

The establishment of hepatitis B care and treatment clinics in the United Republic of Tanzania: A demonstration project following WHO guidelines

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BACKGROUND

- 257 million persons with chronic hepatitis B virus (HBV) globally
 - 887,000 associated annual deaths: liver cirrhosis, liver cancer
- HBV prevalence in African region is 6.1%
 - 5–17% in Tanzania
- Few HBV care and treatment programs in Africa
- World Health Organization (WHO) issued HBV care and treatment guidelines in 2015 for low resource countries

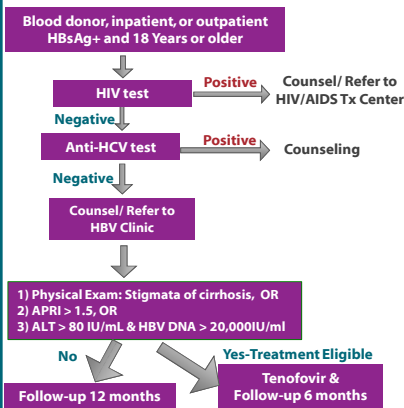
OBJECTIVE

- Demonstration project following WHO guidelines in Tanzania
 - Implement a model HBV care and treatment program
 - Evaluate the feasibility and acceptability of the program
 - Evaluate the impact of the program on proximal disease outcomes (improvement in liver enzymes and HBV DNA)
 - Increase the capacity of healthcare professionals to care for patients with chronic HBV

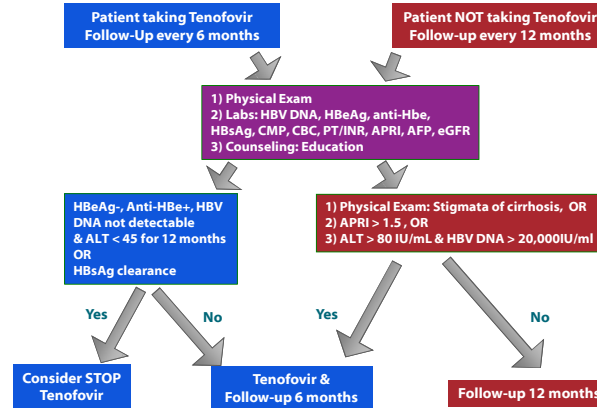
METHODS

- Project period: January 2017 – December 2021
- Two clinics of excellence established:
 - Muhimbili National Hospital, Dar es Salaam
 - Mnazi Mmoja, Zanzibar
- Partnerships
 - Ministry of Health
 - CDC-Atlanta and CDC-Tanzania
 - Regional WHO office
 - Hospitals/clinics
 - Blood donation program
- Training
 - Clinical staff to provide HBV care and treatment
 - Laboratory staff to perform HBV related laboratories
 - Community partners for communication and outreach
- Recruitment: mono-infected patients with HBV 18 years and older
 - Blood donors, patients from hospitals (inpatient), clinics (outpatient) screened HBsAg+ and HIV-, anti-HCV-negative 18 years and older
- Follow-up: Evaluate patient for antiviral treatment eligibility
 - Treatment eligibility criteria:
 - 1) Liver cirrhosis or
 - 2) APRI > 1.5 or
 - 3) ALT > 80 IU/mL & HBV DNA > 20,000 IU/ml
 - Treatment eligible patients followed every 6 months
 - Not treatment eligible patients followed every 12 months
 - Tenofovir provided as gift from Gilead Sciences

RECRUITMENT



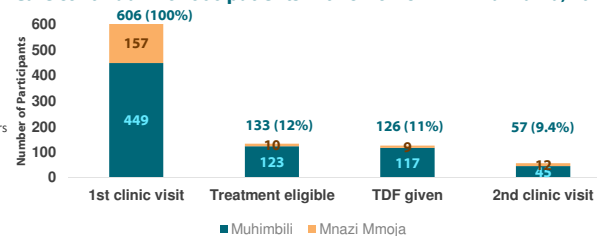
FOLLOW-UP



PROGRESS AFTER ONE YEAR (2017)

- Muhimbili National Hospital, Dar es Salaam
 - Large public University hospital with Gastroenterology
 - Endoscopy, ultrasound, HBV DNA lab capacity
 - Target enrollment 350 / year
 - Trained 10 physicians, 7 field assistance, 3 laboratory technician, 2 pharmacists, and 1 data manager
- Mnazi Mmoja Hospital, Zanzibar
 - Public hospital for Zanzibar; primary care and internal medicine providers
 - Endoscopy, ultrasound; no HBV DNA testing capacity (samples to MNH)
 - Target enrollment 150 / year
 - Trained 2 physicians, 2 nurses, 1 laboratory technician, 1 pharmacist, and 1 data manager
- 115 diagnosed with liver cirrhosis
- 46 with AFP > 200 IU/mL which may indicate liver cancer

Care continuum for 606 patients with chronic HBV in Tanzania, 2017



DISCUSSION

- Two clinics of excellence established to provide HBV care and treatment following WHO guidelines
- Successful recruitment and enrollment is on-going
- Challenges include:
 - Fluctuating costs of laboratory supplies including reagents for HBV DNA and HBV serology testing
 - Demand for HBV care and treatment is much higher than capacity to care for all the patients with HBV
 - Many patients presenting to clinics with advanced disease
 - Liver cirrhosis
 - Possible liver cancer (Hepatocellular carcinoma)
- Next steps:
 - Continue recruitment and enrollment
 - Continue HBV training and education
 - Monitor adherence to and side effects from TDF
 - Monitor and evaluate protocol implementation
 - Evaluate the feasibility and sustainability of continuing such a program in low resource settings, including cost analysis for Ministry of Health
 - Analyze data to evaluate impact of program on improvement in liver function and HBV DNA suppression

ACKNOWLEDGEMENTS

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