

ПРЕЗЕНТАЦИЯ

PRESENTATION

International conference on
Food Safety Risk Analysis and
Antimicrobial Resistance

Moscow, Russian
Federation, 17- 18 12/2019

Международная
конференция по вопросам
анализа риска безопасности
пищевой продукции и
устойчивости к
противомикробным
препаратам

Москва, Российская
Федерация, 17 -18 12/2019



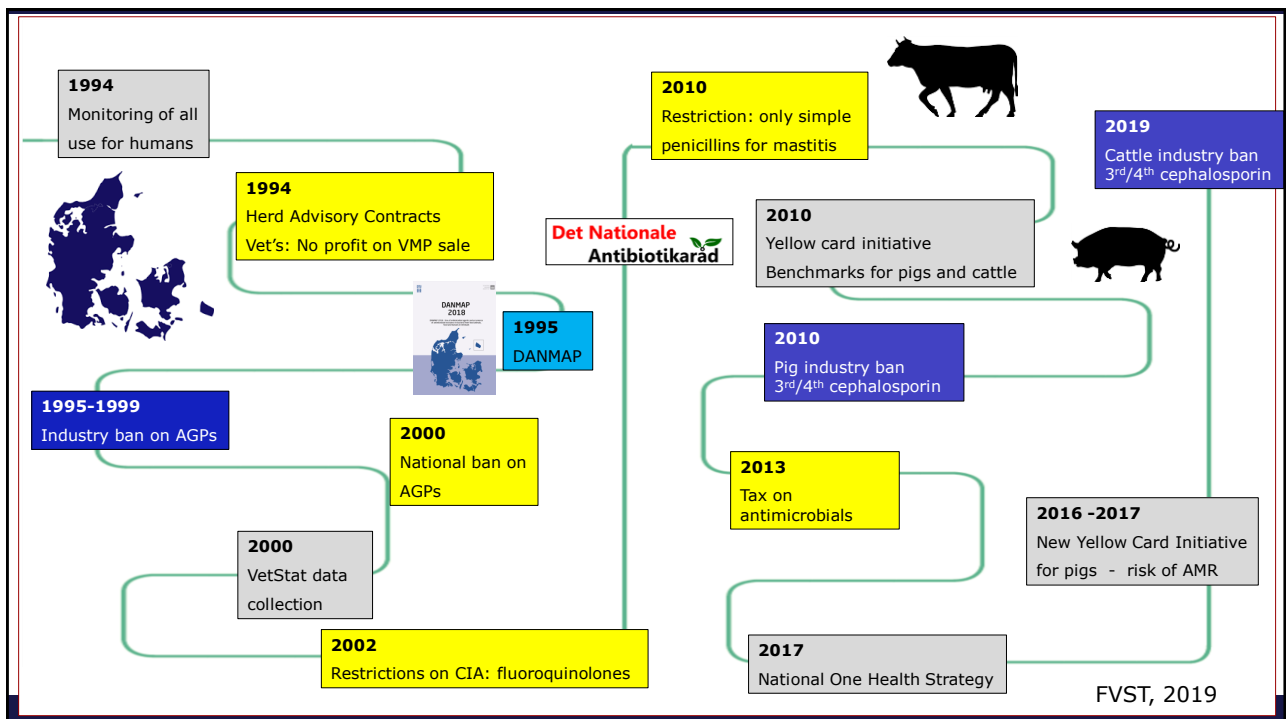
Prudent use of AMU

Success by communication and partnerships

Johanne Ellis-Iversen DVM PhD MSc FRSPH
Veterinary Epidemiologist & Senior Advisor
Head of EpiRisk, DTU FOOD, Denmark

Understanding *The Danish way*...

