

Factors Associated with Interruption of Treatment Among Pulmonary Tuberculosis Patients in Plateau State, Nigeria, 2011

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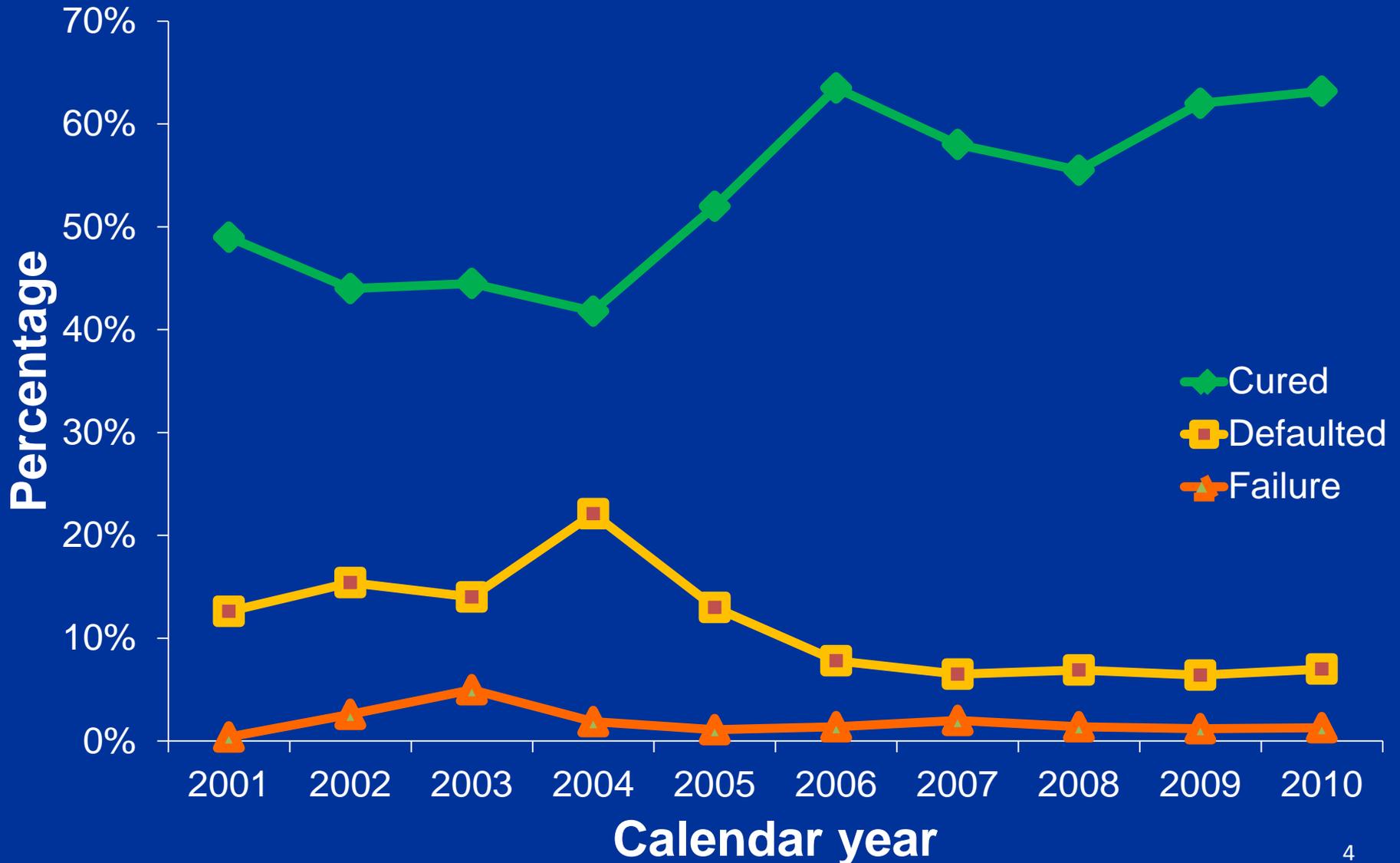
Introduction

- Tuberculosis (TB) is a global health problem
 - One third of world population is infected
 - 1.1 million deaths in 2010
 - 95% of deaths in low and middle income countries
- 22 countries account for 80% of the TB burden
- Nigeria ranks fifth among the 22 countries
 - Incidence of 311 /100,000 (**World TB report 2010**)

