



EAAP Florence – 4th September 2024

Session 93 "Preventive approaches to livestock diseases to reduce drug resistance".

Evaluating the Effect of Motivational Interviewing and Farmer Training on Effectively Delivering the AHDB Mastitis Control Plan

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ision Our Approach Key Areas Get Involved

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MISSION STATEMENT

We aim to promote and develop sustainable livestock health and welfare and the central role of vets in delivering these goals to promote a balance across four Key Areas:



Food
Security



Animal Health
and Welfare



Environmental
Management



One Health and
Antimicrobial
Resistance (AMR)

*Animal Health and Welfare: Protecting and improving
our reputation*



Department
for Environment
Food & Rural Affairs

The Animal Health and Welfare Pathway

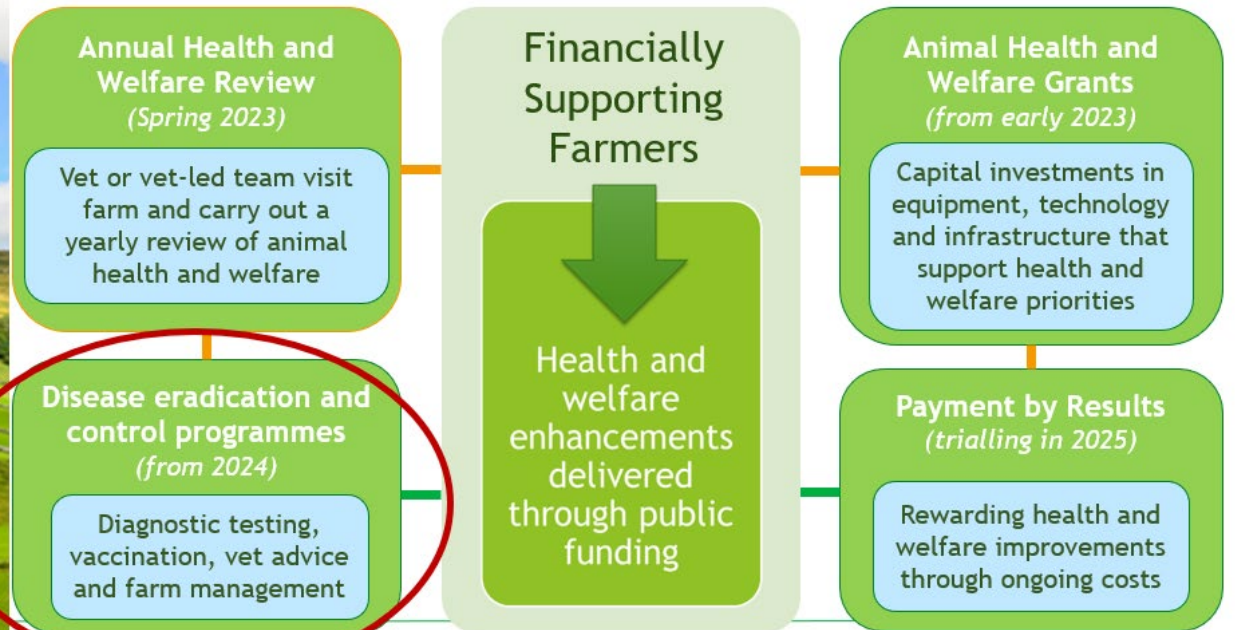


England: Animal Health & Welfare Pathway

>£100 million programme =Veterinary led (June 2024)

We will launch a new Endemics Disease Scheme with over £72m of funding and an Infrastructure Grant for Laying Hens with over £20m of funding as part of the Animal Health and Welfare Pathway. The Endemics Disease Scheme will help farmers Eradicate Bovine Viral Diarrhoea (BVD) in cattle, control Porcine Reproductive and Respiratory Syndrome (PRRS) in pigs and tackle a range of different health conditions in sheep. Meanwhile the Laying Hen Housing for Health and Welfare Grant will offer grants of between £5,000 and £500,000 to help laying hen and pullet farmers to improve the health, welfare and productivity of their flocks.

