

# Fresh cow evaluations and treatments on California dairies

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## Introduction

Minimizing the risk of antibiotic resistant organisms and antibiotic residues in dairy and dairy-beef products is a topic of nationwide interest. Our long term goal is to achieve this objective, based on decreasing unnecessary antibiotic use on dairies. To design an effective outreach program on judicious use of antibiotics, it is imperative to describe the actual practices on dairies. The objective of this study is to describe the identification techniques for sick cows and treatments decisions for fresh cows (FC) based on cow-side observations.

## Materials and Methods

A total of 19 dairies, 2 Jersey and 17 Holstein herds, ranging in size from 600 to 9500 cows, were visited in Tulare-Kings and Merced-Stanislaus Counties in California. Two bilingual veterinarians recorded cow-side observations and responses from individuals treating cows during FC evaluations. Information on the following topics was collected: a) FC diagnosis techniques, b) signs of disease evaluated, c) post-calving prophylactic treatments, d) FC treatment decisions, and e) treatments records.

## Results

Daily (n=18) or thrice a week (n=1) FC evaluations and treatments administrations lasted (median (range)) 13.8 (1.5 to 45) s/cow. To identify sick cows evaluators relied on thermometer (n=3), stethoscope (n=7) or both (n=5). All dairies visually inspected cows for abnormal vaginal discharge (VD), retained placenta (RP), and down cows. On 2 dairies those were the only signs evaluated. In addition, 1 (n=3), 2 (n=2), 3 (n=5) or 4 or more (n=7) signs of disease were evaluated including rumen fill (n=8), eyes-ears (n=8), milk yield/udder fill (n=10), appetite (n=7), feces (n=9), temperature (n=9), and/or respiratory issues (n=8). Monitoring programs were based either on rectal temperature evaluations followed by rectal palpation in febrile cows from 1 to 3 days-in-milk (DIM) (n=2) and from 1 to 10 DIM (n=3); or rectal palpations within 1 to

10 DIM either once (n=1) or twice (n=1). One dairy performed vaginal inspection at day 1 after calving. Antibiotic therapy was given systematically after eutocic (n=2), twinning (n=8), and dystocic calvings (all FC (n=3), primiparous FC (n=1) or severe cases (n=8)). Cows with RP received a preventive treatment at 24 (n=8), 48 (n=6), and 72 (n=2) h postpartum with systemic ceftiofur (n=10), penicillin (n=1), ampicillin (n=2) or intrauterine oxytetracycline (n=1); or they received a selective treatment only when metritis was observed (n=3). On 4 dairies RP cows were treated with antibiotic uterine flushings. Fetid VD were treated with systemic antibiotics (n=19), and uterine flushings either with antiseptic (n=7) or antibiotics (in all cases (n=2); if systemic treatment failed (n=2)). Abnormal non-fetid VD with fever were treated with systemic antibiotics (n=5), antibiotic uterine flushing (n=1) or systemic antibiotic with antiseptic flushing (n=3). When fever was not observed 4 dairies used systemic antibiotics and 6 dairies only used antiseptic flushing. Two dairies treated non-fetid VD with systemic antibiotic regardless of fever. Depressed and/or anorexic cows were treated without fever (n=3) or if fever was observed (n=7). Three dairies, monitoring postpartum rectal temperature, treated cows with fever as the only symptom. Systemic antibiotics used to treat metritis symptoms were ceftiofur (n=16) for 3 to 4 days, penicillin (n=2) or ampicillin (n=1). Computer records of antibiotics with milk withdrawal were kept, but only 10 dairies kept records for cephalosporins.

## Significance

Techniques used to identify sick cows and the signs of disease observed varied widely across dairies. Thus, ailments classification might not be consistent across dairies. Fresh cow evaluations focused mainly on seeking metritis signs. Disease signs that lead to antibiotic treatment varied widely across dairies. To improve judicious use of antibiotics on dairies, more large-scale field studies are needed to establish valid criteria and treatment recommendations for current practices on fresh cows.