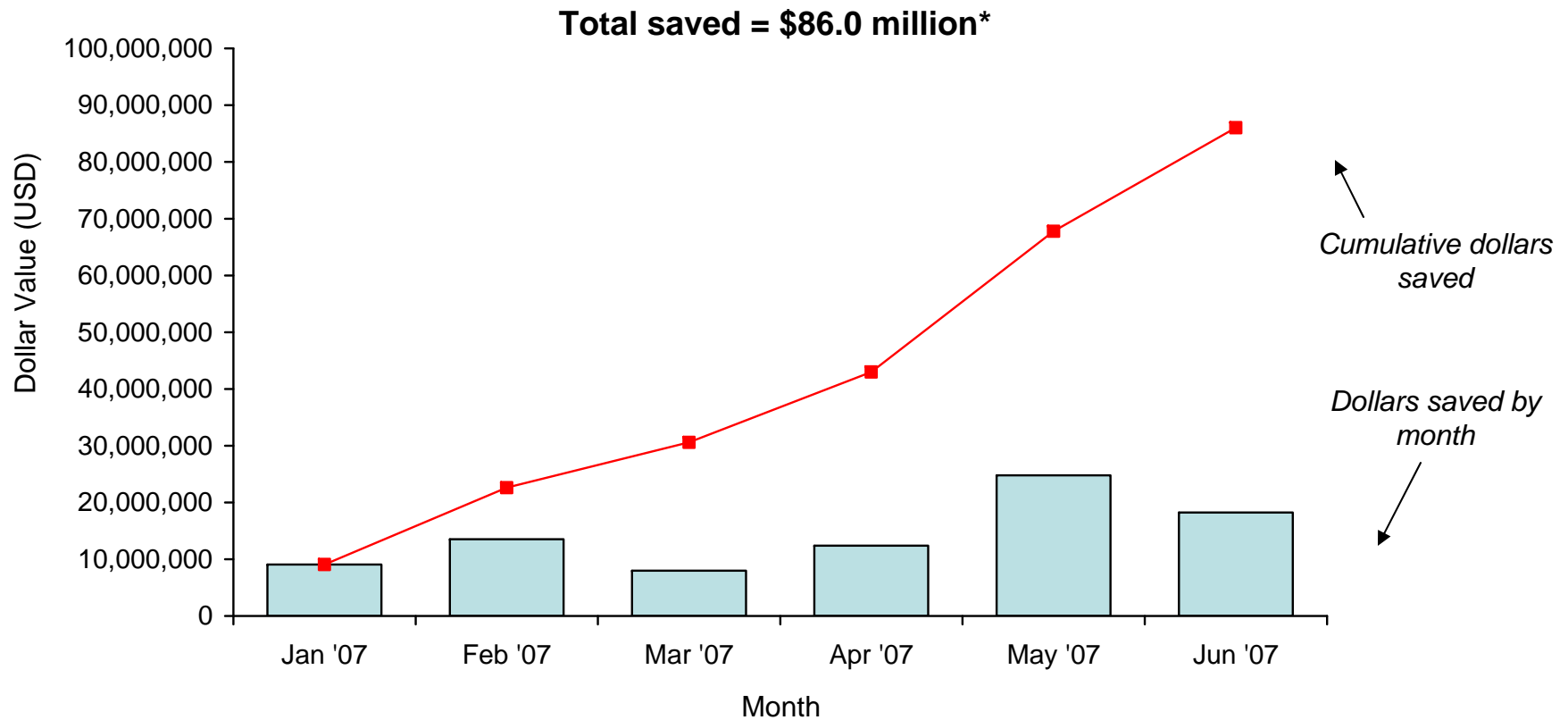
SCMS savings from generic purchases (January – June 2007)
Total Savings = \$86.0 million

ARV	AAI Cost ⁽¹⁾	Actual SCMS Cost	Actual Savings at SCMS Prices ⁽²⁾
January – March 2007	43,524,309	12,938,865	30,585,444
April – June 2007	<u>75,362,999</u>	<u>19,925,170</u>	<u>55,437,829</u>
TOTALS:	118,887,308	32,864,035	86,023,273

(1) AAI prices are rounded to the nearest cent on this table, but the AAI Cost is calculated using the full price

