Access to artemisinin anti-malaria treatment and its related factors in rural Tanzania

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Outline:

- Brief statement of the problem
- Objectives
- Methods
- Main findings
- Conclusions and policy implications

Brief statement of the problem

- ACTs have been demonstrated to be highly efficacious in malaria treatment
- This treatment potential can change when they are delivered in routine health system (effectiveness)
- Issues that matter most in these changes are such behavioral and health system factors as

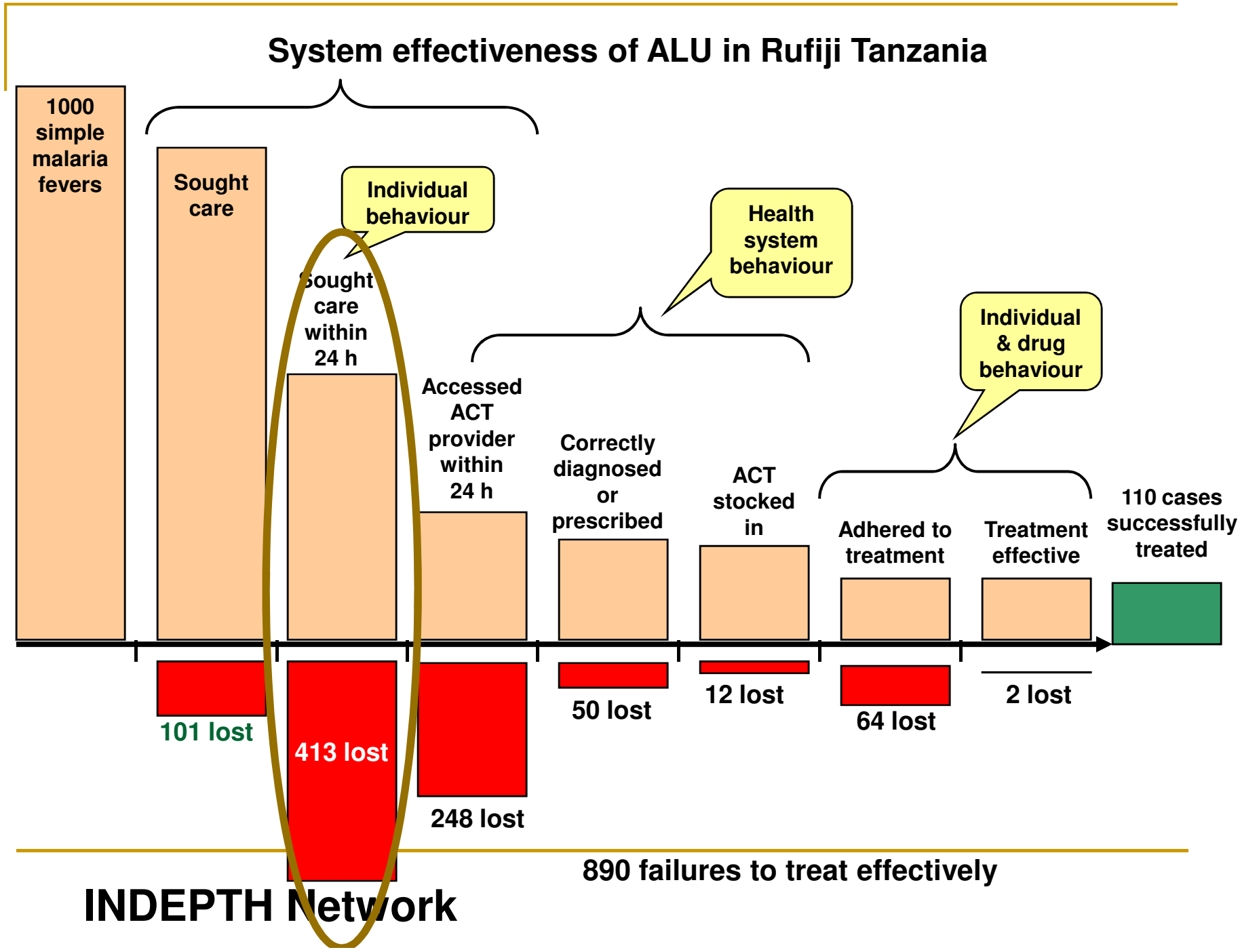
  - access, targeting accuracy, provider compliance, patient adherence, costs and community perceptions and practices

