

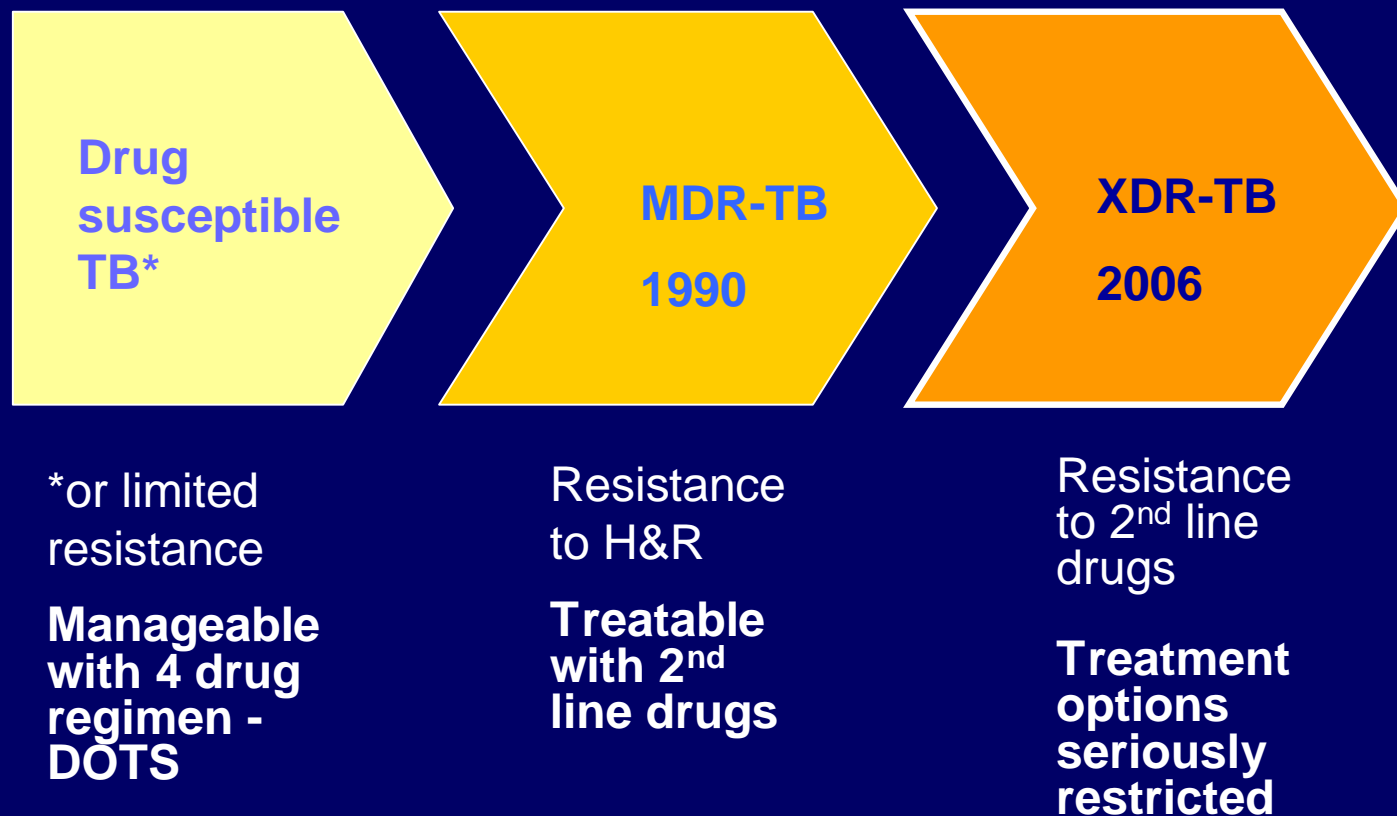
# **Addressing the Threat of Drug Resistant TB: A Blueprint for Action**



