

OBSERVATION OF MASTITIS PARAMETERS IN FARMS USING A POLYVALENT MASTITIS VACCINE

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OBJECTIVE

Monitoring the dynamic nature and magnitude of the mastitis challenge, prevalence and incidence within the modern dairy herd is becoming common place around the developed dairy industries of the world. The iterative process of regular interpretation of prevalence data (Individual Cow Somatic Cell Counts [ICSCC]), incidence data (Clinical Mastitis Records) and how these data change over time both within lactation and over the dry period can give much information about the transmission patterns and likely origin and duration of intramammary infections within a dairy herd.

MATERIALS AND METHODS

The initial aim of this project was to apply these diagnostic and monitoring techniques to three herds chosen for a high prevalence of *Staphylococcus aureus* over the 12 months prior to and during the 12 months of a rolling 3 month vaccination program with a polyvalent mastitis vaccine (STARTVAC®, HIPRA). After this initial observational period two of the herds decide to continue with the vaccination program. All cows received 2 vaccine doses 3 weeks apart followed by a rolling policy of quarterly boosters. In calf heifers were batched to receive 2 doses 3 weeks apart with the second dose no less than 10 days prior to expected parturition. Heifers then joined the rolling 3 month booster program. Data is compared at 6 month intervals from 12 months prior to and 36 months after initiating a whole herd vaccination policy.

