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# Are prescriptions in an MSF hospital in Sierra Leone adherent to standard treatment guidelines?

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# Background (1): Rational drug use

- **WHO definition:**
  - Correct drugs
  - Correct dosage & duration
  - Lowest cost
- **Irrational drug use: major public health challenge**
  - Direct harm
  - Accelerates resistance development
  - Wasteful

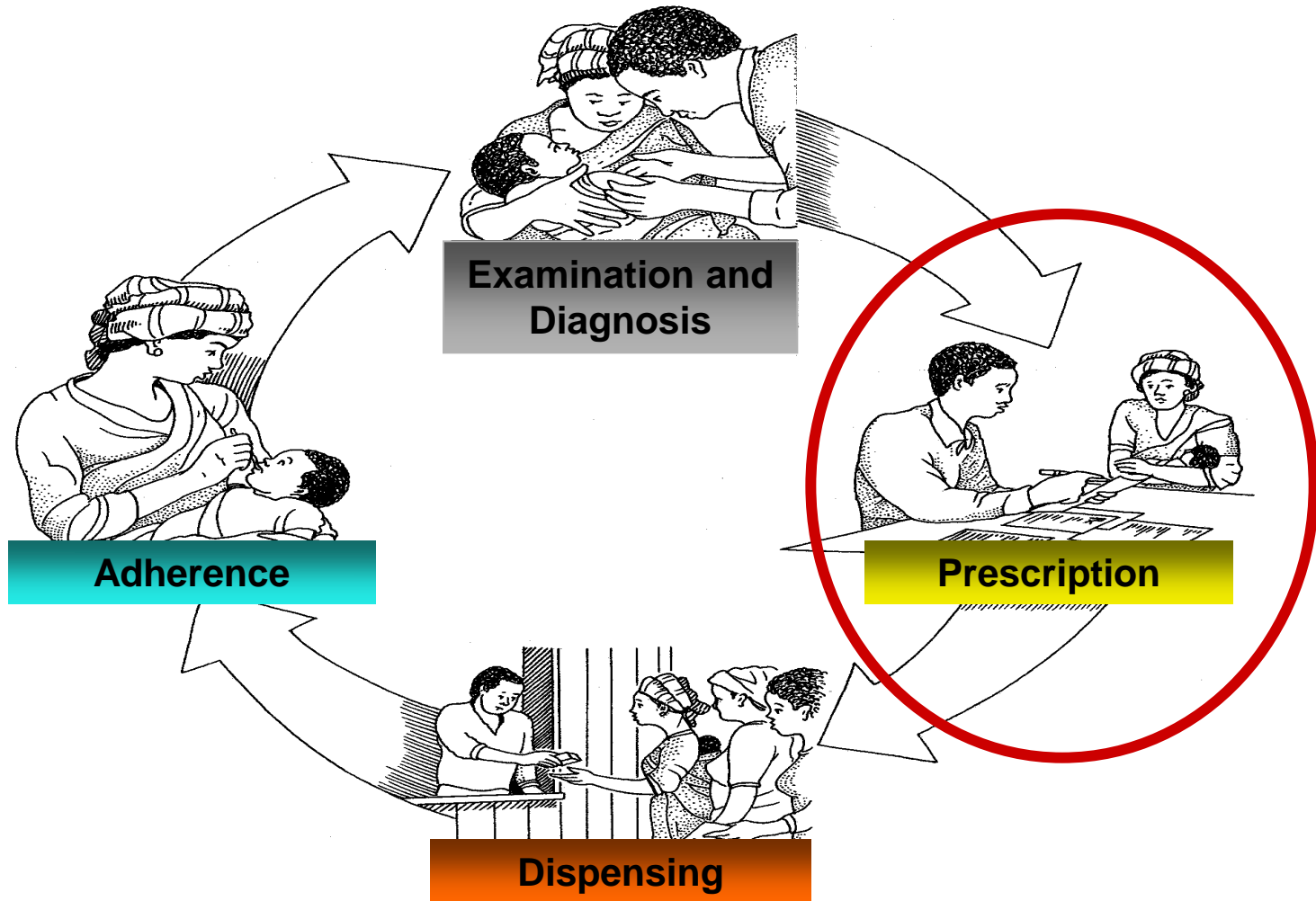


## Background (2): Standard treatment guidelines



- Standard treatment guidelines can strongly reduce irrational drug use.
- **However: are these guidelines adhered to?**

