

SHOES OF VETERINARY STUDENTS PLAY SIGNIFICANT ROLE IN TRANSMISSION OF *C. difficile* SPORES

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BACKGROUND AND AIM

C. difficile is often found in animals and their environment, however, not much has been reported on veterinary clinics environment in terms of the prevalence and PCR ribotype diversity. The aim of the study was to assess the prevalence of *C. difficile* on shoe soles of veterinary students to explore their potential role in *C. difficile* dissemination in the environment of veterinary teaching clinics, hospitals and teaching rooms.

METHODS

SAMPLING	February 2020 Faculty of Veterinary Medicine – 5 different locations Shoe sole swabs from 24 students
ISOLATION	Shoe soles were swabbed with sponges (3M™) premoistened with NaCl prior swabbing. The sponges were incubated in BHIS. After enrichment they were subjected to ethanol shock. Selective medium CHROMID® <i>C. difficile</i> (BioMerieux) was used for <i>C. difficile</i> isolation. The isolates were identified with MALDI-TOF MS (Bruker)
TYPING	PCR ribotyping (Janezic and Rupnik, 2010) PCR toxinotyping (Rupnik et al. 1998)



RESULTS

100% positivity

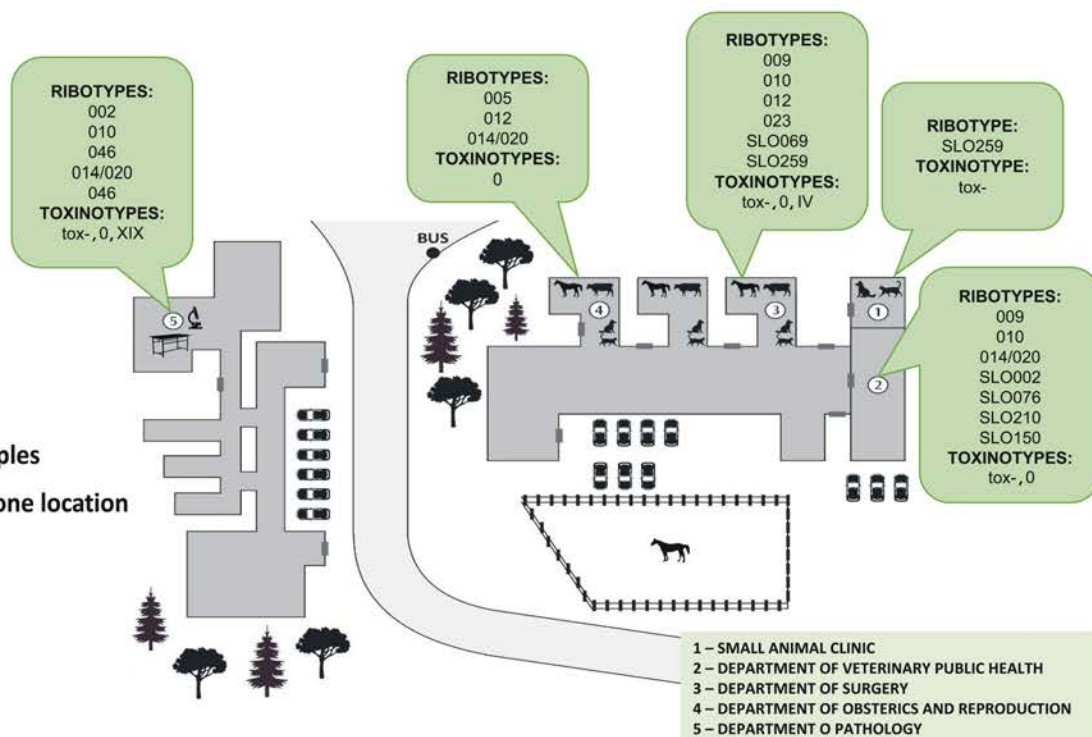
130 isolates

15 PCR ribotypes

Nontoxicogenic and toxicogenic strains

6 ribotypes present in multiple samples

Up to 7/15 ribotypes isolated from one location



CONCLUSION

Veterinary students could contribute significantly to *C. difficile* spore transmissions among veterinary teaching clinics, hospital and teaching rooms. Changing shoes for the time spent in veterinary clinic/hospital should be considered as a main solution to reduce transmission of different *C. difficile* ribotypes in this environment.

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