RESULTS

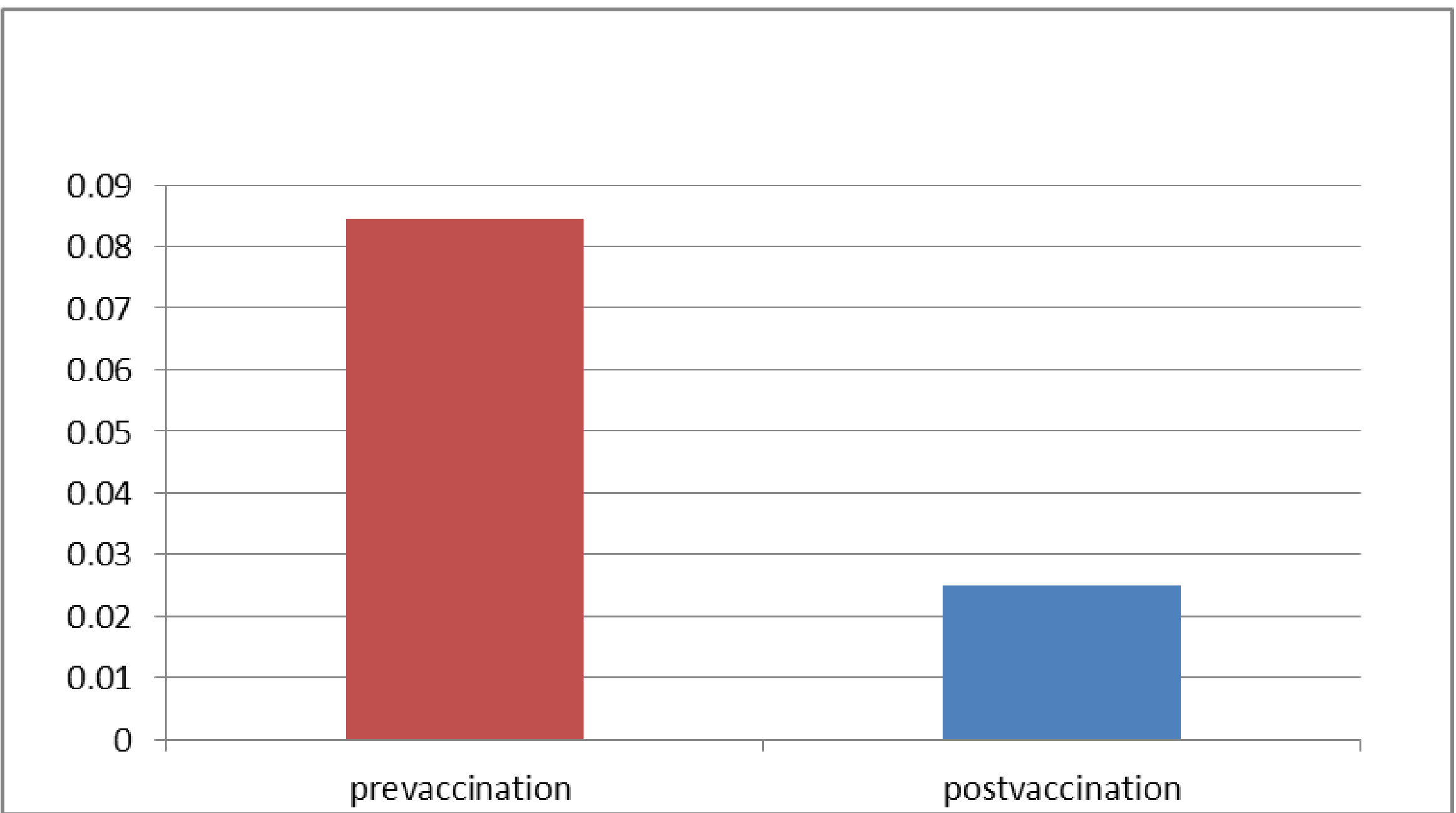


Fig 1. *S. aureus* prevalence before and after vaccination.

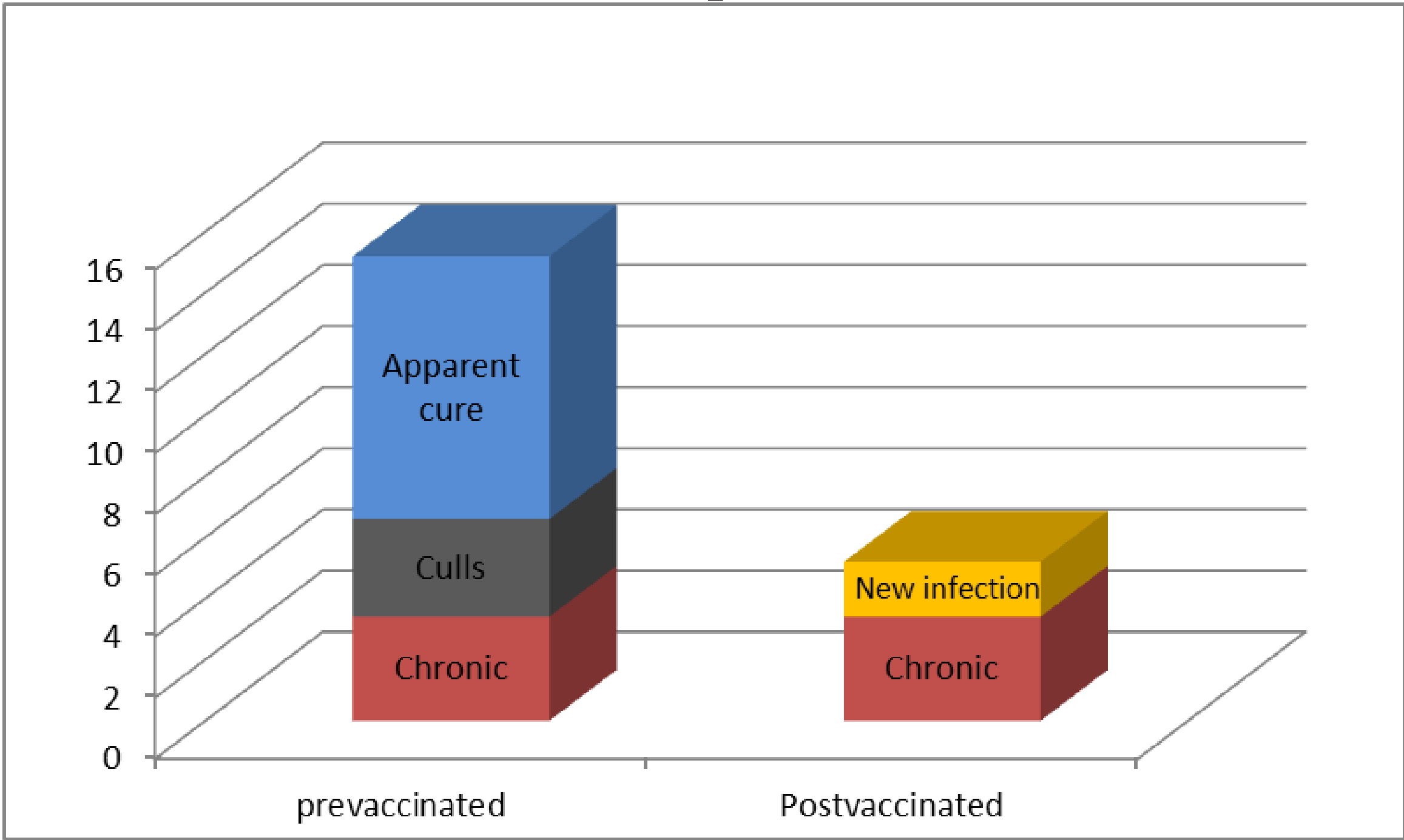


Fig 2. Potential impact of culling of known *S. aureus* infected cows on *S. aureus* prevalence.

