



Slaughterhouse Zoonoses

Slaughterhouse workers as sentinels of zoonotic disease

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Background

- Slaughterhouse workers are high risk for zoonoses due to contact with animals
- Slaughterhouse workers may act as reservoirs of zoonotic organisms
- Workers are often first exposed in zoonotic disease outbreaks
- No previous studies in Kenya investigating zoonoses in slaughterhouse workers

Objective

Determine exposure to zoonoses in slaughterhouse workers



Outcomes

- Prevalence of zoonoses
- Risk factors associated with carriage

Materials and methods

Study site

- 45km radius from Busia, Kenya
- 142 slaughterhouses
- 738 slaughterhouse workers

Sampling

- Questionnaire
 - Risk factors
 - Knowledge of zoonoses
- Blood
- Faeces



Sample analysis

- Blood smear
- Faecal exam
 - Q fever
 - Brucellosis
 - Cysticercosis
- Rift Valley Fever
- Leptospirosis

Data analysis

Logistic regression
- odds ratios for risk factors to zoonotic pathogens

Results—to date

Knowledge and practices n=738 %

Knowledge of zoonoses	31
Protective clothing worn	52
Eat at the slaughterhouse	20
Slaughter sick animals	17
Appeared drunk at interview	11
Had an open wound	8

Disease	%	95% CI
Malaria n=738	15	12-18
Schistosomiasis n=698	5	3-7
Hookworm n=698	31	28-34
HIV Type 1 n=500	12	9-15
Cysticercosis n=338	1	0-2
Brucellosis n=338	0	0

Key findings

Workers with secondary education are more aware of zoonoses

OR=1.9 95%CI=1.22, 2.93 Chi-squared=9.37 1 d.f. P= 0.00

Workers with knowledge of zoonoses are more likely to wear protective clothing

OR=1.92 95%CI=1.31, 2.86 Chi-squared=12.08 1 d.f. P=0.0

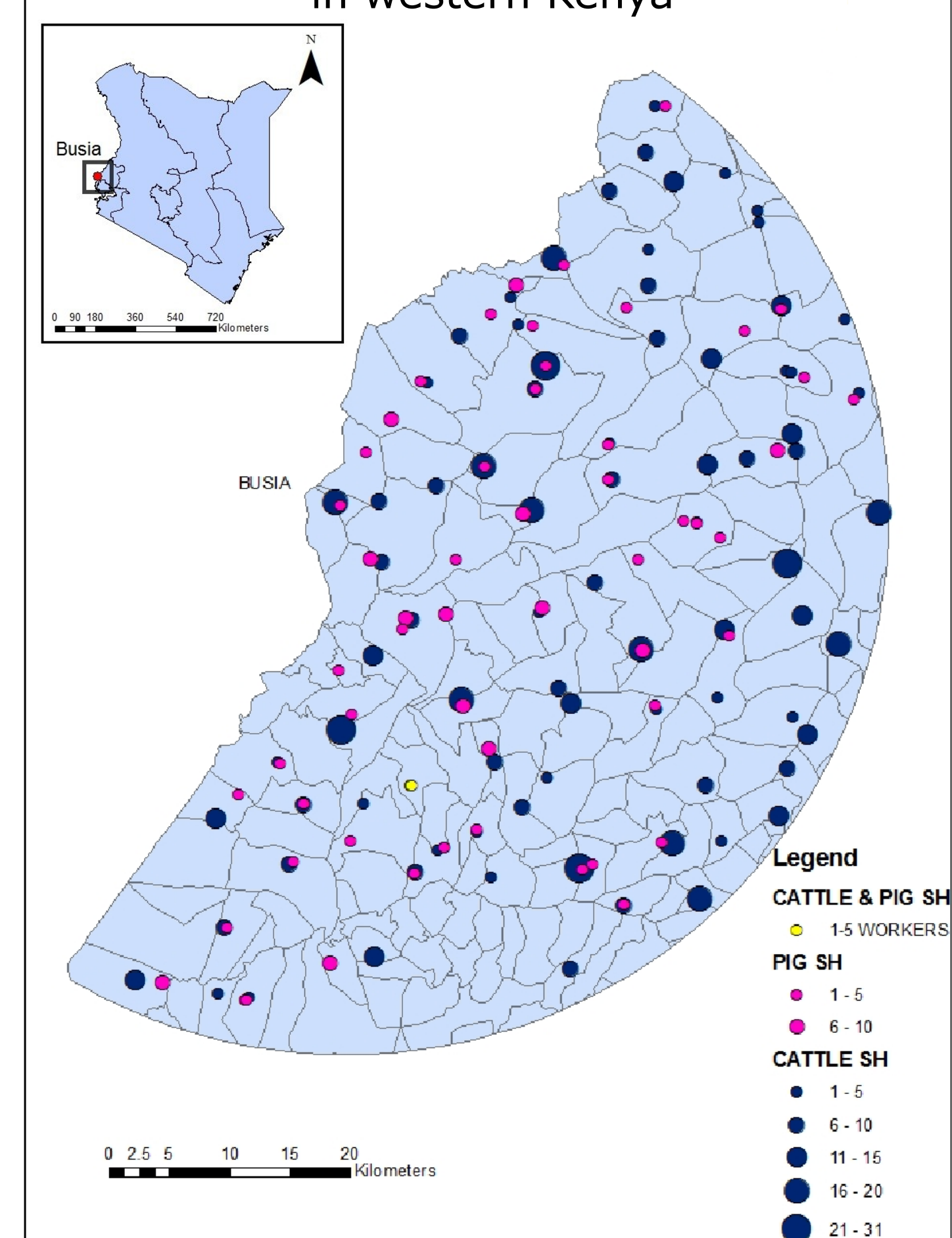
Workers that appear drunk are more likely to have an open wound

OR=3.14 95%CI=1.5, 6.23, Chi-squared=12.79 1 d.f. P=0.00

Workers that slaughter sick animals are also more likely to eat at work

OR=1.7 95%CI=1.01, 2.78 Chi-squared=4.82, 1 d.f., P=0.03

Fig 1 Map of slaughterhouses in study area in western Kenya



Conclusions and Future plans

- Hygiene in slaughterhouses in western Kenya is poor
- A number of risk factors for zoonotic disease exposure are identified
- Workers have high prevalence of endemic disease
- Serology testing for zoonoses will be completed in July 2013
- Results will be compared to seroprevalence in the general population



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