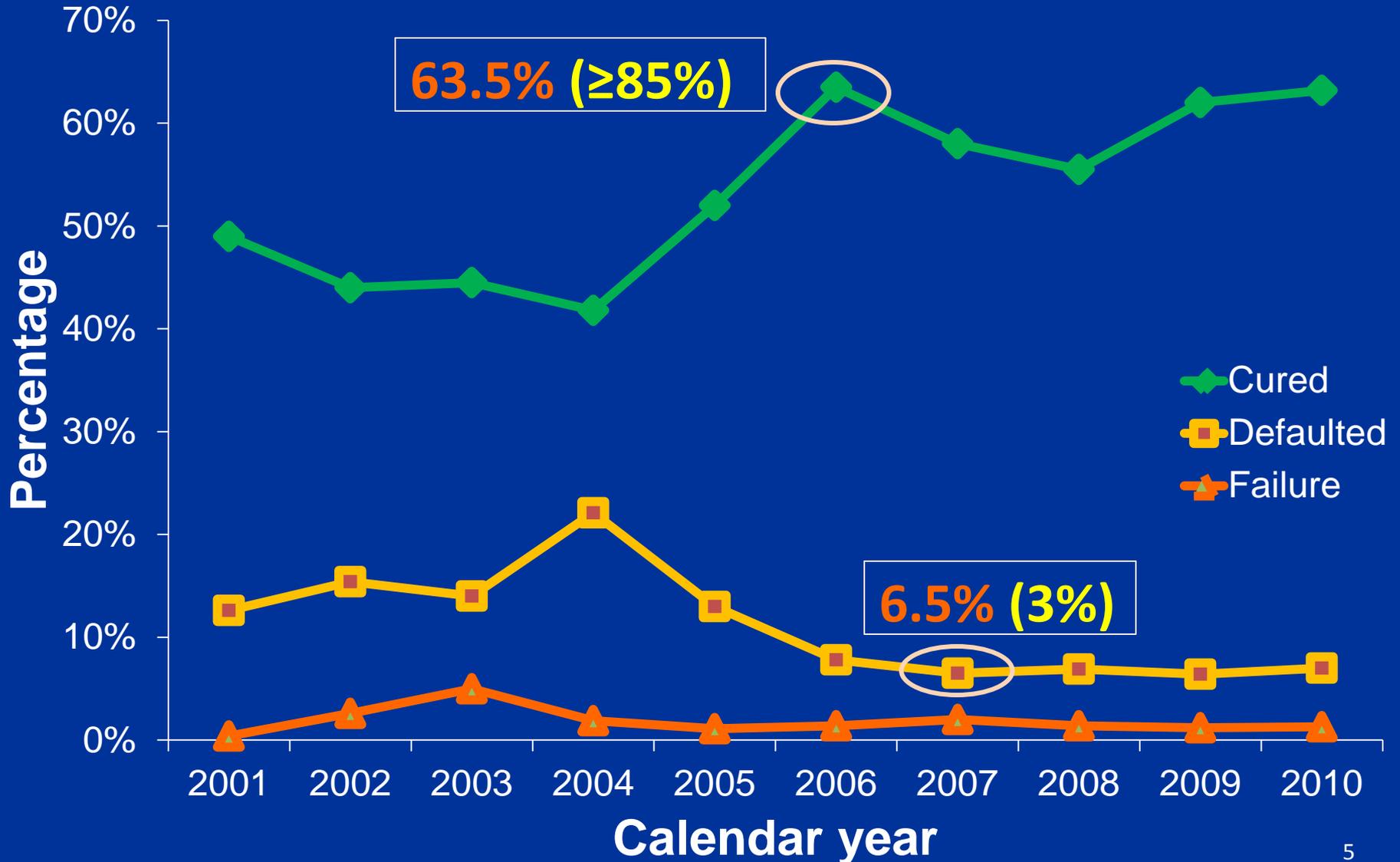
TB treatment strategy

- Directly observed treatment short course (DOTS)
 - Direct observation of patients in the intensive phase of treatment
 - Reduces morbidity and mortality
 - Prevents multi-drug resistant TB (MDR-TB)
 - Caused by inadequate or incomplete treatment
 - Adopted in Nigeria in 1996