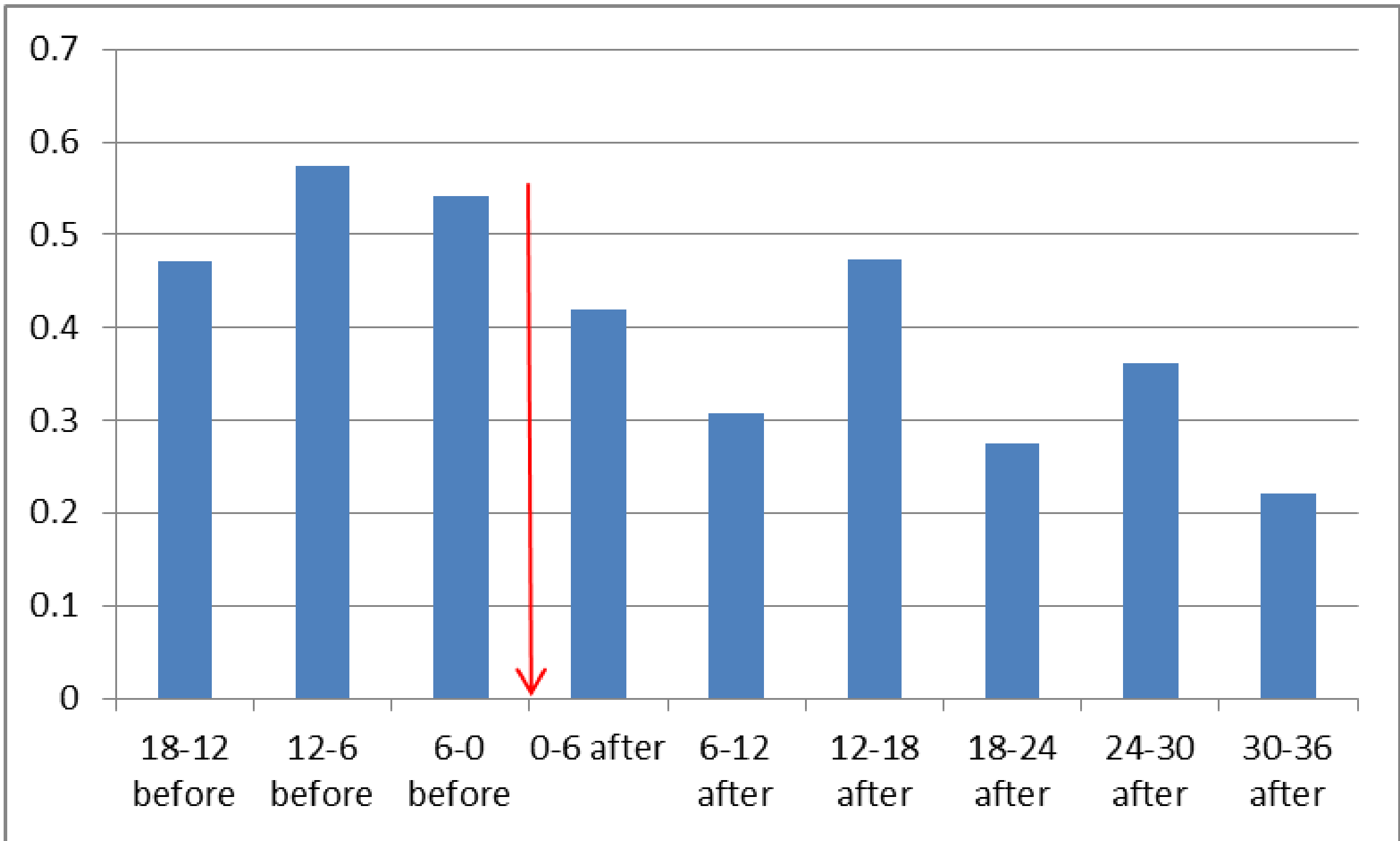


Fig 3. Clinical Mastitis Incidence.

