Slaughterhouse workers as reservoirs of zoonotic disease

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Background

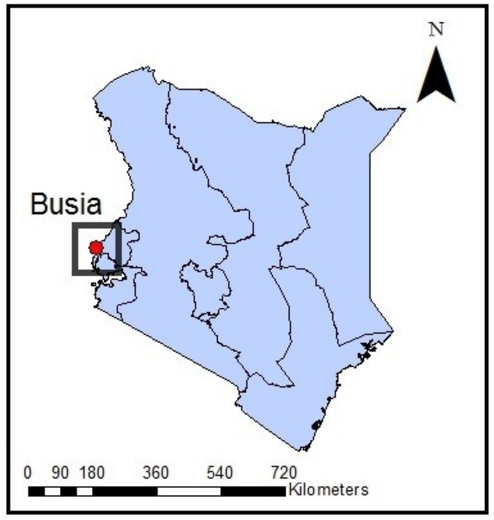
- Slaughterhouse workers are high risk for zoonoses due to contact with animals
- Slaughterhouse workers may act as the source of zoonotic disease to the community
- Contamination of meat can occur via cross contamination between carcasses or workers may be asymptomatic carriers
- No previous studies in Kenya investigating zoonoses in slaughterhouse workers

Objective

Determine carriage of bacteria in slaughterhouse workers

Outcomes

- Prevalence of enteric pathogens and MRSA
- Risk factors associated with carriage



Methods

Study site 45km radius from Busia, Kenya

142 slaughterhouses and 738 slaughterhouse workers

Sampling Questionnaire—Knowledge of zoonoses and risk factors

Faecal and nasal swab

Sample analysis *Salmonella* sp., *Campylobacter* sp. and *S. aureus*

Data analysis Chi squared or Fishers exact test. P value of <0.05 considered statistically significant.

Results

Organism	Prevalence n=723	95% CI
Salmonella sp.	7	5-8
Campylobacter sp	24	21-27
S. aureus (n=738)	33	29-36
Knowledge and practices	**Percent n=738**	**95% CI**
Knowledge of zoonoses	31	28-34
Know meat carries disease	41	37-45
Wear protective clothing	52	48-56
Eat at the slaughterhouse	20	17-23
Slaughter sick animals	17	14-20
Cleans the slaughterhouse	5	3-7
Health status		
Diarrhoea in past 3 months	22	19-25
Wounds noted at clinical exam	8	6-10
Febrile at exam	2	1-3

Key findings

Campylobacter significantly associated with diarrhoea (OR 1.89 95% CI 1.26-2.83) *Salmonella* was not (OR 1.22 95% CI 0.56-2.47)

8% of *S. aureus* isolates MRSA (95% CI 4-11, n=241).

MRSA carriage significantly associated with workers involved in cleaning (OR 4.15 95%CI 1.25-12.1).

Conclusion

- Asymptomatic carriage of organisms in workers may be an important reservoir for dissemination of pathogens.
- Simple hygiene interventions would reduce disease in slaughterhouse workers

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