

VetStat Cluster

Project 2020-2024: Evidence based use of VetStat data in science and contingency work.

ACROBAT 7. December 2022

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What am I doing in my PhD?

Majs' work flow: CTRL+C | CTRL+V

Agenda

- VetStat cluster
 - VetStat data – accessibility
 - Benchmarking veterinarians Rapport 1 and 2

- Teaser: VetStat cattle
 - Antibiotic use in Danish veal production

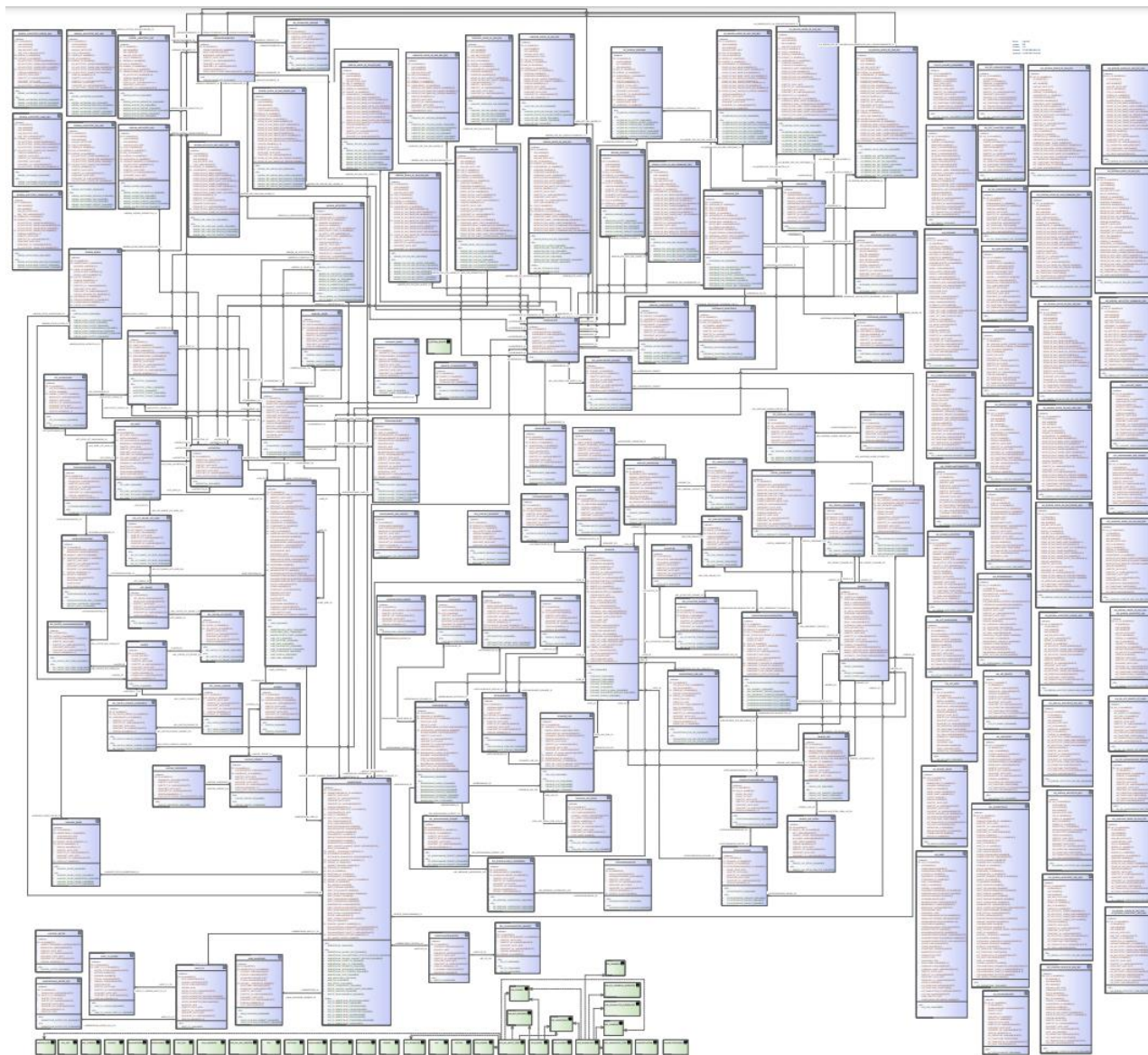
VetStat data – the core

- Medicine for animals:
 - When?
 - (Where?)
 - Farm and herd
 - Pharmacy
 - (Who?)
 - Species and age
 - Veterinary practice and practitioner
 - Responsible for prescription
 - Product
 - Antibiotics
 - Vaccines
 - ...
 - Amount
- Veterinary Advisory Service Contracts
- Veterinary practice affiliation
- Fødevarestyrelse: Antibiotic use reports
- Number of animals (from CHR)
- ...