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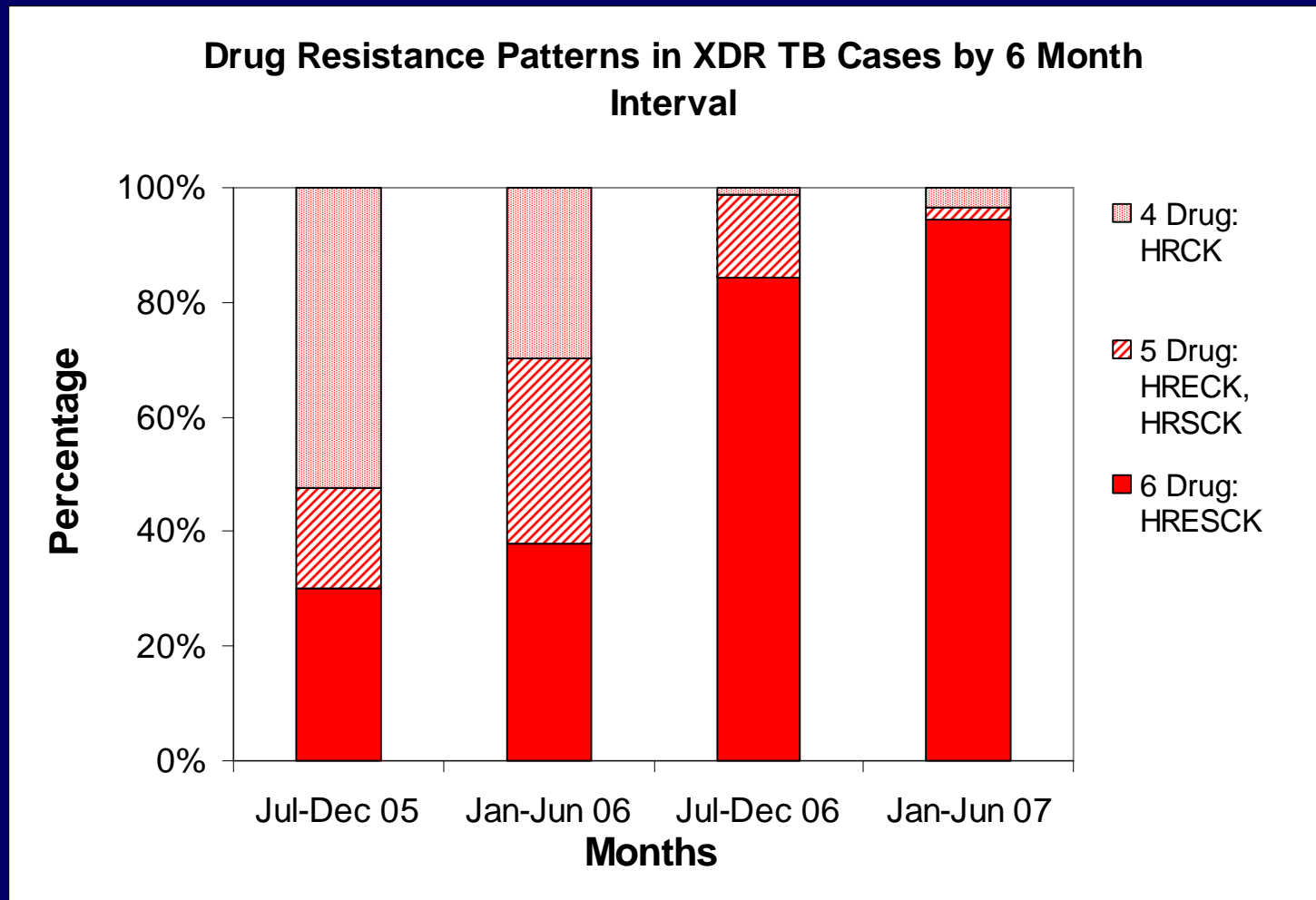
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# The Evolution of Drug Resistance



*Adapted from Paul Nunn, Global Task Force on XDR TB, Geneva, 2006*

# Drug Resistance Pattern of XDR TB Isolates



Moll A, Gandhi NR, Andrews JA, et al. 38th Union World Conference on Lung Health, Cape Town, 2007. Abstract No. PC-721 12-12.

## Beyond XDR TB?

- Resistance to additional first-line and second-line drugs (e.g., ethambutol, streptomycin, PAS, cycloserine, ethionamide)
- Among 234 XDR TB isolates in global SRL survey, subset showed additional resistance beyond the “minimum” four drugs in definition
- 118 (50%) isolates resistant to all first-line drugs
  - 57 (48%) with additional resistance to 4, 5, or all 6 second-line drug classes

# Implications

- **Number of MDR & XDR TB patients continues to increase worldwide**
- **XDR TB isolates resistant to increasing number of drugs *tested***
- **Diagnostic tests must identify resistance to multiple first- and second-line drugs for accurate diagnosis and treatment**
- **Diminishing number of available drugs for treatment of XDR TB (and beyond) patients**

# Plan for Action

- **Experience Sharing**
  - Across diseases
  - TB Regional Centers of Excellence à “Yes we can”
  - In-country, sustained technical assistance
- **Health systems-based approach**
  - Laboratory scale-up: Facilities, staff, and/or equipment
  - Integrated, patient-centered treatment: MDR-TB and HIV co-management