# Background (3): Non-adherent prescriptions



# Background (4): Setting



## The **Gondama Referral Centre (GRC):**

- Large (220 beds) MSF hospital
  - Offers paediatric and emergency obstetric care
  - 100% MSF-managed
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- GRC therefore represents an ideal model setting to analyse prescription behaviour in an MSF hospital setting

# Objectives

In the GRC, Sierra Leone to assess:

- Adherence to paediatric treatment guidelines for malaria and LRTI treatment in the first 24h after admission
- Patterns of possible non-adherence



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# Methods (1)

- **Study design:** retrospective analysis of routine programme data (case files)
  - **Study sites:** Gondama Referral Centre, Sierra Leone
  - **Study period:** January-April 2011
  - **Study population:** All paediatric inpatients
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# Methods (2): Definitions

## ■ **Definition of non-adherence:**

- Treatment regimen: any regimen not listed as first line, alternative first line, second line or alternative second line in the treatment guidelines
  - Dosage: any daily dosage deviating more than 10% from the recommended daily dosage
  - Frequency: any non-recommended daily frequency
  - Duration: any non-recommended treatment duration
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## Methods (3): Process

- Treatment regimens prescribed in the first 24h after admission entered into a database
  - Screening for possible non-adherence – using an automated search algorithm
  - Cases flagged as possibly non-adherent audited by an independent clinician
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# Results (1): Population characteristics

**Out of 1605 case files:**

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<b>Mean age (months)</b>	16 (IQR 8-32)
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<b>Gender: female</b>	680 (42%)
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<b>Malaria (&gt;61% severe malaria)</b>	865 (54%)
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<b>LRTI (&gt;74% severe LRTI)</b>	691 (43%)
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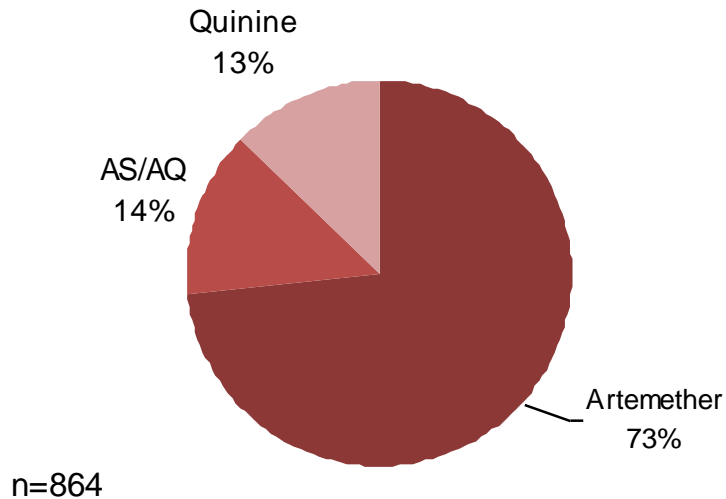
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# Results (2): Prescription characteristics

865 malaria cases:

