Tenofovir Alafenamide (TAF) for treatment of HIV-1 in adults and adolescents in Leicester - A clinical audit.

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Background

The NHS England's Clinical Commissioning Policy clearly outlined the criteria for commencing Tenofovir Alafenamide (TAF), in patients with absolute and relative contraindications to Tenofovir Disoproxil Fumarate (TDF), due to renal and/or bone diseases/risks. It further provided requirements for audit purposes, which include: (1.) Patients with contraindications to other backbone switched to F/TAF. (2.) Estimated eGFR changes in patients commencing TAF-based ART

The aim of this audit was to compare our standard of practice to those set out in this policy by NHS England.

Method

Patients commencing TAF- based antiretroviral treatment (ART) between October 2017 to September 2018 were included. Data was obtained from pharmacy records, MDT Approval Forms and patients' medical notes.

Results

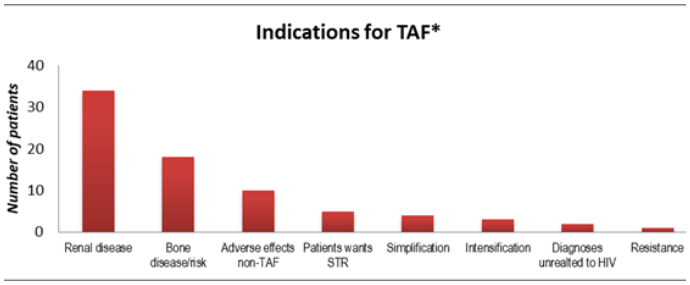

***Figure 1*: Indications for commencing TAF in the audited cohort.**

*** Some patients have more than one indication for TAF.**

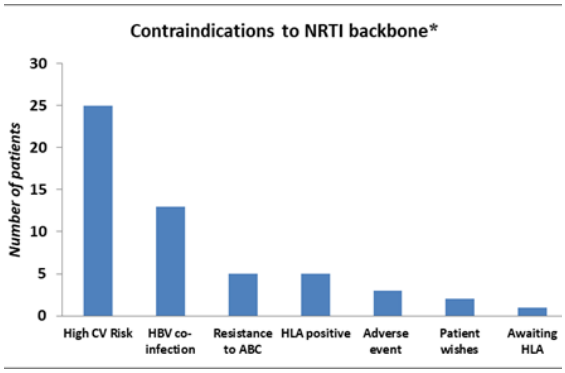

***Figure 2* : Contraindications to NRTI backbone in the patients commenced on TAF in this cohort.**

*** Some patients have more than one contraindication to NRTI backbone.**

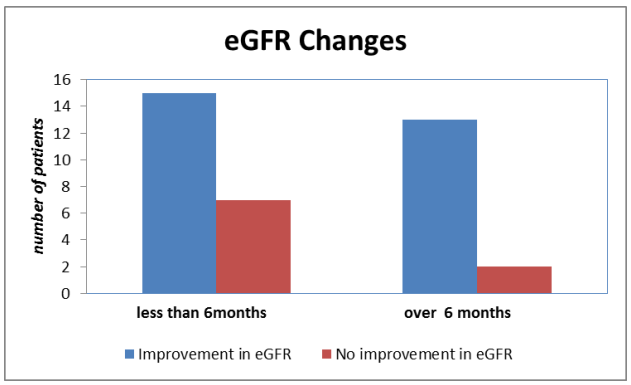

***Figure 3:* Mean eGFR changes post TAF commencement at less than 6 months and after 6 months.**

Colour bars:
Blue – improvement in eGFR; Red – no improvement in eGFR.

Sixty-five (65) patients were commenced on a TAF-based ART in the period audited.

Indications for TAF in this cohort ***(Figure 1):*** Renal disease (n=34), bone disease/ risk (n=18), adverse effect on non TAF regimen (n=10),patient's wishes(n=5),simplification (n=4), intensification (n=3), other diagnoses unrelated to HIV (n=2),and resistance mutation (n=1)

Contra-indications to other NRTI backbones in this cohort ***(Figure 2):*** High cardiovascular disease risk (n=25), HBV co-infection (n=13), HLA positivity (n=6), patient's wishes (n=2), adverse events on ABC (n=2) Resistance to ABC (n=5), not documented (n=12)

34 *(52%)*of these patients were commenced on TAF due to renal disease (according to the National Institute of Clinical Excellence definitions).

In patients with available eGFR results for six months or less ***(Figure 3)*** (n=22), 15 *(68%)* showed eGFR improvement from baseline in the first six months. Nine patients *(60%)* had a net eGFR gain between 1ml/min - 10 ml/min, while six patients (*40%)* had a net eGFR gain of more than 10ml/min.

Furthermore, in patients with available eGFR results for more than six months after TAF commencement ***(Figure 3***),(n=15), 13 (*87%)* showed improved eGFR from baseline - on TAF commencement. Of these, 7(*46%)* have eGFR of 60ml/min or above, while 6(*40%*) had eGFR 70ml/min or above.

Conclusion

This audit demonstrated that the adherence to guidelines on TAF (indications for TAF and contraindications to NRTI backbone), approached ninety percent, in patients with appropriate documentation.

The audit also highlighted eGFR improvement in patients commenced on TAF due to renal disease.

Areas for improvement will revolve around appropriate documentation and clearer MDT discussions on reasons for initiating TAF, guided by the national guideline.