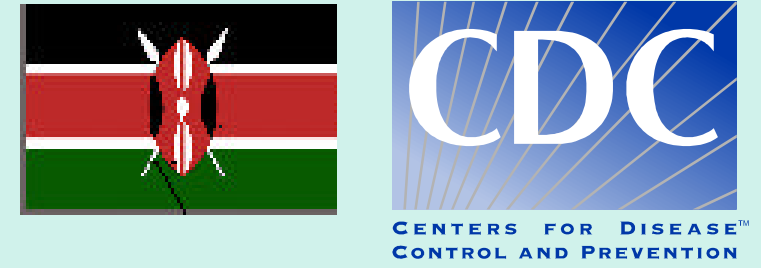


Review of Antiretroviral Therapy in the Private Sector in Nairobi, Kenya

Retrospective Chart Review of the Experience of 5 Physicians in Nairobi

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Introduction to Antiretroviral use in Kenya

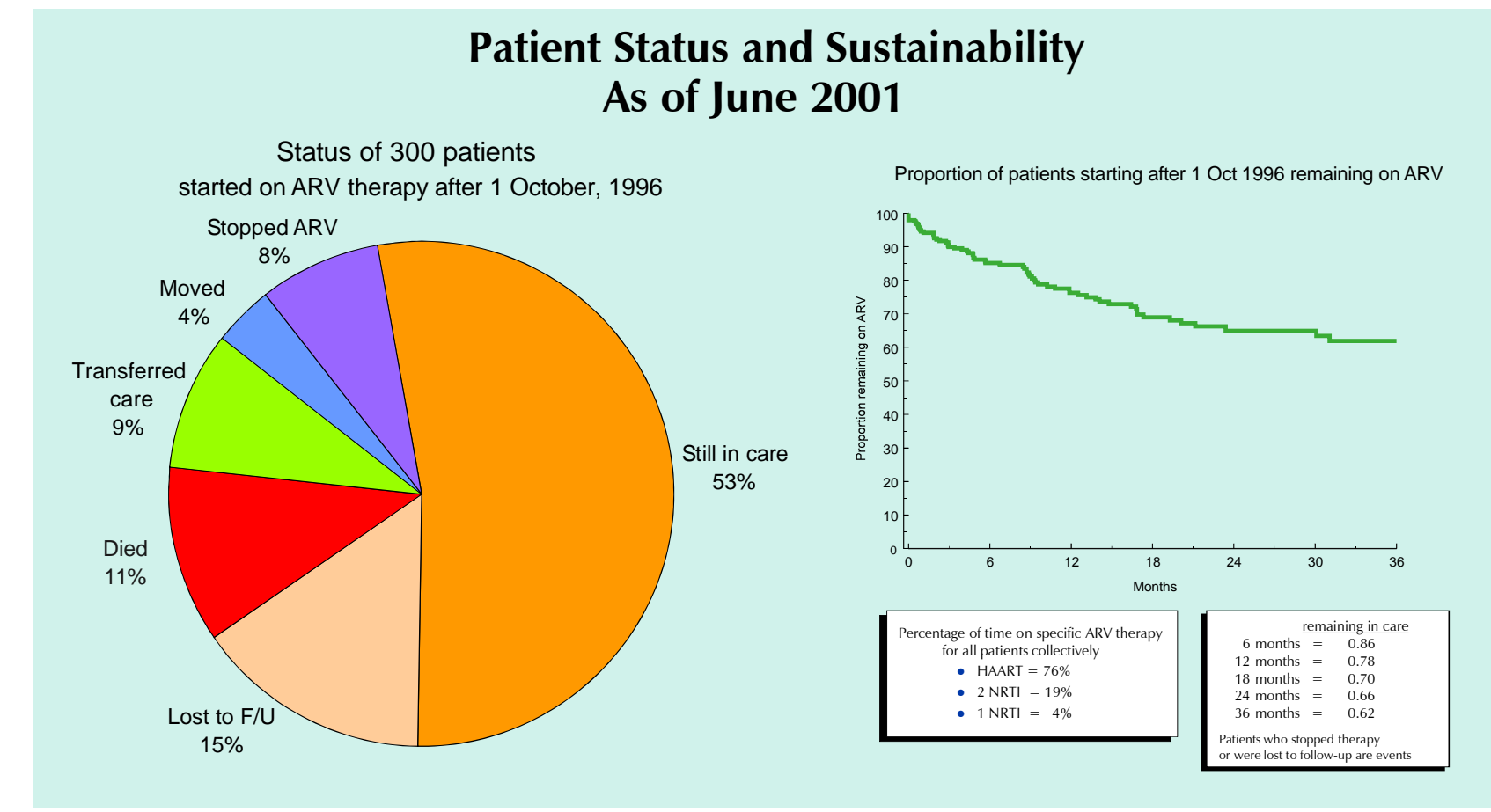