- 864 antimalarial prescriptions

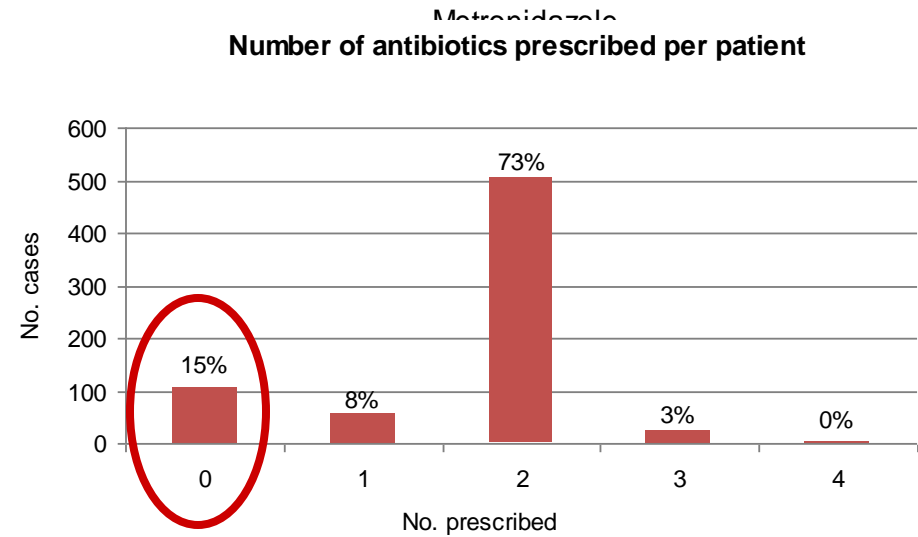
Antimalarial prescriptions



691 LRTI cases:

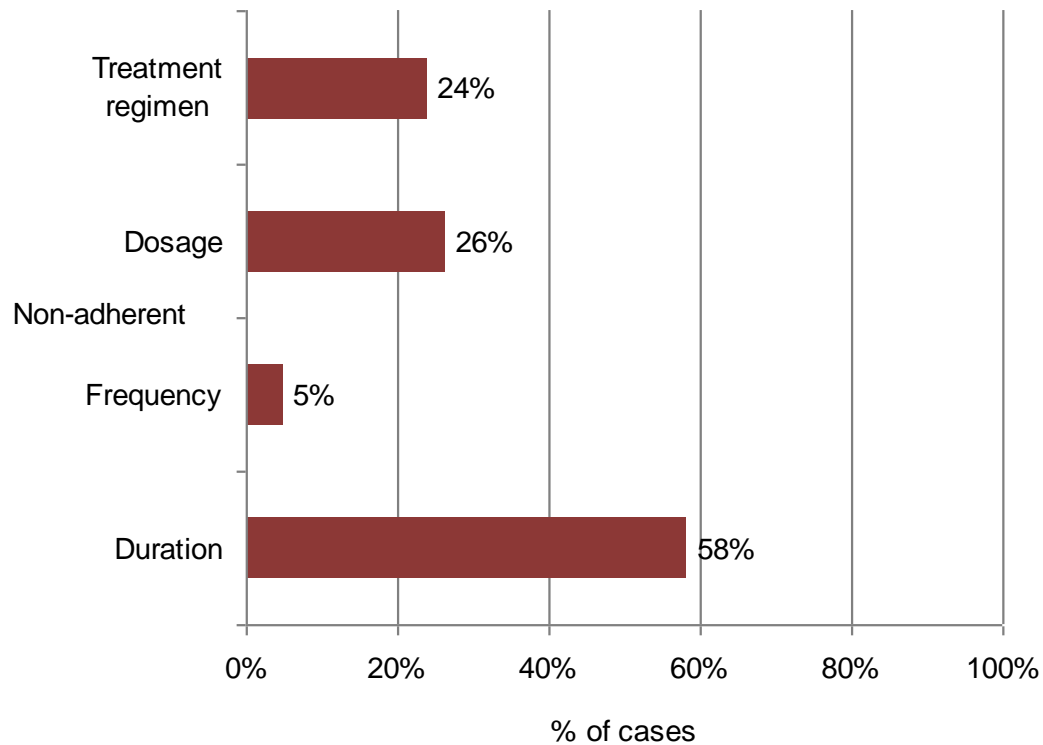
