



Syndromic surveillance

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Syndromic surveillance is the term applied to the use of health related data that precedes diagnosis to signal sufficient probability of a case or an outbreak to warrant further investigation or response (CDC 2004)

Drivers

Human

Early detection of significant outbreaks

- Bioterrorism
- Emerging diseases eg Nipah, SARS

Veterinary

- Emerging diseases
- Freedom from disease
- Reduction or lack of veterinary infrastructure (private and govt)

Human health applications

http://www.cdc.gov/biosense/



Department of Health and Human Services
Centers for Disease Control and Prevention

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With the increasing concern for a possible pandemic of a naturally occurring disease such as influenza, as well as the ever present potential of a bioterrorism event, the Centers for Disease Control and Prevention (CDC) is actively working to improve the nation's biosurveillance capabilities through BioSense.

BioSense is a national program intended to improve the nation's capabilities for conducting near real-time biosurveillance, enabling health situational awareness through access to existing data from healthcare organizations across the country.

Primary Objective



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About BioSense

- > [Background](#)
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[BioSense Overview Handout](#) (📄, **Sep 6**)

Interest Form

Please fill out this form if your organization is interested in participating in BioSense as a data source ...[more](#)>>



http://whoissick.org/sickness/

Who Is Sick?™
BETA

Home About Us Contact Us

J.A. Times article
Who Is Sick Video Contest
View and discuss and report on illnesses

How To Use **Who Is Sick?**™

1 Post
Post sickness information onto the map (completely anonymous)

2 Search
Search and filter for sicknesses by location, time, symptoms, sex, age and keywords

3 Discuss
Discuss issues, ask questions, and give us feedback on our forums

4 Analytics
Summary analytics show sickness trends and current outbreaks

Do not show this screen again

MAF BIOSECURITY NEW ZEALAND

Animal Health applications

Émergences system (France)

<http://www.inra.fr/maladies-emergentes>

INRA émergences...

>> inicio
socios
investigación
noticias
enlaces
contactar

.....
enfermedades emergentes
epidemiología
salud animal y salud pública

Programma collaborativo EPIDEM

Un sistema genérico por la detección y la analisis en tiempo real de enfermedades animales emergentes

INRA - SNGTV - ENV - MAAPAR - InVS - AFSSA - SENTIWEB

« Para luchar contra las enfermedades y asegurarse su bienestar, el hombre siempre ha querido actuar de forma cada vez más precoz. »

Visitantes: 18209 [Téléchargement des mixes à jour](#) [Aviso legal Actualizado el 10 de Febrero de 2006](#)

Inscripción Sus notificaciones Sus investigaciones Resultados generales Ayuda

BOSSS <http://www.ausvet.com.au/bosss/> (Aust)

Parasite Surveillance

BOSSS - Bovine Syndromic Surveillance System



This site is useful to all owners of cattle or those who work in the cattle industry such as agents, transporters, exporters, inspectors, vets.

For the livestock owners, this site helps you investigate sick cattle within your herd. Your description of the cattle is used to identify potential diseases, especially important ones that are new or not presently found in Australia.

BOSSS will ask you questions about the sick cattle, recommend investigations you can undertake, suggest people who can help you, list potential diseases and provide information on these diseases and their controls.

Your data is confidential and can only be viewed by you, but will contribute to district averages that all participants can access. Information that you provide helps monitor the Australian cattle herd for disease and provides vital information to help maintaining market access and support for international trade.

This site is part of a remote area surveillance system for the Australian livestock industries, developed as a project of the Australian Biosecurity Cooperative Research Centre.