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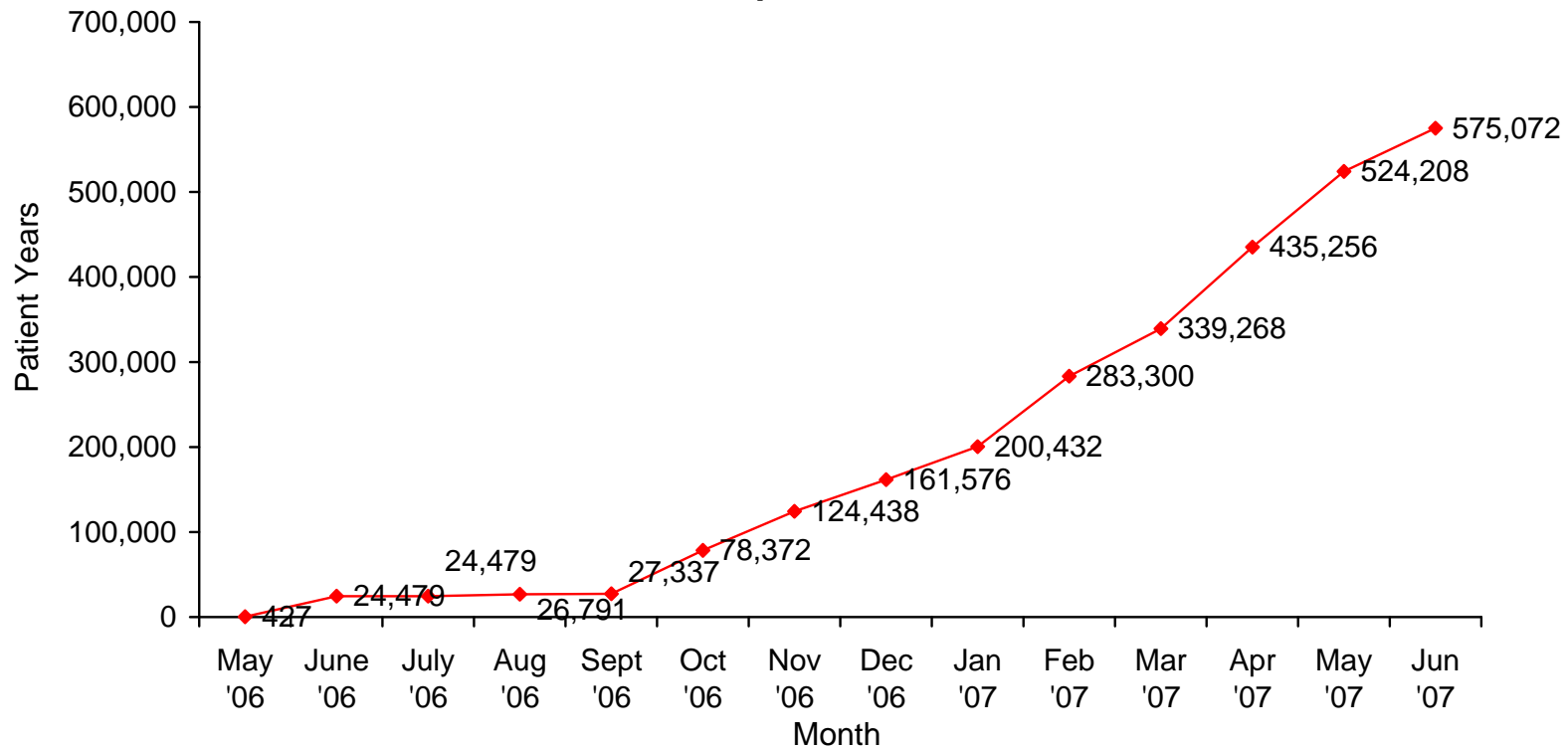
SCMS has achieved over \$86 million in savings since January 2007 (cont.)



(*) SCMS savings are determined by calculating the difference between the actual cost of SCMS generic purchases and the cost of all generic ARVs if they had been purchased by SCMS at their AAI prices.

SCMS has procured ARVs to provide 575,072 patient years through June 2007

Patient years
Total procured = 575,072



Note: ARVs are generally packaged for one month's worth of treatment, therefore patient years are estimated by counting the number of packs delivered and dividing by 12