Outcomes of TB treatment in Plateau state 2001-2010



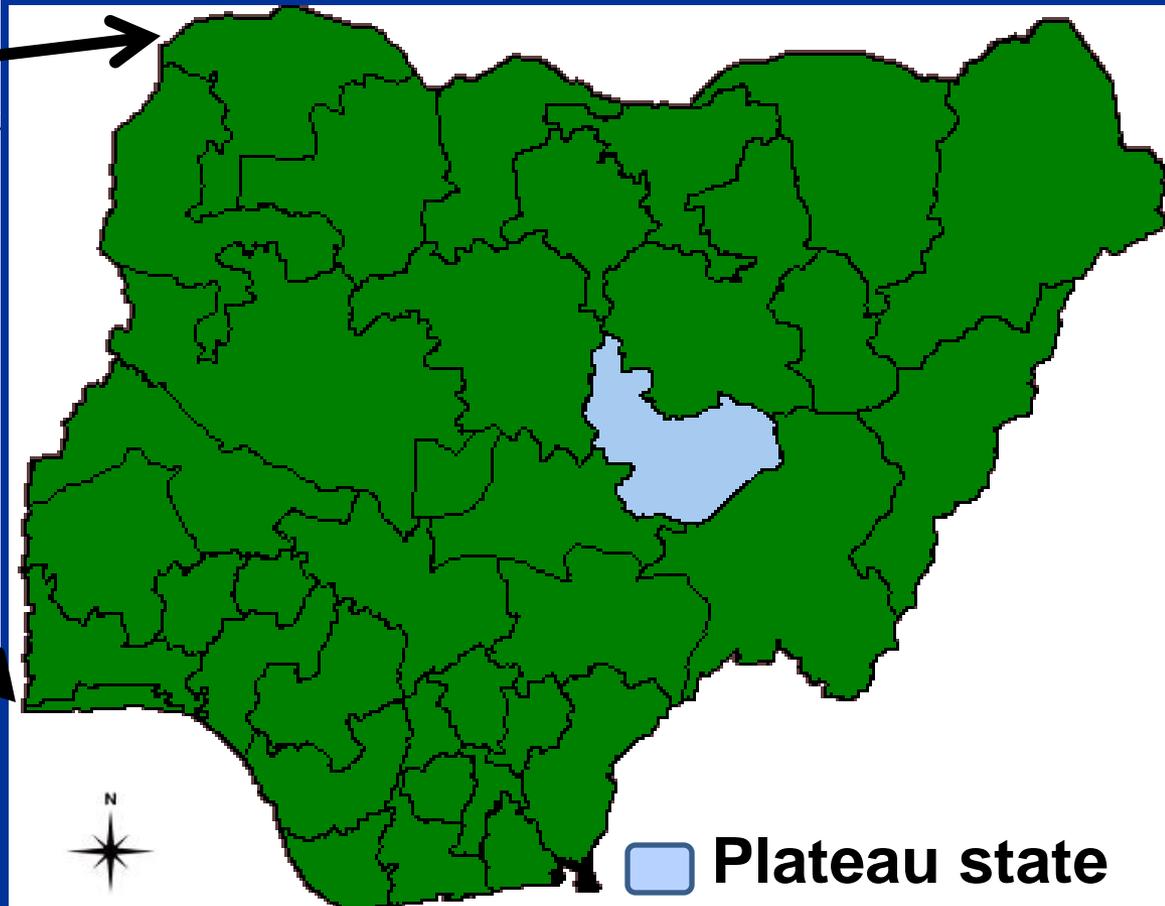
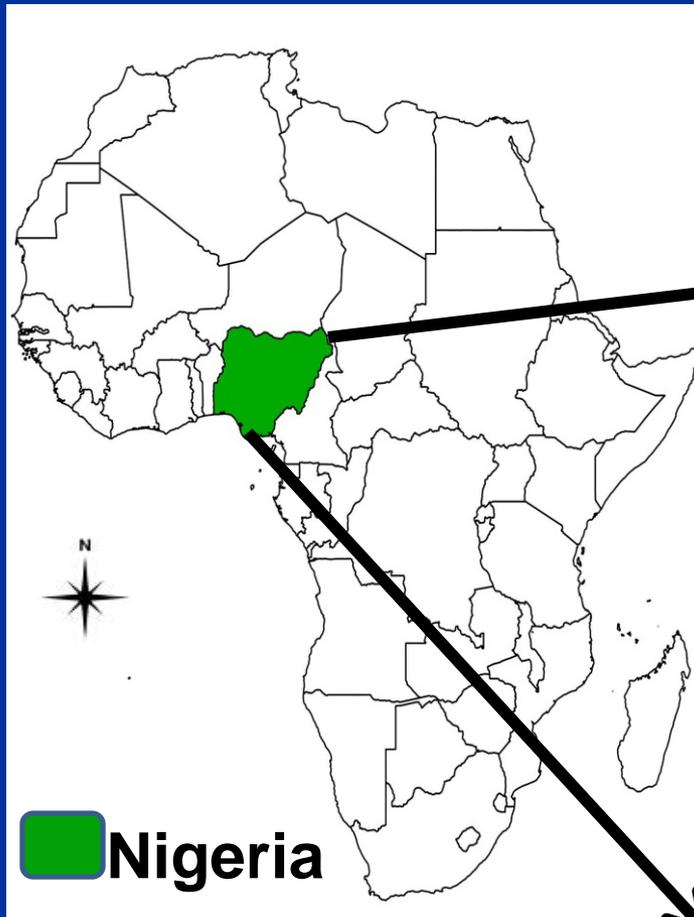
Outcomes of TB treatment in Plateau state 2001-2010



Objectives

- To determine the proportion of TB patients with interrupted treatment
- To identify the factors associated with interruption of TB treatment

Study site



Methods

- Study design: Cross-sectional study
- Study period: June - July, 2011
- Respondents: Pulmonary TB (PTB) patients
- Eligibility for enrolment
 - Age \geq 15 years
 - In the eighth month of treatment
- TB treatment interruption
 - Intensive phase – 2 days
 - Continuation phase – 14 days

Recruitment of respondents

438 TB patients
in eighth month of treatment

422 (96%) with pulmonary TB
patients ≥ 15 years

378 (90%) identified
interviewed with questionnaire

Data collection technique

- Quantitative
 - Checklist
 - Structured questionnaire
- Qualitative
 - Focus group discussion (FGD)
 - Homogenous groups of male and female

Data collection

- Quantitative data by
 - Trained research assistants
- Qualitative data
 - Note taker
 - Moderator
 - FGD guide
 - Tape recorder