Financial Support - 4 Funding Programmes



Other programmes-learnings: Mastitis, MI & AHDB in UK

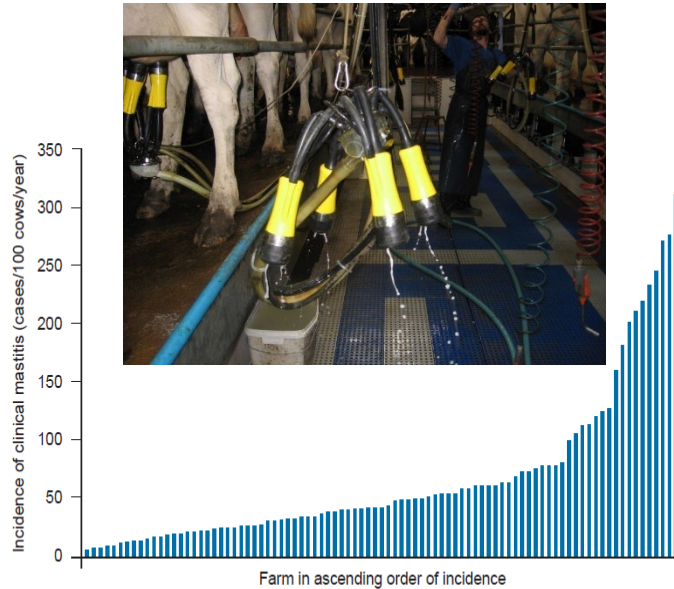


FIG 2: Incidence of clinical mastitis calculated from five milk samples in 89 herds, in order of increasing incidence; one farm (not shown) had an incidence of 849 cases per 100 cows per year

- Mastitis is a disease of high economic importance to the global dairy industry.
- It is also a major contributor to food waste and increased GHG emissions intensity

Mastitis, MI & AHDB in UK-since 2009



- Societal challenges such AMR, One Health, and delivering sustainable food production also demand a proactive approach to mastitis control.
- The UK AHDB Mastitis Control Plan (MCP) offers an evidence-based route to mastitis control.
- While it is an established and proven industry tool, further development of compliance strategies to better understand the barriers to implementation of MCP diagnosis and solutions would benefit industry.

Pilot study:

investigated social science approaches to motivating MCP implementation:

- 1) Motivational Interviewing (MI) techniques,
- 2) Engagement with the practical farm-based skills training delivered by veterinary surgeons (VS) in practice to farmers, known as 'Farmskills' (FS).

- 20 MCP-qualified Veterinary Surgeons (VS) were recruited.
- MCPs were delivered by Vets were grouped into 4 social science categories (MI, FS, MI + FS and Control).
- Vets received only ONE DAY SHORT training via an MI taster session from Sheffield Hallam University (SHU) UK.

Focus on findings from MI work with vets

Motivational Interviewing (MI) by vets & 'MITI' coding

- The MITI is a behavioural coding system that examines how well or poorly a practitioner is using Motivational Interviewing in their client conversations.
- Mastitis conversations between Vet and a farmer were coded by an independent coder at SHU for MI credentials using the MITI coding instrument.
- ***No significant differences were identified between groups.***



Motivational Interviewing Treatment Integrity coding system 4.2.1

- The MITI evaluates the component processes within motivational interviewing, including engaging, focusing, evoking, and planning.
- Sessions without a specific change target or goal may not be appropriate for evaluation within the MITI, although some of the elements may be useful for evaluation and giving feedback about engaging skills.
- Conversations were scored 1-5 using the MITI 4.2 coding instrument (*Moyers et al 2015*; see Table 1).