- INESS was designed to assess these treatment effectiveness in the context of these factors in 7 HDSS sites in Ghana, Tanzania, Mozambique and Burkina Faso
- The presentation will share results from Access Module in Tanzania where:
- Alu is used as primary drug for malaria treatment

Objectives of access in the study

- To determine proportion of malaria cases needing to seek care who gain physical access to an official point of ACT provision

  -within 24h and 48 hours of fever onset
- Identifying reasons for choices and failed access and
- Suggesting options on how to improve access and consequently effectiveness of ACTs used in Tanzania


System effectiveness of ALU in Rufiji Tanzania
1000 simple malaria fevers
Sought care
Individual behaviour
Sought care within 24 h
Health system behaviour
Accessed ACT provider within 24 h
Correctly diagnosed or prescribed
ACT stocked in
Individual & drug behaviour
Adhered to treatment
Treatment effective
110 cases successfully treated
101 lost
413 lost
248 lost
50 lost
12 lost
64 lost
2 lost
890 failures to treat effectively
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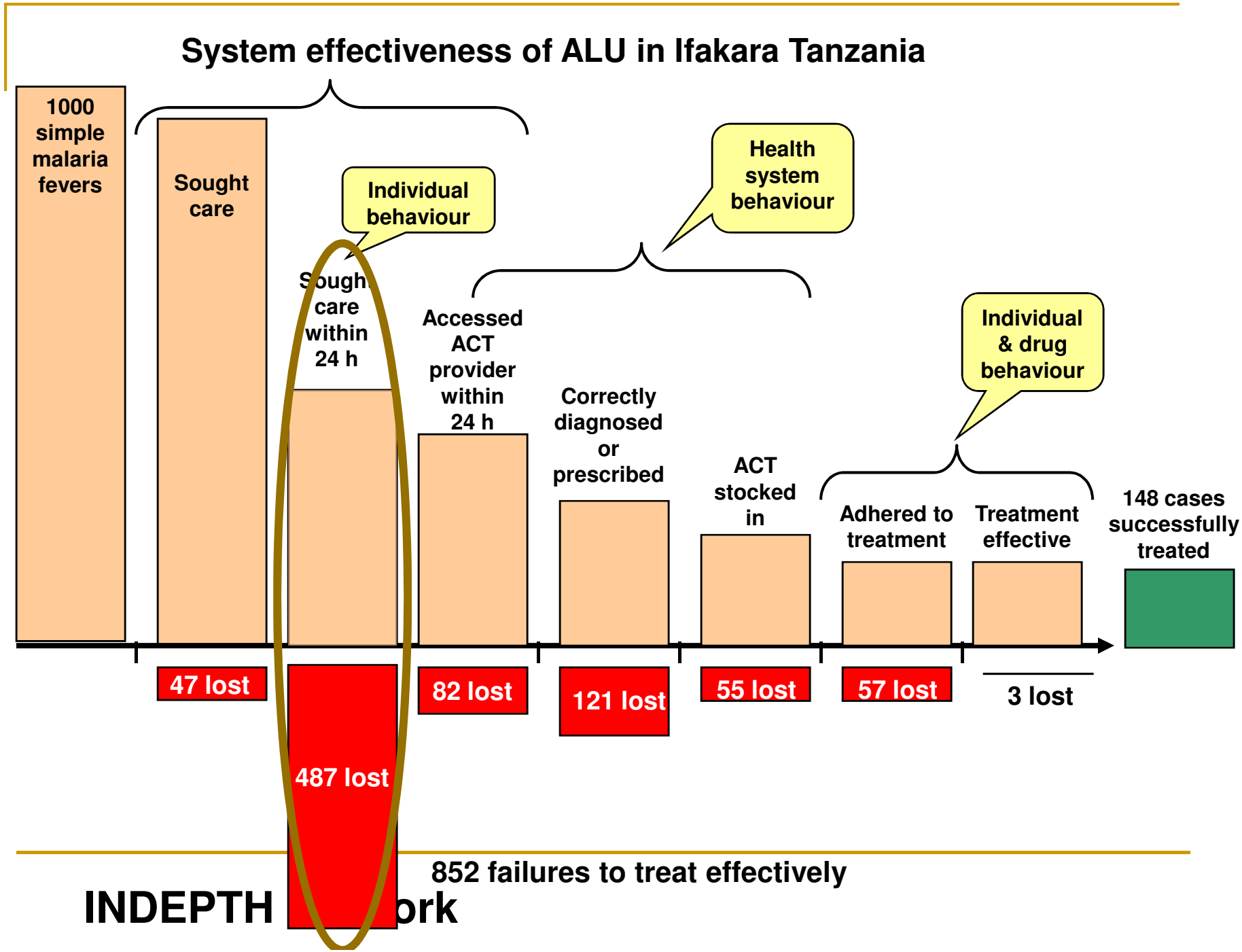
System effectiveness of ALU in Ifakara Tanzania
1000 simple malaria fevers
Sought care
Individual behaviour
Sough care within 24 h
Health system behaviour
Accessed ACT provider within 24 h
Correctly diagnosed or prescribed
ACT stocked in
Individual & drug behaviour
Adhered to treatment
Treatment effective
148 cases successfully treated
47 lost
487 lost
82 lost
121 lost
55 lost
57 lost
3 lost
852 failures to treat effectively
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Methods