New VetStat and new access



VPN



VetStat database overview provided to cluster by Fødevarerstyrelsen

Alice Puk Skarbye

Postdoc

Sektion, Animal Welfare and Disease Control

Grønnegårdsvej 8, 1870 Frederiksberg C



Data_suppl



VetStat_cleaned



VetStat_raw

variable_da	type_original	variable_eng	type_adj	explanation	inclusion_priority
2 ID	integer	ID_observation	factor	Unique VetStat ID for each recorded sale	1
3 ORDINATIONSGRUPPE_ID	integer	ID_disease_group_VS	factor	Unique VetStat ID key for the area of disorder	2
4 OPRETTET_DATO	POSIXct	entered_date	POSIXct	Date entered into VetStat	3
5 OPRETTET_AF	character	entered_by	factor	Entered into VetStat by	3
6 OPDATERET_DATO	POSIXct	corrected_date	POSIXct	Date the record is corrected in VetStat	3
7 OPDATERET_AF	logical	corrected_by	factor	Corrected in VetStat by	3
8 VERSION	integer				0
9 FODERTILSAETNINGSSTOF_ID	integer				0
10 UDLEVERINGSDATO	POSIXct	date	POSIXct	Date for use/dispensing (sale) of the product in the record	1
11 VARE_ID	integer	ID_product	factor	Unique VetStat ID assigned to each product	1
12 INPUT_FIL_ID	integer				0
13 TYPE	character	product_type	factor	Type of product e.g. medicine or feed additive	1
14 KILDE	character	data_source	factor	Data source ie. pharmacy, veterinarian or feed mill	1
15 EKSPEDITIONSNUMMER	integer				0
16 EKSPEDITIONSTYPE	character	ID_sale_type	factor	Type of sale e.g. sale for farm, veterinarian or small animal o...	2
17 APOTEK_NUMMER	integer	ID_pharmacy_VS	factor	Unique VetStat ID assigned to each pharmacy ...?	1
18 PAKNINGSSANTAL	numeric	apo_amount_pack	numeric	Number of whole packages of product sold from pharmacy	1

VetStat 2.0: Data from veterinarians, pharmacies and feed mills

Basic description, processing, testing and merging

Jeanette Kristensen

2022-09-20

- 1 Original data
 - 1.1 Changes from previous VetStat data
 - 1.2 Data pathway
 - 1.3 Additional data
 - 1.4 Loading veterinarian, pharmacy and feed mill data
 - 1.5 Loading species, age and disease group information
- 2 Adjusting data sets
 - 2.1 'VetStat_indberetning' - Veterinarian, pharmacy and feed mill data
- 3 Errors in classification in 'SALES'
- 4 Saving sales data and error data

WORK IN PROGRESS
Inputs are welcome!

VetStat 2.0: Data on products

Basic description, processing, testing and merging

Jeanette Kristensen

2022-09-20

- Original data
 - Changes from previous VetStat data
 - Data pathway
 - Loading data
- Adjusting data sets
- Merging intermediary data sets for product data
- Merging data on products
 - Merging product data
- Merging data on Animal daily doses for products
 - Merging data sets for ADD product data
- Removing data sets
- Saving data sets

