

Subsidized laboratory testing as an incentive for improved livestock disease reporting

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Objective

To evaluate free diagnostic testing as an incentive for compliance with a livestock disease surveillance program.

Introduction

Livestock owners normally pay the full cost of disease testing. As a result the number of laboratory submissions is dependent on the owner's perception that testing is beneficial. This decreases the likelihood of an accurate diagnosis and biases the number and type of samples received by a laboratory. Despite these limitations, laboratory data are commonly used for passive disease surveillance.

The Ontario Farm-call Surveillance Project (OFSP) analyzed disease-related farm call data supplied by livestock veterinarians. Project goals were to provide a new data source for livestock disease monitoring and to improve the quality of laboratory data. As an incentive for participation, veterinarians were not charged when diagnostic samples were sent to the Animal Health Laboratory (AHL), University of Guelph.

Methods

The OFSP veterinary clinics were a convenience sample of food-production and equine clinics in Ontario. Clinics participating in OFSP were offered two incentives: (1) free diagnostic testing at the AHL and (2) \$175.00 per farm call if postmortems (PMs) were performed and farm call data were received within 10 days of the call. The first incentive was offered for the duration of the project; the second was available from October 2010 to June 15, 2011.

The average number of days from farm call completion to data submission was compared pre- and post-PM incentive.

The rate at which a veterinarian submitted samples for diagnostic testing to the AHL was calculated (total number of submissions/total number of farm calls). Only 20/28 OFSP clinics were enrolled in the study pre-PM incentive. A comparison of the number of submissions to the AHL for those clinics pre- and post-PM incentive was performed. Submissions of animals for necropsy or tissue for histology were classified as 'pathology' submissions. The proportion of livestock pathology submissions that were from the OFSP were compared to the total livestock pathology submissions pre- and postcommencement of the PM incentive. AHL reporting rates of livestock

zoonotic diseases were compared pre- and post-commencement of the OFSP (total number of positive livestock zoonotic disease laboratory submissions/total number of livestock laboratory submissions).

Results

One hundred and eight veterinarians from 28 livestock clinics contributed data to the surveillance project between April 2009 and June 2011. No clinics withdrew from the study.

Fig. 1 illustrates the timeliness of reporting before and after the PM incentive.

Veterinarians participating in OFSP submitted a sample to the AHL 11% of the time they completed a disease-related farm call. A comparison of 20 OFSP clinics revealed that 458 more cases were submitted to the AHL while those clinics were participating in the OFSP than the year prior to participation. OFSP clinics represented 19% (28/147) of the clinics submitting pathology samples during the time period the PM incentive was offered. OFSP pathology submissions represented 36% (712/1984) of the total pathology livestock submissions for the same time period. For the same period, the previous year (pre-PM incentive) OFSP pathology submissions accounted for 7.7% (141/1822) of the total pathology submissions.

The proportion of laboratory submissions from OFSP clinics positive for a zoonotic disease increased from 4.3% prior to participation in the project to 7.7% while part of the OFSP.

Conclusions

Incentives are needed to ensure adequate compliance with a surveillance program. The OFSP incentives were considered a key factor in the number of veterinarians participating in the study as well as the 0% drop out rate.

Receiving data quickly is critical when monitoring for new or emerging diseases. Animals found dead or moribund are an important group to monitor for livestock disease surveillance but producers often do not want to pay the cost of a PM. The ability to provide better client service made the incentives offered by OFSP appealing to veterinarians.

The OFSP incentives increased submissions to the laboratory, improved the laboratory data for passive surveillance and, specifically, increased zoonotic disease reporting.

Keywords

Incentives; surveillance; livestock

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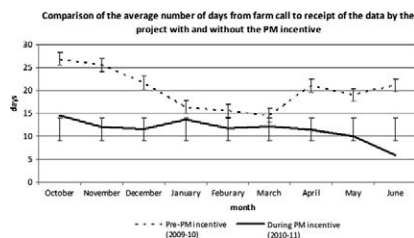


Fig. 1. A comparison of the timeliness of data before and after the start of the Post Mortem Incentive.