

Marked increase in ART initiation after implementation of universal treatment in Durban, South Africa

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Conflict of interest statement

We declare that we have no conflicts of interest.

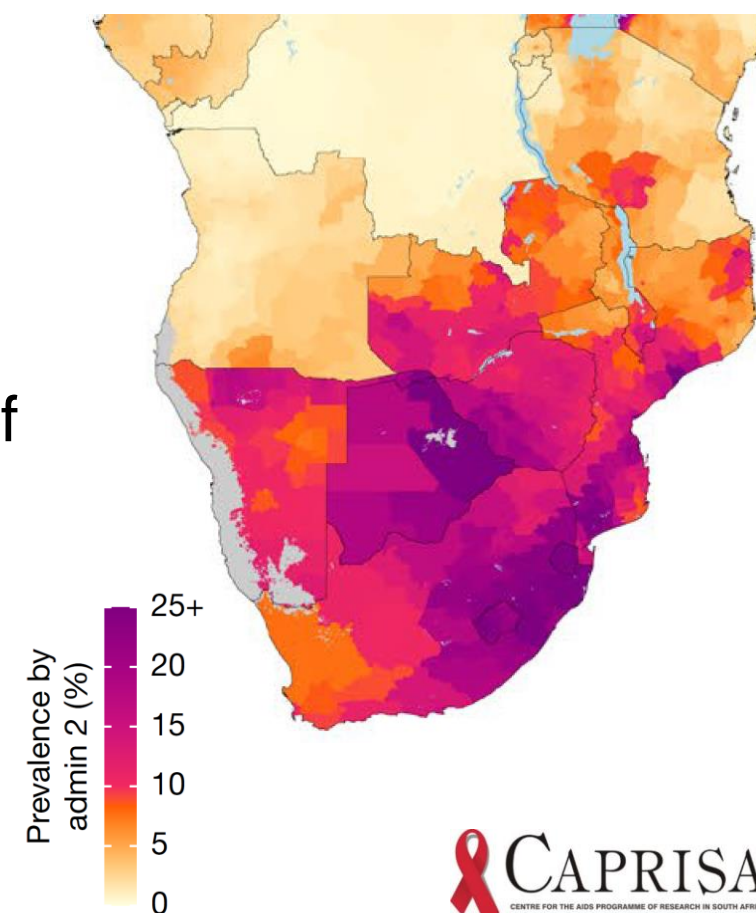


Background: South Africa

South Africa has the largest HIV epidemic

- Over 7 million people living with HIV¹
- Prevalence up to 25% in some districts²
- Universal ART for all people living with HIV was implemented in September 2016³
 - Prior to this, South Africa used a CD4 threshold of <500 cells/mm³ for ART initiation
 - Providing universal ART prevents immunosuppression and reduces opportunistic infections such as TB^{4,5}