Goal

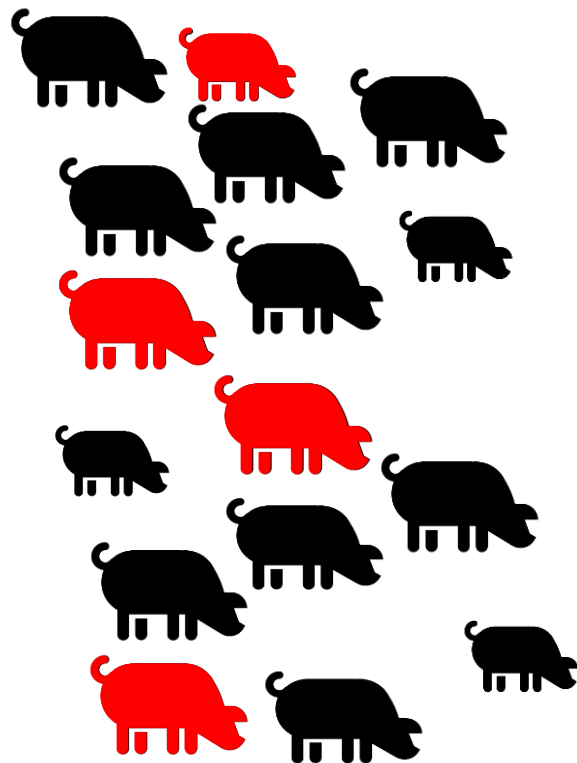
Data which is easy to extract, understand, and use

