

HEALTH & HUSBANDRY

Health protocols: creative or boring?

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Coming up with new, imaginative ideas to solve problems is often a real positive on the ranch. Figuring

out a novel method to overcome an obstacle is rewarding. However, when it comes to treating disease in your herd, consistency is more advantageous.

Successfully treating sick cattle is challenging, and a comprehensive treatment protocol provides a road map for identifying the best therapies for your ranch. For health protocols, boring may be better than creative, because following a systematic process provides more accurate evaluations of health outcomes.

A treatment protocol is a series of guidelines for identifying and treating sick animals. This written document is best created in collaboration with your veterinarian and tailored to your operation. A comprehensive treatment protocol includes case definitions, treatment regimens and outcome assessments.

Step 1: Case definitions

The first step in a treatment protocol is to create case definitions: clear, concise, repeatable methods of identifying specific diseases. Visual observation is the most common mechanism for identifying cattle disease. The case definition is a methodology for the animal observer to combine multiple factors to determine if treatment is necessary.

A case definition for bovine respiratory disease (BRD), for example, could include a field

evaluation of cattle containing at least two common clinical signs (depression, anorexia, nasal discharge, increased respiration rate) and a rectal temperature of greater than 104.5° F.

The specific definitions should be modified for each disease, cattle type and operation, with the goal of a repeatable field diagnosis.

The animal evaluation system needs to be consistent, and training greatly improves repeatability among observers. Severity of illness is difficult to gauge. Research shows distinguishing healthy from diseased cattle is reasonable, but accuracy decreases when trying to gauge illness severity.

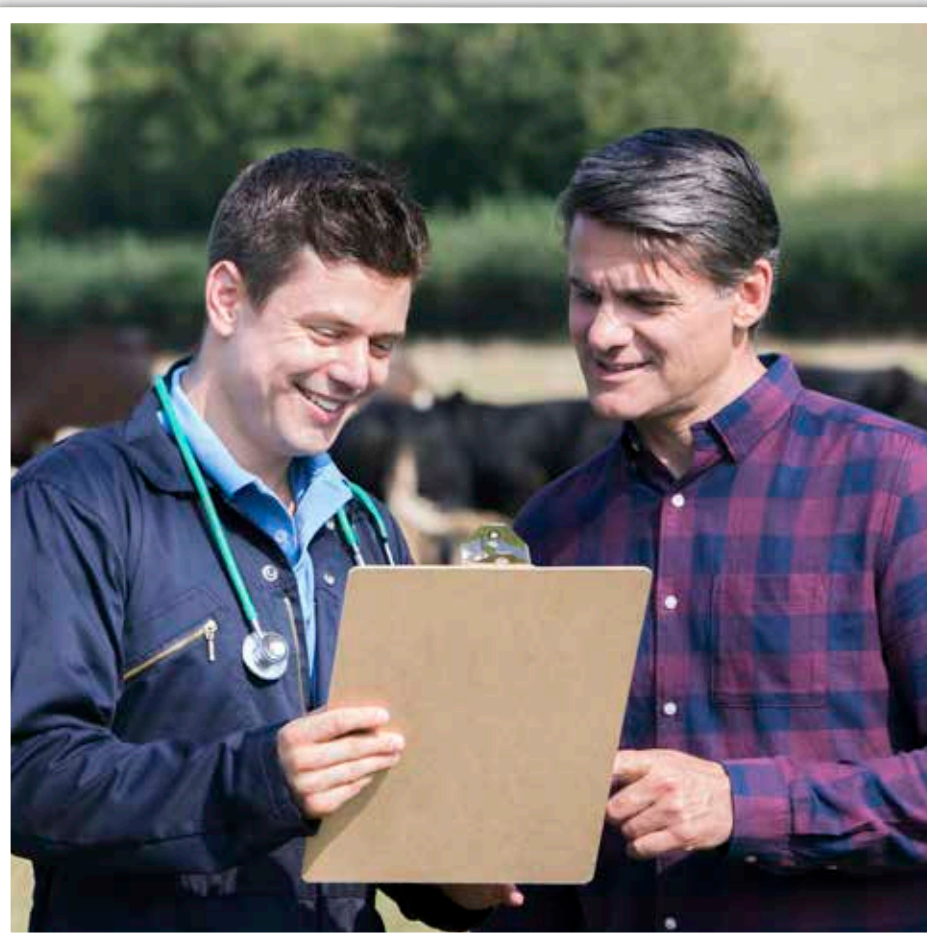
The precision of clinical evaluation is better with fewer severity categories.

