A One Health approach to understanding the epidemiology of Cryptosporidium in Scotland

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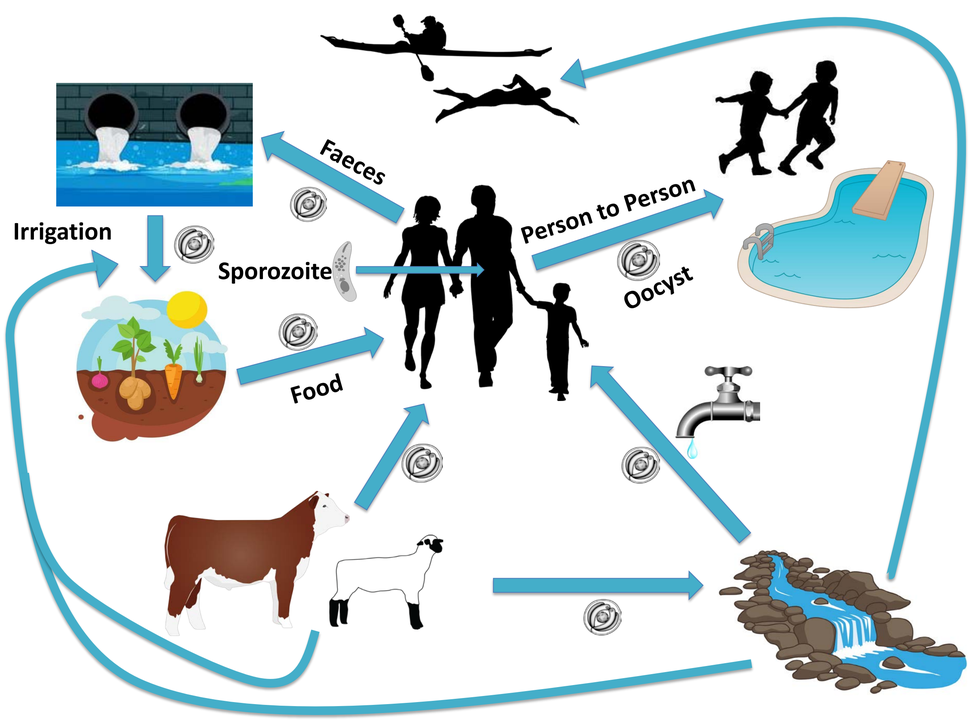
Cryptosporidium is the most commonly reported protozoal cause of infectious intestinal disease among humans in Scotland. A One Health approach was taken to bring together human and veterinary expertise and data to achieve a better understanding of the complex epidemiology of cryptosporidium, and to demonstrate the value in this approach.



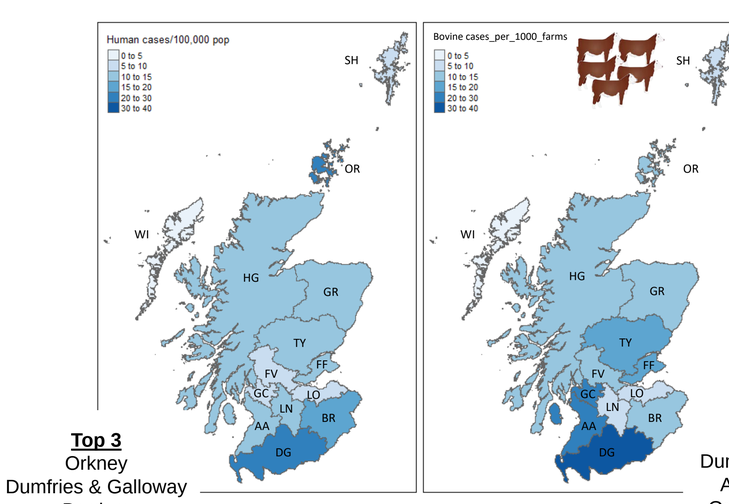
Human data from routine reporting of laboratory confirmed cases of cryptosporidiosis (*C. parvum* and *C. hominis*) to Health Protection Scotland (HPS)

Animal data from voluntary diagnostic submissions to SRUC Veterinary Services Disease Surveillance Centres

The aim was to determine whether additional value could be realised over and above current usage of the routine surveillance data

Rates of cryptosporidium vary considerably across the 14 NHS Boards, with some similarity between the human rate and herd-level cattle rates within a Board.

The spring peak of the biphasic seasonal pattern among humans is predominantly due to *C. parvum*. It occurs consistently four weeks after the single peak of cattle isolates associated with the spring calving period.



