



ETHICAL AGENTS
VETERINARY MARKETING

EA NEWS

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Is It All Doom and Gloom?

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Biosecurity New Zealand's officers screened 1,391,641 arriving air passengers in the first 3 months of 2023, compared with 97,810 for the same period in 2022.

This coupled with the fact that there were more than 100,000 cruise ship arrivals not only means that Biosecurity New Zealand has been extremely busy but also that the hospitality industry, after a couple of very tough years, should be starting to get back on its feet.

While lack of staff has been an issue the hospitality industry, which has mainly relied upon employing backpackers must be able to see a light at the end of the tunnel.

There are probably other demographics in play, for example many tourist travelers are the silver haired variety, i.e. retirees crossing off bucket list items. Therefore the young backpackers may not be so prevalent.

Thus the current situation of staff shortages leaving restaurants un-

able to cope with demand, may continue.

Nevertheless there is clearly some pick up in the tourism industry especially the airline industry.

The national carrier, Air New Zealand went through extremely tough times during the pandemic, necessitating huge fare increases to break even.

Now planes are packed full so the airline is currently creaming it. This leads some to complain about profiteering but in reality they are just making up the shortfall.

While there are, justifiably, talks of recession at least the tourism industry should be finding its

feet and, as always, the farming industry, especially dairy, remains reasonably strong, carrying the economy.

Global events such as climate change and the war on the other side of the planet have very great ramifications that, even though we are far removed, have such major effects on the larger economies, so that there is always some impact on our little country.

However we remain resilient, mainly thanks to agriculture and despite the efforts of some politicians to limit it.

Far better for them to address more crucial issues such as health and child poverty.



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Penicillin WHP Changes

There has been some market place confusion after a seemingly simple message from ACVMG. MPI has, over the last year, undertaken a long overdue reassessment of antibiotic uses, beginning with penicillins. The same considerations regarding dose rates, claims, and withholding periods are being applied to all penicillins, and nearly identical changes are being actioned for the products.

What the Changes Entail:

All production animal dose rates require revision to update the dose rate and include a dosing interval. This is because current best practice and AMR mitigation strategies require that doses remain high enough to support efficacy and an appropriate MIC. The dose rates will also require a minimum dosing interval of three days, with standard best practice being 3-5 days.

All withholding periods also require amendment. This is due to both the changes in dose rate to support efficacy and AMR mitigation, and the changes to the MRLs for meat, offal, and milk.

The cattle milk withholding period is based on available public domain data supporting compliance to a 0.004 mg/kg MRL for the combination of a 20 mg/kg dose and a 96-hour withholding period. Because current best practice for penicillin G procaine requires a minimum dosing interval of three days, the customary one- and two-day withholding periods must be removed.

The cattle, sheep, and pig meat withholding periods are also based on public domain data and conformance to tissue MRLs of 0.05 mg/kg.

Finally, the required additions of the standardised prudent use statement for Highly Important Antibiotics and the classification of penicillin G procaine as a highly important antibiotic will be required for final approval.

What the Changes Mean:

In short label dose rates for most penicillin injections have been increased by around 66% for most species, as well as dosage intervals being altered; and this is accompanied by a reduction in MRL necessitating a change in withholding periods on the label.

For dairy cattle then the requirement is for three-day dosing so only the one WHP, viz, "Milk intended for sale for human consumption must be discarded during treatment and for not less than 96 hours (8 milkings) following the last treatment."

This contrasts with the previous 48 hours for one dose, 60 hours for two doses and 72 hours for three doses. These will apply across the board!

The Ramifications:

First of all, there have been some mixed messages in the field regarding existing stock. For suppliers existing stock in the market can be run out with current labels

in place, though any new stock being produced must be labelled with the new labels.

This leaves the situation whereby clinicians and farmers will be using product with old labels when both dosing and withholding periods have been altered.

Questions of liability for any potential residue violations immediately come to front of mind.

The legal requirement is always conformance to the MRL regardless of the use pattern and withholding period the vet assigns at authorisation. However, for most products the issue of MRL conformance is directly related to the increased dose rates, so use of the old doses should allow the withholding periods to conform to MRLs.

