

# The Veterinary Surveillance Intelligence Unit (VSIU)



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## Creating an Early Warning Surveillance System with High Se and Sp.

➤ **Maximise System Sensitivity:** Detection of livestock and zoonotic diseases with high sensitivity (early in the epidemic) as “suspect events”

▪ **Syndromic Surveillance:** Relevant data is evaluated and included in the syndromic surveillance system

▪ **Veterinary Intelligence:** Veterinary Inspection Officers (VIO) and their networks are an invaluable resource to detect emerging animal health issues

➤ **Maximise System Specificity is Essential:** Highly sensitive surveillance systems generate false positive signals

▪ **Suspect event investigation** by VIOs supported by the Veterinary Diagnostic Laboratory Network

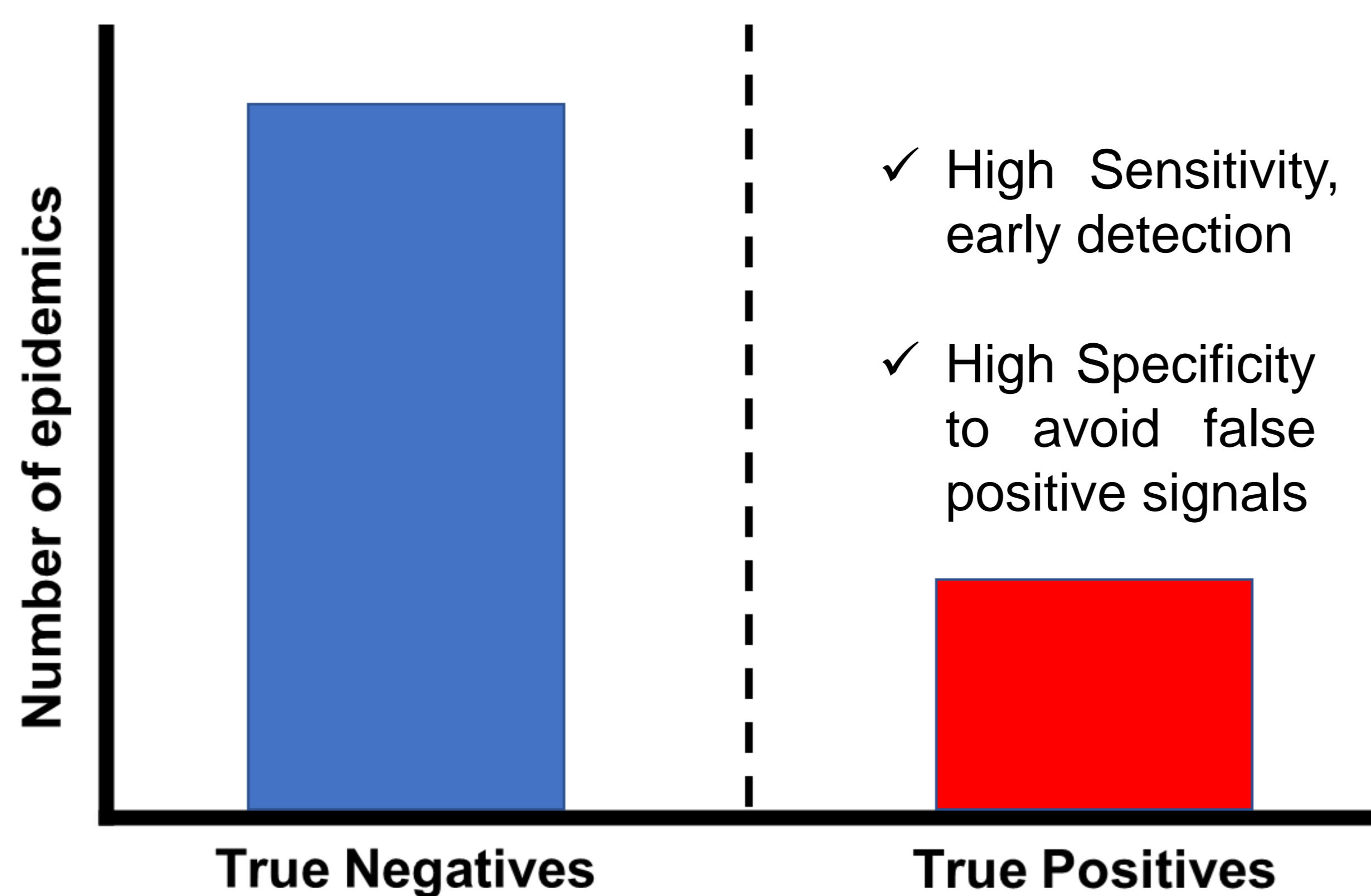


Figure 1. Representation of the Early Warning Surveillance System

**Confirmed Negative**  
It is not an:  
Emerging disease  
Foreign disease  
Public health risk

**Confirmed Positive**  
It is an:  
Emerging disease  
Foreign disease  
Public health risk

➤ **Rapid communication with all stakeholders** (Government, Veterinarians, Farmers, others) through veterinary intelligence networks