Fig 1. Prevalence of HIV among adults aged 15–49 in 2017²

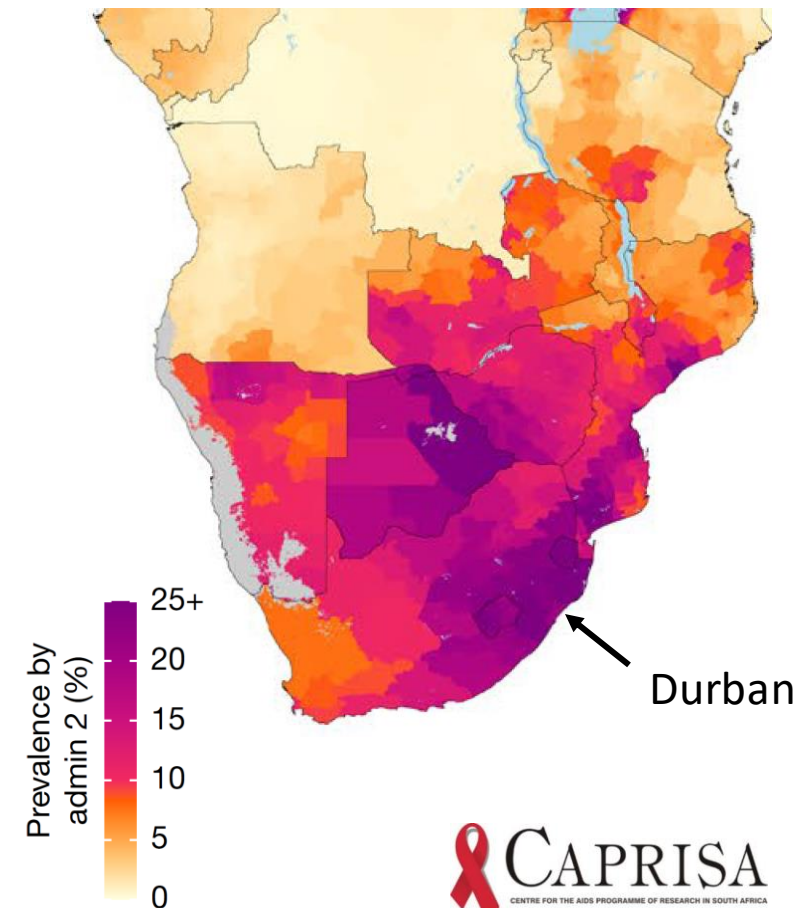


Background: Durban

- EtheKwini Municipality (Durban)
 - Capital of Province of KwaZulu-Natal
 - Largest shipping terminal in Southern Africa
 - Population of 3.5 million
 - 600,000 people living with HIV (1 in 70 of all people with HIV globally)



Fig 1. Prevalence of HIV among adults aged 15–49 in 2017²



Aims

- We aimed to assess the impact of implementing universal ART on:
 - the number of ART initiations
 - the mean CD4 count at ART initiation
 - the proportion of people initiating ART with advanced HIV infection (CD4 <200 cells/mm³)
 - the proportion of people with HIV/TB co-infection at ART initiation

Methods

- Setting
 - Prince Cyril Zulu Clinic
 - Large urban clinic in central Durban
 - Located next to central transport hub and serves widespread urban population
- Data Source
 - Audit of routinely collected clinical and laboratory data that is recorded at time of ART initiation