Thresholds	Fair	Good
Relational	4	5
Technical	3	4
% CR	40%	50%
<u>R:Q</u>	01:01	02:01
Total Mia		
Total Mina		

Table 1: MITI Coding Thresholds and targets (*Moyers et al 2015*)

Results - MITI report example

4.4.1 Example coding report

Name: xx Ref: xx Coder: xx Date: xx

Target Change: Reducing mastitis – cows Segment coded (mins): All 10.33

Global ratings

Technical Components						Average Score
Cultivating Change Talk	1	2	3	4	5	
Softening Sustain Talk	1	2	3	4	5	1
Relational Components						
Partnership	1	2	3	4	5	
Empathy	1	2	3	4	5	1.5

Behaviour Counts

Total

Giving Information (GI)	3
Persuade (P)	13
Persuade with Permission (Pw)	3
Question (Q)	0
Simple Reflection (SR)	0

Complex Reflection (CR)	0
Affirm (AF)	0
Seeking Collaboration (Seek)	2
Emphasising Autonomy (Emph)	0
Confront (Conf)	0

Figure 2: Example coding report

i. Cultivating change talk

- varied widely across the pilot study vets, with the majority of vets coded at very low scores and 8/20 scoring zero (Figure 15 and 16, Table 26).

Statistics

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
Cultivating Change Talk	20	0	1.050	0.266	1.191	0.000	0.000	1.000	1.750	4.000

Table 26: Descriptive Statistics: Cultivating Change Talk

i) Cultivating Change Talk

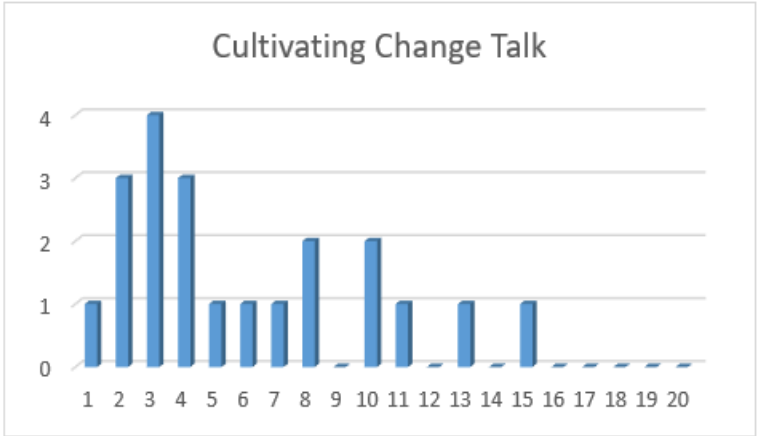


Figure 15: Cultivating Change Talk

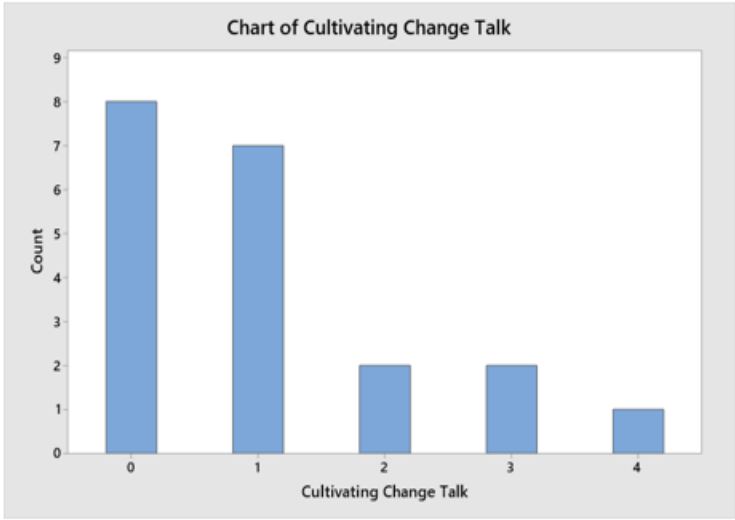


Figure 16: Chart of Cultivating Change Talk

ii. Softening Sustain Talk

varied widely across the pilot study vets, with the majority of vets coded at very low scores and 10/20 scoring zero (Figure 17 and 18, Table 27).

