

# Challenges in effective TB/ART Integration and The Riddle of Monitoring Referrals in Routine Public Health Services

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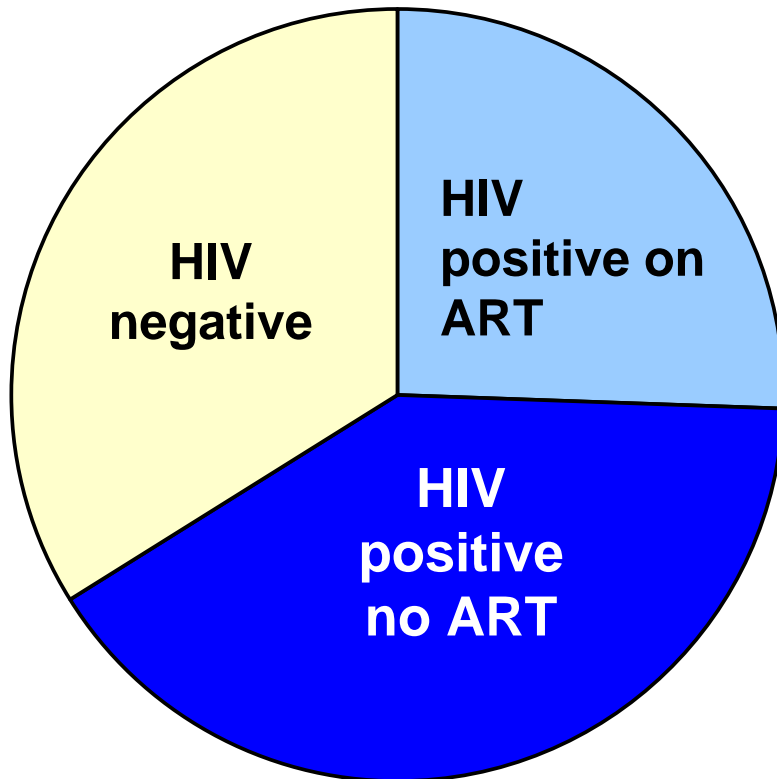


**LIGHTHOUSE**



# Estimates for Malawi

***60% of TB/HIV patients don't get on ART***



**27,000** TB patients per year  
but case detection <50%  
(51,000 estim. cases)

**66%** TB patients HIV +

**16%** TB case-fatality

# TB treatment in Malawi

## Centralized Initiation – Decentralized Continuation

- **48** facilities start treatment
- **600** facilities continue treatment, incl. one ART clinic
- Standard TB regimen (6 months, rifampicin throughout)
- HIV testing initiated by TB officers – usually referral
- TB/HIV patients clinically eligible for ART
  - If CD4 available: “ART to be deferred if the CD4 count is too high.”

No ART from TB clinics (non-medical staff at TB)

# ART in Malawi

## Specialized ARV clinics in public & private facilities

- Successive roll-out *since 2004*
- Existing clinicians and nurses with ART training
- **200** facilities start and continue ART (2008)
- Over **100,000** patients alive on ART
- Standard ART regimen stavudine / lamivudine / nevirapine
- Start ART **2 months** after TB treatment initiation

