

Reduced loss to ART initiation among patients initiating cotrimoxazole prophylaxis therapy in Johannesburg, South Africa

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BACKGROUND

- Patient loss to follow-up is a major challenge to effective HIV care throughout sub-Saharan Africa.
- The time between HIV testing and ART initiation is known to be a period when substantial patient loss to follow-up occurs.
- Cotrimoxazole prophylaxis therapy has been shown to reduce HIV-related opportunistic infections and mortality among patients on ART.
- Limited research suggests cotrimoxazole prophylaxis therapy may be associated with improved patient retention.
- We investigated the effect of cotrimoxazole on ART initiation within the first year following initial CD4 staging at a primary healthcare clinic in South Africa.

What is cotrimoxazole?

- Cotrimoxazole (trimethoprim-sulfamethoxazole) is a sulfanamide antibiotic commonly marketed under trade names Bactrim, Cotrim and Septra
- The drug is inexpensive and used to treat a wide variety of ailments, including respiratory tract infections, renal and urinary tract infections, GI infections, wound infections, septicemias and others
- Among HIV-positive patients, the drug is particularly useful for reducing the risk of co-infection with *Pneumocystis pneumonia* and toxoplasmosis, but also may reduce risk of bacterial pneumonia, malaria, sepsis and diarrhea



METHODS

Study site:

- Witkoppen Health and Welfare Centre, high-volume NGO-operated primary care clinic in Johannesburg, South Africa
- Cotrimoxazole is prescribed according to SA guidelines: CD4 value ≤ 200 cells/ μ l or WHO stages II, III or IV

Study population:

- 755 newly-diagnosed, ART-naïve, non-pregnant adults (≥ 18 years) with a first CD4 test in 2010
- Must have completed a CD4 notification visit 3 days – 2 months after CD4 test
- Must have an initial CD4 value ≤ 200 cells/ μ l

Data collection:

- Data were extracted from TherapyEdge-HIV™, the clinic's electronic data system, in May 2012, allowing patients to experience a 12-month outcome

Study variables:

- Patients were considered to have initiated cotrimoxazole if the drug was started 7 days prior to 2 months after the CD4 testing date
- Outcome of interest was ART initiation within one year of CD4 notification date

Statistical methods:

- Compared proportion initiating ART by cotrimoxazole use
- Kaplan-Meier curves of time to ART initiation

RESULTS

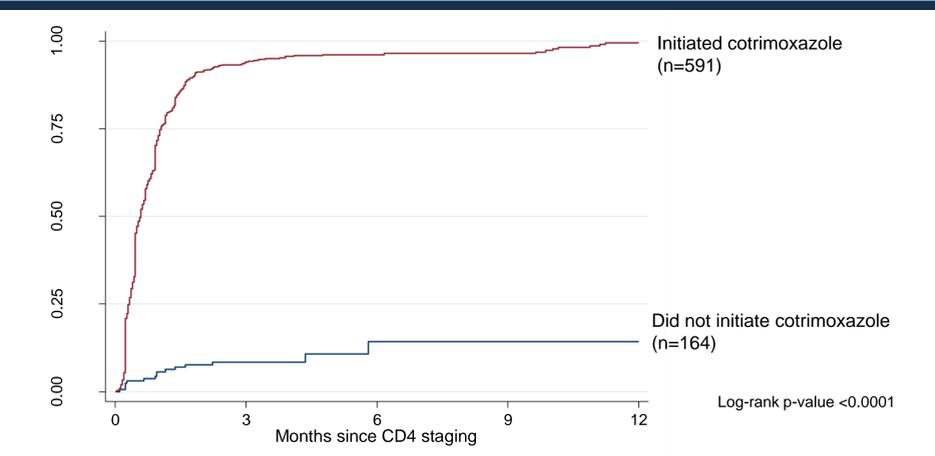
Patient characteristics (N=755)