It should be noted however that MPI recommend that vets use the new dose rates, since the reason for the change is that the lower dose rates will pose a risk of inefficacy and a greater chance of AMR. If that is the case, and the new dose rates are recommended by a veterinarian then that clinician should advise the client of the newly recommended withholding period.

It is important to realise that these dose rates and withholding periods will apply to all penicillin injections and no one product should have different withholding statements to any others.

Modern Dad Joke

A priest a pastor and a rabbit walked into a bar. The rabbit said, "I'll get the drinks."

The barman looked at him and said, "We don't get your type in here often."

The rabbit replied, "I was not supposed to be here but there was a mistake in the predictive text."

Candida auris

Candida auris is an emerging fungus that presents a serious global health threat. Candida auris is a species of fungus that grows as yeast. It is one of the few species of the genus Candida which cause candidiasis in humans.

Although fungi are seen as simple cells they are still regarded as eukaryotic organisms so it is challenging to devise an internal anti-fungal medication that is non-toxic to humans.

The result being that there are only five classes of antifungal drugs, a small number compared with the more than 20 classes of antibiotics to fight bacteria. Thus resistance is rife, which only aids the spread of Candida auris.

Although fungi are eukaryotic they do possess a rigid cell wall, unlike mammalian cells, and this can be a useful target for surface disinfectants.

Candida auris spreads mostly in long-term healthcare facilities among patients with severe medical problems. The current rapid spread of Candida auris cases is directly due to the Covid pandemic.

Covid, being a Corona virus is extremely easy to kill and, while that is seen as a blessing, it has inad-

“there are only five classes of antifungal drugs, a small number compared with the more than 20 classes of antibiotics to fight bacteria”

vertently led to the spread of Candida auris due to widespread use of lower grade disinfectants.

The American Environment Protection Agency has different lists of disinfectants for different circumstances. List N disinfectants were used widely for easy to kill organisms such as Covid but for hard to kill organisms such as Clostridium difficile hospital grade disinfectants were proposed on another list known as list K.

The USEPA advise that disinfectants on list K are effective against Candida auris.

While Covid patients were clinging to life in an intensive care unit being treated with heavy duty antibiotics, the professional cleaning staff, unaware of the fungus, was disinfecting hospital surfaces with disinfectants on List N and merely spreading the fungus from one surface to the next without killing it.

Candida auris is seen as a relatively new phenomenon so

very few, if any, disinfectants have direct data. However disinfectants deemed hospital grade, and SteriGENE has TGA approval as a hospital grade disinfectant, are considered highly effective against Candida auris.

In addition, SteriGENE has been tested to be highly effective against Candida albicans, which is from the same family, and therefore closely related in structure to Candida auris.

Thus Candida auris is seen as the ‘superbug’ of the fungal world but, just like the ‘superbugs’ of the bacterial world it can be controlled by hospital grade disinfectants such as SteriGENE.



Engagement

A Dubliner proposes to his girlfriend on St. Patrick’s Day and gives her a ring with a synthetic diamond.

“You cheap bum!” she yells. “This isn’t even real.”

“I know,” he says. “But in honour of Saint Patrick, I thought I’d buy you a sham-rock.”



The Gnome

A gnome is in the garden busily destroying some bushes when a house cat appears. “What are you?” asks the cat.

“A gnome,” comes the reply. “I steal food from humans. I kill their plants and I love mischief. And what, may I ask, are you?”

The cat replies, “Um, I guess I’m a gnome.”

NSAID Fashions

Flared trousers for men were in fashion in the 1970's and, thankfully, are one of the few fashion items not to reappear some years later. It is not the same with NSAIDs which seem to fall in and out of fashion over the years, mainly due to vigorous marketing.

Clinicians, understandably, get used to certain treatment regimes and generally are loathe to change, particularly in the areas of anaesthesia and analgesia. Oddly enough this is not always the case with NSAIDs. Quite clearly, over time, those with the largest advertising budgets have generally cornered the market.

Now that there is a myriad of generics for all the common NSAIDs the advertising is overall reducing and fashions have now changed again. As purveyors of every type of NSAID on the market EA is in a position of being able to give objective comment without having a specific barrow to push.

