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**DEVELOPMENT OF A NOVEL MONITORING AND
SURVEILLANCE SYSTEM FOR ENDEMIC ANIMAL
DISEASES IN NEW ZEALAND**

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Abstract

Disease surveillance of animal populations has taken on renewed importance. The literature regarding disease surveillance systems, particularly with respect to animal diseases is summarised in section 1.

Section 2 explores three potential sources of dairy cattle endemic disease data, with a view to utilising this data within the national disease surveillance system and as a model for gathering data from other animal species.

Disease records stored on farm computers were retrospectively sourced from forty dairy farmers, from paper records of their servicing veterinary practices and from laboratory records held by the practice for these same farmer's animals. In this way, the loss of data on recorded disease events from farmer to veterinarian to animal health laboratory could be quantified and characterised. Frequency and magnitude of veterinary activity on farms was also quantified, as an indicator of "coverage" of the dairy cattle population, with respect to disease surveillance capability.

As expected farmers recorded the largest number of disease events (14.6 per 1000 cow months at risk, the veterinary practitioners the next (5.2 per 1000 cow months) and animal health laboratories the least (0.58 per 1000 cow months). Twenty-five percent of farmers did not record any disease data. Of those farmers who did record diseases, 84% of records were cases of lameness or mastitis. Farmers rarely recorded veterinary diagnoses.

When lameness and mastitis were excluded, veterinary records gave the highest rate (3.6 per 1000 cow months) and spectrum of diseases events recorded. Veterinary records had a high (22%) percentage of undiagnosed or unspecified cases when compared to farmer records.

Veterinary practices visited the farms on average 17.8 times per year and handled on average 156 cows per 1000 cow months.

The animal health laboratories made positive disease diagnoses at a rate of 0.24 per 1000 cow months. Approximately half of these were milk samples for routine culture and sensitivity testing.

Veterinary practice records offer valuable information for monitoring the temporal and spatial pattern of disease events on farms.

Section 3 outlines elements of a prototype palmtop recording system (VetPAD), which offers easy standardised data capture.

Section 4 explores a possible future for Veterinary Practitioner Assisted Disease Surveillance (VetPAD) using a syndromic disease reporting approach.

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Contents

<i>Abstract</i> _____	<i>i</i>
<i>Acknowledgments</i> _____	<i>iii</i>
<i>Contents</i> _____	<i>v</i>
<i>List of Tables</i> _____	<i>vii</i>
<i>List of Figures</i> _____	<i>viii</i>
SECTION 1: _____	1
Literature Review: Monitoring and Surveillance of Animal Diseases 1	
Introduction _____	1
Definition of Terms _____	1
Concepts of monitoring and surveillance _____	3
Information Systems to Support Monitoring and Surveillance Systems _____	9
Laboratory Surveillance _____	10
Role _____	10
Networks (National & International) _____	11
Current NZ Laboratory Surveillance Contract with MAF _____	11
Medical / Veterinary Interface _____	12
Examples of laboratory surveillance output _____	12
Slaughter Surveillance _____	13
Role _____	13
Sub-clinical disease monitoring at slaughter _____	14
Farmer Surveillance _____	15
Veterinary Surveillance _____	16
Examples _____	16
A Medical Example of an Innovative Method of Disease Surveillance. _____	17
SECTION 2 : _____	21
Use of Veterinary Practices to Define Baseline Patterns of Animal Disease for National Animal Health Surveillance _____	21
Introduction _____	21
Program objectives _____	22
Materials and Methods _____	22
Practice recruitment _____	22
Selection of farms _____	23
Data analysis _____	25
Results _____	26
Veterinary clinic records _____	27
Diseases reported _____	33
Laboratory records _____	35
Farmer Records _____	37
Discussion _____	38
SECTION 3: _____	45
VetPAD - Veterinary Practitioner Aided Disease Surveillance System _____	45
Introduction _____	45
Overview of proposed VetPAD Logic _____	46
Client list information _____	46
Products and materials _____	46

Commentary _____	46
Draft Disease Code Categories for proposed VetPAD _____	48
Proposed Job Description -Bovine _____	55
Proposed Animal Description _____	56
Overview of (proposed) VetPAD program structure for invoicing a client _____	57
SECTION 4: _____	59
General Discussion _____	59
Appendices _____	62
Appendix 1: Count of diseases seen by practitioners _____	62
Appendix 2: Count of diseases recorded by farmers as diagnosed by farmers, veterinarians or unspecified. _____	65
References: _____	67

List of Tables

<i>Table 1: Number of study herds, herd size, and duration of clinic records for participating veterinary practices</i>	26
<i>Table 2: Frequency of farm visits per-month and per-month per 100 cows</i>	27
<i>Table 3: Mean number of visits per farm per month by each participating clinic</i>	29
<i>Table 4: Mean and range of number of sick animals seen per farm per month by clinic and same standardized to 100 cows.</i>	33
<i>Table 5: Reported disease categories (Cases per 1000 cow months)</i>	34
<i>Table 6: Reported disease categories by month (Cases per 1000 cows / month)</i>	34
<i>Table 7: Prevalence of cases in reported disease categories expressed as cases per thousand cow months at risk for each practice (1 - 5).</i>	35
<i>Table 8: Estimates of relative risk (RR) of examination of sick cows and 95% confidence intervals, for practice (relative to practice 5) and months (relative to month 12) generated by Poisson Regression using a negative binomial model.</i>	35
<i>Table 9: Percentage of all animals and sick animals examined that were sampled for laboratory submission by clinic; percentage of laboratory submissions that were sick animals or production profiles by clinic</i>	37

List of Figures

<i>Figure 1: Inter-relationships between components of a monitoring and surveillance system</i>	5
<i>Figure 2: Association between frequency of herd visits (V) and herd size (simple linear regression with 95% confidence limits; $P < 0.001$)</i>	28
<i>Figure 3: Frequency of veterinary visits per farm by month</i>	29
<i>Figure 4: Association between number of cows seen each month by a veterinarian (N) and herd size (simple linear regression with 95% confidence limits; $P < 0.000$)</i>	28
<i>Figure 5: Association between number of cows seen each month by a veterinarian (N) and herd size (simple linear regression with 95% confidence limits; $P < 0.000$) with outlier (at herd size = 870) removed</i>	31
<i>Figure 6: Cows handled each month by clinic per 1000 cow months at risk.</i>	32