Data analysis

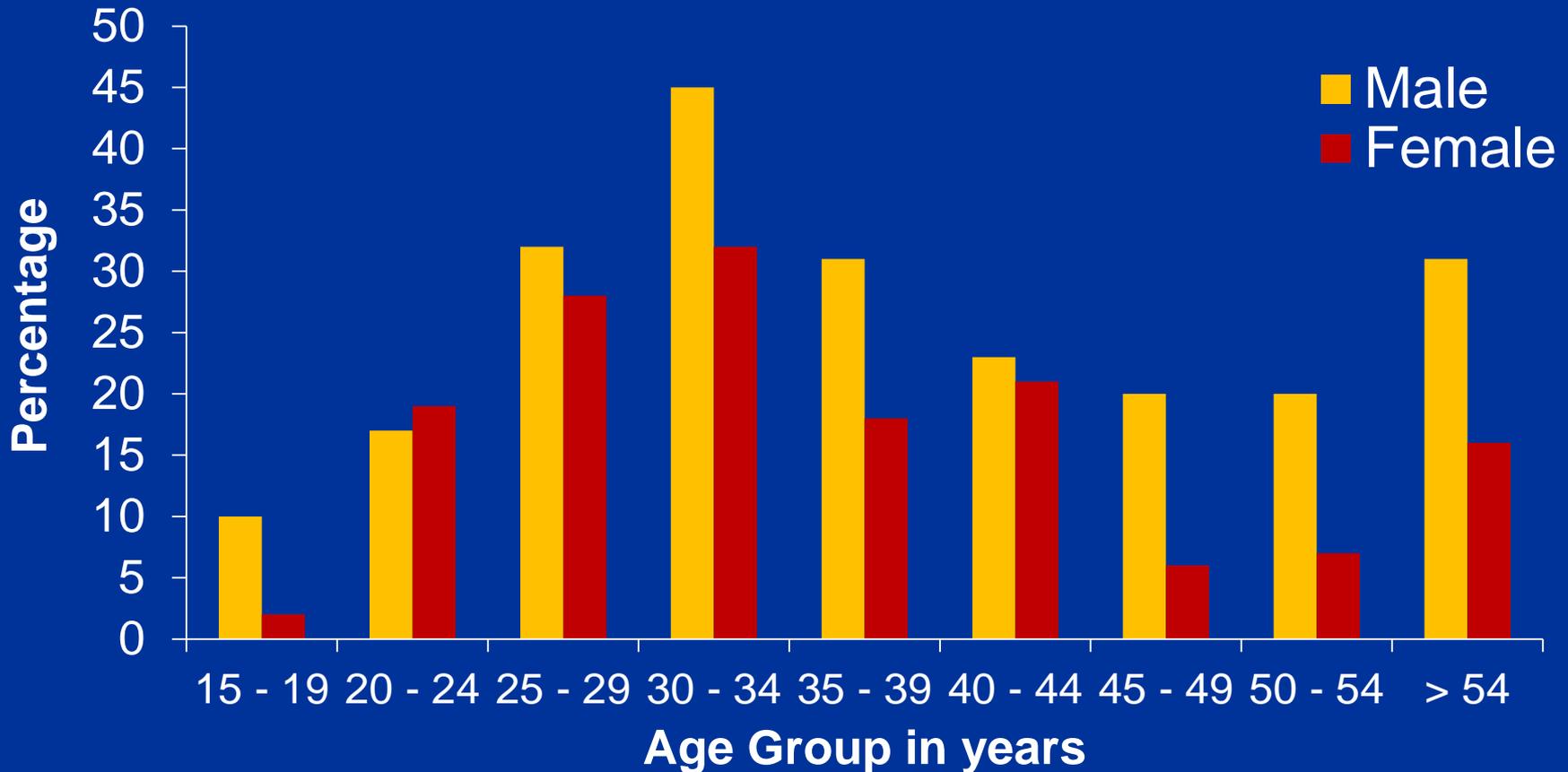
- Data analyzed with Epi Info version 3.5.1
 - Descriptive analysis
 - Bivariate analysis
 - Multivariate analysis
- Analysis of FGD
 - Transcription
 - Translation from local language to English
 - Report

Ethical considerations

- Ethical clearance obtained from the Plateau State Ethical Review Committee
- Informed consent obtained from all study participants