Figure 2: Map of clinic location

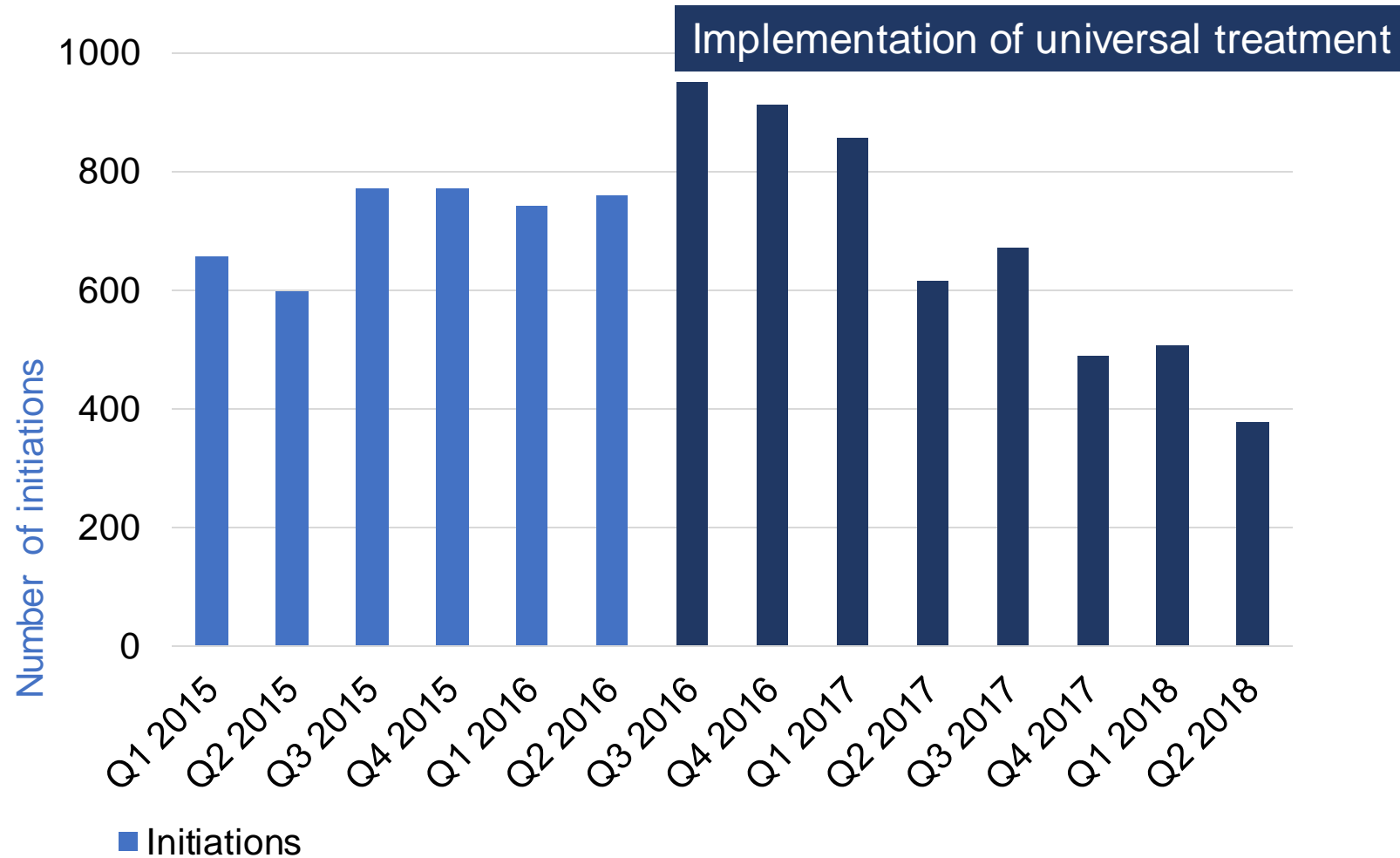
Methods

- Eligibility criteria
 - Non-pregnant adults aged 15 years and above
 - Initiated ART between 01 Jan 2015 and 30 June 2018
- Analysis
 - Assess trends in ART initiations, CD4 count at initiation and proportion with TB per quarter using descriptive statistics
- Ethical approval
 - University of Kwazulu-Natal Biomedical Research Ethics Committee