- All HDSS households (~ 14,000 HHs & 115,000 individuals per site) surveyed for 2 week fever history across the year in Rufiji and Ifakara HDSS sites
- Random sample of pre-selected households if having fever in past two weeks eligible for full in-depth interview of fever care seeking and costs (~ 1,150 individual interviews per site / year).
- Sample selection and interviews done through routine HDSS system

Main findings

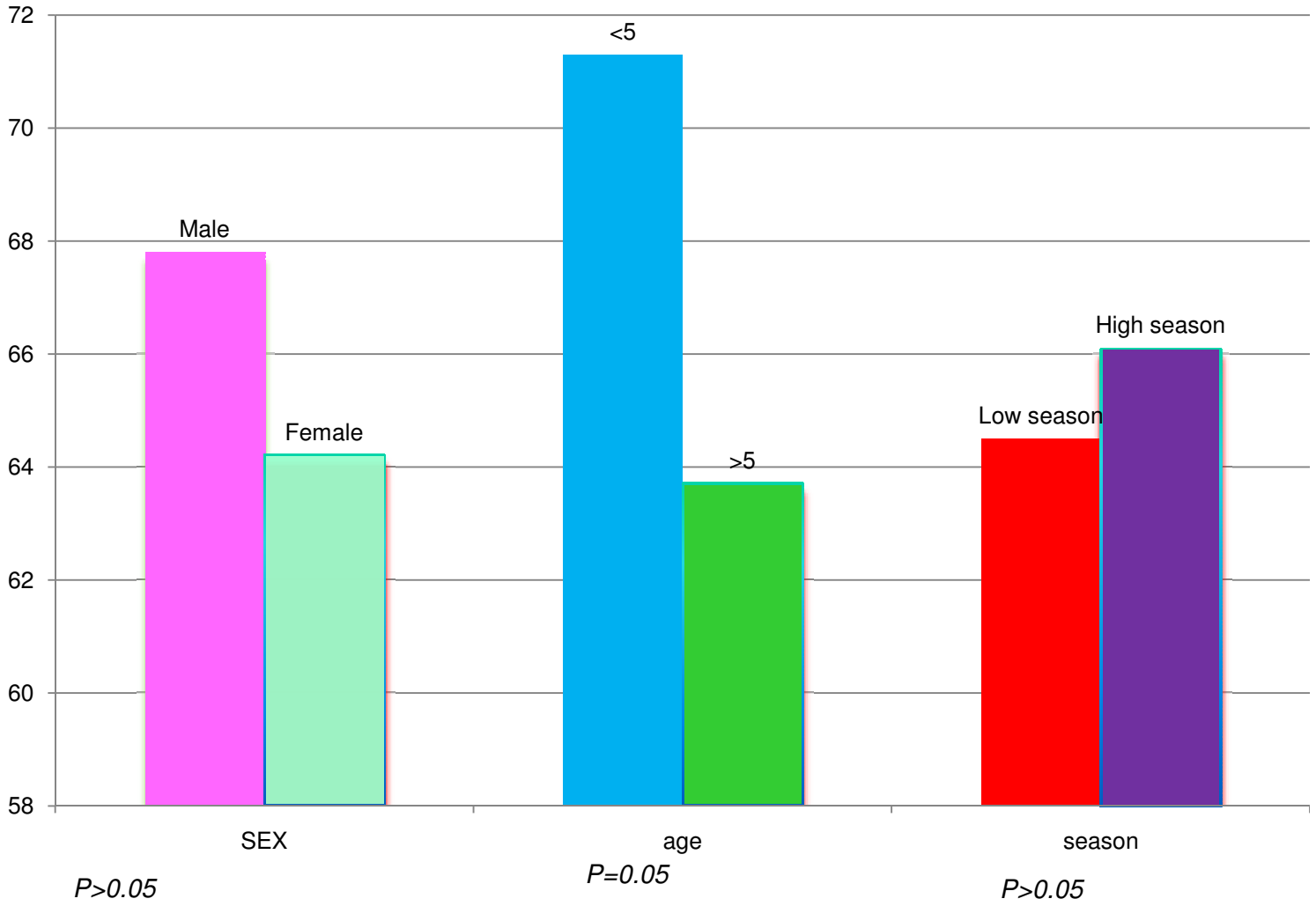
- access to an official point of ACT provision within 24h hours of malaria onset