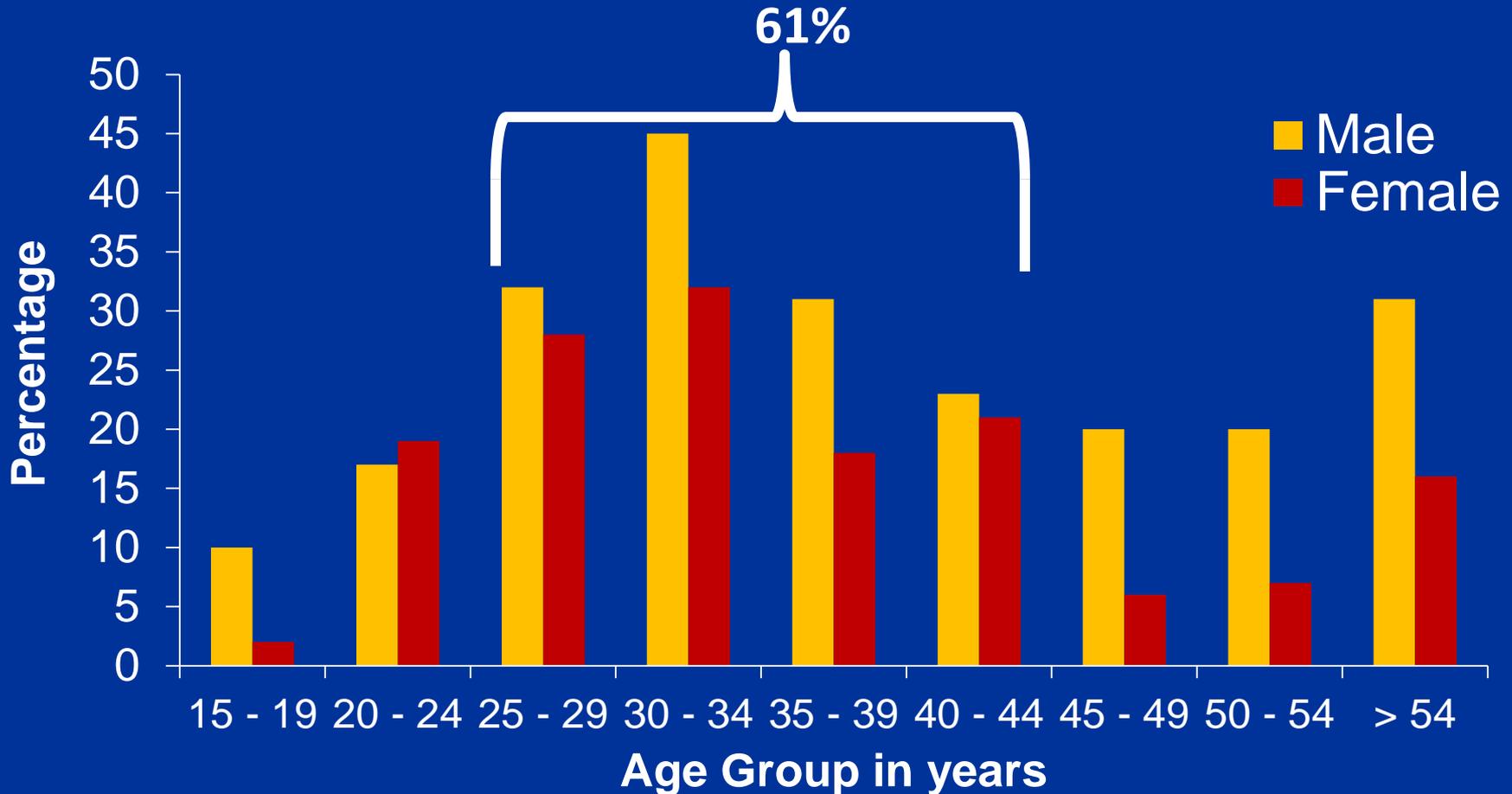
Results

Age and sex distribution of respondents (n=378)



Mean age 37.6 (± 13.5) years, 61% male

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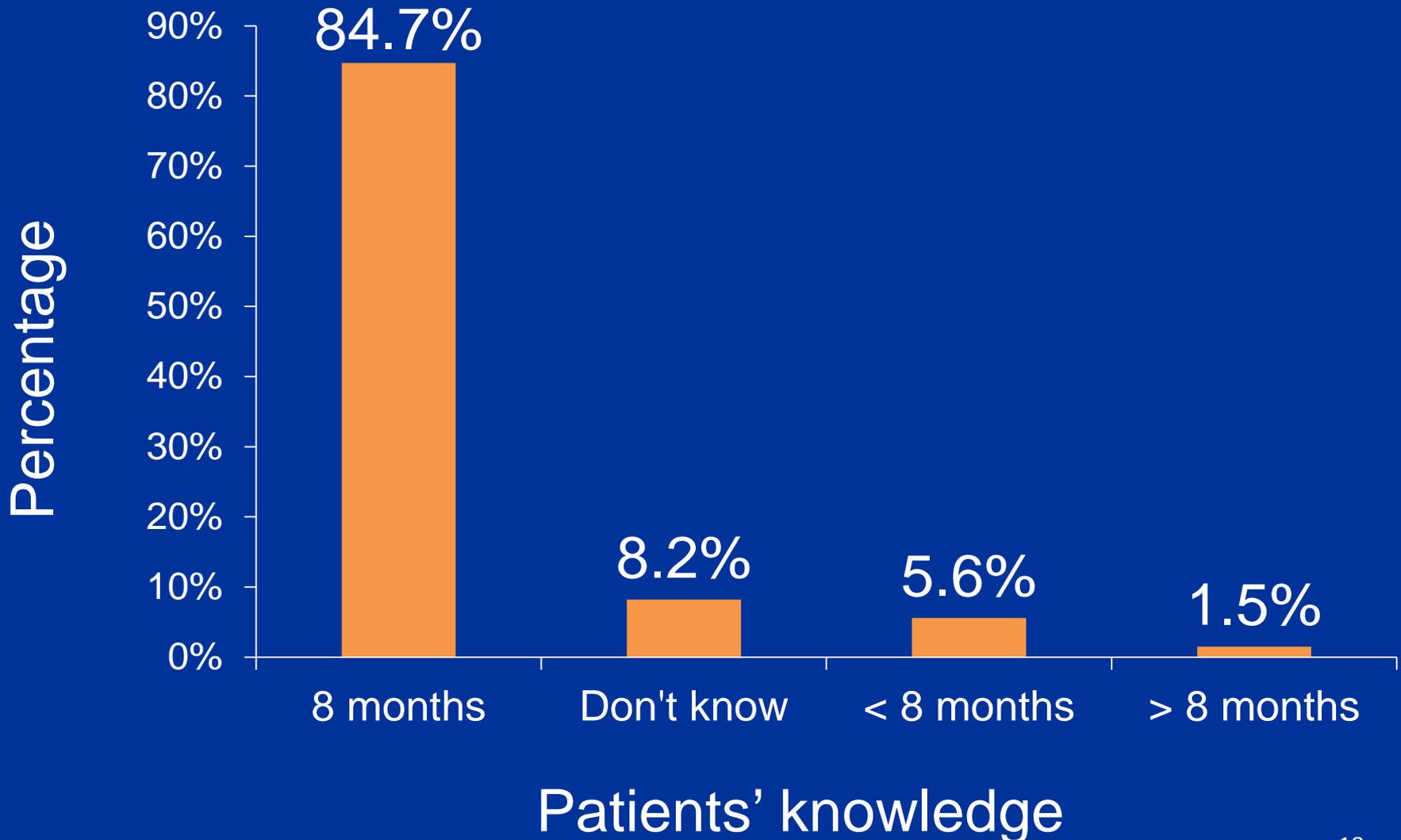


