An Epidemiologic Study Evaluating Therapies for Bovine Mastitis

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One recommended element of a comprehensive mastitis control program is to treat all cases of clinical mastitis with an appropriate antibiotic. There is good evidence that antibiotics are not effective treating coliform mastitis and recent data suggests that antibiotics may have no effect on the clinical course of mastitis. Our study examined the utilization and effectiveness of different therapies for the treatment of naturally occurring mastitis. A cohort study followed 5 Pennsylvania (USA) dairy herds over four years. The study utilized producer collected data and samples, including milk from clinical quarters for microbiology ; and information on initial severity of the clinical mastitis, treatment choice, and 30 day assessment of the course of the mastitis. Production data were obtained from DHIA records, and only first clinical cases involving a single quarter and pathogen were used in this study. The primary analytic outcome was the number of days for the for the quarter and milk to return to normal (DTN). A total of 367 clinical cases were evaluated. Four categories of treatment were defined: no antibiotics used, intramammary beta-lactams, intramammary ceftiofur, and miscellaneous therapy. The most common treatment was intramammary ceftiofur used in 39% of the clinical cases. No antibiotic therapy was chosen in 14% of the cases. In this study only one of the farms treated all clinical cows with some form of antibiotic. The Cox Proportional Hazards Model, which controlled for initial severity, showed no effect of therapy on DTN. Of all variable examined, initial severity score best predicted DTN. Further analysis will examine the antibiotic effect on microbiologic cure, DTN conditional on bacterial cause, and production.

Segregation or Use of Separate Milking Units for *Staphylococcus aureus* -Infected Dairy Cows

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Abstract

Seventy six dairy herds with initial prevalence of *Staphylococcus aureus* IMI 3 10% were included in this study. Farm managers did not elect to change teat dipping or dry cow treatment practices, were not segregating cows that were positive for *S. aureus* at the initial visit, and did not cull >50% of those found positive on the initial visit. During a 6-to-24 month follow-up period, segregation or separate milking of cows that were positive for *S. aureus* resulted in reduction of prevalence from 29.5 to 16.3%, and bulk tank SCC from 600,000 to 345,000/ml. Prevalence of *S. aureus* mastitis was unchanged for farms not segregating *S. aureus* cows, 22.5 to 20.2%. Change in SCC from 698,000 to 484,000 for nonsegregated herds was less of a reduction than for segregating farms. Segregation or use of a separate milking unit for cows known to be positive for *S. aureus* is an effective mastitis control practice.