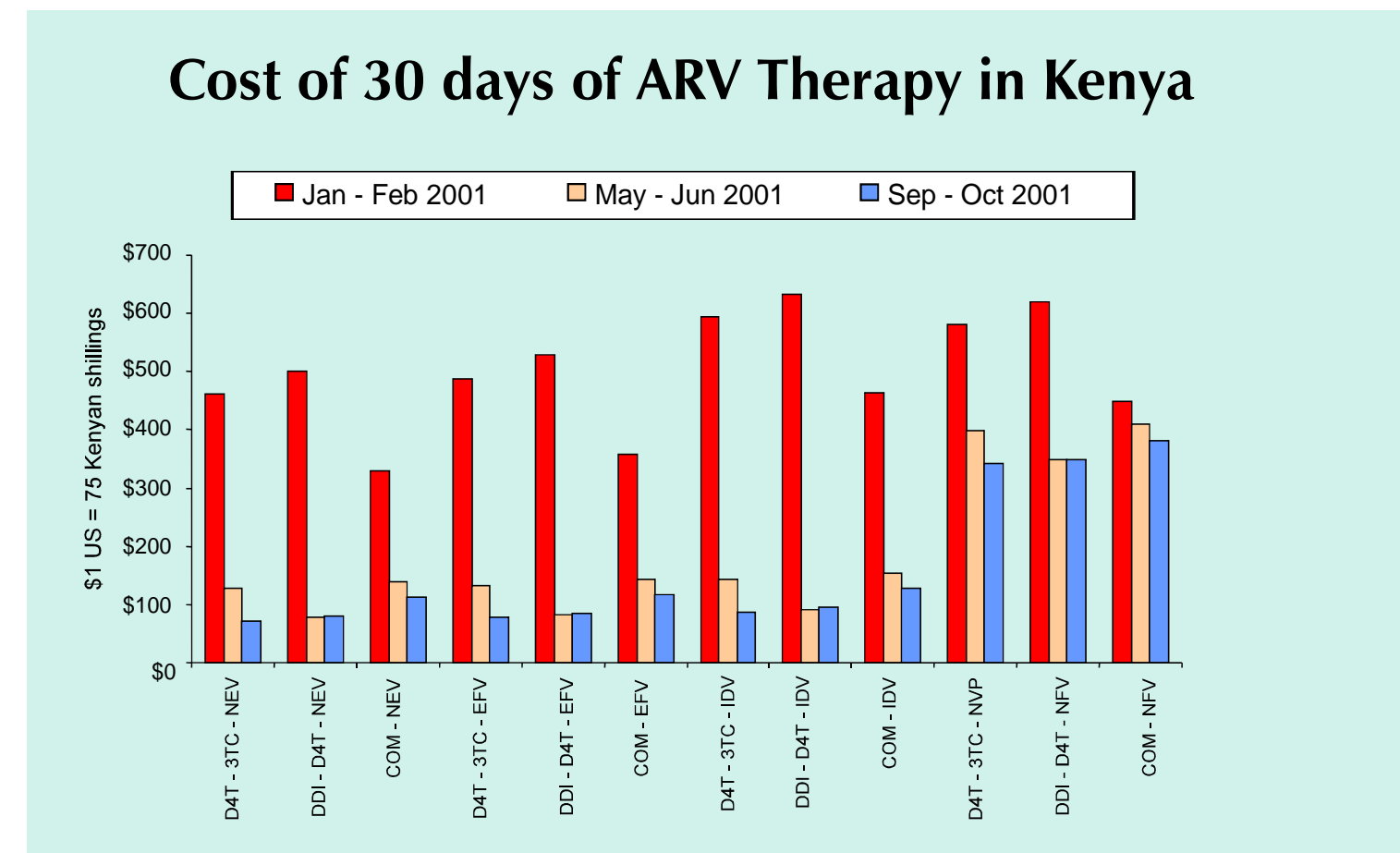
- Nucleoside reverse transcriptase inhibitors (NRTIs) have been available since the late 1980s.
- Protease inhibitors (PIs) first imported by individual patients for private use in October 1996, then available through the commercial sector starting late 1997.
- NNRTIs were first available in 1999.