Statistics

Variable	N	N*	SE		Minimum	Q1	Median	Q3	Maximum	
			Mean	StDev						
Softening	20	0	1.150	0.335	1.496	0.000	0.000	0.500	2.000	4.000
Sustain										
Talk										

Table 27: Descriptive Statistics: Softening Sustain Talk

ii) Softening Sustain Talk

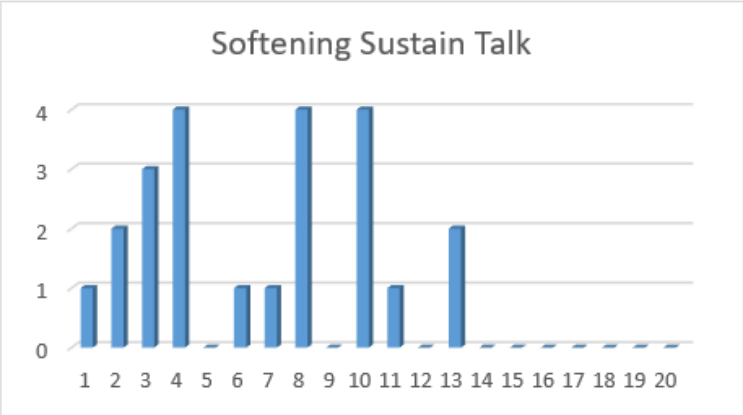


Figure 17: Softening Sustain Talk Graph

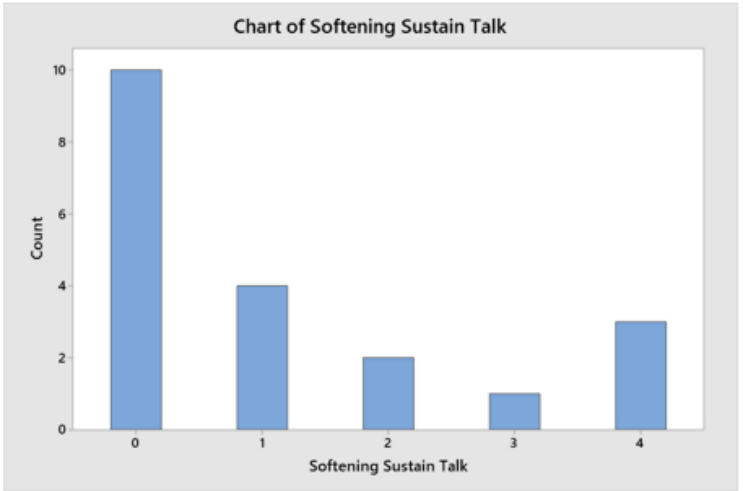


Figure 18: Chart of Softening Sustain Talk

iii. Relational Components: Partnership & Empathy= Partnership

5.3.2.2 Relational Components

Relational Components																			
Partnership	2	3	4	3	1	1	1	3	1	3	2	1	2	1	2	2	1	2	0
Empathy	1	3	3	2	1	1	1	2	1	2	1	1	2	1	1	1	1	1	0

Table 28: Relational Components of Motivational Interviewing

Varied widely across the pilot study vets, with the majority of vets coded at very low scores and although only 2/20 scored zero, 7/20 only scored 1(Figures 19 and 20, Table 29).