NSAIDs are a relatively new phenomenon, although older than antibiotics. Aspirin and paracetamol originating in the mid-19th Century, about the same time as disinfection in hospitals! There were original concerns about paracetamol toxicity and so aspirin was it for human medicine for many decades until the development of phenylbutazone in the mid-20th Century.

In 1971, British pharmacologist John Vane, won a Nobel Prize by showing aspirin suppressed the production of prostaglandins and thromboxanes, however aspirin's popularity declined after the development of acetaminophen/paracetamol in 1956 and ibuprofen in 1962. In addition, in animals dogs are better able to tolerate aspirin than cats are. Cats metabo-

lize aspirin slowly because they lack the glucuronide conjugates that aid in the excretion of aspirin.

Paracetamol is extremely toxic to cats, which lack the necessary UGT1A6 enzyme to detoxify it. Initial symptoms include vomiting, salivation, and discoloration of the tongue and gums. The main effect of toxicity in dogs is liver damage, and GI ulceration has been reported.

Phenylbutazone was originally made available for use in humans for the treatment of rheumatoid arthritis and gout in 1949 but it was found that metabolites of phenylbutazone can cause severe adverse effects such as suppression of white blood cell production and aplastic anaemia in humans. Hence use in horses is now limited to those not intended for food.

This meant that there were very few reliable NSAIDs for use in companion animals and food animals throughout the first part of the 20th Century but this situation was certainly about to change in the final quarter and the marketers definitely got into gear.

The first of the 'new wave' of NSAIDs was ketoprofen, which the marketers claimed inhibited the 5-lipoxygenase and leukotriene B4 pathway and thus was superior to other NSAIDs. Studies showed this to be a false claim and in humans it is not considered superior to phenylbutazone as previously believed. However, due to toxicity of other current NSAIDs, ketoprofen rapidly became a major pain relief medication for both small animals and cattle.

Flunixin soon was used in horses, cattle and pigs. Because it targets the inflamed tissue, flunixin is mainly used for colic pain, musculoskeletal pain, and ocular pain. It

is also a fenemate class of NSAID thus exhibiting very rapid onset of action.

"Ketoprofen has no better efficacy than other NSAIDs and has a much shorter duration of activity,"

Carprofen was launched in the early 90's and underwent a massive marketing push in small animals to be virtually NSAID of choice despite social media starting to rear its head and reporting cases of toxicity.

Although first developed in 1977 meloxicam was not promoted for animal use until the late 90's when it underwent a huge marketing push in both small animals and dairy cattle. It was a case of corporate companies going head-to-head in the marketing field as meloxicam took on carprofen in what seemed like a Pepsi/Coke type battle.

Despite the huge popularity of carprofen, meloxicam, claiming a prolonged action, gradually took centre stage as it too benefited from a strong marketing campaign in the dairy world, where carprofen was a late and not hugely successful starter.

Tolfenamic acid, another rapid acting fenemate but having a prolonged action as well, also appeared in the 90's and has always been an extremely effective NSAID but suffered by comparison because it was the product of what was, at the time, a family run company that did not have the benefits of massive marketing dollars that the multinationals did.

The 5-lipoxygenase and leukotriene B4 pathway story, as originally

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NSAID Fashions

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promulgated for ketoprofen had now given way to the Cox1/Cox2 debate that was pushed to such an extreme that veterinarians really became sick of hearing about it.

This debate also led to the appearance of the Coxibs, NSAIDs that selectively inhibited only Cox 2. However they soon proved that they heralded a false dawn as they had their own toxicity issues and the medical world soon realised that the Cox1/Cox2 debate was more complex than first thought.

The upshot of this was that the field settled down to the handful of NSAIDs already in the marketplace. Phenylbutazone and flunixin (for colic) became the main go to products in the equine field, meloxicam and carprofen had their adherents in small animal medicine, and then meloxicam, mostly, and tolfenamic acid were mainstays in the dairy world. However, the fashion was soon about to change with the rapid reappearance of ketoprofen for dairy cattle.

Meloxicam was marketed as having a prolonged period of action but it has a slower onset and a very long milk withhold of 84 hours.

This made it vulnerable once there were a number of generics available resulting in a lower marketing push by the parent company.