Objective of Project

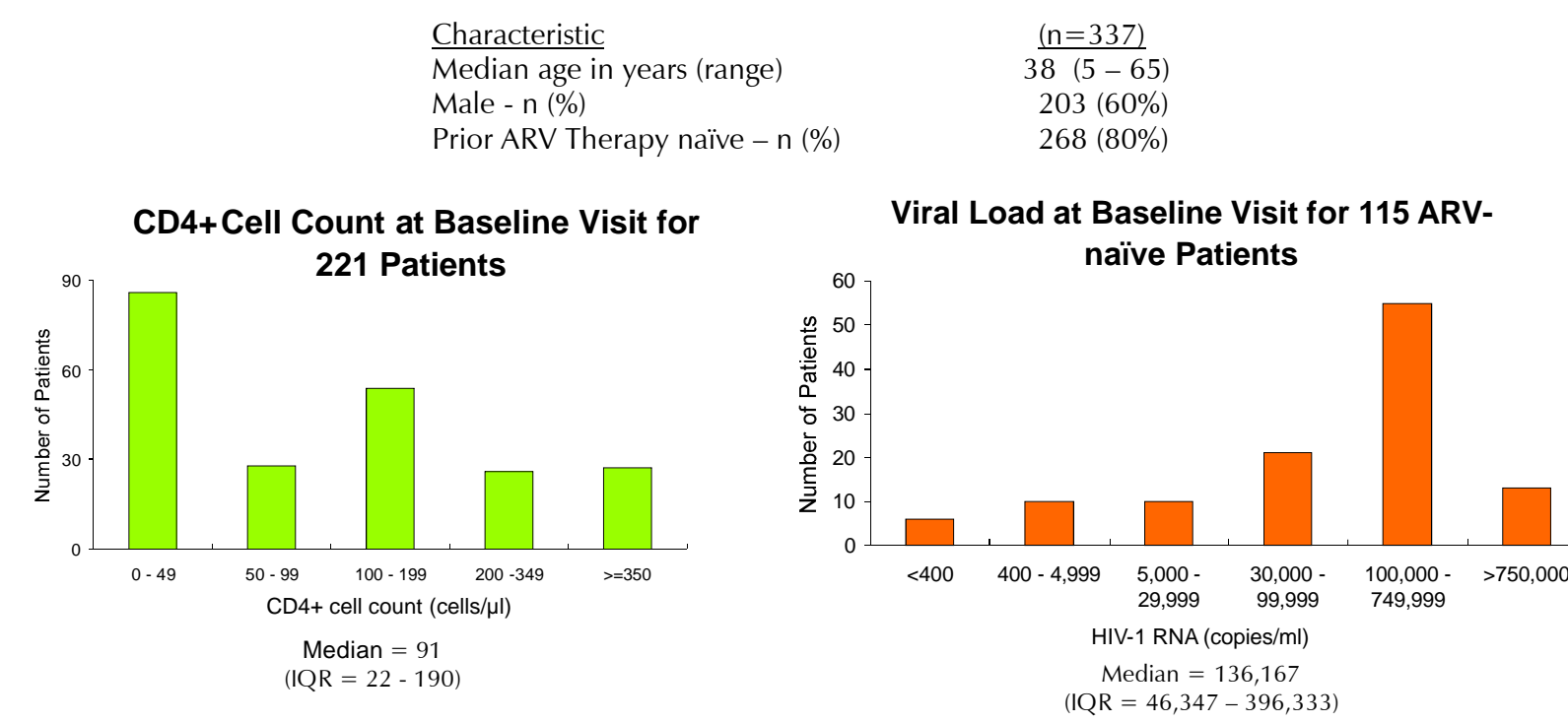
- To determine the use and impact of antiretroviral (ARV) therapy in HIV-infected patients receiving care in private practices in Kenya.

Methods

- Physicians were identified by non-random identification of practitioners known to commonly prescribe antiretroviral drugs.
- Patients were identified by physician recall and review of laboratory results of patients who ever had a viral load or a CD4+ cell count.
- Information was collected by reviewing medical charts and interviewing physicians about patients, who had received care in the private practices of 5 physicians, in Nairobi, Kenya.
- This information was analyzed to determine
 - prescribing patterns
 - sustainability of therapy
 - virologic and immunologic response
- HAART (Highly active antiretroviral therapy)
 - Intent of regimen is to provide maximal suppression of plasma viral load
 - 2 NRTIs + NNRTI; or 2 NRTIs + 1-2 PI; or 3 NRTIs (includes abacavir)



Characteristics of Patients at Baseline Visit



Frequency of Immunologic and Virologic Monitoring for Effect

Time in months since first visit after Jan 1, 1998*	Patients with at least one visit while taking ARV	Number of patients with at least one test done during the interval N (%)	
		CD4+ cell count	Viral load
1 - 6	254	115 (45)	112 (44)
7 - 12	138	62 (45)	55 (40)
13 - 18	98	54 (55)	43 (44)
19 - 24	67	30 (45)	29 (43)
25 - 30	54	22 (41)	17 (31)
31 - 36	38	14 (37)	12 (32)
37 - 42	25	14 (56)	11 (44)

*Viral load and CD4+ cell count commonly available in Nairobi after this date. [First CD4+ cell count in 1989, first viral load in 1997].

