Mastitis is the most common and costly health disorder in dairy cows. Its negative economic impacts include:

- Discarded milk
- Lost production
- Reduced milk quality
- Treatment costs

Extended-duration therapy may be the most accepted mastitis treatment strategy because of its efficacy for some pathogens.

However, the economic impact of extended treatments according to pathogenic prevalence has not been studied.

The study developed a decision tree model to evaluate the economic impact of different durations treatment for the first case of mild or moderate clinical mastitis occurring in early lactation.

The model was used to study scenarios of pathogens distributions and use of on-farm culture.

1) Culture-based therapy allowed for the most judicious use of antimicrobials

2) Overall, the best strategies were:
   a. Treat mastitis caused by gram-positive pathogens for 2 days.
   b. Do not treat mastitis caused by gram-negative pathogens.
   c. Do not treat mastitis when no pathogens are recovered in culture.