

Risk of TB and Latent TB Infection Among Health Care Workers in Kisumu East District, Nyanza Province

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Background

- Kenya ranks 13th among 22 high TB burden countries
- Estimated incidence 288/100,000
 - 39% HIV co-infection (~70% in Nyanza)
- Nyanza province – 20% of TB burden in Kenya
- TB transmission in hospitals is known to occur globally
- Limited data from Kenya are available

Background cont'd

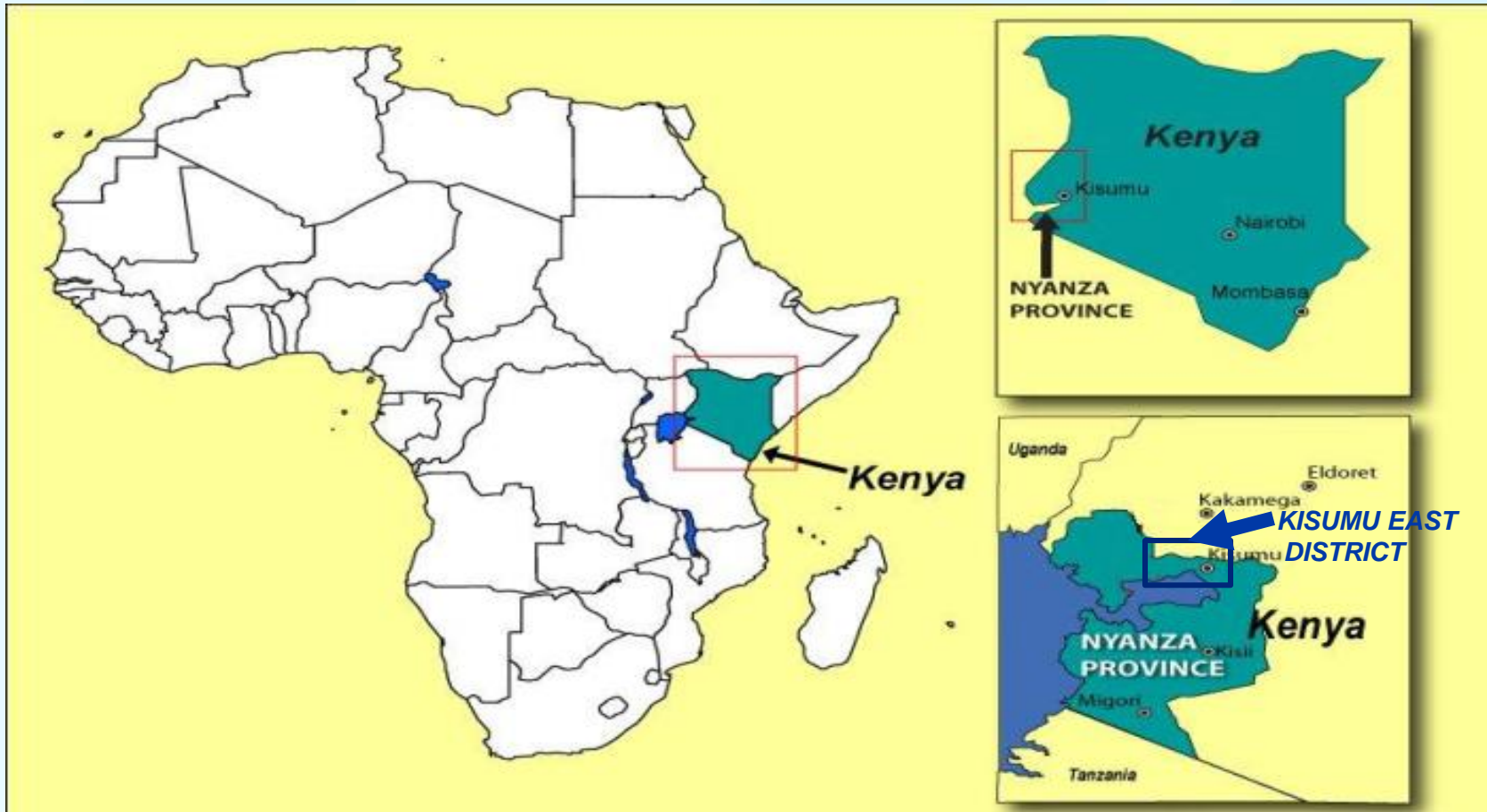
- WHO Three I's guideline – a key public health strategy to reduce TB in people infected with HIV
- Focuses on:
 - Isoniazid preventive treatment (IPT)
 - Intensified case finding(ICF)
 - TB infection control (IC)

Objectives

- Determine the prevalence of LTBI among health care workers in Kisumu
- Evaluate if increased LTBI risk is associated with health care settings
- Determine if there are differences in risk of LTBI among inpatient vs. outpatient healthcare workers

METHODS

Study setting



Sampling Frame

- Kisumu East District, Nyanza province
- Population 473,649 (2009 Census)
- 32 Health facilities
- 34 schools

