Evaluation of participatory disease surveillance for highly pathogenic avian influenza in Africa and rinderpest in Pakistan

International Livestock Research Institute, Kenya
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Objective

Participatory disease surveillance (PDS)

- Application of participatory approaches for disease surveillance

Objective

- Evaluate PDS as a surveillance tool within existing systems
- Build evidence base of appropriate applications
Methods

Framework: 5 Pillars, 34 Indicators
- Relevance to national surveillance
- Effectiveness for disease surveillance and outbreak detection
- Efficiency as a surveillance approach
- Sustainability of PDS
- Impact

Country selection
- Nigeria
- Tanzania
- Benin, Togo
- Pakistan
- Uganda

Approach
- PE practitioners (n=74) & key informants (n=48)
- Questionnaires & semi-structured interviews
- Workshops: most significant changes, actions, decisions
Results: Relevance

Relevance to meet national priorities
• Corroborated absence of disease
• Informed control programs

Tool appropriateness: Non-commercial farmers

Usefulness & purpose
• Identification of priority diseases and challenges (surveys)
• Improving farmer-vet relationships
• Outbreak investigation
Results: Effectiveness

Sensitivity & PPV: Not quantified

“Lots of data, little of it used”
  • Field exposure led to actions

Data analysis & compatibility: Unit conflict
  • Integration, Reconciliation, Validation (Togo, Pakistan, PPR)
  • Qualitative challenges

Acceptability: In complement
Results: Efficiency

Timeliness: not quantified

- No effect on disease prevention & control
- PDS driven changes, actions & decision not time sensitive

Nigeria, Benin & Togo
HPAI outbreaks

Communication flows: Upwards
Results: Sustainability good news

Ongoing uses
- Economic surveys (FMD Pakistan)
- AFENET annual surveys & outbreaks
- 32% of PE practitioners informally integrate into surveillance

Training & veterinary curriculum
- Graduate: formal (Nigeria, Tanzania)
- Undergraduate: informal (Nigeria, Tanzania, Uganda, Pakistan)
- In-service: sporadic (Uganda)
- Post EDRSAIA: Nigeria, Uganda, Benin
Results: Sustainability bad news

Not considered ‘institutionalized’
• Evidence of use limited (new surveillance protocols & strategies)
• Sustainability road map not clear

Missing pieces
• Standard operating procedures for PDS visits
• Standardized guidelines for data analysis
• Mechanism to integrate data into existing systems
• Legal framework
• Scientific evidence and validation (Pakistan)
Results: Impact

Changes & contributions outside surveillance
- Universally positive
- 85% reported career or personal benefit
- Veterinary service ‘mentality shift’ & ‘coordination’
- Field epidemiologists ‘investigate outbreaks better’
- Professional skills improved – ‘change agents’

Participatory or extractive?
- Participatory process poorly understood
- Participation, empowerment, social capital lacking
- Emphasized surveillance objectives
What did we learn?

Participatory approaches: appropriate as complements

Consistent with other data: not evidence of performance

Captures community perspectives & improves relationships

Positive attitude to PE

Surveillance data limited

Large amounts of unused qualitative data

Informal use: significant elements lacking

Extraction of data: inconsistent with participatory values
Recommendations

Invest in the evidence: Harness positive effects
• Survey tool as *raison d’être*
• Judicious & selected applications

Recommendations
• Validate data for common applications
• Evaluate sensitivity, PPV & timeliness
• Evaluate cost effectiveness
• Build evidence base: evaluate & document applications
• Develop Standard Procedures for data collection & analysis
• Compare to passive surveillance, farmer field days, media
• Align objectives: local priorities vs. surveillance outcomes
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