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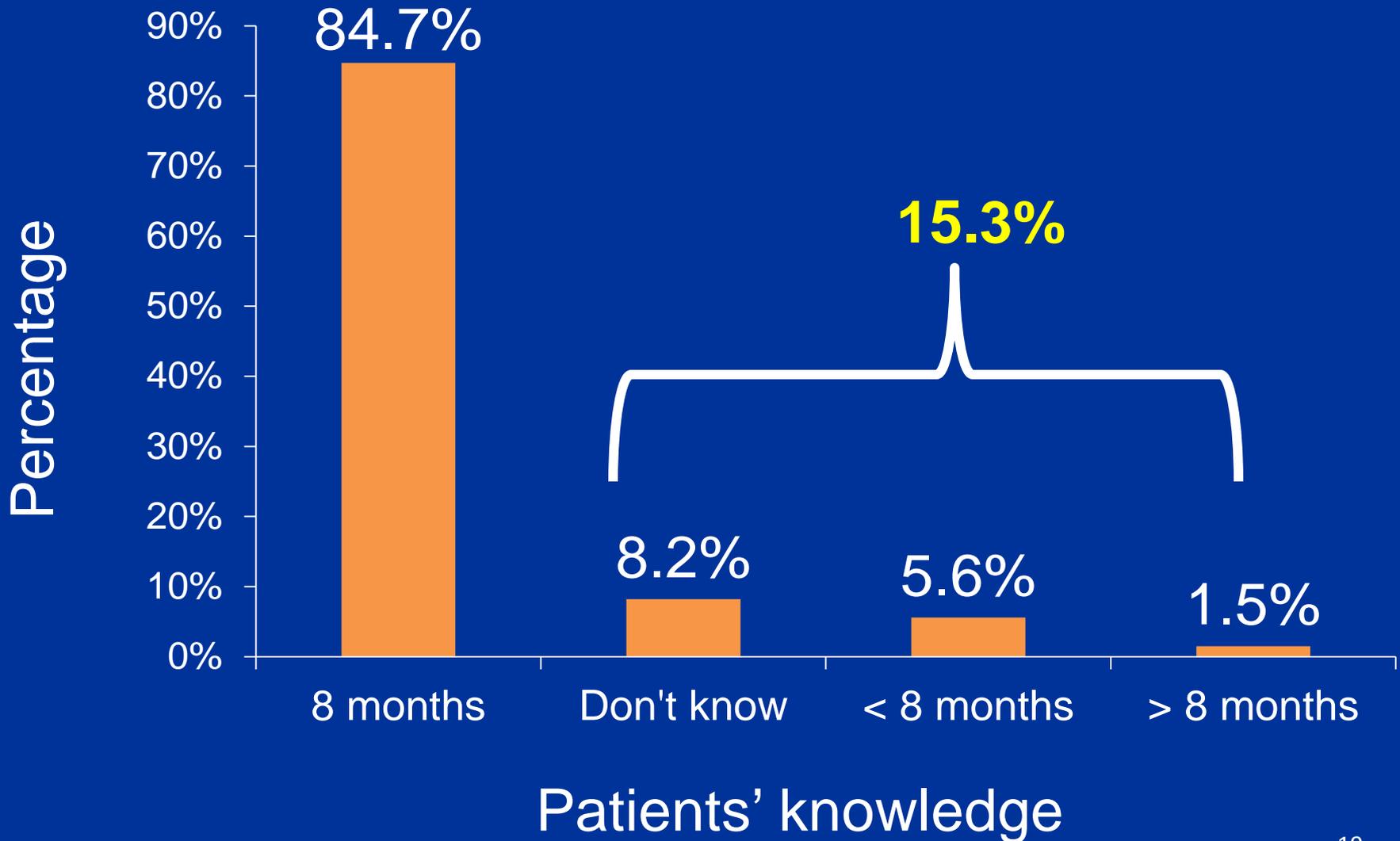
Clinical and socio-behavioral characteristics of respondents (n=378)

Factors	n (%)
Category classification 2	34 (9.0)
Married	271 (71.7)
< Secondary level education	189 (50.0)
Unemployed	85 (22.5)
Smoke cigarettes	70 (18.5)
Alcohol use	167 (44.2)
Bread winner of the family	180 (47.6)
Living > 5 km from tx site	72 (19.0)