Out of the woodwork came the old ketoprofen in recent years. Ketoprofen has no better efficacy than other NSAIDs and has a much shorter duration of activity, requiring more frequent administration but has a nil WHP, which makes it very attractive to dairy farmers. It is not the only useful NSAID to have a nil WHP but strong marketing has seen high strength ketoprofen, a little surprisingly, come back into fashion.

The bottom line is that they all are effective pain relievers and what drives the fashion trends are not the old hammered home points of effectiveness, especially Cox 1 and Cox 2, but more mundane things such as length of activity and withhold periods. Surprisingly speed of onset of activity, led by the two fenemates, tolfenamic acid and flunixin, has not yet played a great role in the trends.

Who knows what the future holds, as fashion always changes over time. Already University of Queensland has developed a pour

on meloxicam for cattle and this may prove significant when it comes to market. The underlying factor, as seen over time, may well be level of marketing rather than the specific advantage seen.



Hearing

Nagy says, “Doctor, I think my wife is getting hard of hearing.”

“There’s a simple test you can run to see how bad the problem is: Start out 40 feet away from her, and in a normal conversational speaking tone say something and see if she hears you. If not, go to 30 feet, then 20 feet, and so on until you get a response.”

That evening, Nagy’s wife is in the kitchen cooking dinner, and he’s in

the living room. In a normal tone, he asks, “Honey, what’s for supper?”

No response.

So he moves to the other end of the room and repeats, “Honey, what’s for supper?” Still no response.

Next, he moves into the dining room. “Honey, what’s for supper?”

No response, so he walks up to the kitchen door. “Honey, what’s for supper?”

Again, there is no response, so he walks right up behind her. “Honey, what’s for supper?”

“For the fifth time, Nagy, CHICKEN!”



Cat Facts

For those that do not get the magazine *Agribusiness* there is an interesting article in the March/April issue.

The article is about the association between Wattie's and the Massey University Centre for Feline Nutrition and detailed some of the Centre's key finding over the past 30 years.

Agribusiness outlined five of these key findings, some of which seem as if they should be self-evident and some do break new ground in our thinking of cat nutrition.

The five key findings are:

1) Cats eat seasonally. While not totally surprising this may be news to some. Across the year, cats show a change in appetite and bodyweight and will generally eat more in winter and less in summer.

2) Cats dislike cold food. This makes a whole lot of sense. Cats eat their food at room temperature, as they are hard wired to eat their prey at body temperature.

3) Cats hydrate from their food. Cats typically don't need to drink much water if they consume wet food. Wet cat food contains similar amounts of water as rats and mice which cats were domesticated to control around human settlements. Wet food also lowers the risk of weight gain and has remained a popular dietary staple.

4) Cats prefer organ meats. This will be useful news to many. Cats definitely prefer organ meat such as liver and



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kidney over muscle meat when given a choice.

5) Cats feel the effects of ageing. Our feline pets lose their ability to digest fat as they age, which is why their dietary needs vary, and so does their diet.

While the centre is generally funded by, and for the benefit of, pet food companies the data generated is of benefit to all clinicians in feline practice.

The Optimist

There once were twin boys, age six, that had developed extreme personalities.

One was a pessimist and the other a total optimist. Concerned, their parents took them to a psychiatrist.

First, the psychiatrist treated the pessimist. Trying to brighten his outlook, the psychiatrist took him to a room filled with toys. But instead of yelping with delight, the little boy burst into tears.

"What's the matter?" the psychiatrist asked. "Don't you want to play with any of the toys?"

"Yes," the little boy bawled, "but if I did I'd only break them."

Next, the psychiatrist treated the optimist.

Trying to dampen his outlook, the psychiatrist took him to a room piled to the ceiling with horse manure.

But instead of wrinkling his nose in disgust, the optimist climbed to the top of the pile, and began gleefully digging out scoop after scoop with his bare hands.

"What are you doing?" the baffled psychiatrist asked.

The little boy replied,

"With all this manure, there must be a pony in here somewhere!"



Sustainability - Walking the Talk

At Ethical Agents sustainability is an important aspect of our family run business and shows itself through many aspects of our daily operations.