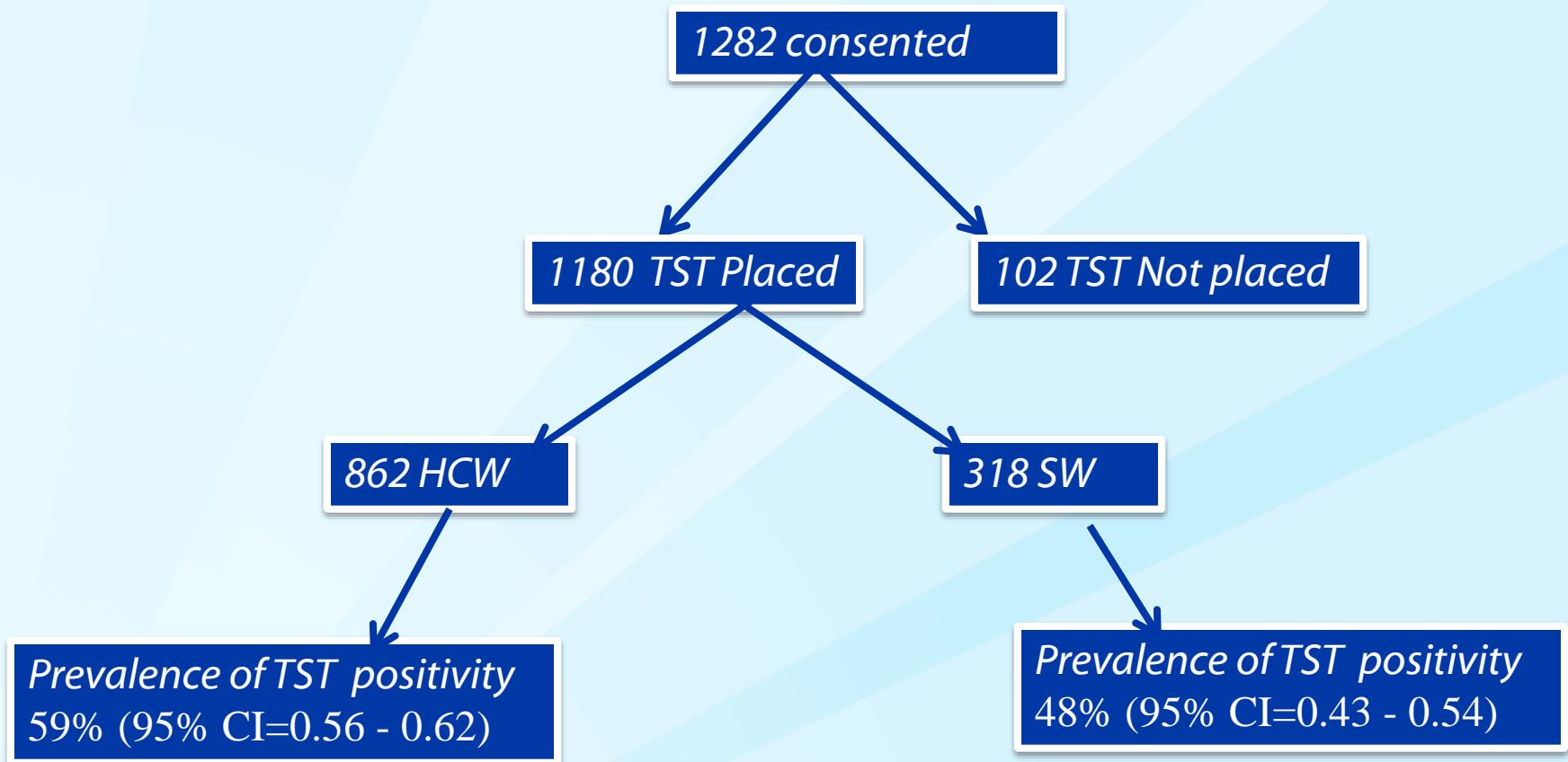
Study procedure

- We recruited 1425
 - 1006 HCW from 32 of health care facilities
 - 419 of SW from 34 randomly selected schools
 - 42 declined (2.9 % of total population approached 1467)
- Administered questionnaire and TST
- TST reading after 48-72 hours
- VCT offered, done if accepted
- Participants who screened positive for TB symptoms were further evaluated

Definitions

- We defined TST positivity as skin induration
 - ≥ 5 mm among persons with HIV co-infection or
 - ≥ 10 mm among non-HIV infected persons
- We defined active TB disease as clinically and laboratory confirmed TB