Knowledge of respondents on duration of TB treatment



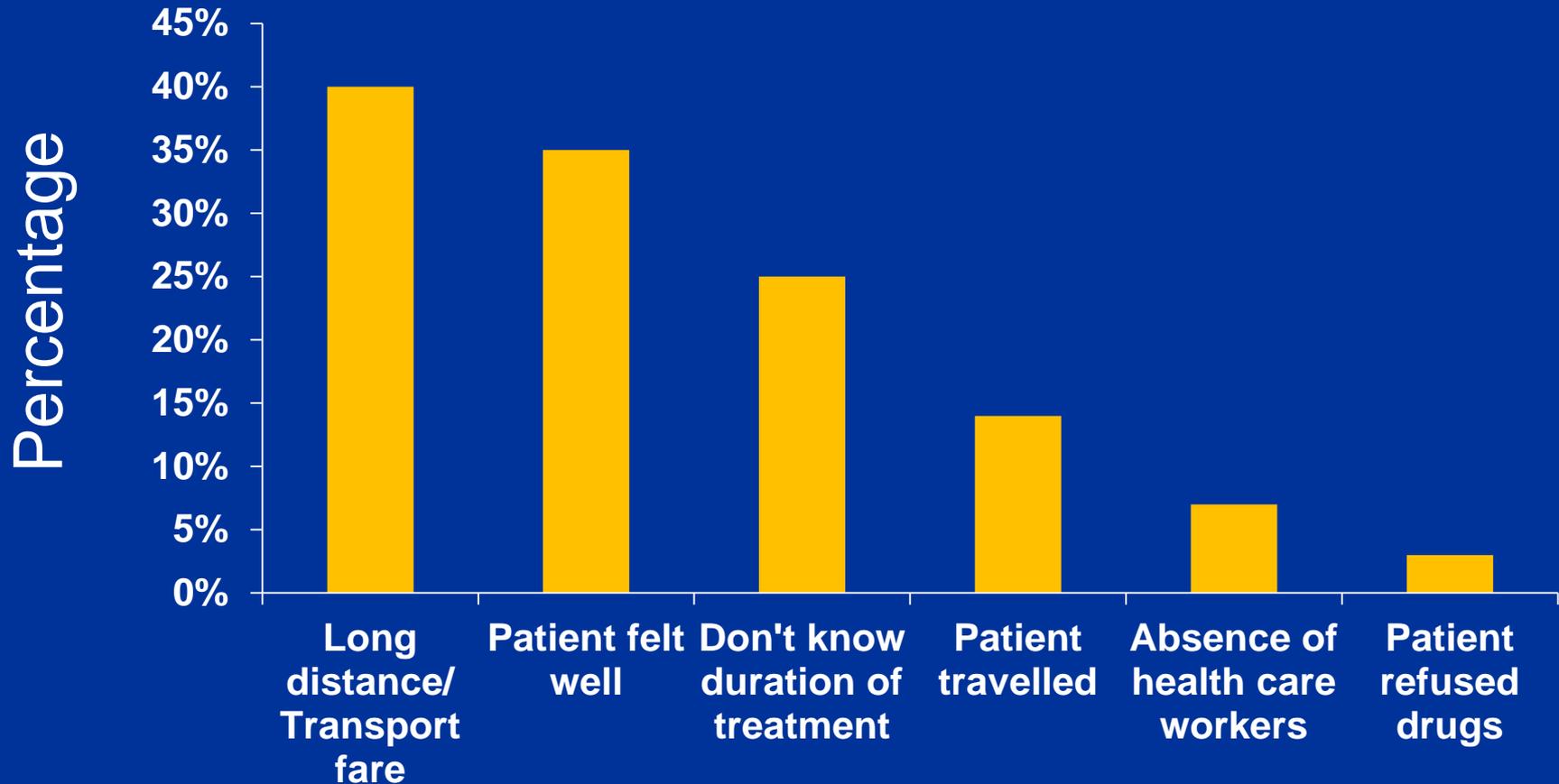
Knowledge of respondents on duration of TB treatment



Interruption of treatment

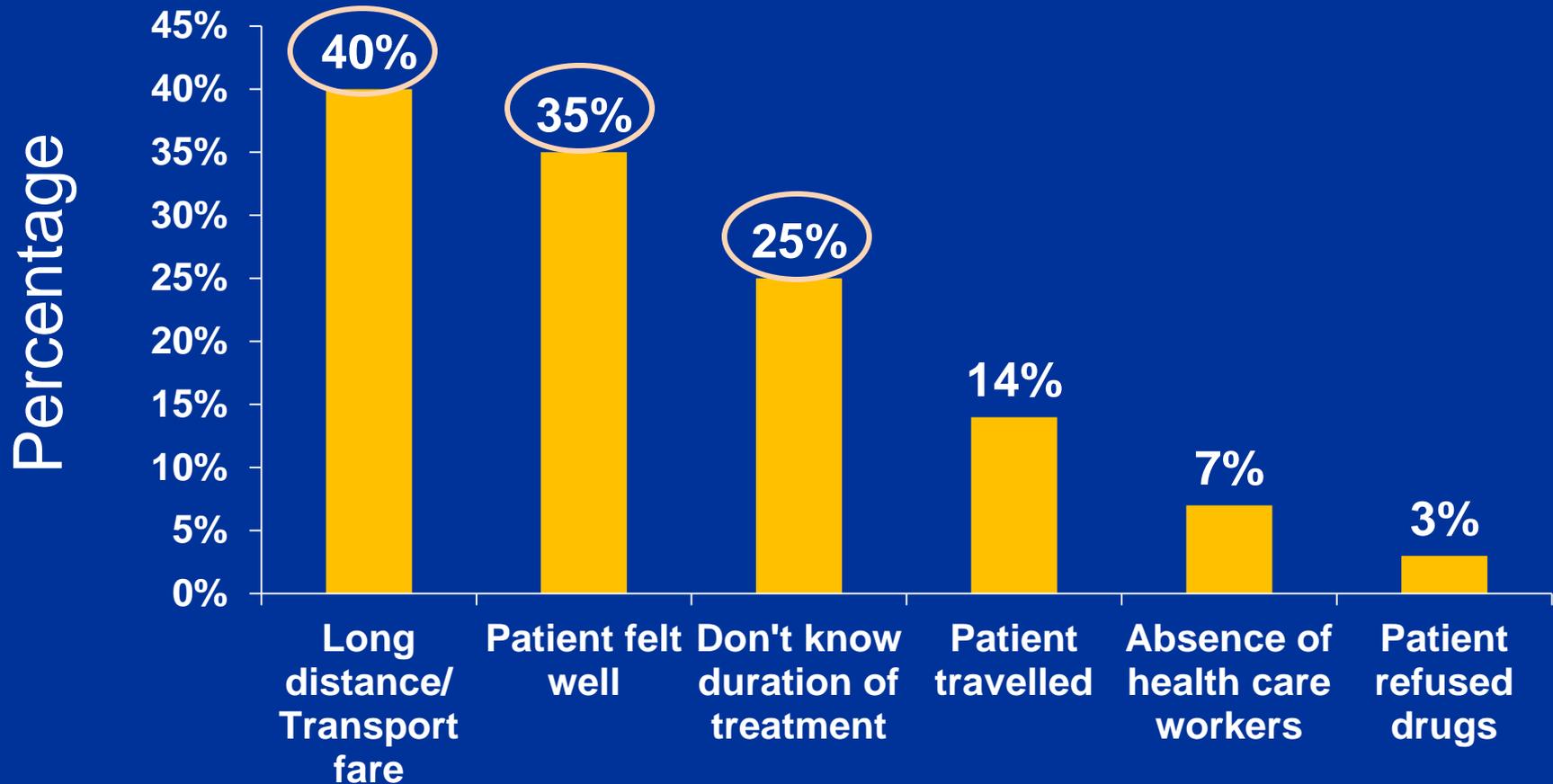
- Total number of PTB respondents 378
 - Number that interrupted TB treatment 71 (19%)
- Interruption by TB treatment phase
 - Intensive phase 25 (35%)
 - Continuation phase 46 (65%)