More information: [about the system](#)

Want to join? [Click here](#) if you would like to register to become part of the system

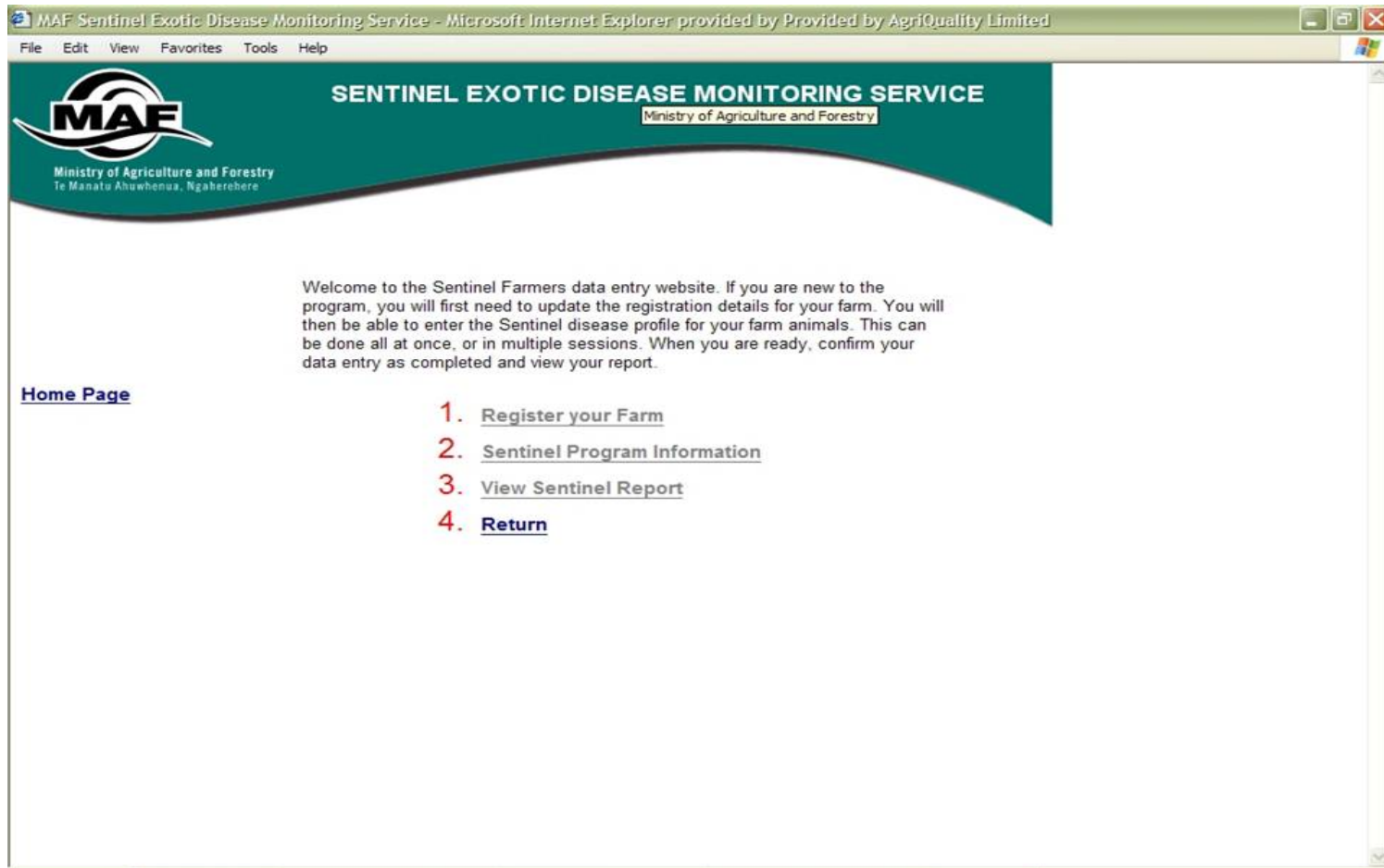
IMPORTANT:

Remember LOOK, CHECK, ASK A VET - while this BOSSS website is a major step forward for reporting and collecting data on animal diseases, Livestock owners are reminded not to rely on this web site only if you detect a sick animal. You should always contact your local vet or call the DISEASE WATCH hot line on 1800 675 888.

