

Teaching old dogs new tricks- can the dogs invent the tricks?

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Background AMU

- 80% of antimicrobials used globally are in agriculture
- NZ has the 3rd lowest AMU globally
- NZVA goal to 'not need antibiotics by 2030'
- Need to motivate farmers to change behaviour

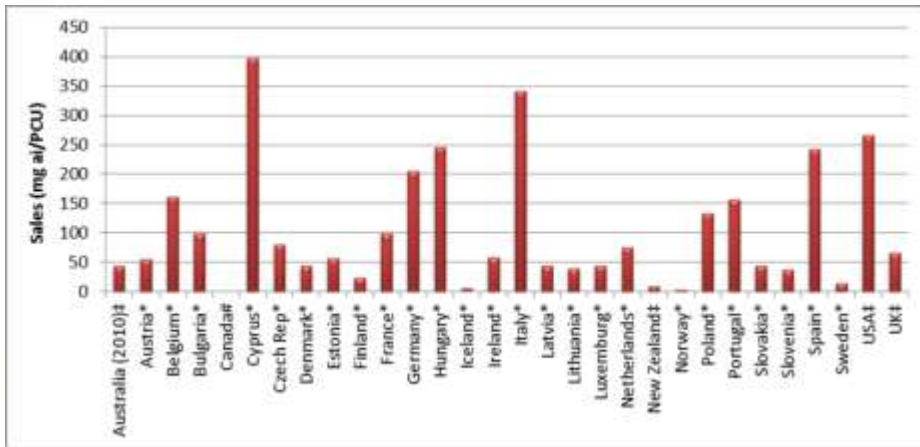
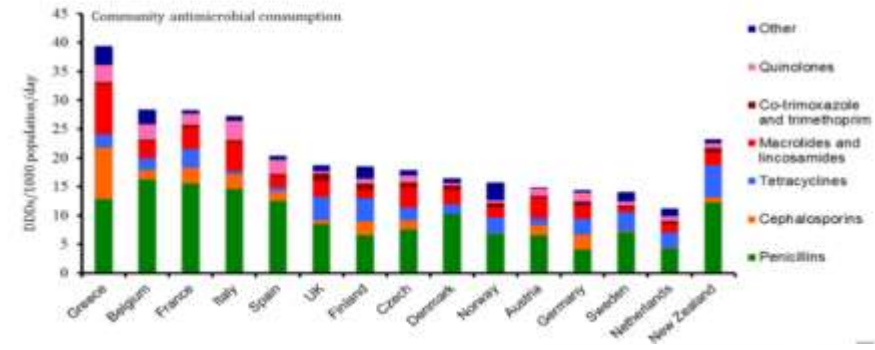


Figure 4. Annual per capita consumption of antimicrobials by community-based patients, in various European countries¹⁹ and in New Zealand, during 2010, measured in DDDs/1000 population/day



Veterinary engagement...

- Long history of working closely with farm clients:
 - **Teatspray to prevent mastitis**
 - Early detection & identification of mastitis pathogens
 - Quality (and quantity) colostrum
 - Selective therapy at drying off
 - Appropriate culling of repeat offenders
 - Better disease identification before treating
 -how effective have we been??



If we change the dialogue can we change the outcome?

'In veterinary consultations, the predominant approach is that of paternalism, where the veterinarian sets the consultation agenda, takes on the role of the guardian and assumes that the client's values match their own, resulting in veterinarians contributing most of the talking and clients playing a passive role'

'...it is more likely to elicit client reactions against a behaviour rather than in favour of it (a phenomenon known as psychological reactance)...'

