

Veterinary Surveillance: Pilot Trial of a Front-line Tool for Pig Health Monitoring



BPEX



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Introduction

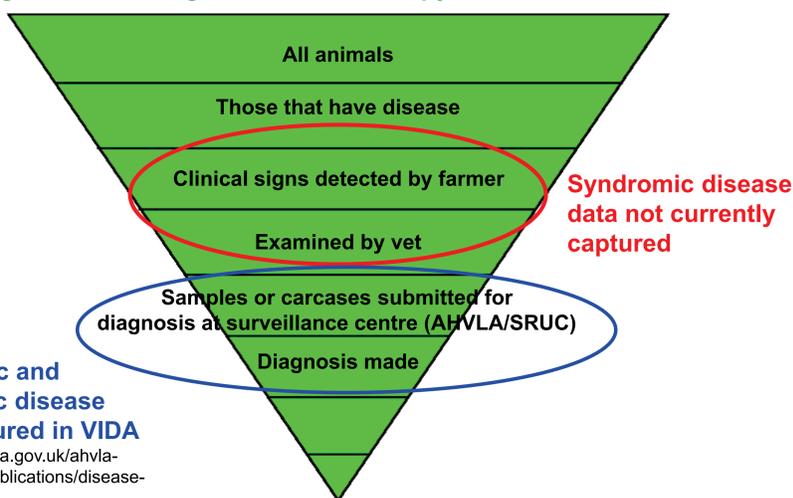
Private veterinary practitioners (PVPs) are the first port of call for investigation of on-farm animal health events. 98% of UK pig production is quality assured. There is a requirement for PVPs to make quarterly visits to assess a unit's health status with respect to specified pig pathogens. This enables PVPs to promptly identify changes from the normal situation for that unit.

Baseline data including the purpose, size, location and health status of each unit provides background information to assist animal health and welfare monitoring.

Capturing syndromic disease data increases the geographical and clinical representativeness of disease surveillance data and complements findings from the smaller proportion of cases being sampled for diagnosis (Figure 1). Such a system, if time-efficient for PVPs, could complement existing national surveillance activities.

We ran a 5-week pilot trial to investigate the feasibility of a system of collection of on-farm health monitoring and syndromic disease data by PVPs.

Figure 1: Scanning surveillance – the pyramid of surveillance



Diagnostic and syndromic disease data captured in VIDA
<http://www.defra.gov.uk/ahvla-en/category/publications/disease-surv/vida/>

Methods

Standardised templates were produced; one for “baseline data” and the other for unexpected animal health events – “disease incident data”.

Eight specialist pig practitioners attended a standardisation day to learn what and how baseline and disease incident data should be recorded. Baseline data, including vaccination strategy, was recorded at the start of the trial for each unit. Disease incident templates were completed as occasion arose during the trial.

Baseline data was recorded in Microsoft Excel and disease incident data via a web server set up specifically for the purpose at SRUC.

Follow-up questions were sent to vets after any disease incident report to determine outcome.

Confidentiality: pig unit location was recorded to county level only; unique identifiers were assigned to each vet and pig unit.

Participant vets were asked to complete an online survey to provide feedback once the trial had ended.

Selected Results

Table 1. Vaccination strategy – from unit baseline data (selected results)

Vaccine	Responses (%)				
	No	Yes breeding pigs	Yes growing pigs	Yes growing and breeding pigs	No response
<i>Mycoplasma hyopneumoniae</i>	26.4	3.6	62.7	7.3	0
PRRS	54.5	29.1	4.5	6.4	5.5
PCV-2	6.4	4.5	76.4	12.7	0
Porcine Parvovirus	20.9	79.1	n/a	n/a	0
Erysipelas	12.7	84.6	0	1.8	0.9
Salmonella	97.3	2.7	0	0	0

Selected Results (continued)

Figure 2. Summary of age group of pigs affected by disease incidents

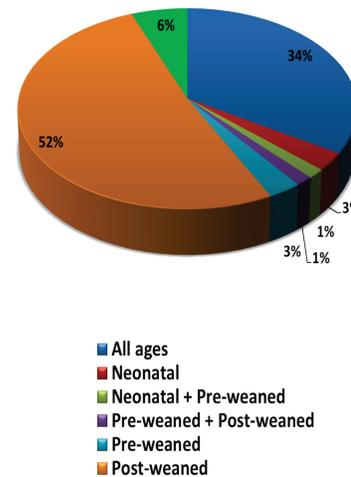
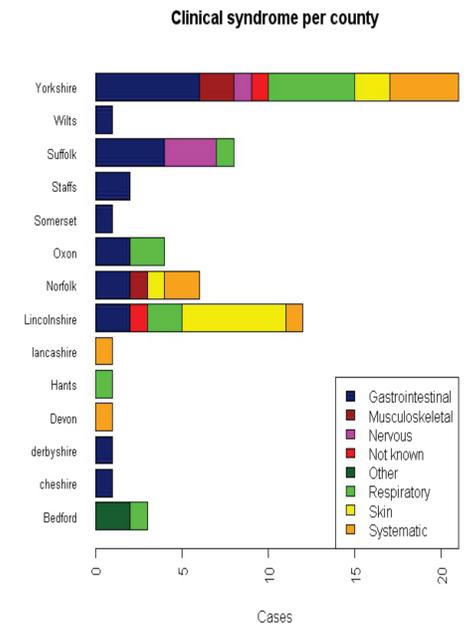


Figure 3. Example of summarised output from disease incident reports; growing pigs



Baseline data was obtained from 110 units and 68 disease incidents were reported in a 5-week-period, 54% at routine visits, 29% from off-farm discussions and 16% at other veterinary visits.

Average time taken to complete data recording was as follows:

- 22 minutes for unit baseline template
- 26 minutes for disease incident report

75% of disease incidents were in post-weaned pigs: gastrointestinal, respiratory and skin clinical signs were most commonly reported.

A final diagnosis was achieved for 40% of disease incidents and a provisional unconfirmed diagnosis for 46% of disease incidents.

Postmortem examinations were undertaken in 22% of disease incidents.

Conclusions

Post-trial PVP feedback and the experience of the trial indicated:

- Confidentiality was key to participation
- Data reporting needs to be more time efficient and linked to a surveillance output for the PVP to access
- Dynamic nature of disease is not effectively captured
- More guidance needed on the type of disease incidents to report
- 28.6% of participant vets felt this type of data collection would be very useful on a long-term basis ; 71.4% felt it would be quite useful.

Data collection

- Collection of syndromic surveillance data by vets is feasible
- Must be underpinned by accurate denominator data
- Portable data entry method would be optimal, e.g. a mobile phone app
- Outputs should be easily accessible in real-time for maximum value
- Significant IT investment essential to develop a fit for purpose system for syndromic surveillance recording in and reporting out

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