DSS site	n/N	%(95%CI)
Ifakara	716/1089	65.7(60.2-70.9)
Rufiji	205/1024	20(16.9-23.6)

- access to an official point of ACT provision within 48h hours of fever onset

HDSS site	n/N	%(95%CI)
Ifakara	862/1089	79.2(75.0-82.8)
Rufiji	309/1024	29.9(26.4-33.4)

IFAKARA: Timely access to authorized providers by sex, age and seasonality



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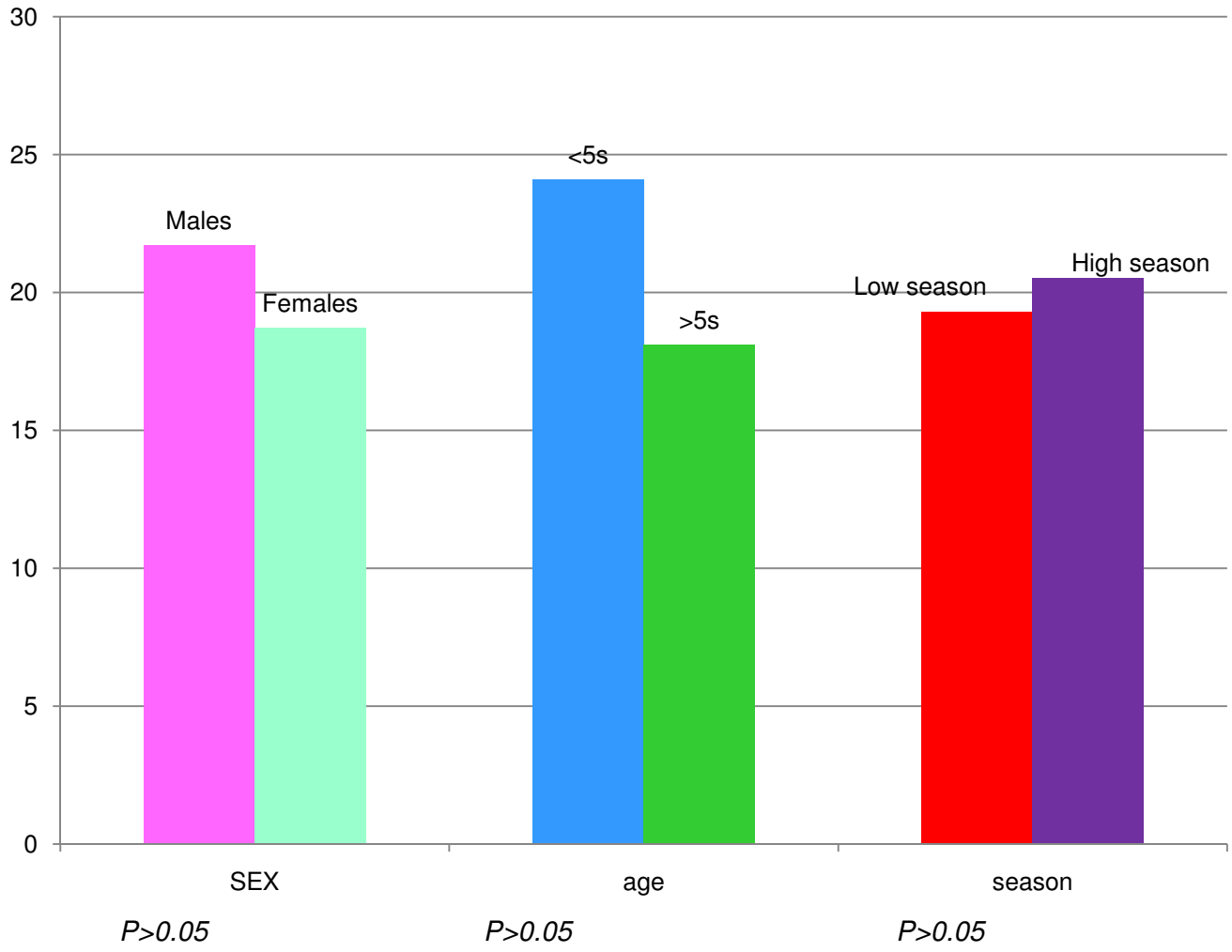
RUFIJI: Timely access to authorized providers by sex, age and seasonality



