

Pill dumping in adolescents receiving a boosted protease inhibitor regimen as part of second-line antiretroviral therapy: Experiences from an urban HIV clinic

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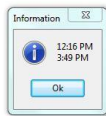
Recap!

- >95% adherence to achieve viral suppression
- Self Report
- Pill Count
- Medication Event Monitoring System (MEMS cap)



Terribly exciting

January 2015						
Mon	Tue	Wed	Thr	Fri	Sat	Sun
				16	17	18
				0	0	0
19	20	21	22	23	24	25
0	0	0	0	0	0	0
26	27	28	29	30		
0	0	0	0	2		

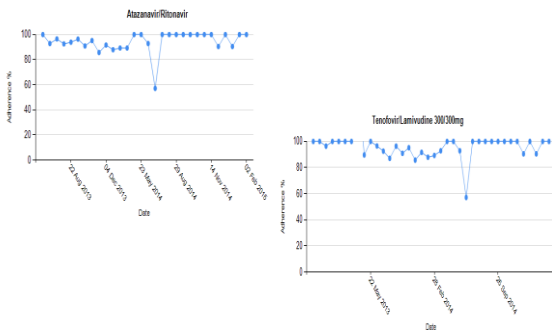


Leading Case - Brian

- 23 year old male
- TDF/3TC + LPV/rtv since 29 Mar 2010
- ATV/rtv since 1 Mar 2013
- Happy lad!



Adherence assessed by pill count

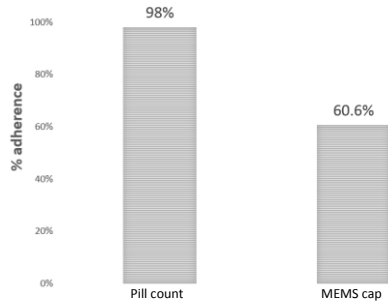


Pill Count Data (ATV/rtv)

Date	Dispensed	Expected	Actual	Adherence %
02 Feb 2015	10.00	0.00	0.00	100%
23 Jan 2015	20.00	6.00	3.00	100%
09 Jan 2015	24.00	3.00	5.00	90%
19 Dec 2014	21.00	7.00	3.00	100%



Median adherence recorded



Statistical analysis

Variable	Viral load		p-value
	(≤50) (n=29)	(>50) (n=23)	
Pill count (%; SE)	96.9 (1.50)	99.3 (0.38)	0.167
MEMS (%; SE)	69.9 (4.59)	49.0 (6.92)	0.012*
Age (mean; SE)	16.7 (0.50)	18.3 (0.44)	0.017*
CD4			
	≤500	63.6%	<0.001***
	>500	10.5%	

Pill Dumping Phenomenon

- Do our patients want to take medicine?
- Newer techniques to ascertain adherence!



Costs Add Up

# of pill dumpers	Monthly cost of TDF/3TC + ATV/rvt (USD)	Annual Cost	5 Year Cost!!	150 OI/ART sites nationally
10	15 + 30 = \$45 x 10 patients	\$450 x 12 months = \$5,400	\$27,000	\$4,050,000
20	15 + 30 = \$45 x 20 patients	\$900 x 12 months = \$10,800	\$54,000	\$8,100,000
30	15 + 30 = \$45 x 30 patients	\$1,350 x 12 months = \$16,200	\$81,000	\$12,150,000

Conclusion

- Pill counts overestimated adherence in adolescent patients on PIs as part of an antiretroviral regimen
- Median adherence was determined to be 60.6%



Acknowledgements

- Newlands Clinic Team
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