

Antibiotic consumption in dairy herds is reflecting decisions rather than health

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The antibiotic consumption of a dairy herd is often considered to be a valid approximation of underlying health status of the herd and a measure of the welfare impairment related to diseases. The objective of this study was to challenge this hypothesis about association between disease and antibiotic consumption at herd level based on systematic clinical recordings of fresh cows as an unbiased measure of disease.

Materials: 109 Danish dairy herds from 2009 to 2014 with systematic clinical recordings of fresh cows (examination for mastitis/metritis).

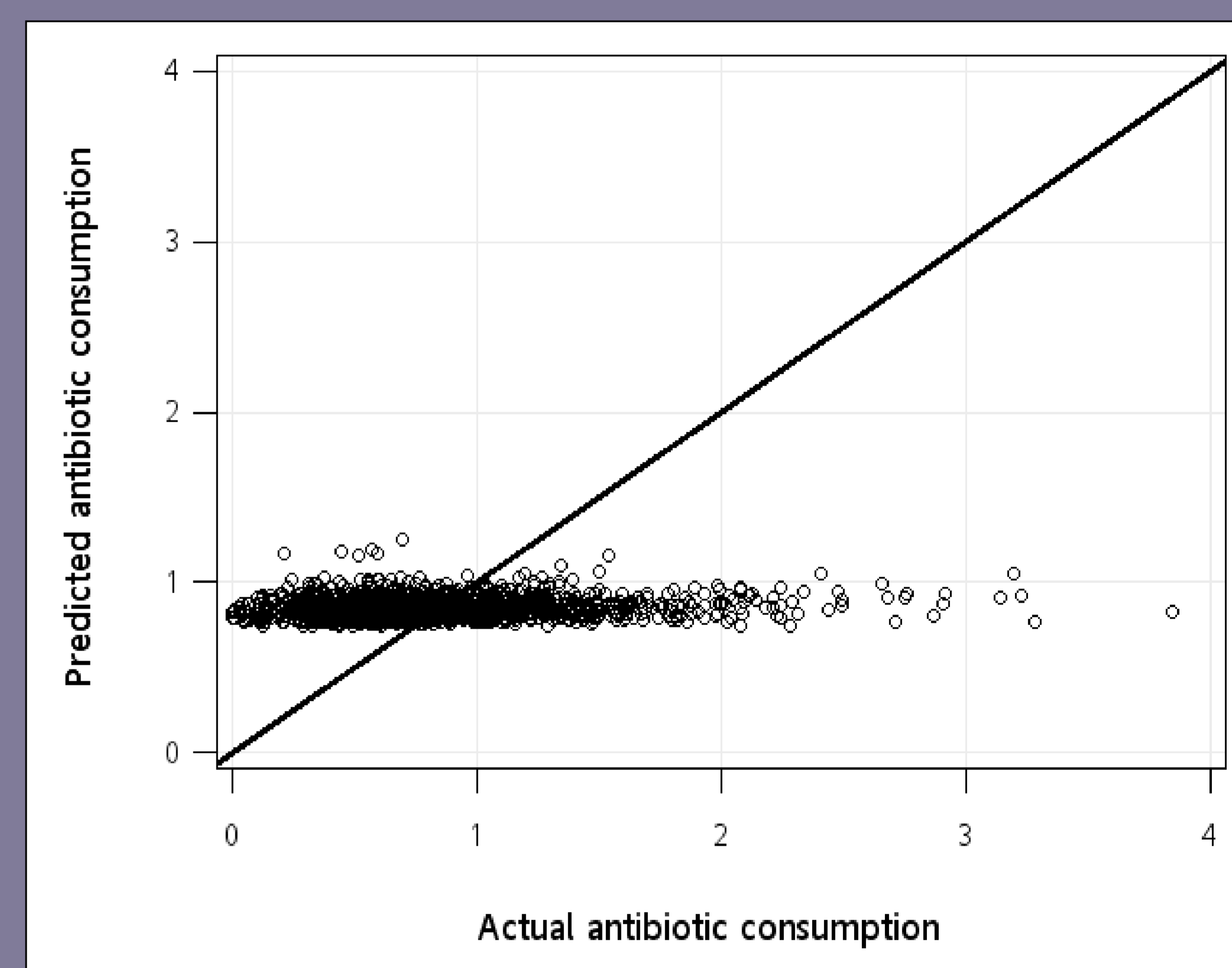
Antibiotic consumption of all treated diseases in Animal Daily Doses/100 cows/day.

Methods: Regression models to evaluate the outcome of systematic clinical recordings ability to predict antibiotic consumption.



The picture shows a veterinarian evaluating the vaginal discharge of a fresh cow to detect metritis. The key point is that all fresh cows are examined.

The graph shows there is no relation between the actual antibiotic consumption and the antibiotic consumption that is predicted by the results of the systematic clinical recordings.



Conclusion/Discussion: Since systematic clinical recordings should be an unbiased estimate of disease prevalence there should be an association between the result of the systematic clinical recording and antibiotic consumption. In this study we hardly find any association indicating that antibiotic consumption and outcome of the clinical examinations does not describe the same underlying condition.

The results can be explained by different treatment thresholds in different herds, and the consequence would be that monitoring disease status by antibiotic consumption is highly questionable.