# Our Facility

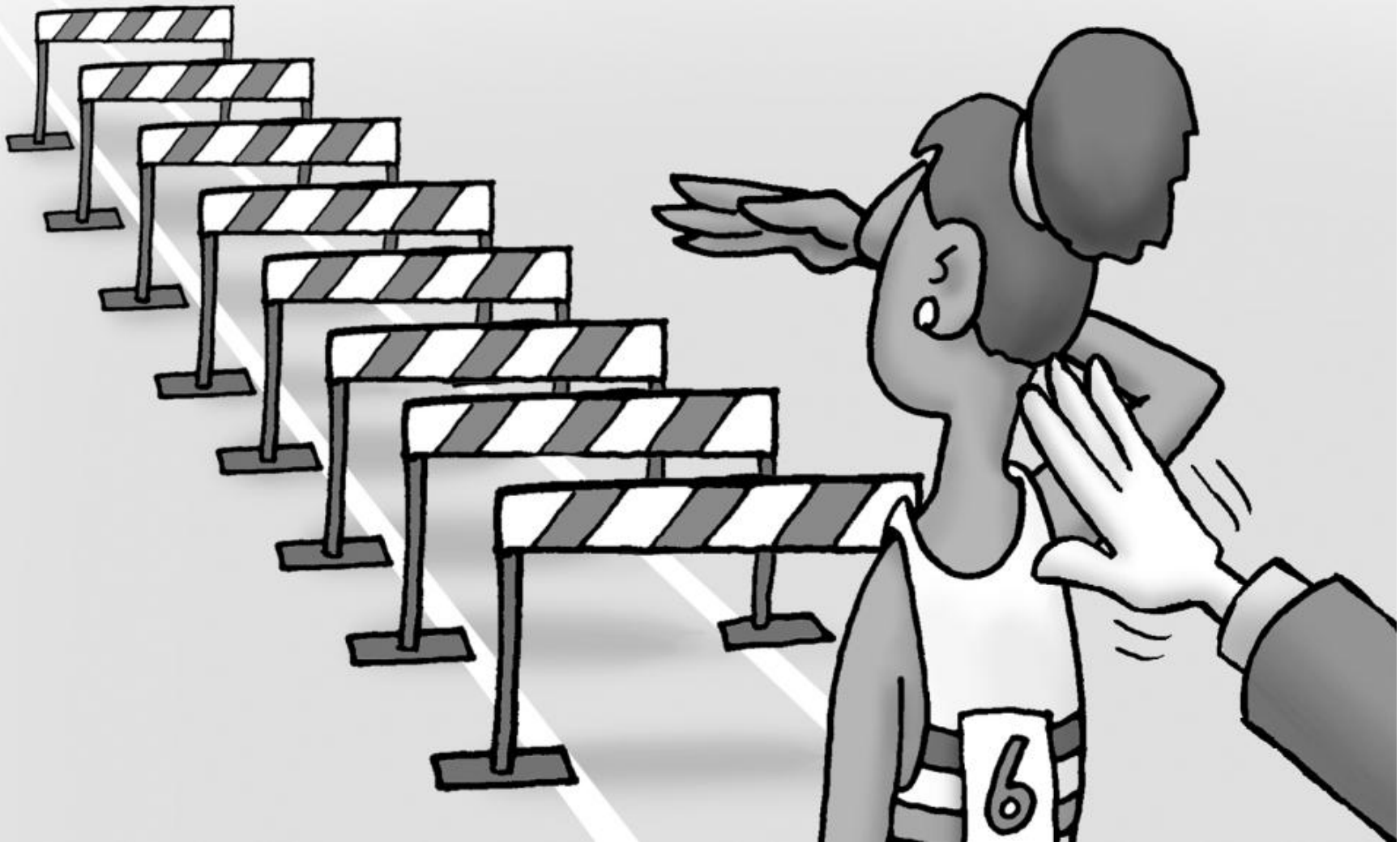
## Martin-Preuss-Centre at Bwaila Hospital

- Located in Lilongwe, Malawi's capital
- Malawi's first integrated TB/ART clinic (*opened 2006*)
- Collaboration between DHO and Lighthouse Trust
- Largest TB registry: **3,700** patients per year
- HIV clinic: **2,300** patients on ARV – **250** new per month
- Separate TB & ART wings, front-desk channels patients
- **Model for national program – all must be replicable**

# Disappointing Early Results

**36%** of TB/HIV patients receiving TB treatment at MPC started ART (300 / 830)

# From TB registration to ART...



# Hurdle 1: Ascertain HIV-status

## **Routine session with HIV counsellor**

- Counseling room integrated into patient flow
- One-to-one discussion about HIV
- Review of HIV test history
- Provider initiated 'opt-out' in-session testing
- Suggest HIV test again if previously refused

# Hurdle 1: Ascertain HIV-status

**What we found: It works**

**92%** HIV status ascertained (3183 / 3472)

**41%** Know status from prev. test (1294 / 3183)

**68%** HIV infected (2165 / 3183)

**21%** Already on ART (457 / 2165)

# Hurdle 2: TB treatment retention

## **Managed by TB officers**

- Monthly TB drug dispensing visits
- Choice where to continue
- Treatment card filing system for follow-up

# Hurdle 2: TB treatment retention

## What we found: **Challenges**

**16%** Lost follow-up by 2 months (118 / 734)

**2%** Known dead by 2 months (12 / 734)

# Hurdle 3: Sputum conversion

**Sputum smear pos. patients need smear neg. result before admission to ARV clinic**

- Standard sputum collected at 2 month visit
- High number of samples for lab

# Hurdle 3: Sputum conversion

**What we found:**      **Challenges**

Sputum result can delay ARV clinic registration

Often additional visit to collect result

# Hurdle 4: Referral to ARV Clinic

## **At 2 month TB treatment visit:**

- Collect TB drugs
- Sent around the corner to ARV clinic reception

# Hurdle 4: Referral to ARV Clinic

## What we found: **Challenges**

**30%** Of patients

- Alive 2 months after starting TB treatment
- Still coming to collect TB treatment
- Known HIV positive

→ *Chose not to go to the ARV clinic*

# Hurdle 5: Preparation for ART

## Standard protocol for ART initiation

- Registration at ARV reception
  - Check documented HIV test result, sputum result
  - Mandatory guardian
- Clinical assessment and stabilization
- Group education on life-long ART
- ART initiation 1 week later

