Mass Drug Administration & Test and Treat for HIV prevention

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What is Mass Drug Administration

- Mass drug administration (MDA) is the treatment of the entire population in a geographic area with a curative dose of a drug without first testing for infection and regardless of the presence of symptoms, except those in whom the medicine is contraindicated.

-- Centers for Disease Control

Some variations on MDA

- Mass screening and treatment (MSAT) and focal screening and treatment (FSAT) involve testing all people in a broad or defined geographical area and treating only positive cases.

Objectives

- Coordinated, often repeated
  - MDA is conducted in a coordinated manner, so that the drug is taken at approximately the same time by the whole population at risk, often at repeated intervals.
- Objectives of MDA include
  - Reduce or interrupt transmission
  - Rapidly reduce disease morbidity and mortality, or
  - Prevent relapses and resulting onward transmission

In the context of malaria

- MDA aims to provide **therapeutic concentrations** of antimalarial drugs to as **large a proportion** of the population as possible in order to cure symptomatic and asymptomatic infections and to prevent re-infection during the period of post-treatment prophylaxis.

- To impact on transmission, MDA requires high coverage of the target population which, in turn, demands a high level of community participation and engagement.

- Until recently, WHO did not recommend MDA for malaria as the evidence suggested MDA was not effective in reducing transmission. In 2015, WHO changed guidance to allow MDA in exceptional circumstances (i.e. health systems overwhelmed) and in low-endemic areas approaching elimination. Using current diagnostic tests, MSAT and FSAT not suitable to reduce transmission.

What is HIV 'Test and Treat'

- Offering HIV voluntary counseling and testing (VCT) to the entire population, and offering immediate ART to all those testing HIV-positive irrespective of clinical stage or CD_4 count.

Rationale for Test & Treat for HIV

- Screening and treatment for the public good
- At best it would prevent morbidity and mortality, both through better treatment of the individuals and reduced spread of HIV, potentially eliminating HIV from society.
- At its worst, the strategy will involve over-testing, over-treatment, side effects, resistance, drain of resources, and potentially reduced autonomy of the individual in their choices of care

HIV Test and Treat studies

Two key studies informing HIV Test and Treat:

- HPTN 052 – 2012: early ART associated with >90% reduction in HIV transmission, and lower rate of death, severe illness and clinical adverse events
- ANSR 12136 (TEMPRANO) – 2016: Immediate ART lowers rates of severe illness, does not increase adverse events

4 large ongoing community trials to evaluate HIV Test and Treat on HIV prevention

- ANRS 12249 – July 2016: no effect on HIV transmission, only 49% took ART after diagnosis ; reached 90:49:90
- SEARCH – results in 2017; reached 90:90:90
- POPART – results in 2018; reached 85:99:tbd
- BOTSWANA – results in 2018