



“Therapy Evaluation”: a tool for sustainable antibiotics use in dairy cattle

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August 2011

Antibiotics use in Dutch dairy sector

Large variation in use of antibiotics

- between herds (total amount)
- within herds (use per type of treatment)

Sector has set ambitious reduction targets

- 2011: -20%
 - 2013: -50%
- } compared to 2009 levels

Hard to monitor and manage antibiotics use at herd level because of low transparency

- farmers and vets use separate recording systems
- many data are not stored electronically



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Antibiotics use in Dutch dairy sector

New regulations (2012)

- all deliveries of antibiotics from vets to farmers have to be included in a national database
- all farmers have to define treatment protocols (which medicine to use, how to use, waiting time)

➔ **How can we help farmers and vets complying with the new regulations and realising a sustainable use of medicines?**

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Existing infrastructure for herd health management

Web-based software to support vets with herd health management

- ~170 veterinary practices
- ~7100 dairy farmers (~30% of Dutch dairy farmers)

Current focus on fertility and udder health

- mainly based on data from milk recording and AI services

Farmers hardly use options to record diagnoses and treatments



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New functionality

Link different systems for registration of medicines

- deliveries of medicines (vets)
- use of medicines (farmers)

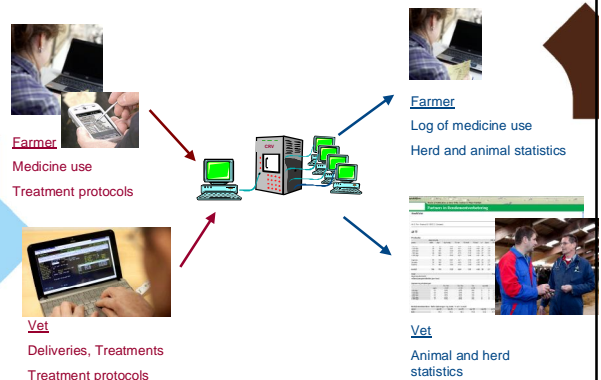
Include treatment protocols

Include new information management tools animal health

Include farm specific targets for health traits

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Infrastructure “Therapy Evaluation”



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Output for vets

Animal level

- diagnoses and treatments

Herd level

- diagnoses and treatments
- therapy overview
 - which therapies were applied for different diagnoses
- comparison of realised results against
 - herd specific targets
 - group of similar herds (benchmarking)

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Pilot “Therapy Evaluation” (2009-2010)

5 veterinary practices / 36 dairy farmers / ~2800 cows

Vets and farmers were trained

Health data recorded by farmers were checked for correctness and completeness

Questionnaire




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Results: recording of health data by farmers

Data are generally correct but not always complete

- correctness depends mainly on frequency (best with daily recording)
- udder health data most complete
- completeness of other traits depends on interest of farmer
- farmers with a PDA record data most completely and correctly

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Results: experiences

Farmers

- software is easy to use
- difficult to define treatment protocols and to understand treatment protocols by vets
- clear and brief presentation of management information is important

Veterinarians

- quality of treatment protocols varied largely across and within practice
- large effect of training and feedback on recording behaviour of farmer
- output triggers discussions on antibiotics use with farmers

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Follow-up activities

Further implementation “Therapy Evaluation”

- 2011: 40 veterinary practices
- 2012: 80 veterinary practices
- 2014: 160 veterinary practices

Include calculation of animal daily dosage (2012)

Evaluate the feasibility of using the output of “Therapy Evaluation” in herd health management plans


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Conclusions

Monitoring and managing antibiotics use at farms requires a good interaction between farmers and vets

“Therapy Evaluation”

- increases transparency and completeness of data on antibiotics
- contributes to improved awareness and responsibility
- helps farmers and vets to identify problem areas
- supports dairy sector to reach defined targets in an efficient way

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Acknowledgements

Partners in the herd health programme




KNMvD (Royal Dutch Veterinary Association)




Pfizer

Farmers and vets in the pilot project

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Thank you for your attention



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