- 1143 antibiotic prescriptions

Antibiotic prescriptions



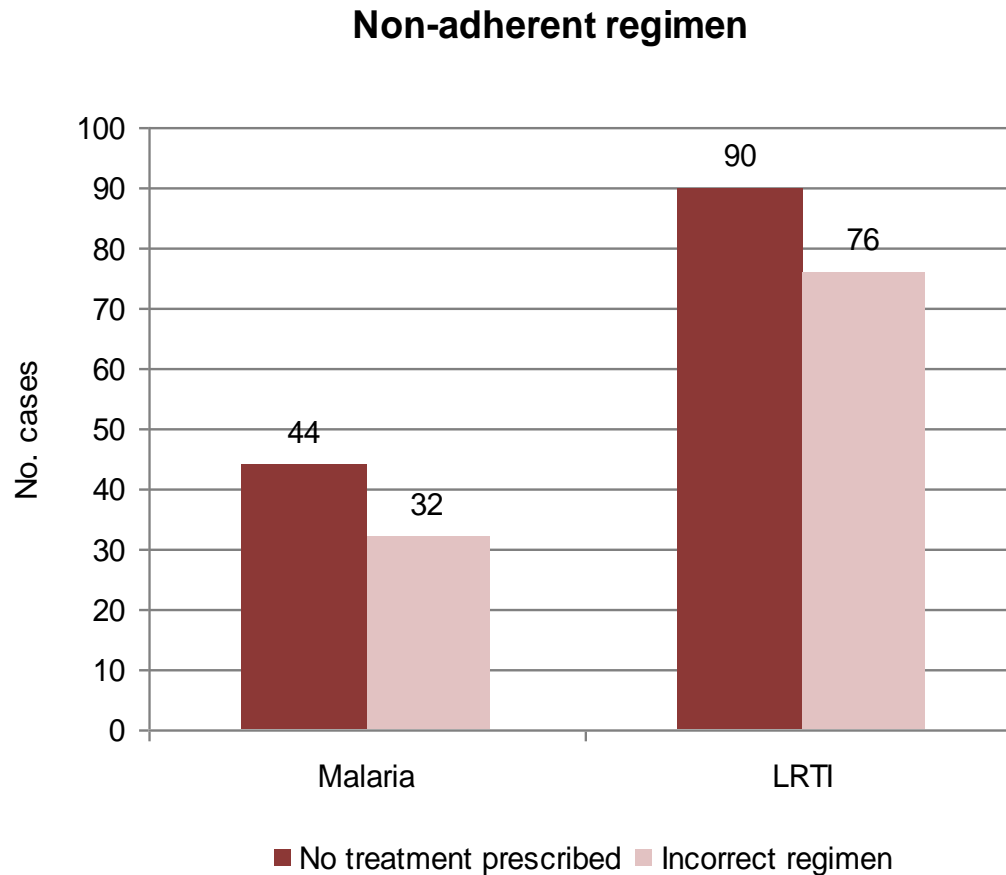
# Results (3): Patterns of non-adherence

