



Surveillance, early detection and emergency response

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Train-of-trainer for field veterinarians on LSD (TCP/RER/3605) - Kiev, Ukraine, 31 May – 1 June 2018



Surveillance

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- “Systematic ongoing collection, collation, and analysis of information.”
- Timely dissemination of information so that action can be taken.
- Specific surveillance: targeted to a specific disease or infection

CHAPTER 1.4. ANIMAL HEALTH SURVEILLANCE

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Surveillance & Risk Analysis

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After the OIE animal health code

Surveillance planning & execution

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- Continues active process
- Periodic re-assessment
- Formal and capable team
- Multiplayers
- Update contingency plan

Monitoring vs Surveillance

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Monitoring	Surveillance
systematic	systematic
Continuous or repeated	Continuous or repeated
Measurements & collection	Measurements & collection
Data analysis & interpretation	Data analysis & interpretation
No pre-defined action plan	Targeted for specific planning, evaluation, For implementation of risk mitigation measures

Types of surveillance - LSD

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- **Passive** - unplanned farm visits or samples
- **Active** - preplanned program
- **Clinical**- relatively easy (awareness!!)
- **Serological**- too complexed, cost-benefit !
- Before outbreak (free country/ region)
- During and after (infected)

LSD active surveillance

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- Who
 - Official vets
 - Private vets, others ?
- When
 - Planned visits, combine with other chores
- How
 - Reporting; written, simple, electronic, data-base
 - Supervise- higher, central level

LSD Surveillance

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Parameter/ type	Clinical (visual)	Serological
Objectives	Identify introduction Find index case Detect spread to new herds/ regions	Vaccination compliance Immune response Protection level
Ease to perform	Simple to visualize Train to sample nodules Capable labs	sample Cold chain labs
Cost	low	High
when	Preparedness During/ between outbreak response	Preparedness/response - vaccine evaluation During outbreak- investigation

Preparedness

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- Information- accurate, updated, active
- Surveillance - look for the incursion
- Contingency Plan- act upon detection
- Capabilities- diagnosis, prevention, control

Contingency plan

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- Based on risk assessment
- The best you can realistically execute
- Will never be perfect – better than non
- TAD's tend to act “out of the box”
- Assess and response accordingly
- Shift of paradigm- stamp-out to vaccination

Immediate (emergency) response

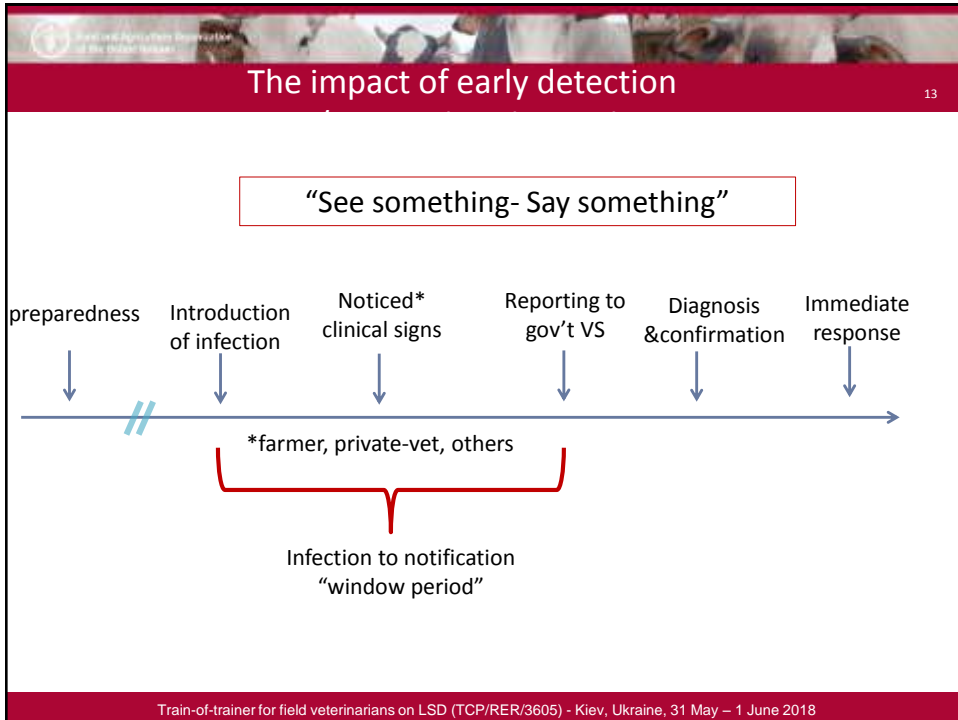
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- Early detection- smaller effort
- Objective- maximum containment
- Single/ multiple/repeated
- Isolated/ spread
- On the border/ deep penetration (IL, KZ)
- Accessibility- operators, activities
- Shift manpower; feed, sleep, care, pay
- Reporting & informing