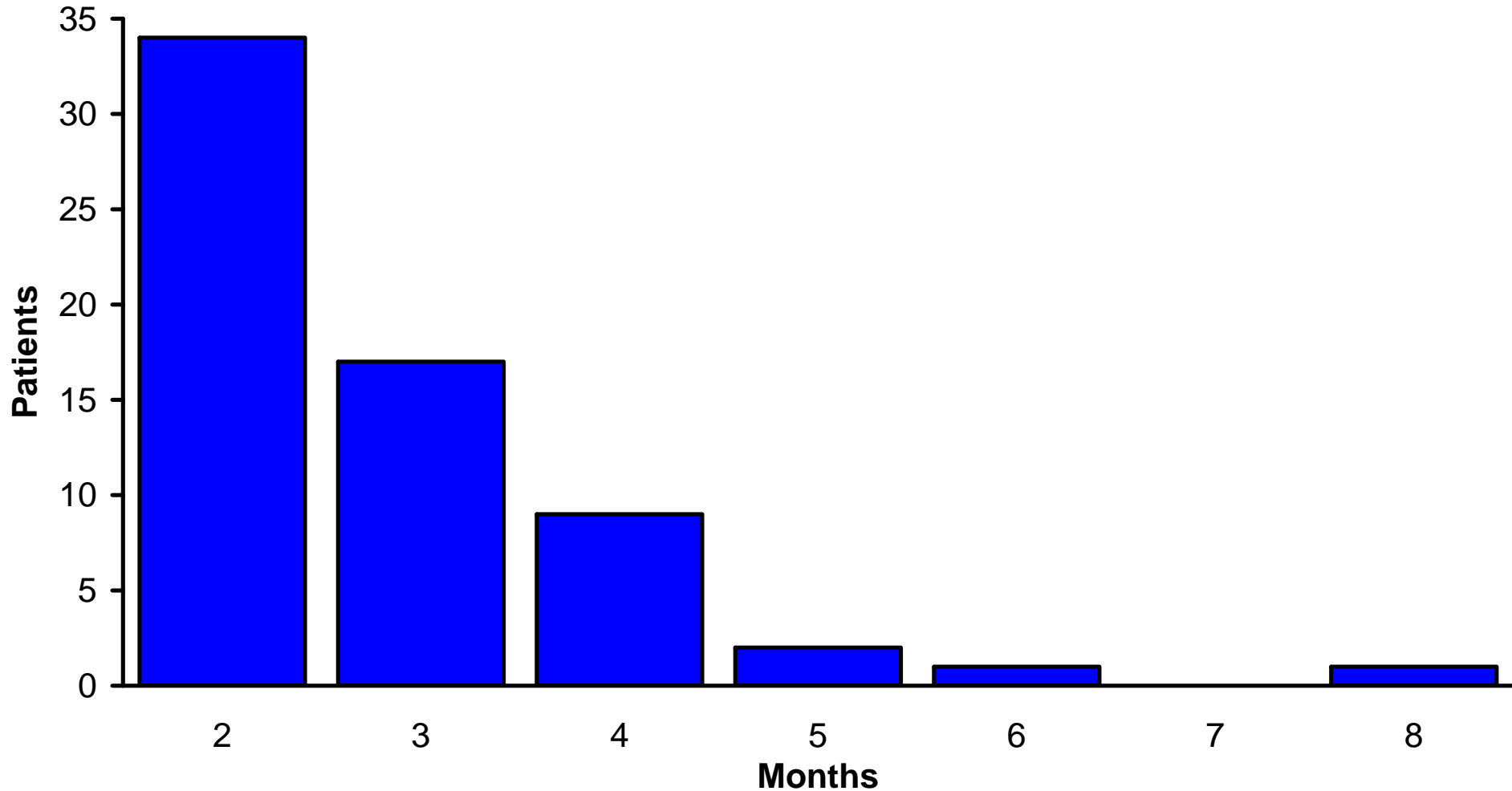
# Hurdle 5: Preparation for ART

**What we found:**      **Challenges**

44% of patients didn't return to start ART

# Many started ART late

Months from TB registration to ART start  
*(Period Jan - Mar 2008)*



# Conclusions

- *'One-stop-shop'* not enough
- Patients reluctant: pill burden, side-effects, ?
- Near complete ascertainment of HIV status
- Diagnostic hurdles: can cause delays
- 'Open system' for referrals – hard to monitor

# Recommendations

- Integrate dedicated HIV counselors into TB
- Place ART clinicians in TB clinic
- Minimize diagnostic hurdles
- Intensify information and education
- Initiate ART earlier than 2 months?
- Cohort monitoring system to analyze drop-outs

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