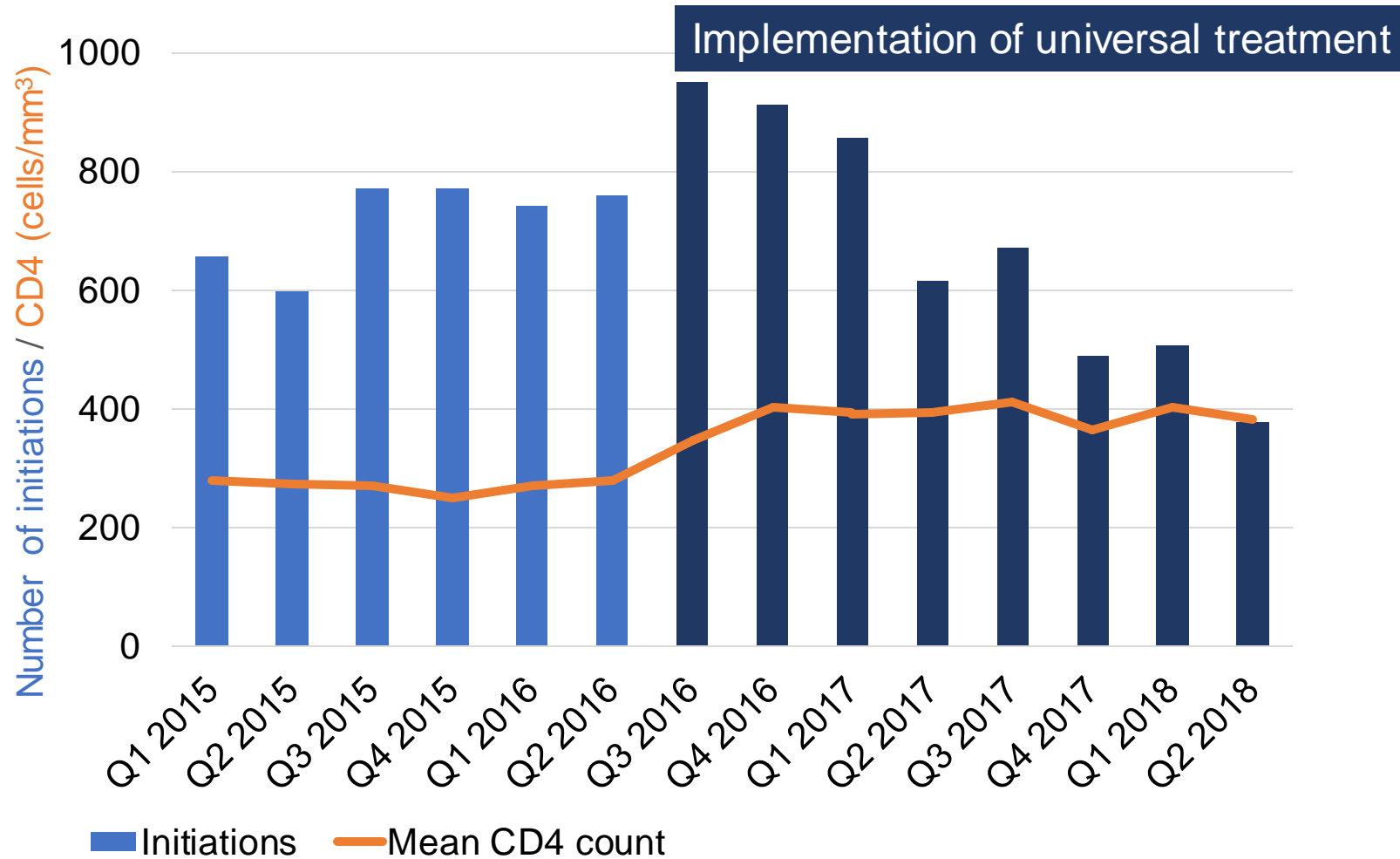
Results

- 9675 patients initiated ART between Jan 2015 to June 2018
- 5229 (54.0%) were female and 4446 (46.0%) were male
- Median age was 34 years (IQR 28-40)
- Mean CD4 count at ART initiation 334 cells/mm³ (standard deviation 236)*
- Overall, 31.9% had advanced HIV with a CD4 <200 cells/mm³
- Overall, 16.7% had HIV/TB co-infection at ART initiation