- **Veterinarians are private sector, but**
 - Heavily regulated
 - Authorisation
 - Production animals – Advisors mainly
- **Agricultural country**
 - 5* as many pigs as people
 - Pigs use 75% of antimicrobials in animals
 - Livestock industries are highly organised
 - Strong industry bodies
 - Control via public/private partnerships

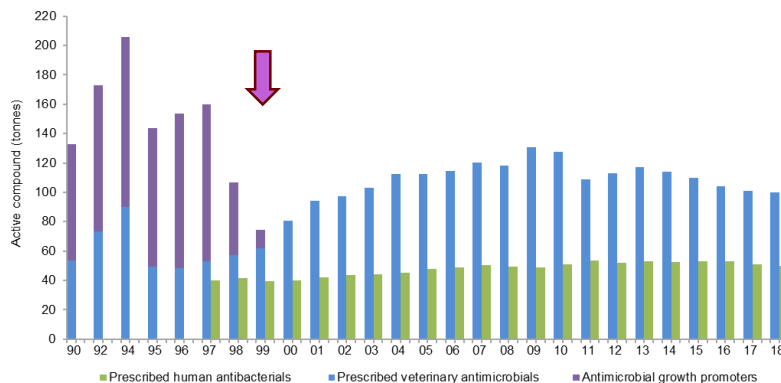


1994 - From veterinary clinician => herd health advisor.....

- **Removed profit from selling antimicrobial drugs**
 - Later – only licenced pharmacies sell antimicrobials
 - => Veterinarians no longer wanted to prescribe
 - => Everyone working to reduce use
- **Replaced by herd health advisor legislation**
 - Intensive production farms with veterinary herd health advisor
 - => More lenient AMU
 - => Improve husbandry & biosecurity, prevent disease
 - Legislation: Herd contract + agreed number of visits per year
 - => 2010 made mandatory for pig, cattle and mink farms



1996-8: Voluntary industry ban on growth promoters



Effects of removing growth promoters

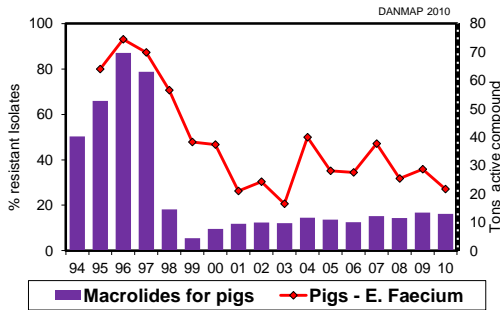
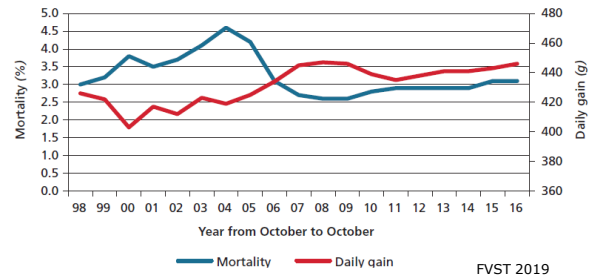
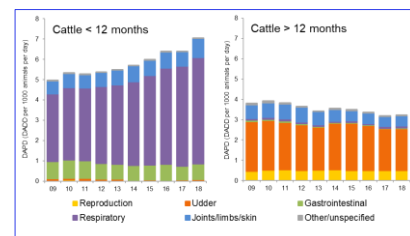
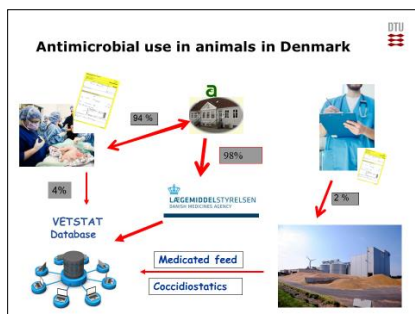


FIGURE 5. Effects of AGP termination on mortality and daily gain in weaner pigs, 1994–2016



Prescribing AMs to animals

- **All AM on prescription only**
 - Animals <= pharmacies, surgery & feed
 - Electronic capture
 - pharmacies, clinics and billing systems
- **Facilitates interpretation at**
 - Herd/flock
 - species, production form, age, geografi, time
 - Veterinarian, clinic-level