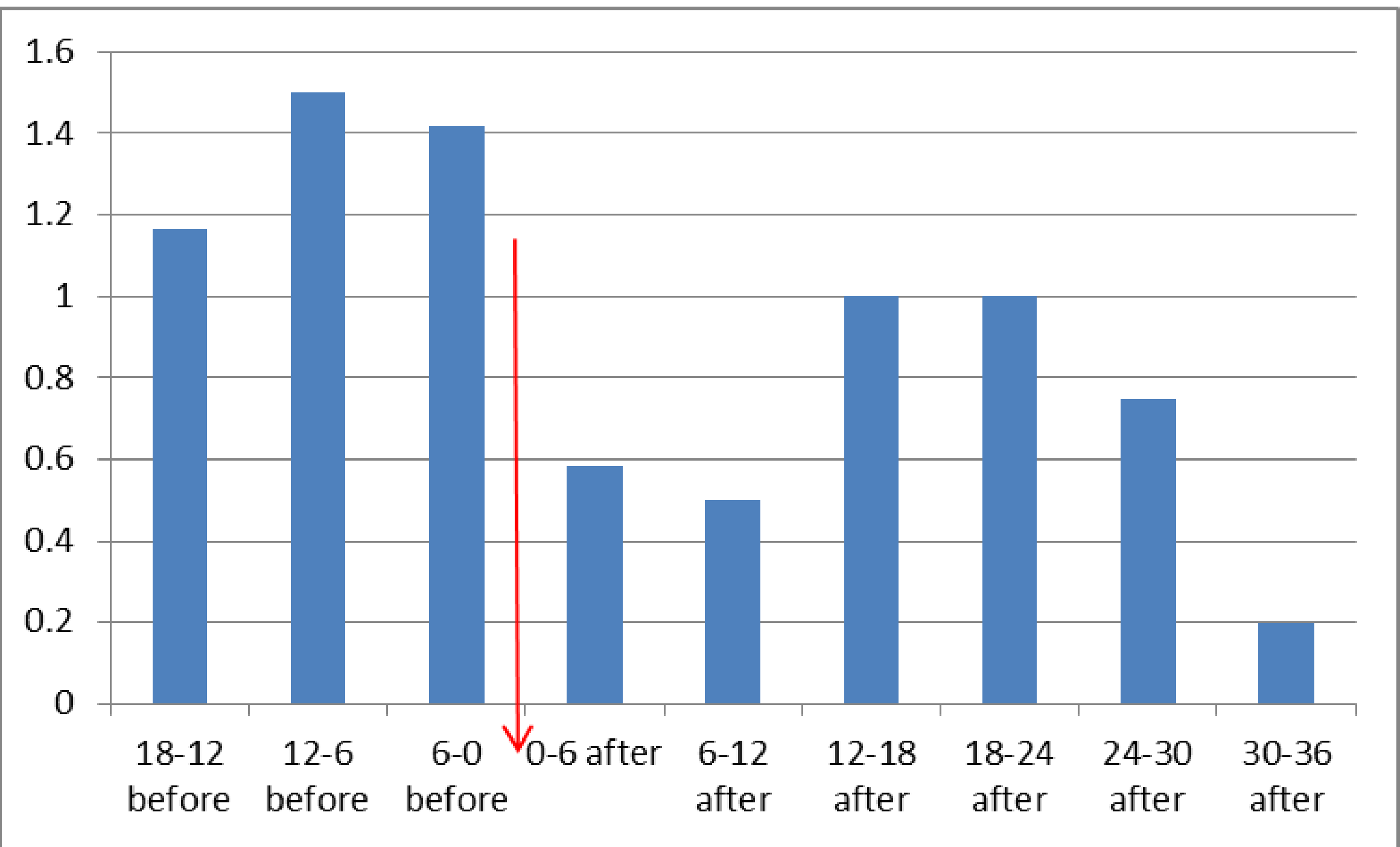


Fig 4. Index clinical mastitis cases in the first 30 DIM.

CONCLUSIONS

In this longitudinal study during three years of using a polyvalent mastitis vaccine despite some short lived fluctuations an improvement in the clinical mastitis and ICSCC was observed. It is important to remark that better results are obtained after 6 months using the rolling protocol - in common with other studies as the improvements take time to accumulate. Vaccination is a valuable tool to control *S. aureus* infections but it is important to remember that as with any control tool, vaccination is not a panacea and consistent good mastitis management is essential.