Recommendations include classifying cattle into three basic categories:

- ▶ healthy (requiring no subsequent action);
- ▶ sick (requiring treatment in accordance with treatment protocol); and
- ▶ moribund (animals so severely ill they need to be euthanized or have some other action taken to promote welfare).

This evaluation system will need to be modified for specific diseases and operational needs.

A case definition should be created for each disease that frequently



occurs in the operation. These case definitions should be written and utilized following training of the animal observers to promote consistent diagnostic methods.

Step 2: Treatment regimens

The treatment regimen — how we treat this case — includes specific therapy(s) selected and the mechanism of administration for each case definition. A treatment regimen includes product(s) selected for therapy; dose; route of administration; frequency of administration, or time following administration before the next treatment is administered; and withdrawal time, or the time after treatment when meat or milk may be used for human consumption.

Product selection and duration of therapy form

the basis for the treatment regimen for each process, and identifying the correct regimen is an ongoing conversation with your veterinarian. Therapeutic selections are based on a variety of factors, and multiple treatments are available and approved for many cattle diseases. Work with your veterinarian to determine optimum selections for your operation.

Treatment regimens must follow product labels regarding species, disease condition, dose, route of administration and withdrawal times. Cattle are food animals; therefore, adherence to product label directions is critical to maintain legal compliance. All necessary details should be listed in the protocol to avoid confusion over which drug can be administered to a specific animal for each disease condition.

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If multiple therapies are administered simultaneously, they should each be listed in the regimen with appropriate dosages and withdrawal time based on the maximum withdrawal for products administered.

The treatment protocol should include steps for re-evaluation and subsequent treatment if the animal is unresponsive to initial therapy. The time between treatments is referred to as the post-treatment interval (PTI), or the time following the first treatment before a second treatment can be administered if the animal is unresponsive. PTI varies based on diagnosis, therapy selected and the animal flow of the operation.

Following an appropriate PTI, the animal can be reassessed with new criteria or the existing case definition to determine if re-treatment is necessary.

Appropriate timelines should be clearly delineated, allowing decision makers to understand what should

happen at each stage of the process.

Written records are necessary to promote outcome assessment and avoid potential violative residues. Any time an animal is

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treated, it should be recorded and a management process implemented to be sure appropriate meat and milk withdrawal times are observed. Consistency in the treatment plan is critical to allow proper outcome evaluation and collect necessary data to determine therapeutic plan success.

Step 3: Outcome assessment

Accurate outcome assessment — determining how well we are doing — is the reason for consistency in case definitions

and treatment regimens. If case definition varies between cattle or new therapies are used frequently, it becomes impossible to determine which treatment plan is best for the operation.

Outcomes should be assessed on an individual animal level and aggregated over time.

Individual outcomes monitored include the need for re-treatment and the long-term return to full function. The goal is to have a high rate of success following initial treatment, but expectations vary based on the disease and type of animal treated. If animals do not respond as expected following initial therapy, consider reevaluating the diagnosis or contacting your veterinarian.

Group outcomes over time can be evaluated to determine potential modifications to the treatment protocol to increase successful

outcomes. These outcomes include the rate of success and failures following treatment, including full return to function and those with chronic disease conditions. Work with your veterinarian to evaluate the overall treatment protocol on your operation.

Conclusions

Creativity is great in many areas of the operation; however, a good treatment protocol is consistent and repeatable. In treatment protocols, boring is good as this provides a solid method to evaluate which therapies are most effective.

Work with your veterinarian to create a written treatment protocol for your operation. **|**

Editor's note: "Health & Husbandry" is a regular *Angus Beef Bulletin* column devoted to the care and well-being of the herd. Author Brad White is on faculty at the Kansas State University College of Veterinary medicine and serves as director of the Beef Cattle Institute. To learn more on this and other beef herd health topics, tune in to the weekly Beef Cattle Institute *Cattle Chat* podcast available on iTunes, GooglePlay or directly from KSUBCI.org.