This site contains:

[\[User's Manual\]](#) - [\[Surveillance Database\]](#) - [\[Downloadable Resources\]](#) - [\[Project Coordination\]](#) - [\[Image Library\]](#) - [\[Links\]](#)

Sentinel exotic disease monitoring service project (NZ)



MAF Sentinel Exotic Disease Monitoring Service - Microsoft Internet Explorer provided by Provided by AgriQuality Limited

File Edit View Favorites Tools Help

MAF
Ministry of Agriculture and Forestry
Te Manatu Ahuwhenua, Ngāherehere

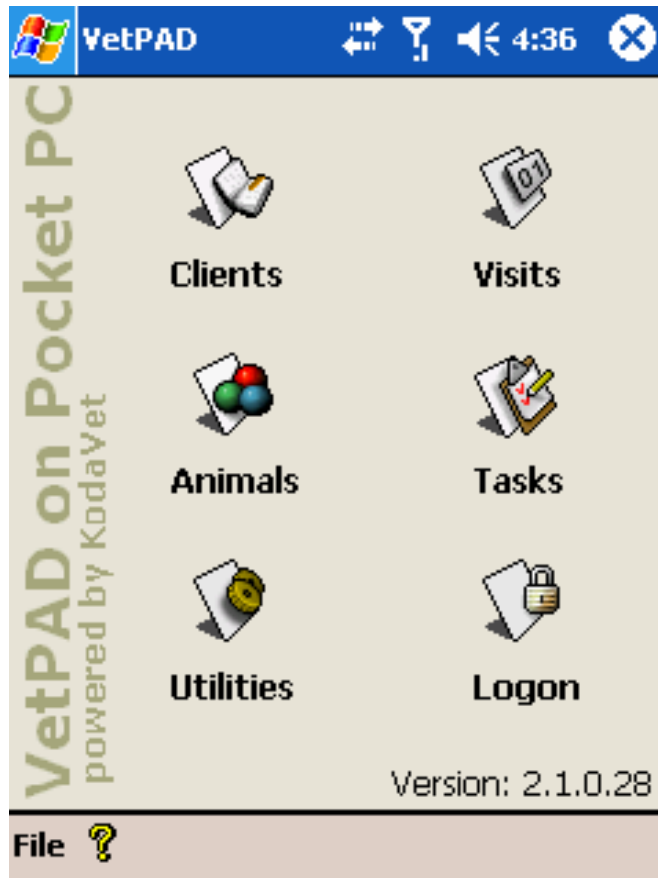
SENTINEL EXOTIC DISEASE MONITORING SERVICE
Ministry of Agriculture and Forestry

Welcome to the Sentinel Farmers data entry website. If you are new to the program, you will first need to update the registration details for your farm. You will then be able to enter the Sentinel disease profile for your farm animals. This can be done all at once, or in multiple sessions. When you are ready, confirm your data entry as completed and view your report.

[Home Page](#)

1. [Register your Farm](#)
2. [Sentinel Program Information](#)
3. [View Sentinel Report](#)
4. [Return](#)

VetPAD (NZ)