Limitations

- Analysis of patients in the 5 private practices in Nairobi may not reflect care in other parts of Kenya or Africa since patients paid for care, drugs, and laboratory monitoring and physicians provided care without ancillary support.
- Patient charts and physician recall may be incomplete.
- Sustainability analysis limited by reasons patients were lost to follow-up was not determined and survival of patients after they were no longer in the physicians' care is unknown.
- Virologic and immunologic tests done when clinically indicated and affordable and quality of tests not always consistent.

Conclusions

- Patients receiving care in the 5 private practices in Nairobi, Kenya have been treated with antiretroviral drugs since the late 1980's.
- Prescribing patterns for this patient population have been generally consistent with international standards of care.
- Sustainability of ARV therapy for these patients was good.
- Virologic and immunologic responses to ARV therapy for these patients are similar to that reported in North America and Europe.
 - Though available in Nairobi, laboratory monitoring was performed infrequently due in part to test costs.
- Survival of those in care was good considering the advanced stage of illness.
 - However, mortality could not be fully assessed due to unknown status of patients no longer in care.

Recommendation

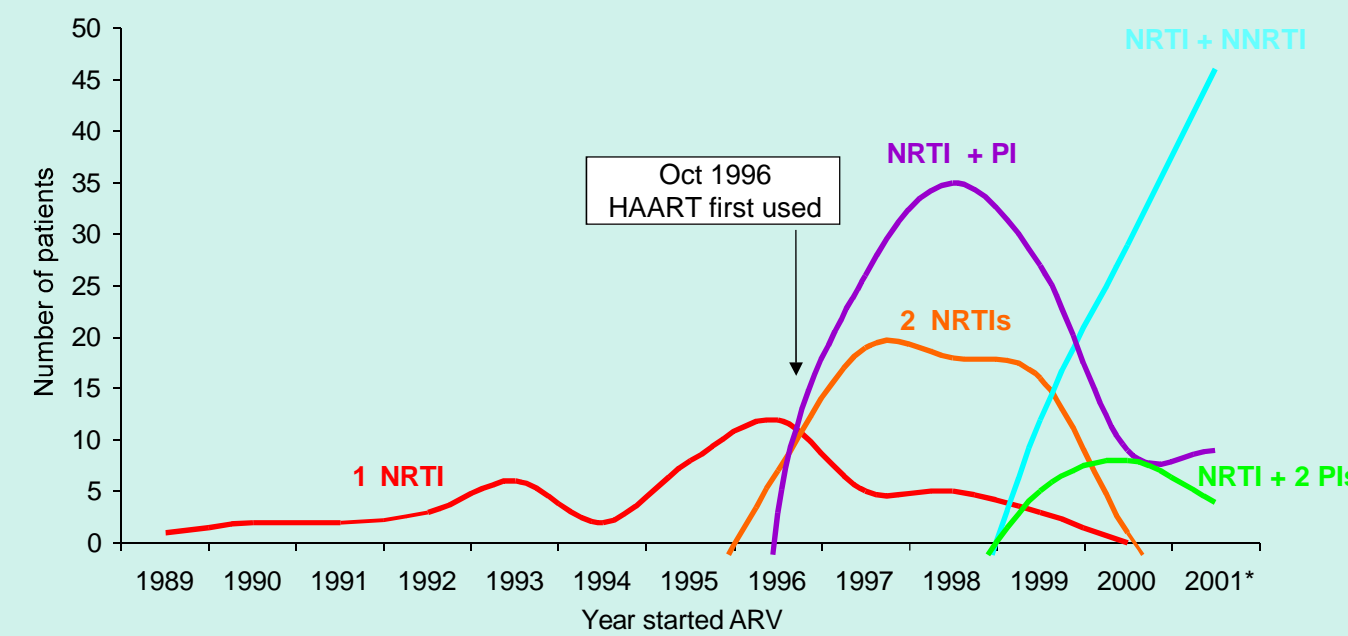
- Efforts to train more practitioners, develop cheaper monitoring tests, and further reduce prices for drugs could increase the number of persons treated in the private sector in Kenya.

Cost of Laboratory Tests in Nairobi, Kenya- January 2001

Test	Kenyan Shillings	US dollars
Viral load	6,500 - 8,400	\$87 - \$112
CD4+ cell count	1,500 - 2,600	\$20 - \$35
Liver function tests	1,200 - 1,900	\$16 - \$25
Electrolytes, urea, creatinine	1,100 - 1,500	\$15 - \$20
Lipid profile	1,000 - 1,460	\$13 - \$19
CBC	200 - 670	\$3 - \$9

Data gathered from 4 laboratories

ARV Therapy Prescribed at Baseline Visit by Year (n=337)



*Through June 15, 2001

Response to Therapy

Data presented only for patients on HAART

