Implementation of ASMQ
Brazilian experience

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Malaria numbers – Brazil, 2009

- 49 million people in risk areas
- 2,6 million thick smears
- 310,000 confirmed cases
  - 86% *P. vivax* infection
- 4,623 hospitalizations
  - 13% in under five
- 79 reported deaths
Distribution of Malaria – Brazil, 2009

Data source: SIVEP-Malária/SVS/MS, created by Lapouble

API = Annual Parasite Incidence

ASTMH 59th Annual Meeting - Atlanta  November 5, 2010
Malaria Cases - Brazil, 1960-2010

Cases x 1.000

Data source: SISMAL and SIVEP-Malaria/SVS/MS, recidives were excluded

ASTMH 59th Annual Meeting - Atlanta  November 5, 2010
Diagnosis and Treatment – Free of charge

- **Diagnosis**
  - Thick smear or Rapid Diagnostic Tests (RDT)
  - Parasitological confirmation is required for treatment

- **P. vivax**
  - Chloroquine and primaquine

- **P. falciparum**
  - Artesunate + mefloquine
  - Artemether + lumefantrine
  - 1\(^{st}\) trimester pregnancy: quinine and clindamycin
  - 80% treated with ACT in 2009

ACT = Artemisinin-based Combination Therapies
Farmanguinhos / Fiocruz

- Instituto de Tecnologia em Fármacos
  - Pharmaceutic lab linked to Ministry of Health
  - Created in 1956
- Part of Fundação Oswaldo Cruz (Fiocruz)
  - Scientific and technical unit
- > 1 billion medicines/year for Brazilian Government
- Over 50 types
  - Antibiotics, NSAIDs, painkillers, antiretrovirals, medicines for malaria, tuberculosis, diabetes, hypertension, cardiovascular and central nervous system
Partnerships

- Drugs for Neglected Diseases Initiative – DNDi
  - Development (2002)
  - Registration (2008)
  - Fixed-dose combination of Artesunate+Mefloquine (ASMQ)
- Cipla – India
  - Offers technology for ASMQ production
  - South-South collaboration

TDR/WHO = Tropical Diseases Research and Training, MSF = Médecins Sans Frontières
From Development to Implementation

- Controlled intervention in Acre State
  - Area 152,581 km² (58,912 sq mi)
  - Population 691,132
  - HDI (2005) - 0.751 - medium

HDI = Human Development Index
Intervention Study

- Jurua Valley
  - June 2006 – December 2008
- Previous 1st line treatment
  - Quinine and doxycycline
- 32,324 patients with falciparum malaria treated
Malaria Control Program – Jurua Valley

- **2005**
  - Systematic screening included as routine for CHW

- **2006**
  - Increase in number of diagnosis labs and human resources

- **2007**
  - Improvements in medicines storage and inventory
  - Political and community involvement in malaria control

- **2008**
  - 7,000 LLIN installation in 17 localities in Jurua Valley

CHW = Community-based Health Workers, LLIN = Long lasting insecticide impregnated nets
Pf/Pv ratio – Jurua Valley, 2004-2008
Progress of FACT in Brazil

- 2006-2007: Intervention Study
- 2008: Study results, ASMQ registration
- 2009: ASMQ deployment to Acre state
- 2010: ASMQ scale-up to other states
Thank you

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