Pitfalls in the analysis of age-dependent prevalence data

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Objective & Material

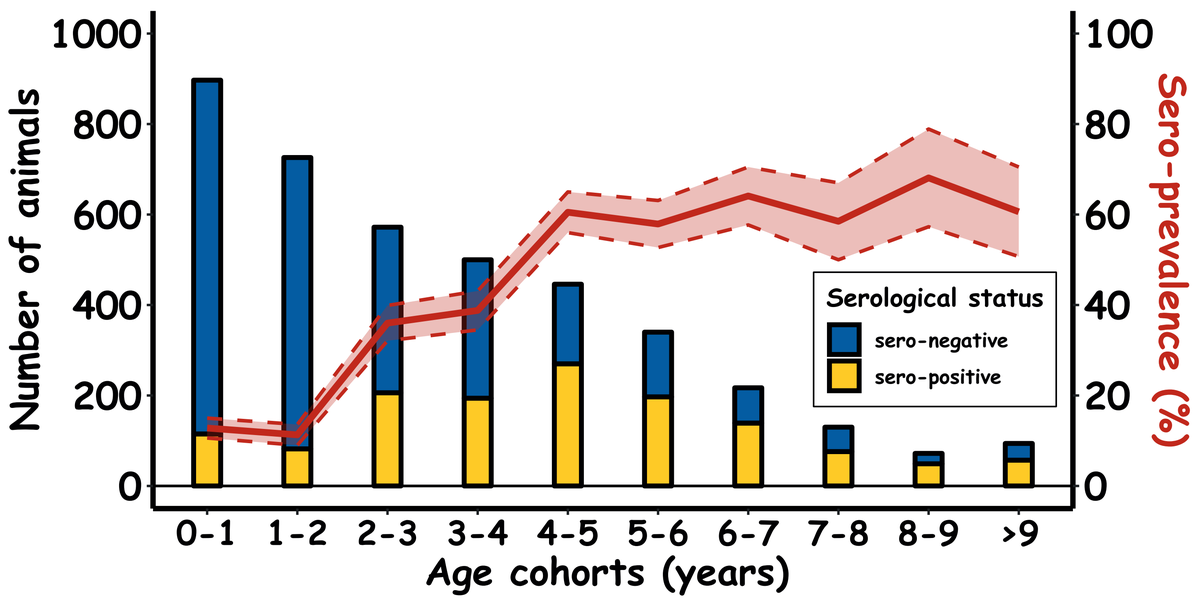
Is age a risk factor for bovine herpesvirus type-1 (BoHV-1) infection in cattle?

getting data

Data characteristics:

- 17 Irish dairy herds
- Unvaccinated & sero-positive
- Serological full herd test for BohV-1 antibodies

Analysing all herds at once



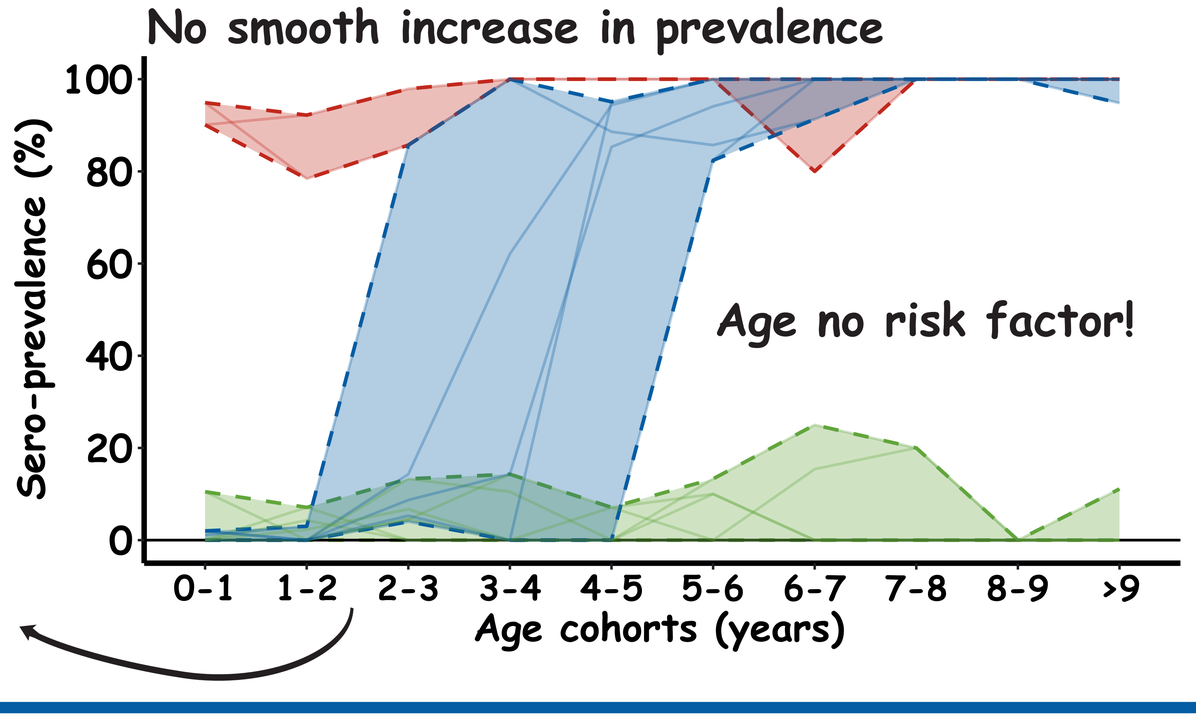
Older cattle are more often sero-positive for BoHV-1 antibodies than younger!

Confirms age as a risk factor for BoHV-1 infection!?

Analysing data at herd level

However, what about individual herd profiles!

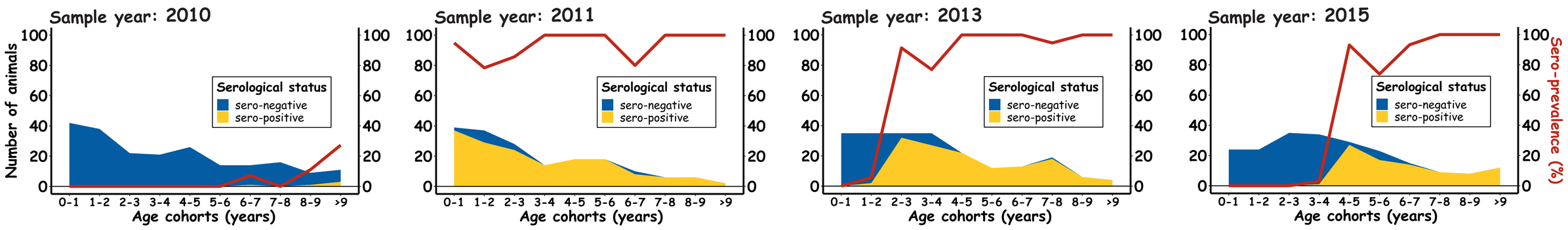
High prevalence (>80%) across all age cohorts
Sudden increase between adjacent age cohorts
Low prevalence (<20%) across all age cohorts



Interpretation & Conclusion

Temporal prevalence changes in a sample herd

Short-lived BoHV-1 outbreaks result in age-dependent prevalence profiles and reveal BoHV-1 history in the herd.



Don´t forget to look at individual herd profiles when analysing BoHV-1 prevalence data

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