The purpose of coliform mastitis vaccines is not to prevent new infections, but to reduce the severity and duration of clinical signs in mastitis cases caused by coliform bacteria. This means fewer coliform mastitis cases will be grade 3 or “toxic” (i.e. when there are clinical signs of systemic illness along with abnormal milk). Studies demonstrate a positive cost-benefit analysis for the use of such vaccines, even in herds with excellent milk quality and a low new infection risk, primarily due to the avoidance of costly outcomes associated with severe coliform mastitis cases: death loss, culling, and substantially decreased milk production from cows that recover.

Some herds simply perform whole-herd vaccinations at regular intervals 3-4 times per year (following an initial series of doses a few weeks apart in heifers). However, the most common strategy for administering coliform mastitis vaccines is to time the vaccinations with the production stages of individual cows. In such a scheme, 3 doses are given per lactation cycle: at dry-off, when moved to the pre-fresh pen, and a few weeks after freshening. (Likewise, heifers are vaccinated at 7 months of pregnancy, at 8 months of pregnancy, and a few weeks after freshening.) Benefits of this strategy include 1) aligning peak immunity with the high risk period for new coliform mastitis infections in the pre-fresh period and early lactation, 2) combining vaccine administration with times that cows are handled for other reasons (e.g. dry cow therapy, pen moves, other vaccinations, etc.), and 3) avoiding milk loss associated with vaccine response (since two doses are administered during the dry period). Because immunity wanes after a few months, some herds give an additional booster to mid-lactation cows at the beginning of summer, to stimulate immunity prior to the summertime high risk period for new coliform mastitis infections.

Your veterinarian can help you select specific vaccine products and develop an effective vaccination protocol for your herd.