## Conclusions

Simple parameters—such as herd incidence of displaced abomasums, protein-to-fat ratio, and percentage of fat cows pre-calving—could be used within a practice to predict increased herd risk for subclinical ketosis. These indicators could be useful to practitioners in determining which herds might need a subclinical ketosis monitoring program. These tests could also be used by veterinarians to target herds which might benefit from enhanced preventive strategies for subclinical ketosis, such as the use of monensin, propylene glycol or rumen-protected choline in the transition cow program.

# Does Calfhood Infection with Cryptosporidium Impact Future Performance of Dairy Heifers?[a,b]

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## Introduction

Cryptosporidium is a zoonotic, parasitic protozoa that is of interest to livestock producers, veterinarians, and public health officials. It is the most prevalent pathogen isolated from diarrheic calves according to published reports. The financial impact of cryptosporidium on the performance of dairy herds is unknown. This study sought to determine whether calfhood cryptosporidiosis has an effect on future performance of dairy heifers.

## Materials and Methods

A retrospective cohort study was carried out using fecal samples from calves in 40 herds that were part of a longitudinal study completed three years ago in southeastern New York state. The fecal samples were examined for *Cryptosporidium parvum* oocysts by concentration/flotation microscopy and for Cryptosporidium-specific antigen by fecal ELISA. Calves that tested positive for Cryptosporidium have a matched, unexposed control based on age and herd. Performance parameters, such as age at first breeding, age at first calving, culling from weaning to first calving, and mature equivalent first-lactation milk yield, have been captured for both case and control calves from the archival data at DairyOne (NE DHIA) as Dairy Comp 305 files. Exposed cases and controls are compared using time-to-event analysis (survival analysis, PROC PHREG -SAS) and a random-effects, multivariable regression model that controls for confounding factors and herd effect (PROC MIXED – SAS).

## Results and Discussion

Sixteen herds met the inclusion criteria for the present study, and their case and control calves were followed up retrospectively through their first lactation. This data will allow us to study whether there is a significant effect of calfhood exposure to Cryptosporidium on future performance of dairy heifers. For performance parameters where exposure status differed significantly, financial liability will be estimated. While analyzing data only from heifers that remained in the herd from birth through first lactation may introduce some selection bias, a direct measure of the difference in culling between exposed and unexposed groups will allow detection of this effect.