Benchmarking veterinarians

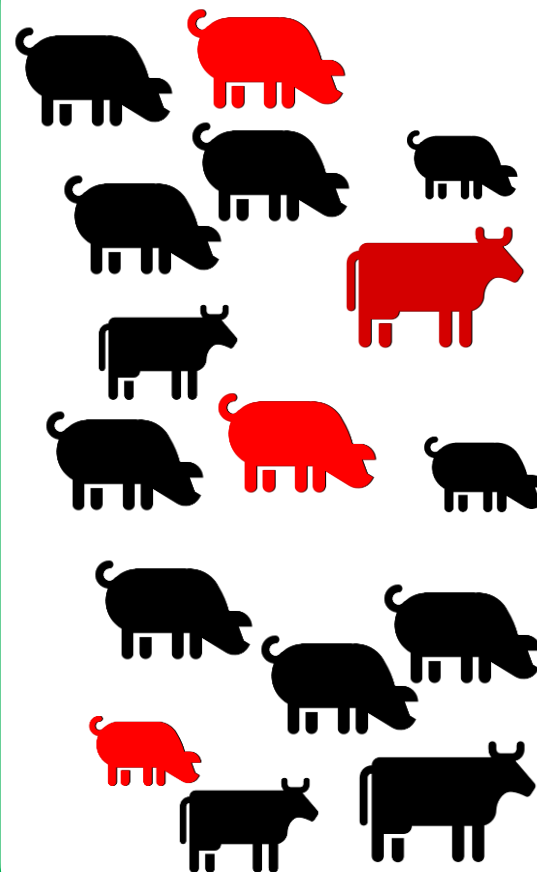
1

Compare VASC veterinarians

$4/16 = 0,25$

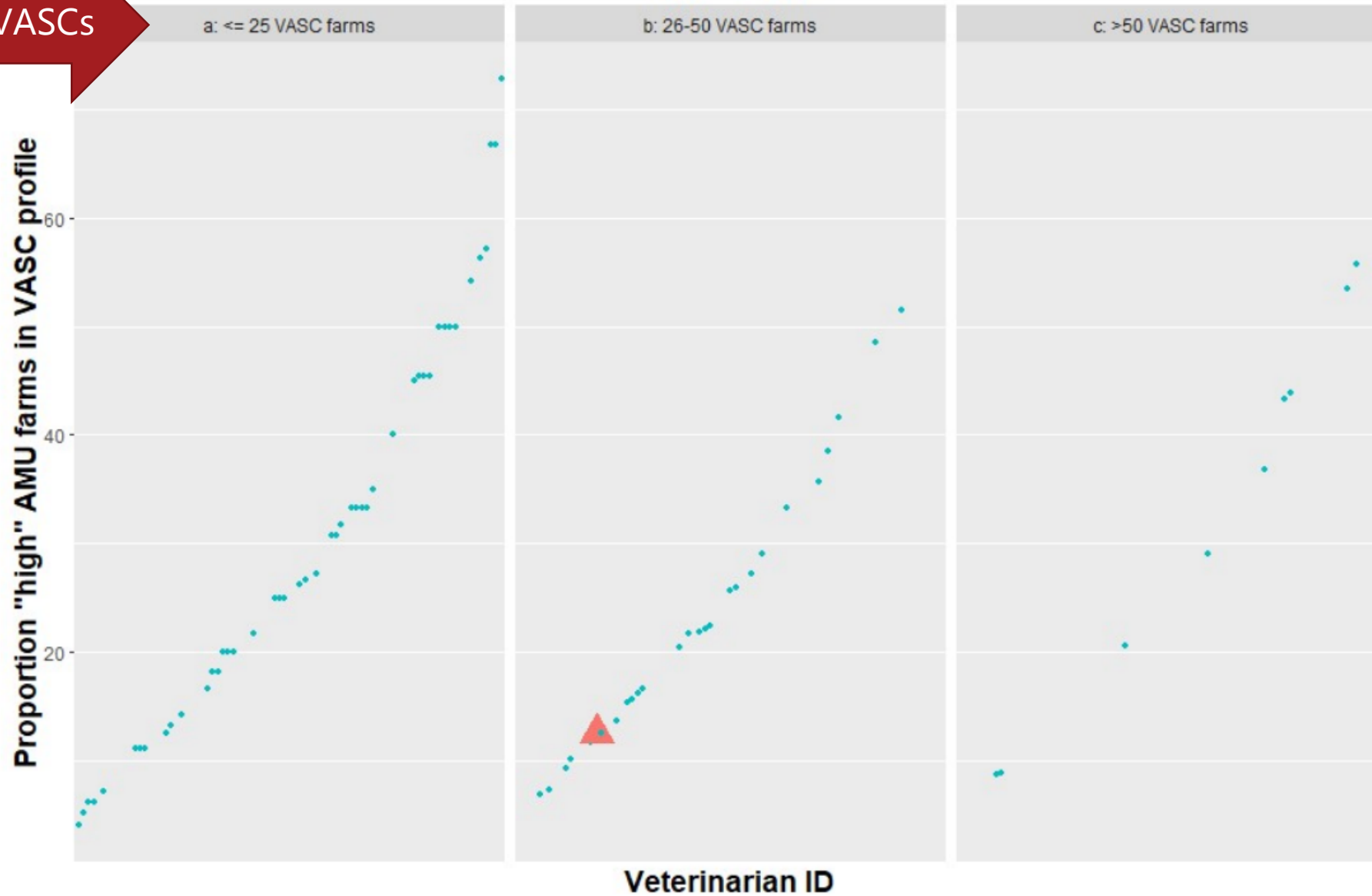


$4/16 = 0,25$



Proportion of "high" AMU farms per veterinarian Pigs - Sows