Results

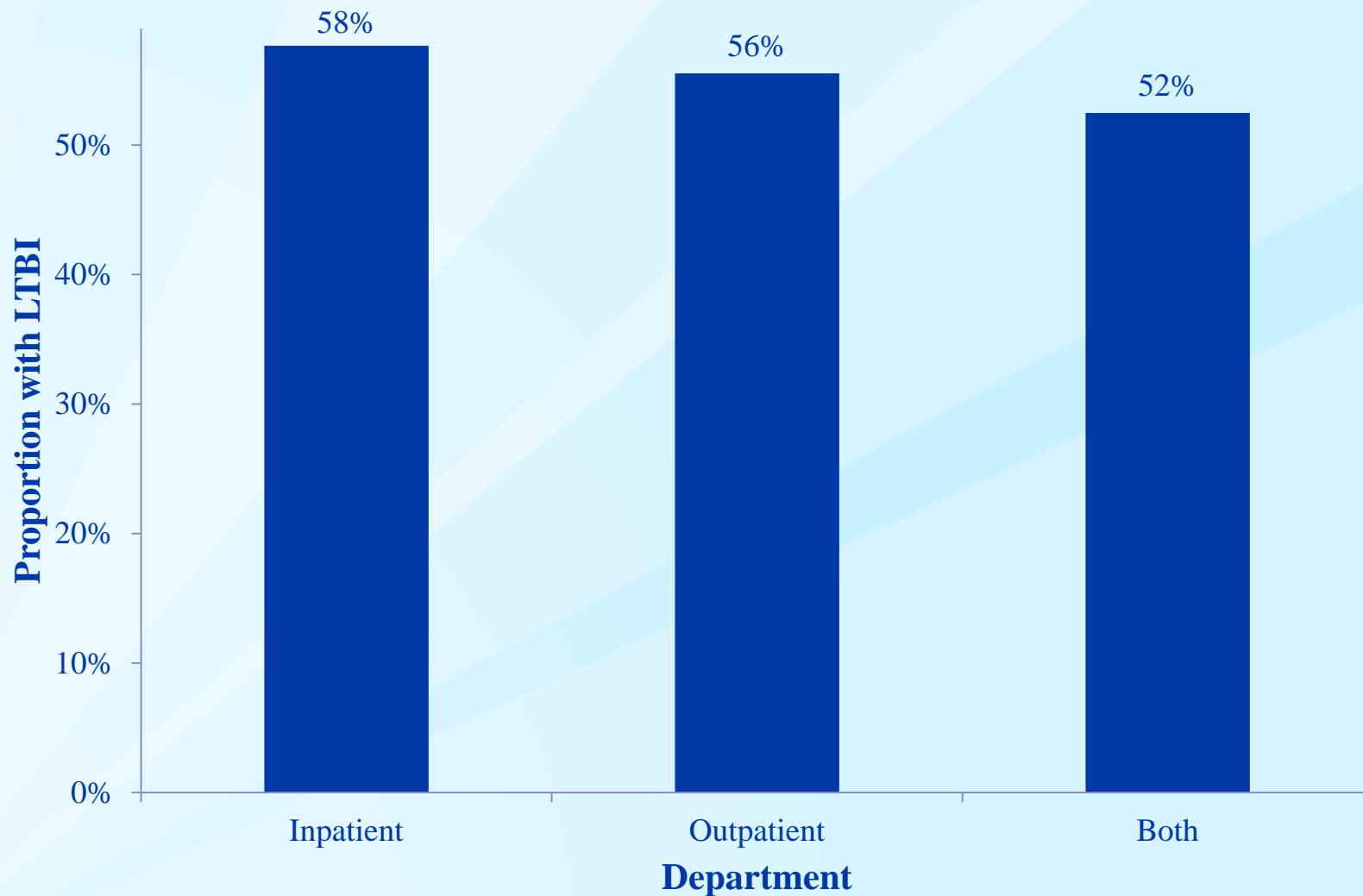


- TB prevalence: 2 cases (1CHW, 1SW)

Characteristics of participants

	HCW	SW
Consented and enrolled	911 (71%)	371 (29%)
TST Placed and read	862 (95%)	318 (86%)
TST positive	510 (59%)	153 (48%)
TB disease	1 (0.1%)	1 (0.3%)
HIV test results		
Positive	282 (31%)	129 (35%)
Negative	547 (60%)	218 (59%)
Unknown	82 (9%)	24 (6%)
Gender		
Male	619 (68%)	189 (51%)
Age (yrs)		
18-26	182 (20%)	92 (25%)
27-36	282 (31%)	100 (27%)
37-46	273 (30%)	133 (36%)
47+	174 (19%)	46 (12%)

Risk of LTBI by health facility departments



Challenges

- Rescheduling of enrollment due to major ministry programs, trainings, exams and co curriculum activities
- Busy schedule of staff making the enrolment team to work late hours
- Industrial action therefore not able to enroll in certain institution
- Personal commitment
 - Absenteeism during enrolment
 - Missing TST reading

Conclusion

- Latent TB infection is common among HCW and SWs, with a significantly higher prevalence in HCW
- Risk of LTBI is similar across healthcare work settings. Inpatient HCWs had similar risk profiles as outpatient healthcare workers

Recommendations

- Develop and/or update TB infection control policies for all health facility levels
- Train health care workers on infection control practices
- Encourage TB control practices in health facilities and communities

Acknowledgement

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