▪ **Production of veterinary intelligence** by compilation of Confirmed Negative Results

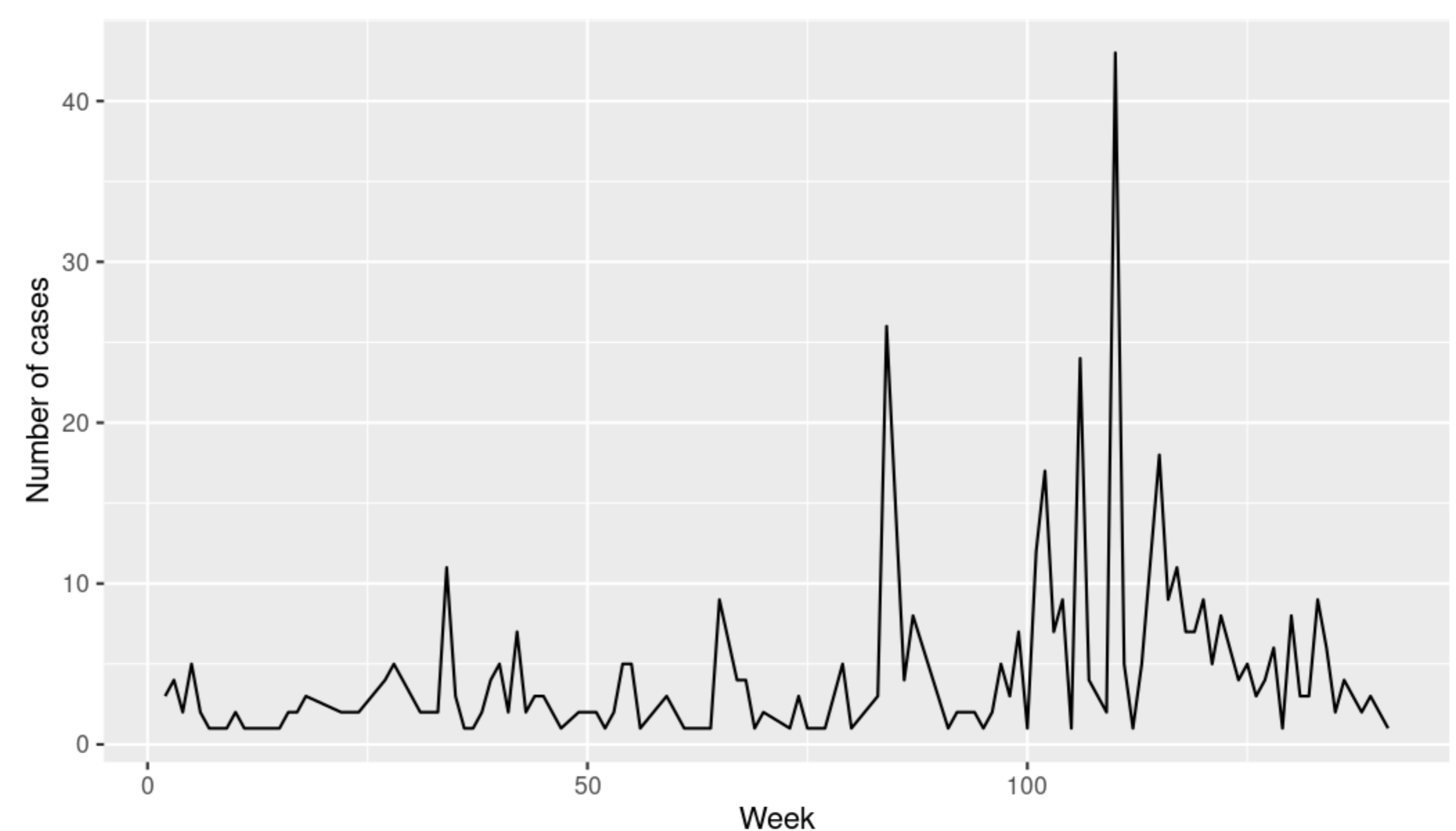


Figure 2. Weekly time series of disease cases

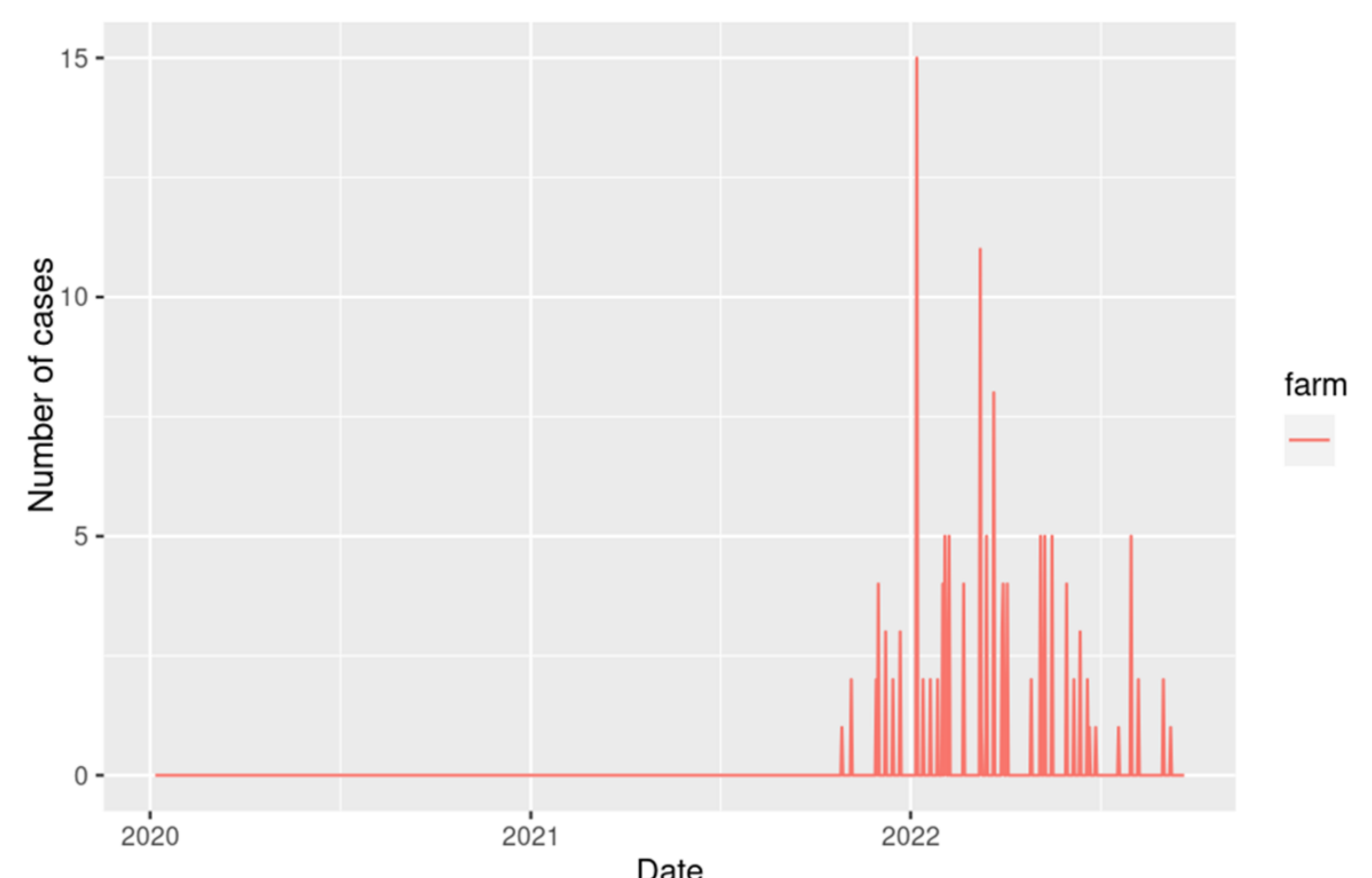


Figure 3. Daily time series of disease cases detected in a farm

## What are the Components of this Surveillance System?

➤ **An innovative Scottish System** to generate and communicates information to improve animal health, production and welfare; reduce zoonotic disease, and create innovative One Health solutions to complex health challenges.

### Collaboration Between Two SRUC Teams.

➤ **Veterinary Services:**

a. **Veterinary diagnostic laboratory network**

b. **Veterinary Intelligence:** VIOs and veterinary pathologists within a network of veterinary surveillance necropsy centres and surveillance hubs supporting the private veterinary practitioners (PVP) of Scottish livestock keepers.

➤ **Epidemiology and Planetary Health:** Epidemiologists, database specialists, statisticians, disease modellers, and social scientists.