

Characteristics of patients receiving compassionate supply of antiretroviral medications and associated medication costs in a Toronto HIV specialty clinic

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Conflicts of Interests

- none



Introduction

- Success of antiretroviral (ARV) therapy
 - potency, drug resistance, adherence
- Prescription Drug Programs: Federal and Provincial
 - Interim Federal Health (IFH), Non-insured Health Benefits (NIHB)
 - Provincial programs vary across the country
 - Ontario Drug Benefit program
 - Social Assistance - Ontario Works (OW)
 - Ontario Disability Support Program (ODSP)
 - Seniors
 - Homecare
 - Trillium Drug Plan



Objectives

Primary Objective

- To estimate the number of HIV positive individuals requiring a compassionate supply of antiretroviral medication in order to avoid a gap in therapy or minimize the delay in starting medications for management of HIV



Secondary objectives

- To characterize individuals requiring a compassionate supply of antiretroviral medications
- To describe the circumstances under which individuals require compassionate antiretroviral medications
- To calculate the quantity of antiretroviral medications provided and their associated cost
- To evaluate changes in antiretroviral therapy



Methods

- Retrospective chart review
- All requests for compassionate supply of antiretroviral medications at St. Michael's Hospital
- June 2011 to May 2012
- Demographic characteristics (age, sex, race, citizenship, duration of HIV, CD4 count, viral load)
- Current drug coverage, problem with coverage
- Antiretrovirals needed and provided, including formulations



Methods (Regimens)

- We classified regimens as follows:
 - Regimen of choice: Same regimen as previously used
 - Formulation of choice: Same formulation as previously used
- When regimen of choice not available, we classified regimens according to U.S. Department of Health and Human Services guidelines
- Antiretroviral cost calculated using Ontario Drug Benefit formulary price, excluding markup and professional fees



Results

- 108 visits for compassionate supply of antiretrovirals by 55 patients
 - 13 visits for post-exposure prophylaxis
 - 95 visits by 42 HIV-positive individuals
- median of 2 visits / person
[Interquartile Range (IQR): 1 to 3]



Characteristic	
Age – median (IQR)	40 (32 to 47)
Male – N (%)	29 (69)
Ethnicity – N (%)	
White	9 (21)
Black	25 (60)
Other (south Asian, south east Asian, Latin, Arab/west Asian)	8 (19)
Immigration status – N (%)	
Canadian citizen or landed immigrant	37 (88)
Other (refugee claimant – appealing decision, undocumented, student visa)	5 (12)
HIV risk factor – N (%)	
Men who has sex with men	18 (62)
Immigrant from endemic country	23 (55)
Injection of drugs	0 (0)



Compassionate supply of Antiretrovirals

Characteristic	
Duration of HIV infection diagnosis, years - median (IQR)	3.4 (0.8 to 6.4)
Patients who were taking ARVs at first visit – N (%)	35(83)
Duration of antiretroviral therapy, yrs (IQR)	1.38 (0.7 to 3.54)
CD4 count, cells/mm ³ - median (IQR)	430 (234 to 594)
Nadir CD4 count, cell/mm ³ - median (IQR)	235 (82 to 322)
Viral load, copies/mL- median (IQR)	39 (39 to 46)
Peak VL, copies/mL- median (IQR)	38,782 (2026 to 129,094)
Proportion with undetectable viral load – N (%)	26 (74)
Patients who were not taking ARVs at first visit - N (%)	7(17)
CD4 count, cells/mm ³ - median (IQR)	132 (31 to 377)
Viral load, copies/mL - median (IQR)	53,266 (1,353 to 107,196)



Individuals taking Antiretroviral Medication at their First Visit (n=35)

Drug Coverage	N (%)
Interim Federal Health	7 (21)
Ontario Drug Program	18 (51)
Social Assistance: OW, ODSP	5 (14)
Trillium drug program	13 (37)
Private Insurance	6 (17)
Other	4 (11)



Drug Coverage Problem, by Visit (n=95)

Drug Coverage Problem	N (%)
Problem with Trillium Drug Plan	61 (64)
Awaiting additional paperwork for Trillium	21 (24)
Status change	16 (18)
Renewal of IFH denied	15 (17)
Unable to meet Trillium deductible	10 (11)
Unable to continue to afford	7 (8)
Expired	5 (6)
Other	8 (9)



Regimen Supplied, by Visit (n=95)

Characteristic	N (%)
Regimen of choice	75 (79)
Formulation of Choice	31 (42)
Change in Daily Pill Burden and Frequency	
No change	32 (34)
Increased burden	58 (61)
Increased burden and increased frequency	5 (5)
Not given regimen of choice	20 (21)
Preferred regimen	3 (15)
Alternate regimen	13 (65)
Acceptable regimen	4 (20)
May be acceptable but use with caution” or “not acceptable”	0 (0)



Supply and Cost

- Total number of antiretroviral-free days averted: 2,886
- Median antiretroviral medication cost per individual (IQR): \$1995 (\$1341 to \$4023)
- Total medication cost: \$134,860



Limitations

- Single centre study
- Retrospective data
 - working status, income, other financial stress
 - actual scope of problem unclear
 - lacking denominator
 - patients may have sought supply elsewhere
- Supply given may have over-estimated need
- Clinical outcomes not measured



Conclusions

- Despite available drug programs, there is a need for compassionate supply of ARVs in order to prevent a gap or minimize delays in therapy
- The limitations of the current drug programs result in a large financial and workload burden to the clinic
- We believe that the Ontario Trillium Drug Program can be better structured to serve our patients
- Future research is needed to better characterize the scope of the problem and comparative analysis be conducted between provinces



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