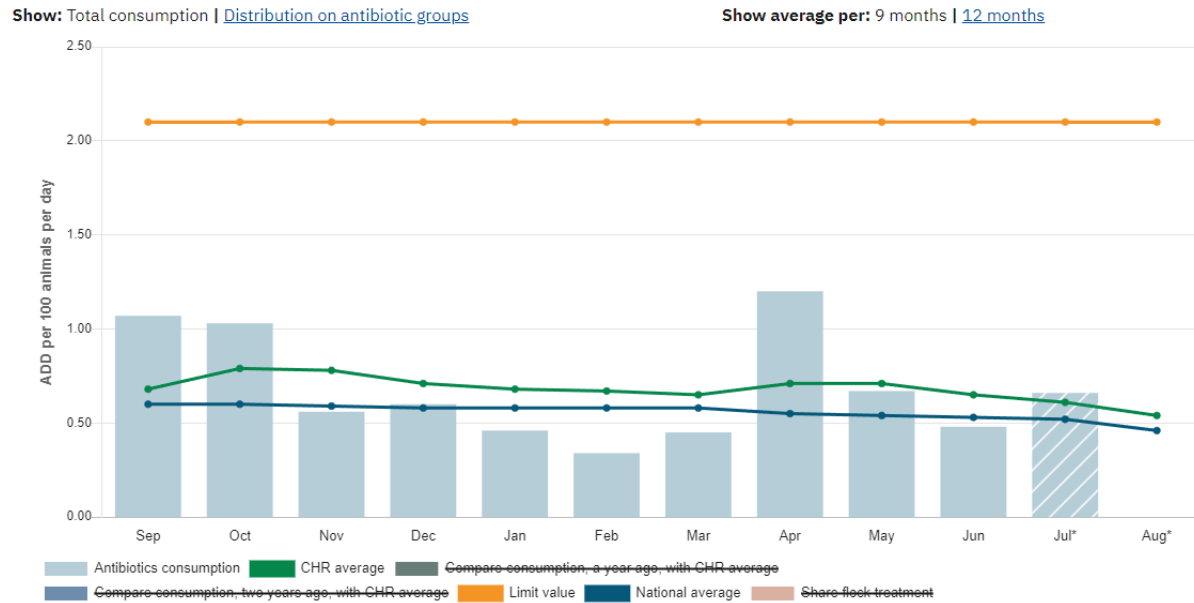
Number of VASCs



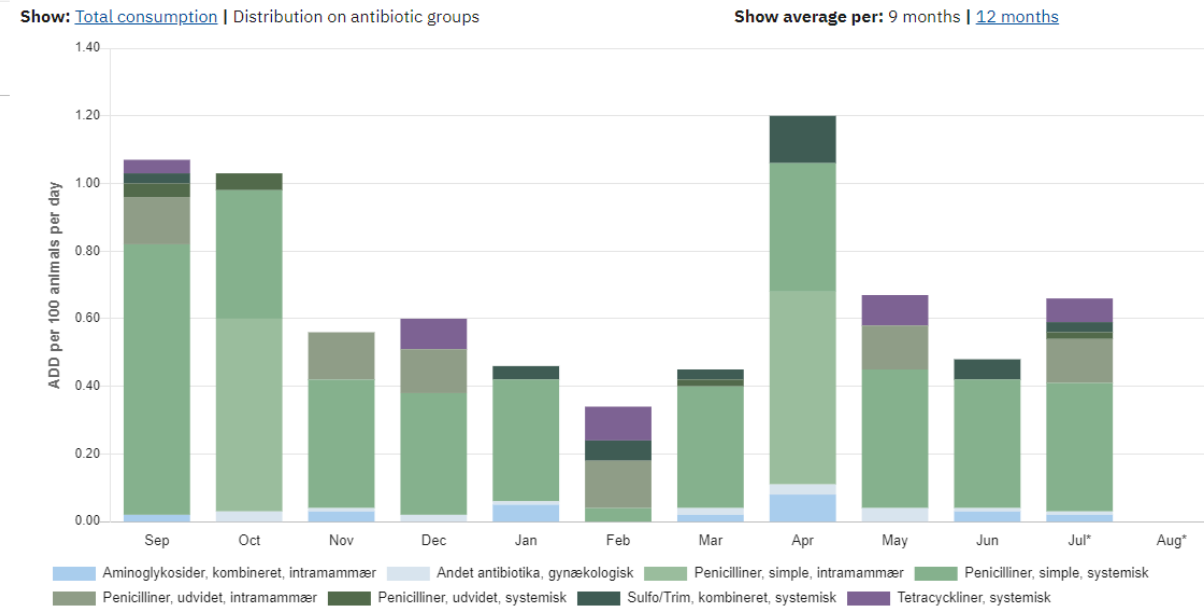
From work with the report "[Deskriptiv analyse af dyrlægers ordinationer af antibiotika i svine- og kvægbesætninger](#)"

