



VETERINARY COUNCIL  
OF NEW ZEALAND  
Te Kaunihera Rata Kararehe o Aotearoa



Case study:

## Selective Dry Cow Therapy reducing antimicrobial use and resistance

# Case Study

Keeping the prevalence of antimicrobial resistance (AMR) low, and ensuring that antibiotics remain effective in the long-term, are a key part of the updated prescribing advice for dry cow therapy (DCAT) which comes into effect on 1 January 2027.

The Veterinary Council of New Zealand's new Statement on the authorisation of dry cow therapy supports a shift in practice to selective DCAT, backed by research which found it is unlikely that herds with a low bulk milk somatic cell count, low incidence rate of clinical mastitis, and low culling percentage for mastitis-related problems have many cows truly infected at the time of dry-off. Where a cow is unlikely to be infected, internal teat sealants (ITS) should be used rather than antibiotic dry cow therapy, to prevent new infections over the non-lactating period. DCAT remains the appropriate choice for individual cows where infection is indicated.

If a clinical case for whole herd DCAT exists, veterinarians still have the professional judgement to authorise it, provided their judgement is documented and supported by evidence. The Statement sets out the expectations for veterinarians when authorising DCAT and ITS,

including having a sound understanding of the current prevalence and incidence of clinical and subclinical mastitis in the herd; the bacteria involved; the effectiveness of antimicrobial therapies; and mastitis management controls in use on the farm.

Using antimicrobials can be an effective part of a wider udder health programme, but the usage must be justified at an individual cow level to minimise the risk of AMR and food residues. Optimal udder health during lactation, around the time of drying off and over the dry period, is typically achieved through careful attention to milking management, udder hygiene, minimising exposure to environmental bacteria, nutrition, and stock handling.

A veterinarian's responsibilities when authorising selective DCAT and ITS include only authorising to herds under their care; reviewing animal health and herd test records; and ensuring there is sufficient evidence to support the need for DCAT in each animal, such as the individual cow somatic cell count (ICSCC) (herd test) results and other mastitis diagnostics test results, where available.

## A case for change

At Taranaki Veterinary Centre, reducing the use of critically important antibiotics and reducing whole herd DCAT usage has been underway for several years, and is achieving great results.

The Centre, which has clinics in Stratford, Waverley, Patea, Hawera and Manaia, has a diverse client base, with dairy farms making up about 80 per cent of it.

Dairy Operations Manager and Veterinarian Matt Stancombe BVSc said, "In 2021, the practice decided not to carry critically important antibiotics (classified as red under the NZVA traffic light system) unless their use could specifically be justified over first choice green or orange classified antibiotics. This followed industry guidelines around antibiotic use."

It also aligns with the World Health Organization (WHO) goal of reducing AMR by 2030 through using a One Health approach to promote prudent antibiotic use, strengthen surveillance, and

improve hygiene across animals, humans and the environment.

The Centre also began focusing on reducing DCAT usage. It started by working with some of their more progressive farmers, and ones who had already expressed an interest in moving their farms towards only using selective DCAT, to socialise the new standard of practise. As part of this work, staff participated in motivational interviewing training sessions which were held over two years.

Motivational interviewing is an evidence-based approach to conversations that helps people strengthen their motivation or commitment to change. It shifts the focus from persuading or directing people to engaging with them in a respectful way that draws out their concerns, ideas or values. This helps to build rapport and trust, which in turn helps to reduce resistance to change. "Initially there was a lot of scepticism about learning motivational interviewing skills as part of our work on reducing whole herd DCAT," Matt says.

“Some people thought it was manipulative or wouldn’t work, especially as some vets had done things a certain way for a very long time. Attitudes improved as people trained and practised more, and understood that this was the direction the clinic was taking as part of our wider strategy. We want to be seen as trusted advisors – not just patch up technicians.”

He says introducing changes in small increments and having good communication had made it

easier to get farmers on board because it made them aware changes were coming and they had time to understand why they were important.

“For farmers, change needs to happen through veterinarians that they trust. A slow and steady approach instead of a hard-line change has been very beneficial for us.”

## The approach

Along with the motivational interviewing training, the clinic has also supported their vets by giving them the tools they need to do things differently, and work within a contextualised care model which adapts the care provided to a person’s specific circumstances.

“We incorporated some standardised record keeping tools into our documentation that our vets use, such as open questions and asking farmers about what their goals were, so that they could have better conversations and could document any barriers or challenges the farmer might be facing, along with what they are currently doing on their farm,” Matt says.

“We ensure verbal commitments from the farmer are documented on the farm records, such as them saying they can’t do it this year but will the

next, so that even if the consulting vet changes, progress can continue.”

“We’ve done a range of things from producing one-page documents for farmers about what a good dry off diet looks like, through to maintaining transparency with our team, setting shared goals and accountability, and giving our vets the opportunity to provide feedback throughout the whole process.”