Early detection challenges

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- In a country, in a region
- Preparedness; knowledge, awareness
- Remote border areas
 - Few farmers, part-time farmers, intensive/ extensive
 - Few official inspectors, few clinicians, no farm visits
- Cattle gathering abilities; paddocks, chutes
- Sampling, shipment; incorrect – false negative
- Israel; 2012 window gap- infection to detection est. ~ 6-8 weeks (skin scars support estimation)



- 1 Train of Trainers Programme of the IZVM/IZVM
- ## Cattle movements control
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- Define zones- declare a “standstill”
 - Inspection, enforcement – limited recourses
 - legislation, regulation, “blue/ green” police, army
 - Data base and IT
 - Longer period/ compliance drops
 - “Clinical freedom” certificates by vet- risky
- Train-of-trainer for field veterinarians on LSD (TCP/RER/3605) - Kiev, Ukraine, 31 May – 1 June 2018

- “No one solution fits all outbreaks”
- adjust policy to reality and capabilities

- EFSA epi’ experts statement 2016:
 - *“When using an effective vaccine*
 - *and vaccination coverage is high enough-*
 - *Stamping-Out has minor effect”*

- it’s the first incursion to a country/region
- isolated small outbreak detected and notified
- the threat of repeated incursions is low
- Epi’ unit can be well defined and isolated
- Immediate response- quick & effective
- Regaining freedom of LSD
- back to normal business

Stamping-Out vs Vaccination

Parameter/method	Vaccination	Stamping-Out	Variables
Direct cost	low	high	Isolated/ wide-spread
effectiveness	high	Low in large events	Suitable vaccine
management	easy	difficult	Cold-chain/ disposal
Long term loss	no	yes	e.g. Breeding value
durability	6-12... m	short	
flexibility	high	zero	Change/ stop vacc.
Herder attitude	positive	negative	
effect on herder future reporting	strong	weak	
Public/ media attitude	Little to no interest	negative	

Disinfection

- Limited importance
- Limited effectiveness
- Costly
- Food products effect
- Environmental effects
- Cleaning is important



LSD is not FMD

Carcass disposal (dead/culled)

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- Legislation & environment; water, land...
- Amount of carcasses to dispose/ time
- Availability on farm/ near farm, cost
- Carcass is not an important source of spread
 - Cover, repellent spray
 - Distance to incineration plant
 - Vehicles route- entering non-infected farms
 - Special vehicles/ special routes - extra costs

When and how to end an outbreak

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- LSD has a sweeping mode
- Population protected; by infection / by vaccination
Repopulation; a.s.a.p (vacc' herds- no empty farms)
- Trade disruption -increase restrictions -
reduce compliance
- Vaccinate for several years (?)... withdrawal

- Continue active surveillance
- Update contingency plan

Summary

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- Be prepared
 - Detailed plan
 - Have everything ready, everybody trained
- Awareness & surveillance
 - All stakeholders and levels
- Respond asap
 - Contain
 - Control
 - Back to freedom

Thank you

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