2

The VetStat dashboard view of a farms' AMU

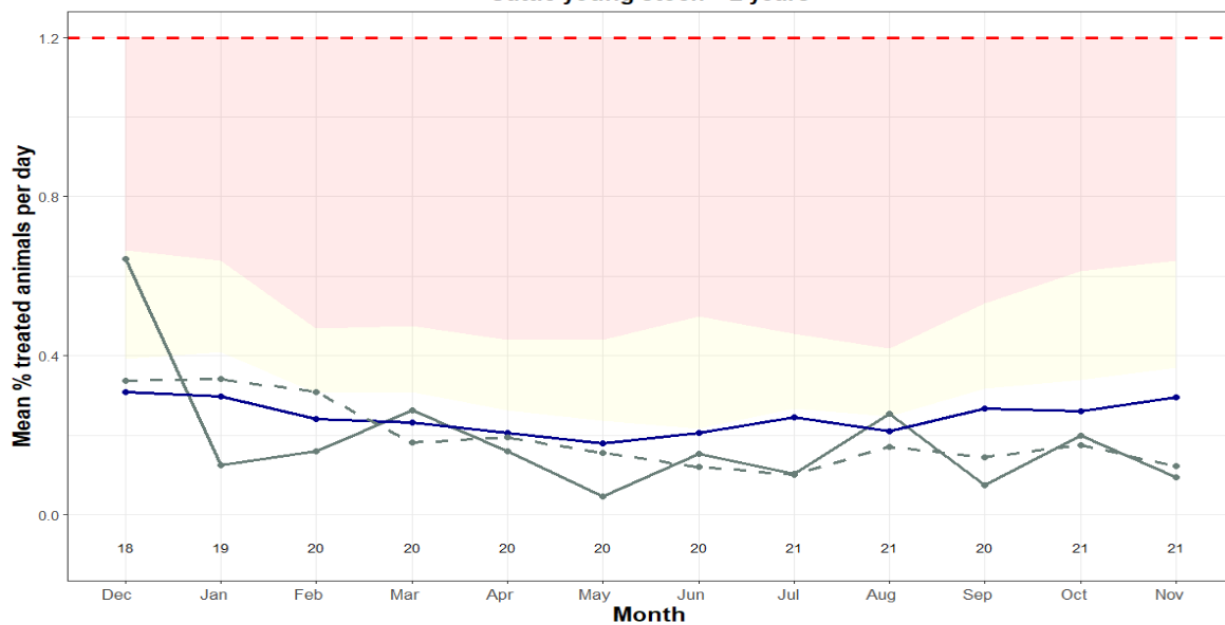


*Antibiotics consumption in these months has not been definitively calculated and may therefore change.



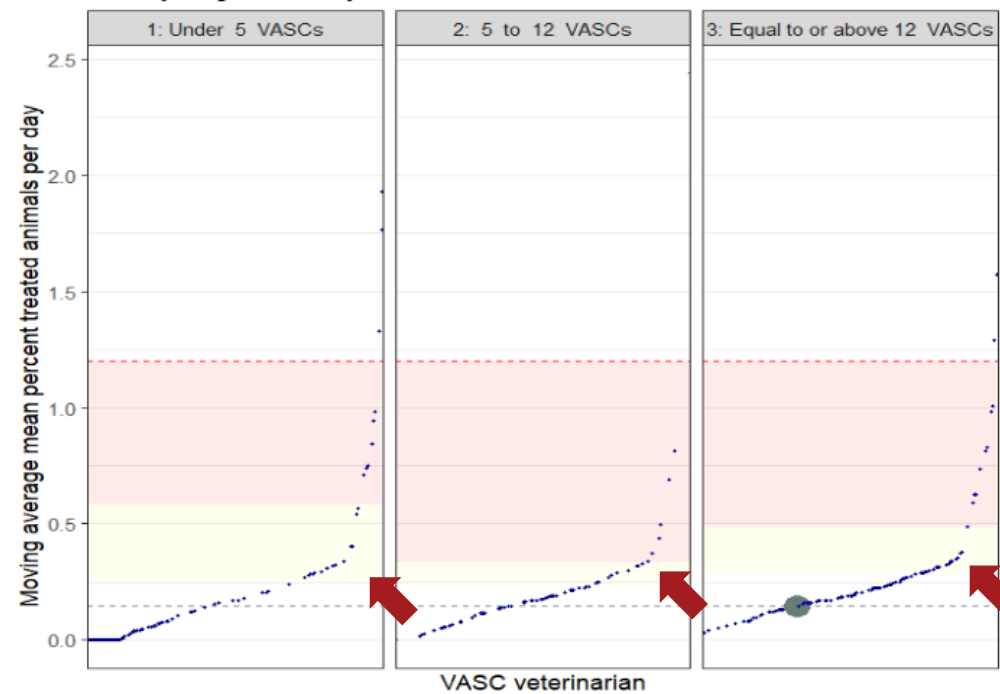
Cattle VASC-veterinarian

Vet X: Mean percent treated per day
Cattle young stock < 2 years



Sep 2020

Vet X: Monthly benchmark on 3-months moving average
Cattle young stock < 2 years



VASC veterinarian

Teaser – VetStat cattle – AMU in veal production

Working with benchmarking of veterinarians

Average percent treated animal per day for cattle young stock from 01-07-2018 to 30-06-2020