- 1) We ensure that all of our plastic bottles are either PET or HDPE recyclable plastics and our packing materials are all recycled, along with our cardboard cartons being NZ manufactured cardboard that complies with the Forest Stewardship Council regulations for sustainability.
- 2) We align with overseas companies such as Chanelle which put sustainability front and foremost, for example supplying phenylbutazone granules in recyclable cardboard boxes instead of the traditional wasteful plastic containers.
- 3) Our key product range SteriGENE is 100% biodegradable also and is currently being used to help our NZ Agri sector protect itself against a variety of diseases.
- 4) Our warehousing facilities are fully electric including

our fork lifts and we primarily rely on passive natural lighting sources to illuminate our warehousing facilities.

- 5) All pallets are recycled and are waste pallets meaning that they can be broken down and utilised for other things once their life as a pallet is complete.
- 6) Our office spaces also rely on passive natural lighting with our wide expansive windows providing enough light for our day time operations,
- 7) The office recycling program is also close to the team's heart with waste paper being reused or placed in the recy-

cling bins that are present at all team members desks.

- 8) All tea towels are laundered by the team at home with their own laundry loads to save on additional water usage and we use our inhouse cleaning products which are refilled as required to save on additional consumables.
- 9) As a business we are a corporate sponsor for trees for survival. Trees for Survival is a charitable trust which works with over 150 schools and local communities across New Zealand to grow and plant native trees along waterways and on erosion prone hillsides.



With sustainability as a focus for our future we will continue working on new ways to improve what we are doing and how we can do our part to make our planet a healthier place.

Special Genie

A man finds a lamp and releases a genie.

"I'll grant you three wishes," the genie says. "There's just one condition. I'm a lawyer's genie, so for every wish you make, every lawyer in the world gets the same thing, only double."

After thinking a moment, the man says, "For my first wish, I would like \$10 million."

"Lawyers will get \$20 million," the genie reminds him.

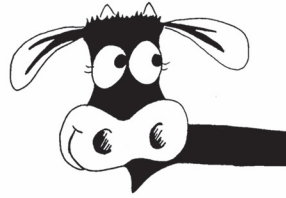
"What else do you want?"

"I'd love to have a red Porsche," he says. Instantly, the car appears on the beach.

"What's your last wish?"

"Well, I've always wanted to donate a kidney."





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The Green Thing

In the line at the store, the cashier told the older woman that plastic bags weren't good for the environment. The woman apologized to her and explained, we didn't have the "green thing" back in my day.

That's right, they didn't have the "green thing" in her day. Back then, they returned their milk bottles, Coke bottles and beer bottles to the store. The store sent them back to the plant to be washed and sterilized and refilled, using the same bottles over and over. So they really were recycled. But they didn't have the "green thing" back in her day.

Back then, they washed the baby's diapers because they didn't have the throw-away kind. They dried clothes on a line, not in an energy gobbling machine burning up 220 volts; wind and solar power really did dry the clothes.

Kids got hand-me-down clothes from their brothers or sisters, not always brand-new clothing.? But

that old lady is right, they didn't have the "green thing" back in her day.

Back then, they had one TV, or radio, in the house not a TV in every room. And the TV had a small screen the size of a pizza dish, not a screen the size of the state of Montana.

In the kitchen, they blended and stirred by hand because they didn't have electric machines to do everything for you. When they packaged a fragile item to send in the mail, they used wadded up newspaper to cushion it, not Styrofoam or plastic bubble wrap.

Back then, they didn't fire up an engine and burn gasoline just to cut the lawn. They used a push mower that ran on human power. They exercised by working so they didn't need to go to a health club to run on treadmills that operate on electricity. But she's right, they didn't have the "green thing" back then.

They drank from a fountain when they were thirsty, instead of using a cup or a plastic bottle every time they had a drink of water. They refilled pens with ink, instead of buying a new pen, and they replaced the razor blades in a razor instead of throwing away the whole razor just because the blade got dull. But they didn't have the "green thing" back then.

Back then, people took the streetcar and kids rode their bikes to school or rode the school bus instead of turning their moms into a 24-hour taxi service. They had one electrical outlet in a room, not an entire bank of sockets to power a dozen appliances. And they didn't need a computerized gadget to receive a signal beamed from satellites 2,000 miles out in space in order to find the nearest pizza joint.

But that old lady is right. They didn't have the "green thing" back in her day. Gee!!! That was MY day too! *Anonymous*