Transition Outcomes for Adolescents Living with HIV in Eastern Ontario – A Single-Centre Review

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Background

- Since the advent of highly active antiretroviral therapy (HAART) as the standard of care in the late 1990's, mortality from HIV-related illnesses has decreased significantly
- For our pediatric patients, this means they now survive childhood and transition to adult care (AC)
- Existing research on transition of care for young adults living with HIV (YLWH) shows that transition from pediatric to adult care is associated with poor outcomes such as **increased mortality**, **loss to follow up**, and **decreased treatment adherence**[1,2,3]
- Canadian research on this subject is limited

Objectives & Hypothesis

- Primary objective: To describe health outcomes, medication adherence, and retention in care for YLWH that transitioned from pediatric HIV care at the Children's Hospital of Eastern Ontario (CHEO) to AC at the The Ottawa Hospital (TOH)
- Secondary objective: To characterize YLWH who have undergone transition of care in Ottawa
- We hypothesized that following transition from pediatric to adult care, a group of young adults with HIV who have transitioned from CHEO to TOH would have lower retention in care, decreased treatment adherence, and poor medical outcomes

Methodology

- Retrospective chart review was performed on those meeting the following eligibility criteria:
  - HIV infection acquired and diagnosed in childhood
  - *Engaged* in pediatric care prior to transfer to AC. For the purpose of this study, engagement is defined as attendance of 1 or more appointments with a pediatric care provider in the year prior to transfer.
  - Seen in follow-up at the TOH HIV clinic at least once post-transfer between the years 1999 and 2019
- Clinical and demographic data was extracted from patient electronic medical records and paper charts at TOH

Results

Table 1. Transition patient characteristics

	Transition Patients (n = 22)
Gender	
Cisgender male, n (%)	12 (54.5)
Cisgender female, n (%)	10 (45.5)
Ethnic background	
African, Caribbean and Black, n (%)	17 (77.2)
White/Caucasian, n (%)	5 (22.7)
Median Age at Time of Transition (age range at time of transition)	18 (17-19)
Documented Substance Use	
IV drugs, n	0
Alcohol, n (%)	11 (50)
Marijuana/hashish, n (%)	6 (27.2)
Cigarette smoking, n (%)	9 (40.9)
Amphetamines (crystal meth, stimulants), n	0
Cocaine, n (%)	1 (4.5)
Opiates, n (%)	1 (4.5)
Total number of patients with documented substance use, n (%)	14 (63.6)
Sexually Transmitted Infection Diagnosis (HIV excluded), n (%)	2 (9.1)
Mental Illness, n (%)	10 (45.5)

Results Continued

Table 2. HIV-related lab and treatment data of eligible transitioned YLWH

Lab data	
Median CD4 count at time of last pediatric visit	470.5 cells/µL
Median CD4 at the time of first adult visit	521 cells/µL
Median CD4 at after 3 years in adult care	290 cells/µL
Viral load not suppressed at time of first adult visit	9/22 (40.9%)
Viral load not suppressed after 3 years of adult care	5/20 (25%)
Treatment Data	**n (%)**
Treatment adherence over time per HR documentation by MD	
Good/excellent	4 (18.1%)
Poor/intermittent	18 (81.8%)
Initiation of treatment prior to 1996	7 (31.8%)
Time since transition, years:	**n (%)**
<1	3 (13.6)
1> and <5	6 (27.3)
>5	13 (59.1)

Table 3. Documented AIDS-defining illnesses and health care utilization of eligible transitioned YLWH

	Transition Patients (n = 22)
AIDS-defining illnesses	
Candidiasis of the esophagus, bronchi, trachea, or lungs (oral thrush excluded), n (%)	1 (4.6)
Chronic intestinal cryptosporidiosis, n (%)	2 (9.1)
Cytomegalovirus retinitis, n (%)	1 (4.6)
Mycobacterium tuberculosis (pulmonary or extra-pulmonary), n (%)	2 (9.1)
Mycobacterium, other species or unidentified species, (disseminated or extra-pulmonary), n (%)	1 (4.6)
Pneumocystis pneumonia, n (%)	5 (22.7)
Recurrent pneumonia, n (%)	3 (13.6)
Progressive multifocal leukoencephalopathy, n (%)	1 (4.6)
Total number of patients with AIDS-defining illnesses, n (%)	11 (50)
Health Care Utilization	
TOH Emergency Department total encounters	39
Number of patients with Emergency Department encounters, n (%)	11 (50.0)
Total number of TOH hospitalizations	14
Number of patients with TOH hospitalizations, n (%)	6 (27.3)
Loss to follow up (not seen at TOH for >12 months at the time of data collected),n (%)	11 (50)
Mortality, n (%)	1 (4.5)

Discussion

Findings

- Survivors of pediatric HIV demonstrated high levels of difficulties remaining on treatment following transition and were often not retained in care
- There was a significant burden of AIDS-defining illnesses, substance use, and mental health problems, amongst transitioned patients

Limitations

- Small sample size of eligible patients
- Loss to follow up based on chart review from TOH patient chart does not exclude the possibility of care being sought elsewhere
- Recorded ED visits and hospitalizations are those that took place at TOH thus do not reflect care sought elsewhere
- We are aware of poor outcomes (including deaths) among youth transferred from CHEO to non-TOH care, not captured in this review

Future Directions

- We have also collected clinical and demographic data for a comparator group of patients who first entered HIV care as young adults at age 18-22 during the same time period. We plan to further elucidate and compare differences between these 2 groups.
- Further work in this area should probe YLWH's transition experiences and determine factors that predict success or failure of the transition process, and interventions that can support them.

References

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