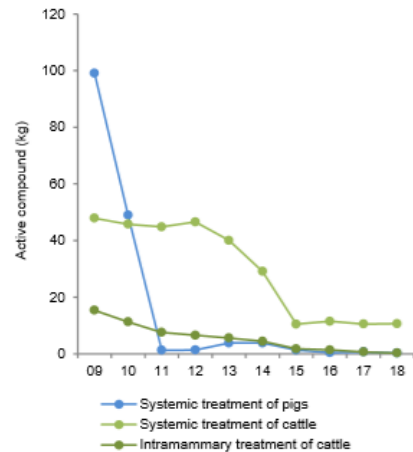


Phasing out Cephalosporins

- 3rd and 4th generation cephalosporins in animals
 - 2010 - Voluntary by pig industry
 - 2019 – Voluntary ban by cattle industry
 - Today - only used in pets & people

Figure 4.5 Use of 3rd and 4th generation cephalosporins in pigs and cattle, kg active compound, Denmark

DANMAP 2018



2013 -Differential tax on veterinary medicines

Veterinary medical products	Tax (%)
Vaccines	0.0
Penicillines with narrow spectrum	0.8
Other antimicrobials	5.5
Critically important antibiotics (WHO) (3./4. generation cephalosporins and flouroquinolones)	10.8
Other veterinary medical products	0.8

Continuous control initiatives

- **Official antimicrobial treatment guidelines (1996->)**
 - Pigs, Cattle, Pets
 - Humans
 - Regularly updated
 - Based on risk assessments
 - AMR in public health
- **Public awareness**
 - Press releases
 - National TV, national newspapers, radio etc.
 - Experts argue in press
 - Political driver

=> Less requests for antimicrobials



Continuous control initiatives

Surveillance and communication

- DANMAP
 - One Health annual surveillance report
 - Since 1995 =>
 - Demonstrates AMR patterns
 - Measures effect of interventions
 - Publicizes all use AM by species
 - Press releases
 - International outreach



WWW.DANMAP.org



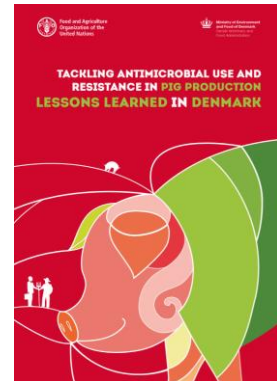
DANMAP report 9000 downloads annually



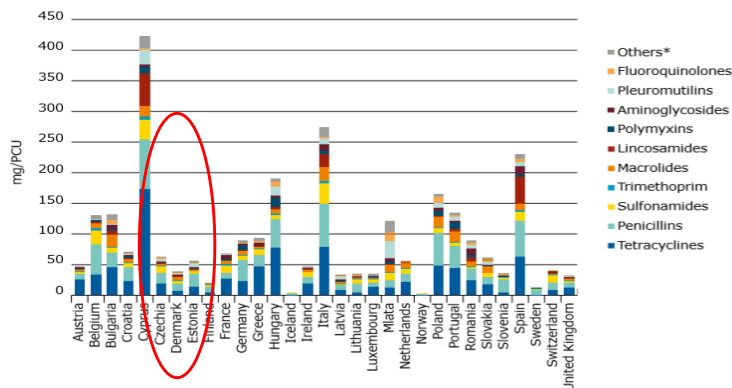
Continuous control initiatives

High level of herd health and biosecurity

- High awareness of biosecurity
- No exotic disease outbreaks
 - AI, ASF, FMD
- Very high level of external biosecurity
- All in-all out principle for poultry and pigs
- Vaccination encouraged
 - Sales doubled from 2009-2017 (28 mio to 55 mio doses)
- Prophylactic use of AM is prohibited by Danish law



Does it work?



25 years towards prudent use of AM ~What have we learned~

- **Partnerships and trust are needed**
 - Data sharing
 - Finding win-win solutions
 - On the same team
 - Openness and awareness
- **No silver bullet**
 - Stepwise approach
- **Public awareness is a political driver**
 - Political will is paramount
- **Surveillance and data to control AMR**
 - Good surveillance of AMU is a great motivator
 - Impartial data provides a common truth
- **Political courage and leadership**
 - To make unpopular policies
 - To make big changes
 - Ensure compliance
- **Control of AMU is a long journey**



Thank you for your attention