Reasons for interrupting treatment among respondents



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Reasons for interrupting treatment

Factors associated with interruption of treatment among respondents 1/2

Factors	Interrupted treatment		OR (95% CI)
	Yes (%)	No (%)	
Unemployed	22 (31)	63 (21)	1.7 (0.9-3.2)
Age > 35 years	35 (49)	141 (45)	1.1 (0.7-2.0)
Male	44 (62)	185 (60)	1.1 (0.6-1.9)
< Secondary Education	36 (51)	153 (50)	1.0 (0.6-1.7)
Bread winner in family	32 (45)	148 (48)	0.9 (0.5-1.5)
Married	48 (68)	223 (73)	0.4 (0.4-1.4)

OR : Odds Ratio, CI: Confidence Interval

Factors associated with interruption of treatment among respondents 2/2

Factors	Interrupted treatment		OR (95% CI)
	Yes	No	
Living > 5km from treatment site	38 (54%)	34 (11%)	9.3 (4.9-17.4)
Don't know duration of treatment	23 (32%)	35 (11%)	3.7 (1.9-7.2)
Smoke cigarettes	20 (28%)	50 (16%)	2.0 (1.1-3.7)
Category classification 2	8 (11%)	26 (8%)	1.4 (0.5-3.4)
Alcohol use	28 (39%)	139 (45%)	0.8 (0.5-1.4)

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Unconditional logistic regression of factors associated with interruption of treatment among PTB patients

Factors	AOR	95% C.I.
Sex (Male)	1.9	0.7 - 5.2
Age > 35 years	0.8	0.3 - 1.9
Clinical class (Cat 2)	1.9	0.5 - 7.1
Living > 5km from treatment site	14.1	5.5 - 35.8
Don't know duration of treatment	5.3	2.0 - 14.2
Smoked cigarettes	3.6	1.2 - 10.2
Alcohol use	0.6	0.2 - 1.4

AOR; Adjusted odds ratio

Result of focus group discussion

- Majority knew the duration for treatment
- Few had interrupted their treatment
 - ‘I take the drugs to get well so as to get back to my work (female participant)’
- Factors responsible for interruption of treatment
 - Cost of transport to clinic
 - Unfriendly attitude of health care workers

Discussion 1/2

- Proportion of TB patients with interruption of treatment is 19%
- Factors associated with interruption of treatment
 - Living far from and cost of transportation to treatment sites

Discussion 2/2

- Inadequate knowledge on duration of treatment
 - Supported by *(Gupta et al, 2010)*
- Unfriendly attitude of health care workers might cause interruption of treatment
 - Supported by Jaiswal et al *(2004)*

Limitations

- We could not trace all the PTB patients that were eligible for the study

Conclusion

- Interruption of TB treatment in Plateau state associated with
 - Long distance of patients from treatment sites and transport cost
 - Poor knowledge of duration of TB treatment
 - Unfriendly attitude of health care workers towards patients

Public health actions

- Supportive supervision with training of health care workers on
 - Patient education on duration of treatment
- To ensure accessibility of services to patient
 - Decentralization of TB treatment sites
 - Use of treatment supporters for TB patients

Recommendation

- The Government of Plateau state
 - To support and sustain the decentralization process
 - To support the implementation of community TB care

Acknowledgements

- Nigeria FELTP
- Nigeria TB Control Program
- Federal Ministry of Health, Nigeria
- CDC Nigeria

Thank you for your attention