1: <100 animals and young stock>75 %

2: 100 animals and young stock<75 %

3: 100-600 animals and young stock>75 %

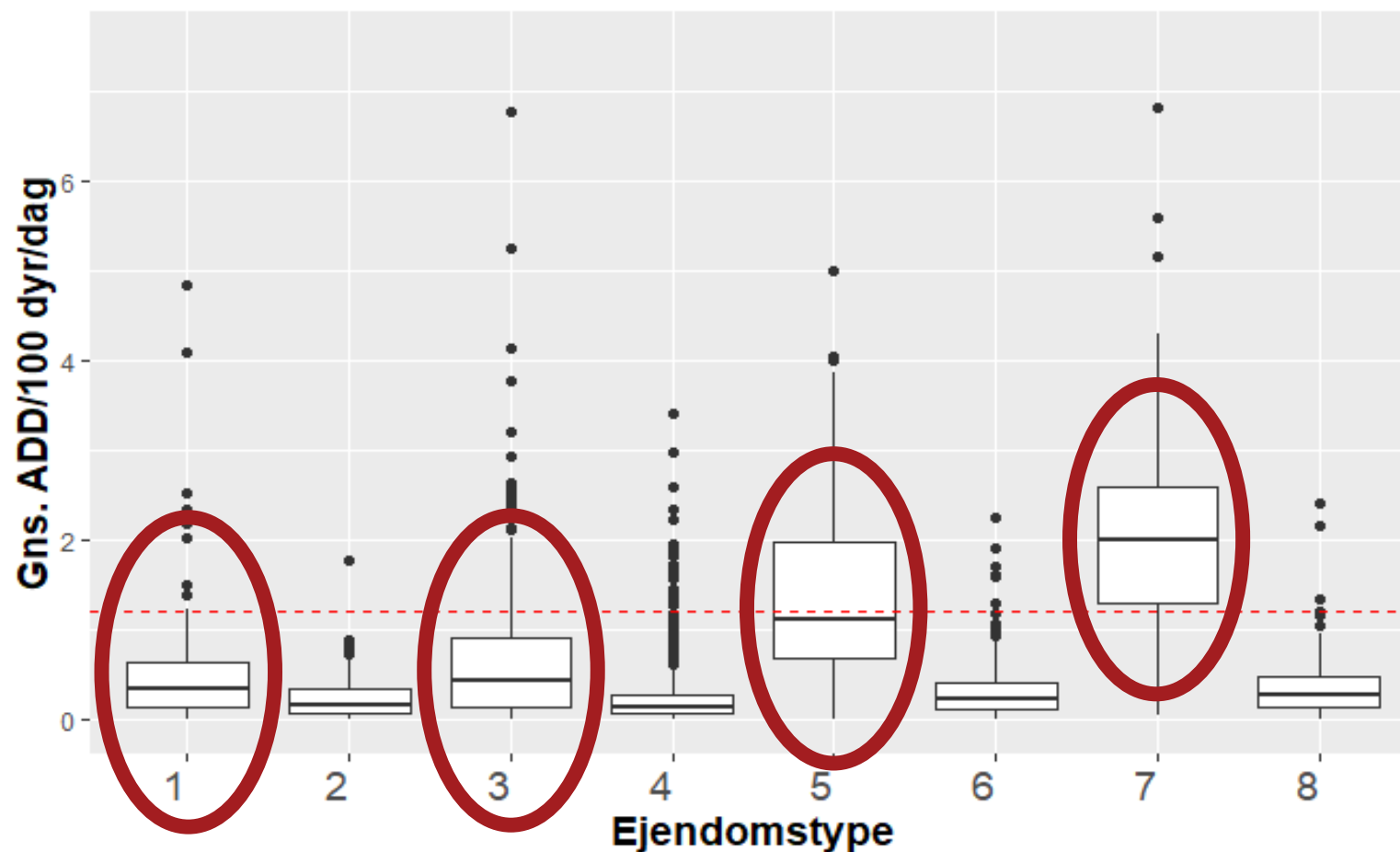
4: 100-600 animals and young stock<75 %

5: 600-1000 animals and young stock>75 %

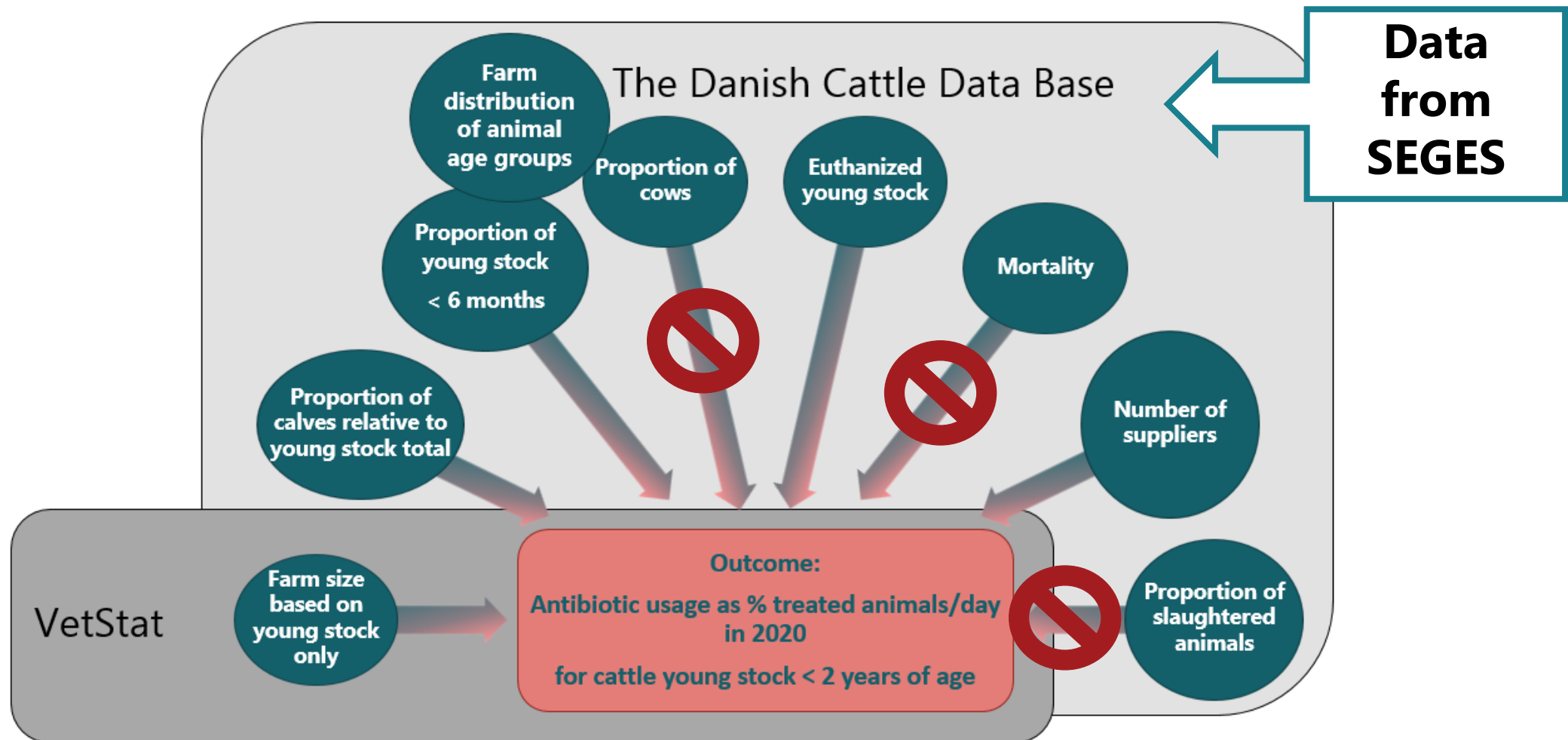
6: 600-1000 animals and young stock<75 %

7: >1000 animals and young stock>75 %

8: >1000 animals and young stock<75 %



Multivariable logistic analysis – Antibiotic use in relation to 1.2% treated young stock animals per day



To be continued...
(until summer 2024)