Top 3
Orkney
Dumfries & Galloway
Borders

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Dumfries & Galloway
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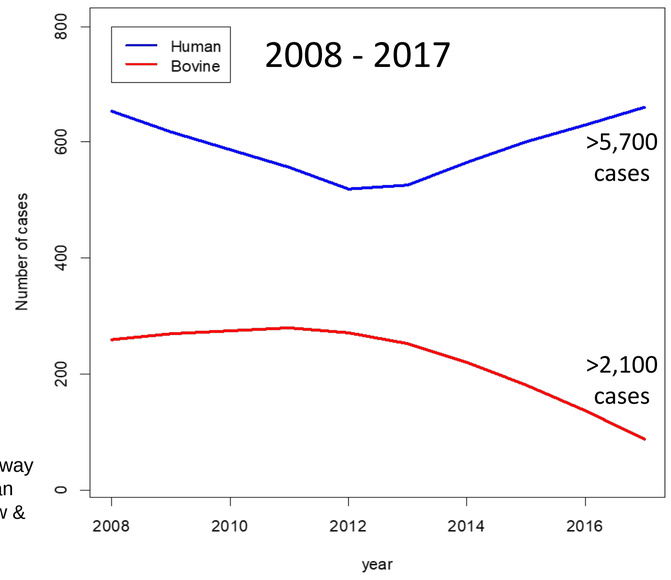
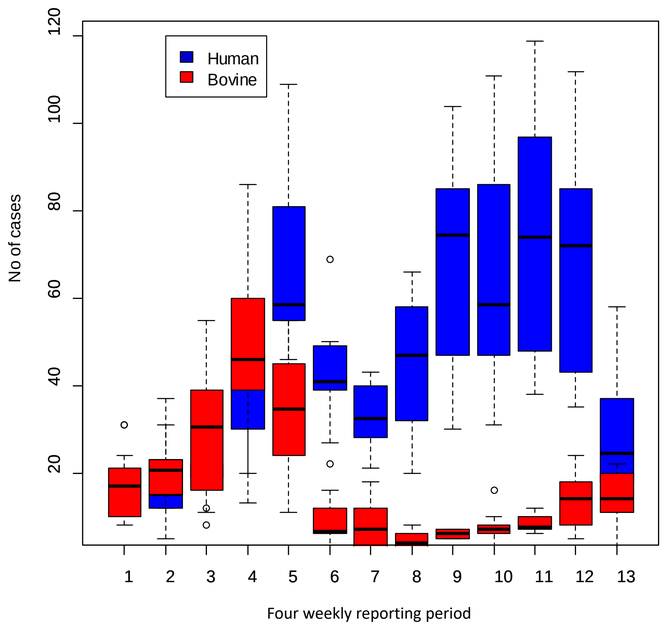
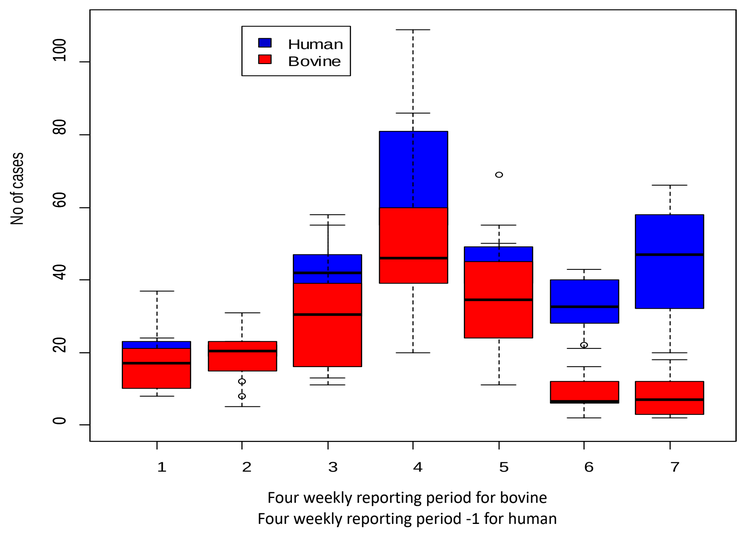
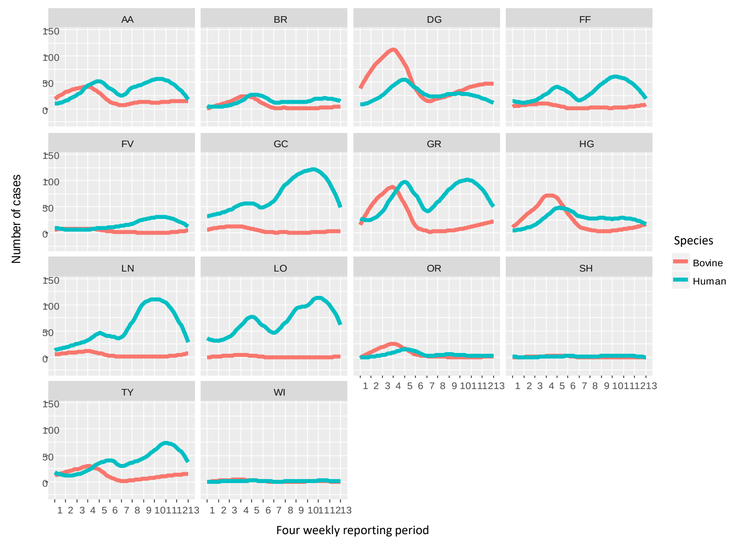
Greater Glasgow & Clyde









The strength of this approach was not only in bringing together human and animal data, but equally as important, in facilitating discussion and collaboration between the expertise in both disciplines, to ensure a common understanding of the limitations and biases of the data, and to provide a joint interpretation of the analysis.