

# **Development Considerations of Antimicrobial Drugs for the Treatment of Gonorrhea: Investigator Perspectives**

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## Disclosures

Grant/Research  
Support:

NIAID

Consultant:

GARDP, Visby Diagnostics

Speakers Bureau:

None

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## Disclosures

Grant/Research  
Support:

GlaxoSmithKline, GARDP,  
Melinta

Consultant:

None

Speakers Bureau:

None

# Outline

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- 1. Background- Clinician and Investigator perspectives**
- 2. Clinical Trial Sites**
- 3. Trial Participants**
- 4. Diagnosis, Endpoints**
- 5. Continuing Issues and Challenges**

# **Background Clinician Perspective**

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- 1. Confidence in current therapy**
- 2. Limited venues for administration of injectables-preference for oral therapies  
(EPT now constrained by lack of approved oral therapies)**
- 3. The challenge of penicillin allergy**

# **Background: Investigator Perspectives**

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- 1. Clinical trial design has changed little in the past 40 years**
- 2. Expectation of >95% efficacy**
- 3. Clinical needs have evolved**
  - A. The threat of AMR**
  - B. Reliance on a single medication class (Beta-lactams)**
  - C. Rectal and oropharyngeal infections**

# Clinical Trial Sites

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1. **Dedicated Public Health Sexual Health Clinic (Highest prevalence setting)**
2. **Family Planning Clinics**
3. **Adolescent Clinics**
3. **HIV/Other**

# Trial Participants

## Sites of Infection

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### 1. Men

A. MSW: Urogenital

B. MSM:

Rectal>Oropharyngeal>Urogenital

### 2. Women:

Urogenital>Rectal>Oropharyngeal

### 3. Adolescents

Variable



# **Trial Participants**

## **Sites of Infection (cont.)**

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### **Oropharyngeal ⇌ Rectal Infections**

#### **Rectal:**

**Acquisition thought direct inoculation or, in women,  
local contamination**

**Questions related to complications**

#### **Oropharyngeal:**

**Acquisition only through direct inoculation**

**Variable sampling**

**Higher treatment failure rates**

**Questions related to transmissibility, complications**

# Trial Participants (Cont.)

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## Enrollment Strategies

1. Males – typically symptomatic, confirmed by gram or rapid stains
2. Women:
  - A. Symptoms unreliable
  - B. Enrolled as contacts to infected partners or following positive screening test
3. Adolescents
  - A. STI Clinics
  - B. Adolescent Clinics

# **Trial Participants (Cont)**

## **Enrollment Challenges**

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**MSW : Few**

**MSM: Predominance of rectal and oropharyngeal infections**

**Women:**

**Identification of infected persons**

**Contraceptive/Pregnancy issues**

**Adolescents:**

**Variability in ability to consent**

# Diagnosis and Outcome Measurement

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1. Gram and other rapid staining methods
2. Culture
  - a. Site specific sensitivity issues
  - b. Currently required for susceptibility testing
2. NAATs
  - a. Residual nucleic acids
  - b. Challenges to determination of susceptibility
3. Point of Care Tests: Pros and Cons

# Diagnosis and Outcome Measurement (Cont.)

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## 3. Point of Care

### a. Pros

Increased enrollment efficiency  
(particularly for females and extra-genital infections)

### b. Cons

Identification of co-infections

# Co-Infections

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## 1. *Chlamydia trachomatis*

Relatively common, GC often susceptible to rx

## 2. *Trichomonas vaginalis*

Relatively common, therapy not active vs GC

## 3. *Treponema pallidum* (syphilis)

Relatively uncommon, historical interest

## 4. *Mycoplasma genitalium*

Variable prevalence, routine testing not currently recommended.

# **Future Clinical Trial Considerations: Investigator Perspectives**

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- 1. Frustration- are current criteria too stringent**
- 2. Are “optimal” medication characteristics the enemy of the good? e.g. single vs. multiple doses, oral vs injectable regimens.**
- 3. What to do about rectal and oropharyngeal infections.**
- 4. Outcome measurements- NAATs vs culture**
- 5. Impact of studies on clinic flow augmented by awkward clinical trial design**

**Thank You**