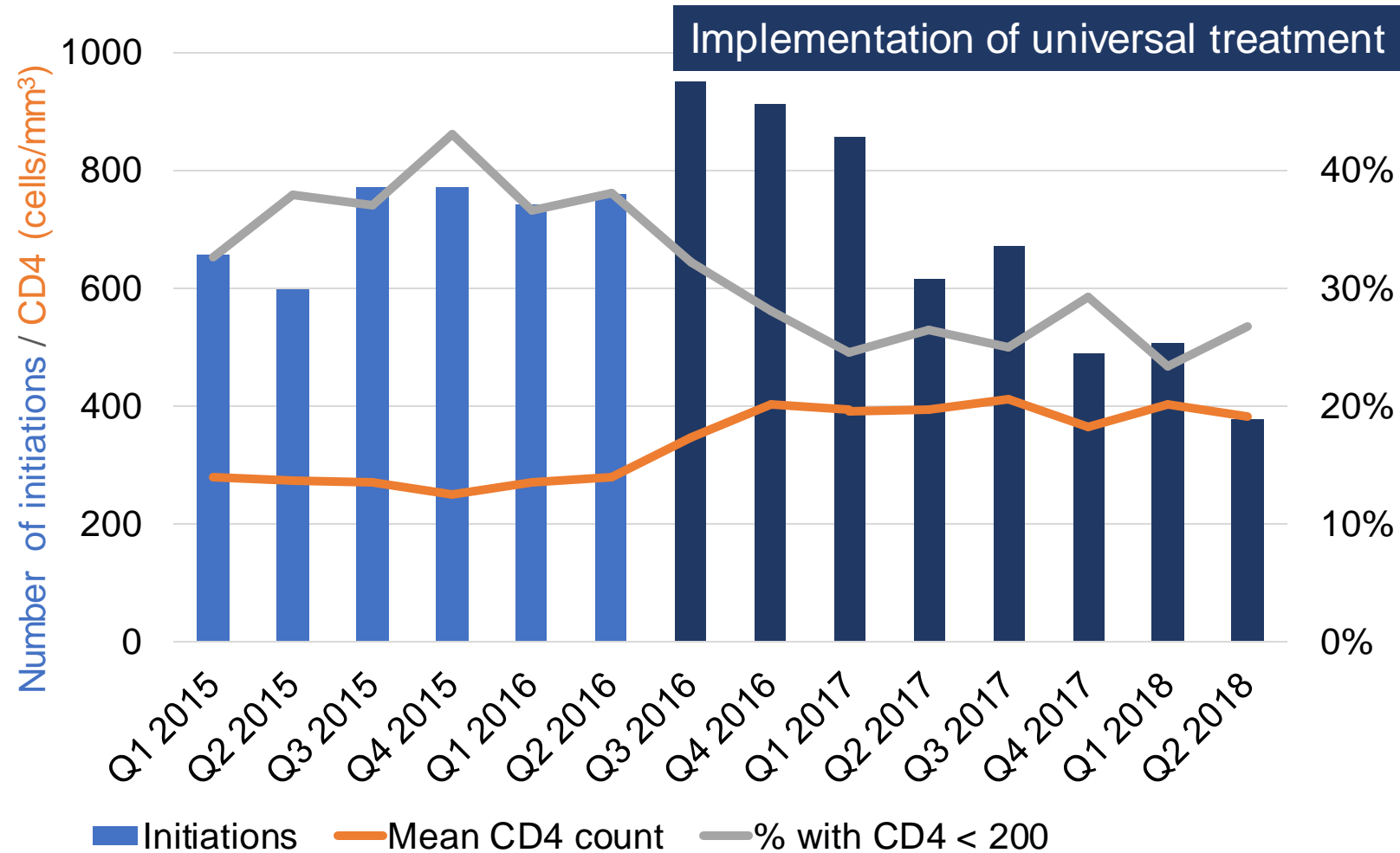
Results: ART initiations



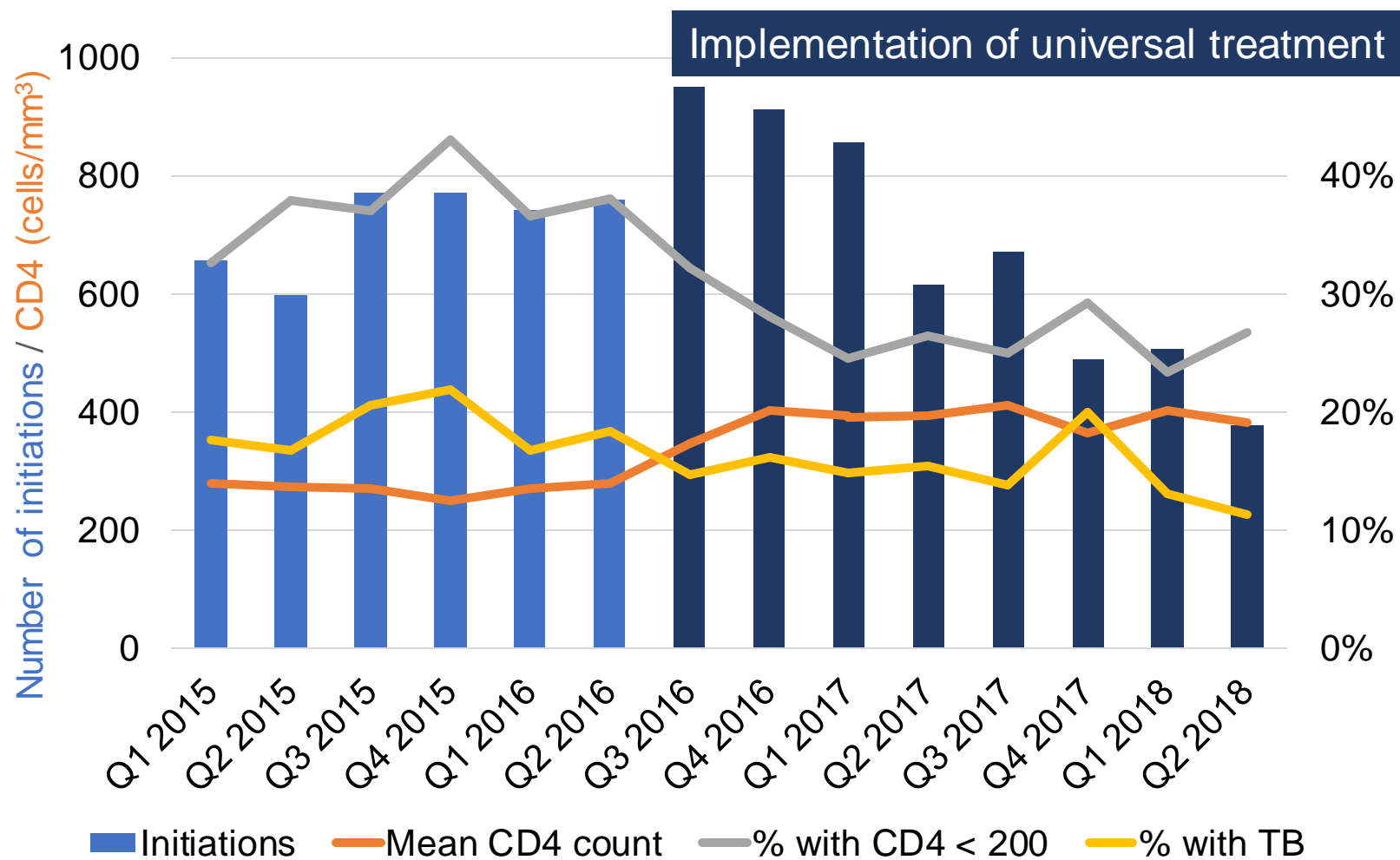
Results: Mean CD4 count at ART initiation



Results: Proportion with CD4 <200 cells/mm³



Results: Proportion with TB



Results

	Before universal treatment	After universal treatment
Number of ART initiations	750*	960*
Mean CD4 count	270 cells/mm ³ (SD 174)	386 cells/mm ³ (SD 266)
Proportion with CD4 <200 cells/mm ³	37.8% (95% CI 36.4-39.3)	27.6% (95% CI 26.4-28.8)
Proportion with TB	18.8% (95% CI 17.6-20.0)	15.0% (95% CI 14.1-16.0)

SD, standard deviation; CI, confidence interval. *in the quarter immediately before/after universal treatment

Discussion

- In this large urban South African clinic there was an initial rise in ART initiations, sustained increase in initiation CD4 count, and decrease in the proportion with TB at ART initiation after implementation of universal treatment
- Our study is limited by the single site study design, and may not be representative of all Ethekekwini clinics
- Further work is needed to assess the impact of universal treatment in a wider range of clinics in Ethekekwini, and to include treatment outcomes such as viral suppression.
- Overall, our findings support rollout of universal ART to combat the HIV and TB epidemic in this high prevalence urban setting.

Acknowledgements

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