

Save protocols from procedural drift

by Paul R. Biagiotti, D.V.M.

IN THE movie, "Mutiny on the Bounty," starring Mel Gibson and Anthony Hopkins, the mutineers set Captain Bly adrift in a small boat. Left to fend for himself and his small crew in the middle of the South Pacific Ocean, he miraculously survived by using his considerable nautical skills and military discipline.



Biagiotti

To be set adrift is fraught with peril and is to be avoided. It is synonymous with lacking direction, being left to the whims of fate, to be out of control. None of these prospects are good. Yet, a similar type of drift or deviation from our intended course happens continually on dairies. It results when protocols and routines become off course or deviate unintentionally from the plan.

Veering off course

Properly termed procedural drift, there are many reasons for its occurrence. Often, it begins with your employees. While innovation and useful new ideas and observations often originate in them, we don't want them implementing changes without first consulting with management.

Unanticipated changes arise for several other reasons. Lack of training of new hires is a big one. If workers do not fully understand their obligations and roles, from necessity they often improvise to get the job done.

Another cause is when unusual, unanticipated situations create a crisis or challenge that demands improvisations, impromptu innovation and change. I observed such drift on a recent consulting visit to a herd that had suffered through winter storm Goliath. Frostbite was rampant in the herd. In its acute stages, it is very painful. Teat skin dies and blisters form, filled with chemicals such as prostaglandins and thromboxanes, which can produce pain and inflammation.

Cows with frostbite must continue to be milked to maintain production. In this case, premilking preparation understandably elicited many "dancing" cows and machine kickoffs. By the time I observed the milking process, a few weeks after the event, teats had begun healing. Teat ends were scabbed; underneath the scabs was regenerating tissue known as granulation tissue. This is a fragile, easily damaged pink tissue that lacks nerves, so it is typically nonpainful.

Yet, I found that their premilking procedure had deviated from the industry standard of dip-strip-wipe-apply. Milkers had, on their own initiative, eliminated the stripping step. This initially reduced the amount of "dancing" and kickoffs and improved parlor flow but also produced several negative aftereffects.

Prestripping has three major benefits: It allows the detection of abnormal milk (milkers at this dairy had missed bloody quarters, resulting in the condemnation of a load of milk because of blood); the discard of high somatic cell milk; and provides stimulation for efficient milk let-down.

Once machines were attached, I observed the typical biphasic flow pattern that suggests inadequate and delayed oxytocin release. In this case, by neglecting to prestrip, the machine itself was instead providing stimulation for let-down. In a situation where we wished to minimize milking machine trauma to teats, this had the bad effect of prolonging machine on time.

I also saw that the automatic takeoffs had not been adjusted to attain the goal of brief milking; cows were being milked too "dry," compounding the insult to teats. Both problems were easily fixed; prestripping the now less "touchy" cows was reinstated, and takeoffs were adjusted to milk cows "wetter."

Beware of shortcuts

Another commonly seen example of drift from good milking practices is found when observing premilking preparation. Milkers should predip or spray cows in the order a-b-c-d, then return to cow "a" and proceed to strip and so on. But often, instead of moving back to the first cow sprayed to strip, in an attempt to save steps, workers will reverse order and go d-c-b-a. This results in cows with both too short and too long stimulation and disinfection.

The hospital pen is another management area where I commonly detect procedural drift. If a protocol calls for flunixin meglumine injection (always to be given intravenously to avoid meat residues) and IV electrolytes, for example, an enterprising hospital crew member may decide to save the trouble of giving two separate IV injections by mixing the flunixin into the electrolyte.

While this may work for combinations such as vitamin B12 and dextrose, in this case, flunixin and calcium, a chemical reaction occurs that results in the precipitation of the drug out of solution. This can obviously have bad effects for the patient. Combining two vaccines in the same syringe, inactivating each, is another mistake that I find all too often.

Maintain a watchful eye

The solution to procedural drift is regular observation, training, and retraining. A veterinary school professor once advised me that "more is missed by not looking than not knowing." This is entirely true in the case of procedural drift. We must first observe and document the change before we can implement a correction.

Observation can be direct or indirect. The internet allows me to monitor KPIs (key performance



EVEN THE BEST LAID PLANS and perfectly written protocols are subject to procedural drift. A variety of reasons can cause milkers or other farm workers to veer off course.

indicators) and access computer records at distant farms, for example. A factor that must be considered when one is doing in-person observation is the well-recognized effect that the very act of observing often changes what is being observed.

It is no mystery (and somewhat amusing) to note that once milkers recognize they are being watched, their performance invariably improves. This is where the vicarious or stealth observation capability of video monitors has an advantage. Workers soon forget they are constantly under surveillance, so they let their guard down and are less likely to be on their best behavior.

Indirect observation can include the conscious evaluation of manure when we are performing an unrelated task such as breeding or preg checking. I recall a recent herd check where I noticed an obvious change in the herd's typical manure consistency. Instead of being free of obvious corn kernels, I found distinctly fibrous manure that was full of unprocessed corn kernels.

This was a "red flag" that I quickly reported to the owner and nutritionist. Further investigation showed that a patch of corn silage that had been poorly processed was unknowingly being included into the TMR. This was a "dodged bullet" that, had it gone unnoticed, could have resulted negative consequences such as acidosis, hindgut fermentation, dropped milk production, and off-feed cows.

Another nutrition-related drift I've encountered is failure to exclude spoiled feed from the silage face or bale. A feeder may be in a hurry or unaware and include moldy or clostridial feed in the ration. Midlactation milk fevers, abortions, and cows off-feed are only a few of the possible bad outcomes of this drift. As a result, I'm constantly scrutinizing TMRs and feed alleys for clumps of moldy haylage and the like.

Mind the details

Reproductive protocols, by their complex nature, invite drift. The breeder may be overwhelmed by a new synch schedule and have to breed scores of cows. In an effort

to be more efficient, he may thaw more straws than he can effectively inseminate in 20 minutes, thereby reducing conception rate.

A switch from a small bore needle to a larger or shorter one may reduce drug delivery compliance, changing ovarian response. The thaw bath water may no longer be in the optimal range for thawing semen due to a malfunctioning thermometer.

A vaccine back order may force a substitute, perhaps utilizing a modified live for a killed or vice versa. I caught one back order where a killed leptoviral combo was unintentionally substituted with a leptovibrio combination. This seemingly minor change can result in severe reactions and death in susceptible cows.

As I've pointed out in previous articles, the devil is in the details. For the details to be minded, we must observe our helpers and the execution of protocols for deviations from the desired course. We are not all good observers. I myself am a poor observer by nature. I need to work at it and make a conscious effort to note the abnormal and to catch the change before it is obvious.

Don't let your cows and herd get set adrift by procedural drift. Help your farm stay on course by having your vet perform regular procedural reviews and observations. 🐄

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