**LRTI treatment - types of non-adherence**



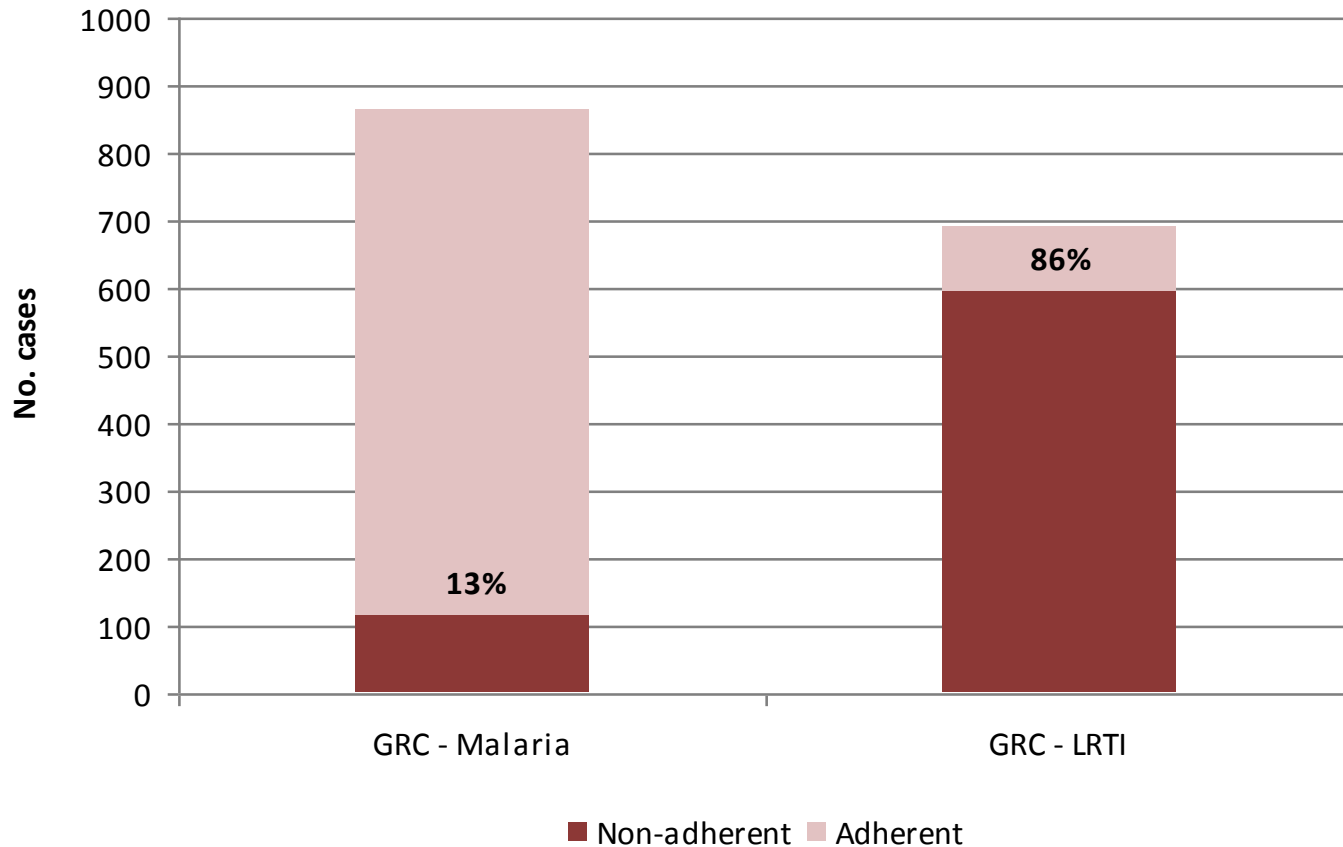
# Results (4): Patterns of non-adherence

## Regimen



# Results (5): Overall guideline adherence

Cases with non-adherent prescription



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# Conclusions

- Prescription adherence to a more straightforward guideline (malaria) is relatively acceptable
  - For a more complex guideline (LRTI), two major issues require further investigation:
    - 15% of LRTI cases did not receive a prescription
    - Non-adherent regimen and treatment dosage & duration for LRTI
  - Patterns of non-adherence differ considerably between drugs, and specific analysis is needed
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# Take-home message

In a rural MSF hospital in Sierra Leone,  
standard treatment guidelines were adhered to  
in:

- More than 8 in 10 prescriptions for malaria
- Less than 2 in 10 prescriptions for LRTI

Need to understand the underlying reasons for  
non-adherence

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# Many thanks



To the Sierra Leone mission, the GRC staff, the OCB Medical Department  
and the patients and beneficiaries of MSF

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