- Bard et al, 2017



Communicating

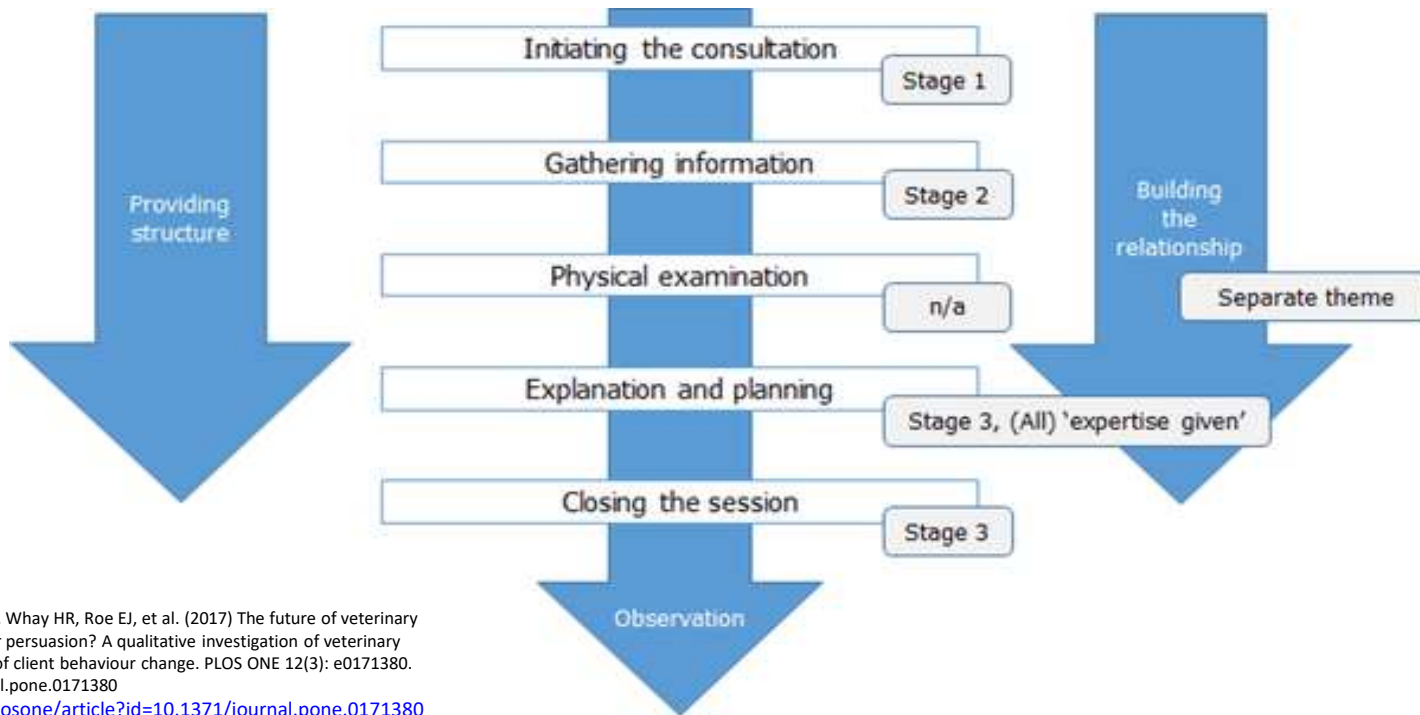


It's not like this.



It's certainly not like this.

Fig 4. Congruence of consultation stages identified by thematic analysis of role-play (n = 15) discourse and Calgary-Cambridge model.



Bard AM, Main DCJ, Haase AM, Whay HR, Roe EJ, et al. (2017) The future of veterinary communication: Partnership or persuasion? A qualitative investigation of veterinary communication in the pursuit of client behaviour change. PLOS ONE 12(3): e0171380. <https://doi.org/10.1371/journal.pone.0171380>
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0171380>

Behavioural change: keys

- Approach:
 - Engage rather than tell
 - Education first
 - Focus on the person not the disease
- Co-factors:
 - Personal (gender, culture, age etc)
 - Environmental factors (family, friends, finance, values, networks)
 - Control of decision making (eg IWG TF)
- Plan:
 - Ease of adoption
 - Holistic, broad
 - Nudges, incentives, positive

'...is it simply enough to ask for more partnership when the subtle effects of the existing paternalistic paradigm are likely to undermine it?....'



Other recent work

- Kristen Reyher's work on AM reduction programmes
- Behavioural change very difficult
 - Especially if routine behaviour
 - Need motivation => intention to change
 - Assistance in new behaviour
 - Support in maintenance
- Vets seen as key influencers and major referrants
- *'...veterinarians have often been found to fall short in adopting this supportive role as proactive and motivating animal health consultants...'*
 - Reyner et al; 2016, 2018; Speksnijder Animal Frontiers, 2018

SFF Project – 2017-2020

- **Development of farmer-led regional Sustainable Health Groups**
- **20% reduction in AM use by 2020**
 - 3 year project- SFF and VetSouth
 - Southland/South Otago
 - Multi- sector
 - Supported by Beef & Lamb; SDDT; local vets and farmers
 - Stakeholders: Uni of Auckland (Prof Mark Thomas); Otago Uni (Prof Greg Cook)
- **‘Participatory development’ farmer-led approach**
 - 4 x Farmer- driven groups; 2 facilitators



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Process & Expected Outcomes



- **Reduction** in antimicrobial use on farms.
- **Changes in farmers' attitudes** to disease management, with a reduced reliance on antimicrobials.
- Identification of **successful and less successful strategies** for reduction in AM use
- **Dissemination of information**, knowledge, and success or otherwise of strategies
- **Unofficial goal to reduce AMU by 20% by 2020**



