

Enhanced herd health through effective protocol management

I learned the difference between having and following treatment protocols several years ago when I walked into the farm office at one of my dairy clients. I had created and distributed a book of treatment protocols to all the farms I provided herd health services for several months before. There was my book propping up the coffee pot. It was serving a purpose, but not for what I intended. I asked the herdsman about it and he told me they simply never got around to using it. This farm had treatment protocols, but was definitely not managing the herd with them. In retrospect, I believe this happened because I made several mistakes. First, I failed to demonstrate the value of making changes to how cow treatments were currently getting done. I also failed to include the farm personnel when developing the protocols. And, finally, I never took the time to train everyone on how to use the manual I had created.

The benefits to using properly developed treatment protocols include improved herd health, reduction in misuse and waste, and lowered drug residue risk.

Improved herd health. Some who are reluctant to use treatment protocols fear that sticking to a set of guidelines will limit their ability to provide care to their animals. This is simply not true. Protocols are developed by all those involved in caring for sick

Improve herd health and decrease drug waste and residue risk by implementing treatment protocols.

and illness.

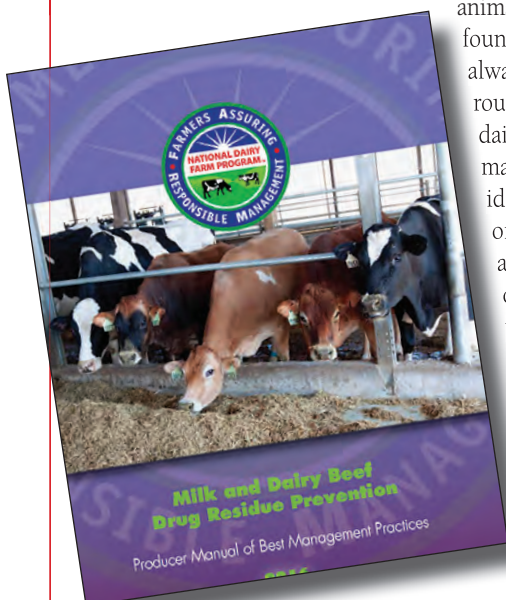
Minimized shrink and misuse. Herd health investigations typically involve a review of the farm's treatment records. The most common finding during these reviews is a simple lack of adequate records. It is difficult, if not impossible, to manage a farm's health program if one cannot look back to see what treatments have taken place. Another common finding is misuse. What kind of misuse? You name it.

Medications given below their dose and/or frequency can lead to treatment failure. Medications given above their dose and/or frequency raise medicine expenses, could potentially cause side effects, toxicity, and most definitely increase the risk of illegal drug residues. The old adage "if some is good, more is better" does not apply to most of the medications available for animals. One way for farm owners to keep an eye on medical expenses is to implement treatment protocols with their veterinarian. With proper oversight medicine waste can be minimized. Protocol adherence by farm personnel will ensure the correct use of medicines. Consistent treatment protocol use will also minimize over-ordering of medication. By limiting what varieties of medicine are needed on hand, and knowing quantity usage over time, farm managers can better manage inventory and decrease how often medicines pass their expiration dates. Using medicine past its expiration date is a bad idea.

Reduced residue risk. Finally, following a set of treatment guidelines developed with your veterinarian minimizes the risk of illegal drug residues. Because your veterinarian can use the information gained from the rigorous veterinary drug approval process set by the FDA, as well as her/his extensive education in animal physiology and pharmacology, she/he is in the best position to help you use pharmaceuticals in a way that ensures the milk and meat leaving the farm is safe for human consumption. Take advantage of this expertise. With all the medication options out there, and all the nuances of approved dosage amounts, frequencies, routes, disease claims, and animal class approvals, let your medical expert help you manage this aspect of the business.

Implementation. Making the switch to organized treatment protocols can appear daunting, but this does not have to be the case. First, evaluate the limited number of treatment options available for the equally limited number of common conditions facing our cows. A thousand page formulary is not necessary. To begin with, everyone who works with fresh and sick cows needs to know how to perform a physical exam to arrive at a correct condition, both through written standard operating procedures (SOP's) and training.

animals. Treatment choices found to be beneficial can always be included in routine protocols. Also, daily observation of animals on treatment will identify those in need of additional assistance and result in a review of their treatment needs. Consistency in disease identification makes incidence tracking over time more useful. If we can identify a rise in disease early, corrective measures will limit expense



This step is very important and often not allocated enough time to be done well. A pneumonia treatment protocol will not help a cow with mastitis. Next, list what is currently in the cabinet and what is used on a regular basis. Under the common conditions identified for the farm, what are the agreed upon treatments? Are they manageable, appropriate and safe?