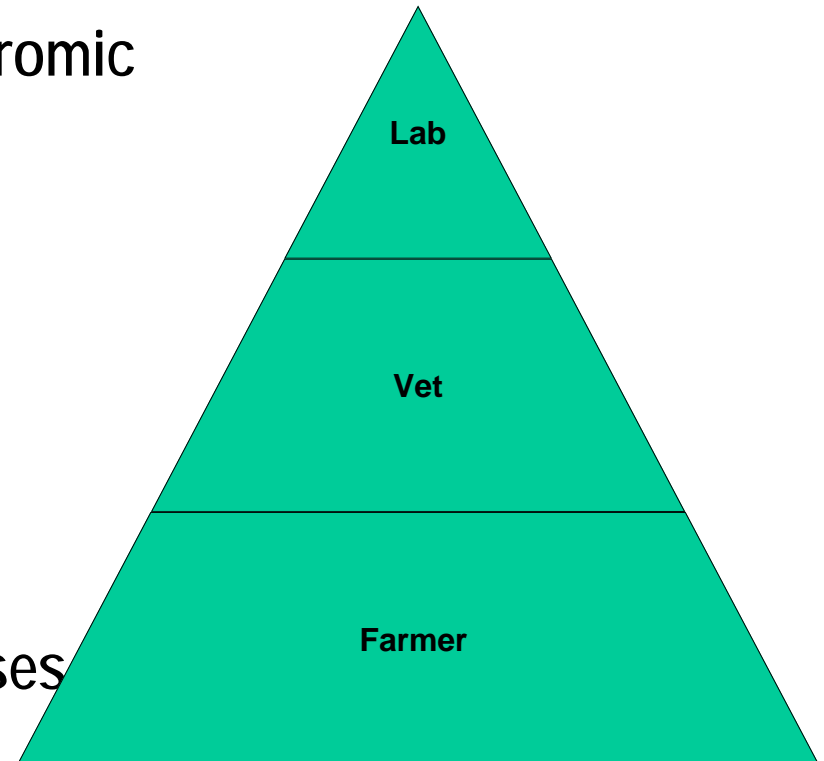
Data collection

What type of data?

- Numerator – atypical vs syndromic
- Denominator

Where from?

- Laboratories
- Veterinary practitioners
- Farmers
- Abattoirs
- Markets/sale-yards
- Registration/property databases
- Censuses
- Industry records



How?

- automatic collection e.g. by-product data
- manual collection e.g. veterinarians
- Combination of above
- Technology – integrated, web based, hand-held, paper
- Incentives

Integration?

When?

- Real time

Data analysis

Timeliness

- Real time

Monitoring

- Automated
- Manual
- Combination of both

Data analysis

What?

- Background level and pattern of syndromes/diseases
- Type of change to detect eg geographic clusters, exponential increases
- Single time period information (compared to yesterday, last week, last season)
- Moving daily, weekly averages
- Cumulative deviations from an constant expected value
- Cumulative deviations from an expected value that is adjusted for seasonal variations

Investigation/action

- Alert thresh hold
- Agreed process when alert occurs
- Other sources of information

Advantages

- Early event warning (?)
- Increases our surveillance portfolio
- Adds value to information
- Integration
- Technology advances
- Detailed baseline information

Constraints

- Biases and variability
- Resources required for investigations
- Size of outbreak
- Privacy/confidentiality
- Legislation
- Costs
- Integration

Future?

- Changed emphasis from data collection to use of data
- Aggregation of data
- Evaluation tools – simulations, detection of existing outbreaks of known diseases
- Performance measures
- Incentives
- Focus on known diseases
- Disease freedom

“Skilled people and the relationships between them are the backbone of any disease surveillance system. Electronic systems are the tools that can help them but cannot replace them” MC Cadwell Commissioner of Health, Dutchess county, NY

Resources:

Buehler JW, Hopkins RS, Overhage JM, Sosin DM and Tong V.
Framework for evaluating public health surveillance systems
for early detection of outbreaks – recommendations from the
CDC Working group
<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5305a1.htm>

Hearing of the subcommittee on bioterrorism and Public Health
preparedness on examining public health preparedness in the
21st Century, focusing on a national public health
infrastructure with real-time situational awareness, and
responding to threats by terrorism or natural disasters, March
28, 2006 <http://www.access.gpo.gov.congress/senate>

McKenna M. Syndromic surveillance: faulty alarm system or useful tool? Centre for infectious disease research and policy
<http://www.cidrap.umn.edu/cidrap/content/influenza/panflu/news/may1607surveil.html>

Stone M The potential for exotic disease syndromic surveillance within veterinary laboratory submissions data

Stoto MA, Schonlau M, Mariano LT. Syndromic Surveillance: Is it Worth the Effort? *Chance* 2004; 17(1):19-24.