SUSTAINABLE FARMING FUND

Current progress

DRY COWS THERAPY SELECTION Dry cow therapy should be selected based on therapy. If you have the available information on which to select for the current 2020 Change System data, selected management and implementation may vary. All options. Go to the 2020 Change System website for more information on this topic.	TREAT IT ONCE - TREAT IT RIGHT! Use antimicrobials most appropriately by following the RDS guidelines for high volume and management handling of antibiotics and if you are using up your supply, then it's time to think a smart decision about the treatment of animal.
THREE STRIKES AND YOU'RE OUT! Maintaining a record of all antibiotic use for every animal is your first step. It's also the first step to a record of antimicrobials used that have a potential to cause resistance.	MANAGING MASTITIS Prepares a management plan to reduce antibiotic use by focusing on preventing mastitis, reducing antibiotic use, and ensuring that the right antibiotic is used for the right animal.
DECIDE WITH DATA Decision data is the most important tool for making the right decisions for your business. It's not just about the numbers, it's about the context and the story behind the numbers.	TARGETED DRY COW THERAPY Focuses on individual dry cows that are at high risk of mastitis and are treated with a targeted dry cow therapy (DCT) program. This is based on the results of a DCT risk assessment.
VITAMIN A, B & E All 3 are vital to maintaining healthy cows and reduce the risk of mastitis, metritis and other issues. However, by providing vitamin supplements and checking the expiry dates, the health of your herd.	GO FOR GOLD Focus on reducing antibiotic use by following the RDS guidelines for high volume and management handling of antibiotics and if you are using up your supply, then it's time to think a smart decision about the treatment of animal.
IMPROVED CALF MILK HYGIENE Reduce the risk of mastitis and other issues by following the RDS guidelines for high volume and management handling of antibiotics and if you are using up your supply, then it's time to think a smart decision about the treatment of animal.	BEARING'S MILESTONE Decision data is the most important tool for making the right decisions for your business. It's not just about the numbers, it's about the context and the story behind the numbers.
REDUCING WASTAGE Reduce antibiotic use by managing antibiotic waste into the environment through correct handling and disposal of antibiotics. This is based on the RDS guidelines for high volume and management handling of antibiotics and if you are using up your supply, then it's time to think a smart decision about the treatment of animal.	TEST TO TREAT If you are using up your supply of antibiotics, then it's time to think a smart decision about the treatment of animal. This is based on the RDS guidelines for high volume and management handling of antibiotics and if you are using up your supply, then it's time to think a smart decision about the treatment of animal.

2020 REDUCING WASTAGE

Description:
To reduce antibiotic use by managing antibiotic waste into the environment.

Technique:

- Farmers to purchase and label Bio Hazard bins/buckets
- Return to Vet Clinic when full for disposal and collection on new bucket
- Record drug inventory (purchases, expiry dates)
- Record disposal of antimicrobials into bins and drop off at clinics

Outcomes:
Through recording of disposal we will see on a yearly basis the percentage of antimicrobials are getting into the environment through incorrect disposal. Our measure will be the difference between year one of 100% to the outcome in year three.



Outcomes: new dogs, old tricks

Farmer strategy

- ‘Treat it once, treat it right’
- ‘Decide with data’
- ‘Go for Gold’
- ‘3 strikes and you’re out’
- ‘Managing mastitis’
- ‘Test to treat’

Vet Advice

- Improved diagnostics
- Selected DCAT
- Improve colostrum intake
- Identify recurrent cases
- Focus on most critical disease
- Identify pathogen before treating cases of mastitis

Outcomes: old dogs, new tricks

Reducing wastage on farm

- Novel strategy
- Reduce purchase
- Reduce use
- Appropriate dose/course
- Weigh animals
- Return unused AMs



20 REDUCING WASTAGE

2020

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Challenges

- Minor ED incursion in the middle of project
- Facilitation and ownership
- Farmers defaulting to vets for advice and direction
 - Breaking down *all* default behaviour
- Strategy-led rather than group- led
- Some over-enthusiasm
- Keeping vets out of it!

Wins

- Education of farmers
- Significant uptake in most strategies
- Farmers engaged and keen to 'buy in'
- Farmers inform other farmers- collective momentum
- Changed conversations
- Workshops and field days
-The old dogs can invent the tricks!



Acknowledgements

- Sustainable Farming Fund
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- Elena Knupfer, Skye Fruean, Deb McCorkindale
- Farmers and participants
- Facilitators

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