Unusual conditions occasionally arise, and not all cows respond to therapy. It is important that all employees on the farm know when and how to seek extra help. Treatment protocols should include an SOP that details how to identify animals as treated. There are many ways to communicate to everyone which cow's milk is not to go in the tank, and which are not safe to be marketed for beef. It is imperative that this method be uniform. Finally, any treatment protocol must be properly documented in the treatment log. The most common finding in post-carcass residue on-farm FDA investigations is neglect of this step. This applies to veterinarians as well. I remember treating many cows on my client's farms. When finished, I would wash up, hop in my truck and drive away. I should have gone straight to the treatment book to record what I did. This is what we expect from everyone treating cows, so we should demonstrate such behavior ourselves. This recording step makes everything else possible. Disease incidence tracking, drug inventory management, and withhold period adherence all rely on proper recording of treatments.

Monitoring. The only way to know for sure if a treatment protocol system is working is by monitoring it. If everyone is following protocols and treatments are written down correctly, anyone should be able to review what has happened to drug inventory. The amount of medicine used should come close to the amount listed in the daily treatment log. If not, it is time to investigate what has gone wrong. This is the best time to find the problem. The worst time? After several cows fail to respond to therapy or you get a call from your milk processor telling you milk from your dairy is positive for a violative drug residue.

Dairy producers have access to many resources to help them get started or to review the system they currently have in place. Risk assessments, protocol templates, inventory and treatment log examples, are readily available. The New York State Cattle Health Assurance Program (NYSCHAP) includes a Food Safety and Drug Residue Avoidance Module. The

Effective Treatment Protocol Management Benefits



National Milk Producers Association publishes a Milk and Dairy Beef Drug Residue Prevention Manual every year full of up-to-date information, which is useful for producers when working on their protocols with their veterinarian. Pharmaceutical companies offer many resources promoting proper use of their products. A new food safety certification program was developed by the Wisconsin Veterinary Medical Association called Food Armor®. Although the program was created in Wisconsin, several training events have been held in the Northeast, making Food Armor® certification possible here.

A great first step is a conversation with your veterinarian during your next herd health visit. □

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NYSCHAP FOOD SAFETY AND DRUG RESIDUE AVOIDANCE RISK ASSESSMENT

RISK FACTORS	RISK FACTOR INFORMATION	RISK FACTORS FOR THIS FARM	FARM FEASIBILITY Y/N
VETERINARY RELATIONSHIP			
Do you have a valid Veterinary-Client-Patient Relationship (VCPR)? Y/N/Don't Know			
Do you use drugs in an extra-label manner? Y/N/Don't Know (If yes, do you have veterinary oversight when using drugs in an extra-label manner?) Y/N/Don't Know			
Have you established drug use (OTC & Rx) and treatment protocols with veterinary oversight? Y/N/Don't Know			
Do you purchase drugs from anyone other than your herd vet? Y/N/Don't Know			
RISK FACTORS	RISK FACTOR INFORMATION	RISK FACTORS FOR THIS FARM	FARM FEASIBILITY Y/N

FDA-Approved Drugs for Intramammary Use Lactating Cows

Active Ingredient	Drug Type	Milk Withholding Time	Meat Withholding Time	Product Name	Manufacturer/Marketer
Amoxicillin trihydrate	Rx	60 hours	12 days	Amoxi-Mast®	Merck Animal Health
Ceftriaxone hydrochloride	Rx	72 hours	2 days	SPECTRAMAST™ LC	Zoetis, Inc.
Cephapirin (sodium)	O-TC	96 hours	4 days	Today®	Boehringer Ingelheim Vetmedica, Inc.
Cloxacillin (sodium)	Rx	48 hours	10 days	Dariclox®	Merck Animal Health
Hetacillin (potassium)	Rx	72 hours	10 days	Hetacillin®K	Boehringer Ingelheim Vetmedica, Inc.
Penicillin G (procaine)	O-TC	60 hours	3 days	Hanford's/US Vet MASTICLEAR™	G.C. Hanford Mfg. Co.
Pirlimycin	Rx	36 hours	9 days*	Pirso® Sterile Solution	Zoetis, Inc.

*Day meat withhold following infusion twice at a 24-hour interval 21-day meat withhold following any extended duration of therapy (infusion longer than twice at 24-hour interval up to 8 consecutive days).