“Ultimately, we’re sharing the decision making with the farmer and creating a bespoke solution for them. We’re asking what their problems are and how we can make their treatment plan work for them. We’re providing advice but asking for permission to explain. The farmers can voice their opinions, and we then work collaboratively with them.”



“For example, we might be working with a farmer in Stratford who has always used whole herd and is concerned about doing selective teat seal because he normally transports his cows one week after drying them off. They might be concerned about the disruption to the cow, the effect of the teat seal, and getting mastitis at the runoff block where it can be notoriously hard to assess and treat animals.”

“So, we listen to what their concerns are and talk with them about whether the trucking company can transport the cows later, or could they dry the cows off in mobs or do a trial on 20 cows and see how they go at runoff. We’ll introduce some of the language around selective DCAT, make a record in the notes and then at the next year’s consultation we’ve captured their commitment for change and shared decision making.”



Taranaki Veterinary Centre Dairy Team

## Overcoming barriers

Matt says barriers that farmers might face in making a significant change to their practises range from financial or relationship difficulties, capability or resourcing deficiencies, through to knowing someone who has lost cows due to incorrect teat sealant usage. They also have different motivational drivers, such as animal welfare and efficiencies on the farm.

Farmers’ motivations for resisting change are often not financial. Poor past experiences with teat sealant, including the loss of cows or quarters, can create a deeply held reluctance that financial arguments alone will not address. The team learned to validate those experiences before discussing why outcomes might be different this time.

“We had to think of ways to minimise bad outcomes and ensure we weren’t pushing clients into change too early. Part of the motivational interviewing training we did looked at what some of the barriers might be that would make farmers resistant to change, and how we could address them.”

Some of the techniques staff can use to develop the farmers trust range from building knowledge and confidence with the farmer such as doing some of the dry-off internal teat sealing with them personally or sending a technician; providing written advice; talking with farmers about comparing the cost of not changing to the value and sustainability of the new standard of practise; and building trust and rapport with the farmer by empathising with their experiences.

“Having all your team on board also makes a big difference. Other clinics have had pushback from senior veterinarians which in turn has an impact on junior vets. I believe senior veterinarians have a responsibility to lead change and be an example to juniors - not a barrier. Junior vets are more likely to want to follow industry change and adhere to changes to a veterinarian’s responsibilities,” he says.

Matt says that for teat sealant products to succeed, failure points need to be addressed, such as hygienic application, and managing the nutrition for cows so they aren’t only being fed grass.

“Teat sealant failure can be anything that makes the teatseal fall out. This could be the cow not being dried off properly before insertion; very high producing older cows who are at a higher risk of losing it; cows being allowed to run down the race and losing their teatseal from swinging udders; the teatseal overheating and running out; or trucking.” he says.

## Outcomes

In 2014, Taranaki Veterinary Centre prescribed enough DCAT to treat 80% of adult cows present at dry-off. That figure is now 50%. The bulk of that 50% comes from the 19% of herds who receive whole herd DCAT, with the remainder being selective.

The number of eligible cows being given teat sealants rose from 35% in 2014, to 65% in 2025.

Feedback from the veterinary team at the clinic has also been positive, with vets saying they were happy with the pace of change and pleased that they could still use their professional judgement and discretion where needed.

In fact, the clinic has found that motivational interviewing has helped in other areas such as relationship building, note taking and monitoring results.

“Our clinical notes have improved, making it easier for example for another vet to take over from someone if they do the next year’s consult,” Matt says.

“We have included boxes on our forms for our team to record what method they use and check they have reviewed the previous year’s documentation including the treatment plan. If someone needs to make a really big change, we might book them in with our nutritionist, for example, to design a diet and provide some basic advice and training so the farmer can recognise some of the red flags and help prevent some of the common issues.”

Supporting vets with the right tools also means being able to identify pathogens and tailor treatment, reducing the temptation to default to blanket antibiotic coverage. All five of the Centre’s clinics also have in-house Mastatest analytical machines, which rapidly detect bacteria causing mastitis from milk samples, and specify the most appropriate treatment.

“This has been a multi-faceted approach that has helped identify barriers for both farmers and vets.”

A 2023 audit by the Ministry for Primary Industries praised the clinic’s DCAT results, saying that, “Overall Taranaki Veterinary Centre is demonstrating the highest standard of stewardship of prudent antibiotic use and efforts to mitigate the development of antimicrobial resistance. These standards are evident in both the small animal and the large animal departments of Taranaki Vet Centre.”

“Taranaki Vet Centre has made significant reductions in the use of antibiotics classified by the NZVA as ‘red class’ and the WHO as “Critically Important - Highest Priority” for the treatment and maintenance of human health.”



**40%** reduction in DCAT antibiotics sold.



**86%** increase in the number of eligible cows given teat sealants.