Successful Down-referral Even Among Patients with Virologic Failure in South Africa

Abstract #1074

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Background

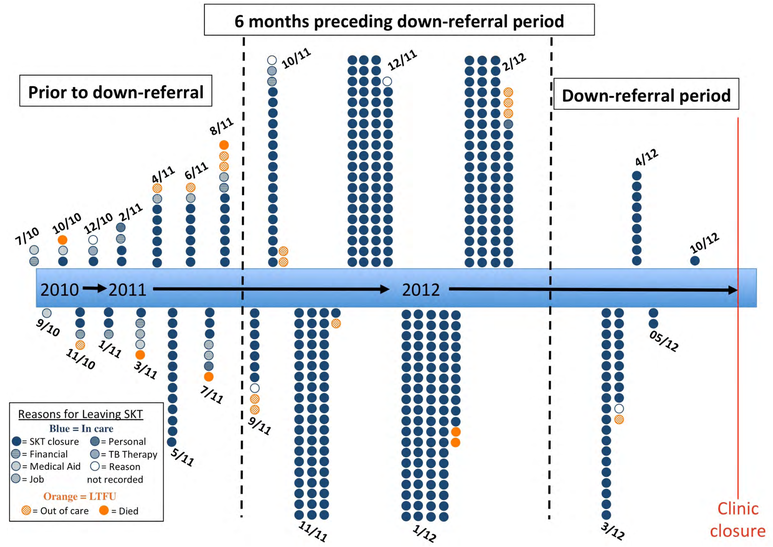
- Globally, ART programs are increasingly becoming decentralized yet little is known about how this affects patient follow up.
- The Sinikethemba clinic (SKT) of the McCord Hospital in Durban, South Africa underwent a down-referral process from March to October 2012.
- Each patient was contacted by clinic personnel to arrange for HIV follow up care at a new clinic.

Methods

- A subset of SKT patients were enrolled in the Risk Factors for Virologic Failure (RFVF) case-control study from October 2010 to June 2012.
- Inclusion Criteria: ≥ 18 years of age and on ART for ≥ 5 months
- Cases: VL ≥ 1000 copies/mL; Controls: VL < 1000 copies/mL
- Each patient enrolled in the parent study completed an extensive survey.
- This is a secondary analysis of the RFVF study of factors associated with attrition during a period surrounding emergent down-referral.
- **Primary Outcome:** whether patients were in care at time of down-referral
  - In care = self reported attendance to HIV care
  - LTFU = self report or family report of not being in care or death
- Statistical tests of independence were utilized to evaluate the association of variables with LTFU.
- Multivariable logistic regression was utilized to analyze variables that achieved statistical significance in the univariable analysis. Variables of epidemiological or contextual significance were kept in the model.

When and Why Patients Left SKT

Timeline of patient's last visit to SKT prior to down-referral



- Most patients were in care and seen in the 6 months preceding down-referral
- Few patients were seen in clinic during the actual down-referral period

Key Findings

Patients being displeased with clinic and poor adherence were the most important predictors of LTFU

Domain / Variable	OR (95% CI)
Demographics	
Age at enrollment (5 year increments)	1.01 (0.95 – 1.08)
Female gender	0.71 (0.27 – 1.92)
Socioeconomic	
< 9 years of education	0.27 (0.03 – 2.51)
Psychosocial	
Not pleased with clinic	**3.04 (1.12 – 8.31)**
Biomedical	
History of any AIDS defining condition	0.34 (0.10 – 1.11)
CD4 count at enrollment < 200 cells/μL	0.55 (0.17 – 1.76)
HIVDR possible (reference HIVDR)	0.80 (0.20 – 3.25)
HIVDR prevention* (reference HIVDR)	0.41 (0.11 – 1.50)
Medications	
Poor Adherence	**3.93 (1.23 – 12.58)**
ART duration (1 month increments)	**0.96 (0.93 – 0.99)**

Multivariable logistic regression analysis with odds ratio of being LTFU

* Equivalent to no prior virologic failure

- Most patients (95%) were down-referred successfully despite a large proportion of the population with prior VF
- A higher proportion of patients whose last SKT clinic visit was more than 6 months prior to down-referral were LTFU making it more difficult to engage them in the down-referral process
- A higher proportion of patients with HIVDR were LTFU compared to those with possible HIVDR or no HIVDR however HIVDR did not prove an important predictor in the multivariable model
- 9.4% of HIVDR were LTFU; 7.8% of possible HIVDR were LTFU; 2.3% of HIVDR prevention were LTFU

Baseline Characteristics & Univariable Analysis

Demographics and surveyed patient characteristics

Domain / Variable	In Care (n=436)	LTFU (n=21)	p-value
Mean Age, y (SD)	40 (9)	37 (9)	0.23
Gender (% female)	65%	62%	0.82
Socioeconomic			
≥ 9 years of education (% yes)	83%	95%	0.22
Any income (% yes)	79%	71%	0.42
Owns car or able to walk to clinic (% yes)	15%	5%	0.34
Psychosocial			
Pleased with clinic (% yes)	82%	52%	0.003
Ever used traditional medication or healers (% yes)	58%	48%	0.37
Married or lives with partner (% yes)	34%	43%	0.48
Depression (% yes)	38%	48%	0.50

Biomedical and medication related factors

Domain / Variable	In Care (n=436)	LTFU (n=21)	p-value
Biomedical			
History of any AIDS defining condition (% yes)	65%	81%	0.16
History of *Mycobacterium tuberculosis*	45%	57%	0.37
CD4 count at enrollment (% with < 200 cells/μL)	28%	38%	0.33
Medications			
HIV Drug Resistance			0.005
HIVDR	22%	48%	
Possible HIVDR	11%	19%	
Prevention (no VF)	67%	33%	
Adherence pill count ratio* (% below median)	50%	81%	0.007
Mean ART duration in months (SD)	31 (25)	18 (16)	0.004

*Adherence was a derived variable utilizing enrollment pill count and dispensed pills over previous 180 days

Conclusions

In a country with 6.3 million infections, even a small percentage of patients failing the down-referral process may compromise the TasP strategy…

- A simple screening tool to measure patients' sentiments toward clinic and adherence might be useful to determine which patients have the highest risk of falling out of care
- As ART programs are increasingly decentralized, we believe identifying patients at high risk of LTFU and redirecting resources toward programs to increase their retention is critical to maximize the success of the down-referral process

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