	Total	Initiated cotrimoxazole (n=591, 78.3%)	Did not initiate cotrimoxazole (n=164, 21.7%)
Sex, n (%)			
Female	422 (55.9)	333 (56.4)	89 (54.3)
Male	333 (44.1)	258 (43.7)	75 (45.7)
First CD4 value (cells/ μ l), median (IQR)	96 (46, 146)	95 (49, 142)	103 (41, 158)
First CD4 value, n (%)			
≤ 100 cells/ μ l	392 (51.9)	311 (52.6)	81 (49.4)
101-200 cells/ μ l	363 (48.1)	280 (47.4)	83 (50.6)
Age at CD4 notification date, median (IQR)	36 (30, 42)	36 (31, 42)	36 (30, 43)
Age, n (%)			
18-29 years	154 (20.4)	115 (19.5)	39 (23.8)
30-39 years	342 (45.3)	272 (46.0)	70 (42.7)
40 years and older	259 (34.3)	204 (34.5)	55 (33.5)
Nationality, n (%)			
Born in South Africa	511 (67.7)	398 (67.3)	113 (68.9)
Born outside of South Africa	244 (32.3)	193 (32.7)	51 (31.1)
Employment status, n (%)			
Employed	423 (56.0)	346 (58.4)	77 (47.0)
Not employed	332 (44.0)	245 (41.5)	87 (53.1)
Prevalent TB, n (%)*			
No	662 (87.8)	501 (84.8)	161 (98.2)
Yes	93 (12.3)	90 (15.2)	3 (1.8)

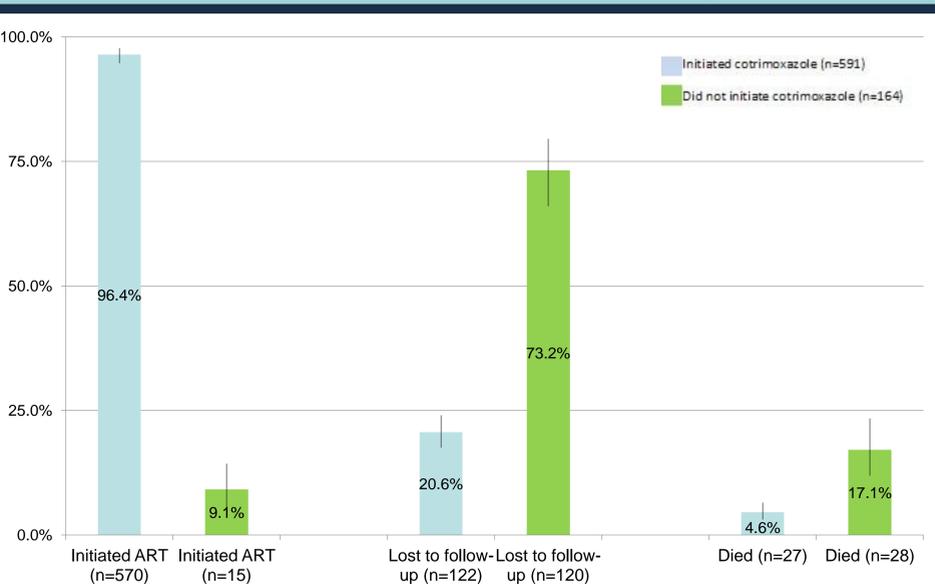
IQR, interquartile range
*TB diagnosis within nine months prior to one month following CD4 notification date

- Among patients who initiated cotrimoxazole, 96.4% went on to initiate ART within one year of CD4 staging
 - 20.6% lost to follow-up at one year
 - 4.6% dead at one year
- Among patients who did not initiate cotrimoxazole, 9.1% went on to initiate ART within one year of CD4 staging
 - 73.2% lost to follow-up at one year
 - 17.1% dead at one year

ART initiation by cotrimoxazole group



One-year patient outcomes by cotrimoxazole group



CONCLUSIONS

- A far higher proportion of patients who first initiated cotrimoxazole proceeded to initiate ART.
- Our results support prior findings that cotrimoxazole use may improve retention in care and likelihood of initiating ART among eligible patients.
- Due to data limitations, we are not able to determine why eligible patients did not receive cotrimoxazole; prospective studies exploring cotrimoxazole use and patient retention are warranted.
- These findings suggest that cotrimoxazole may be an inexpensive and effective intervention to reduce loss to initiation among HIV-positive patients.

CONTACT DETAILS

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