- Association between 24 hours access and socio-economic status between the sites

- SES

	Ifakara		Rufiji	
	OR	(95%CI)	OR	(95%CI)
2nd poorest	1.42	(0.88-2.27)	1.92	(1.0-3.69)
3rd poorest	1.18	(0.77-1.80)	2.46	(1.30-4.67)
4th poorest	1.17	(0.82-1.66)	2.58	(1.39-4.79)
5th poorest	1.51	(0.92-2.46)	3.90	(2.12-7.16)

Fever/Malaria treatment

	RUFIJI HDSS			IFAKARA HDSS		
		%	95% CI		%	95% CI
Patients receiving antimalaria treatment	516/1024	50.4%	47.3-53.5	909/1089	83.5%	81.1-85.6
ACTs prescribed						
Artesunate-Amodiaquine	0	0	0		0.4	0.1 - 1.2
Artemether-Lumefantrine	74.2	68.8	68.8-79.0		64.3	60.9- 67.3
Mono/Non-ACTs prescribed						
Artemether	0.6	0.1-2.7	0.1-2.7		0	0
Amodiaquine	6.8	4.3-10.6	4.3-10.6		3.7	2.6 – 5.2
Sulphadoxine-pyrimethamine	9.9	6.1-15.6	6.1-15.6		18.9	16.4- 21.6
Quinine	8.1	5.6-11.7	5.6-11.7		12.8	10.7- 15.1
Chloroquine	0	0	0		0.1	0– 0.6
Artesunate	0.2	0.0-1.5	0.0-1.5		-	-
β-Artemether	0.2	0.0-1.5	0.0-1.5		-	-

Conclusions and policy implications

- Timely access for effective drugs for malaria treatment was significantly higher in Ifakara than Rufiji
- The variations may be due to:
  - ✓ Long presence of ADDOs in Ifakara
  - ✓ An active interventions promoting timely and appropriate treatment seeking for malaria in Ifakara (ACCESS project – 2004 to date)

- The higher access observed in Ifakara compared to Rufiji suggests that intensified ADDOs roll out accompanied by demand creation through massive social marketing campaign and improvement of health services can partly be a solution to the risk that has been raised
- ADDOs could also be beneficial in redressing socio-economic variations observed in Rufiji

- The observed low timely access to ACT outlets in the study is a serious risk for achieving the drugs potential benefits and targets of malaria control initiatives
- Results call for greater efforts for health system strengthening and behavior change for achieving the potential benefits of the drugs
- AMFm can reduce the observed mono-therapeutic use
- The results provide an evidence of suitability of DSS sites to be health systems observatory in Africa

Thank You!