Partnership

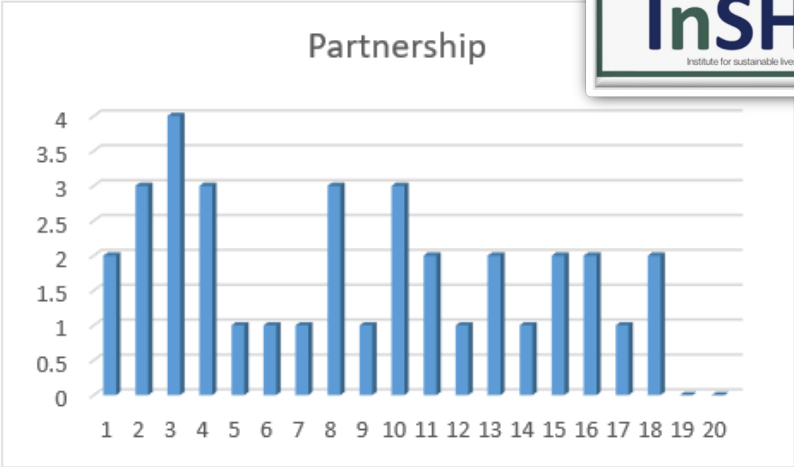


Figure 19: Partnership Graph

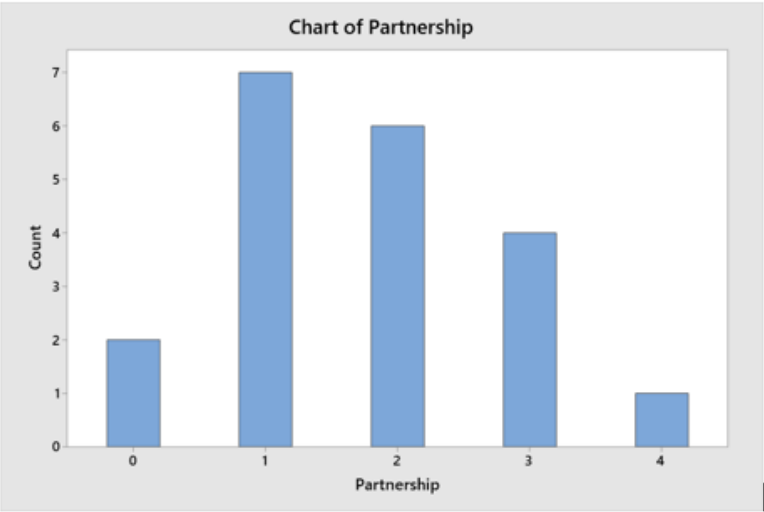


Figure 20: Chart of Partnership

Statistics

Variable	N	N*	Mean	SE		Minimum	Q1	Median	Q3	Maximum
				Mean	StDev					
Partnership	20	0	1.750	0.239	1.070	0.000	1.000	2.000	2.750	4.000

Table 29: Descriptive Statistics: Partnership

iii. Relational Components: Partnership & Empathy=Empathy

Empathy

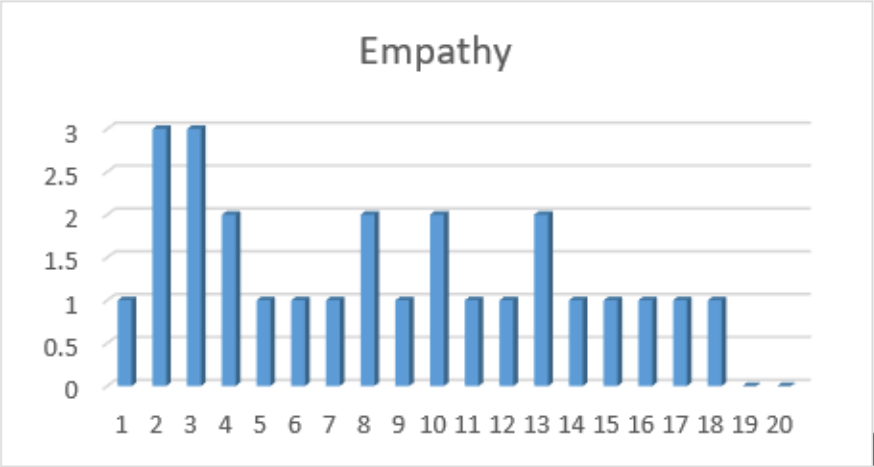


Figure 21: Empathy Graph

Statistics

Variable	N	N*	Mean	SE		Minimum	Q1	Median	Q3	Maximum
				Mean	StDev					
Empathy	20	0	1.300	0.179	0.801	0.000	1.000	1.000	2.000	3.000

Table 30: Descriptive Statistics: Empathy

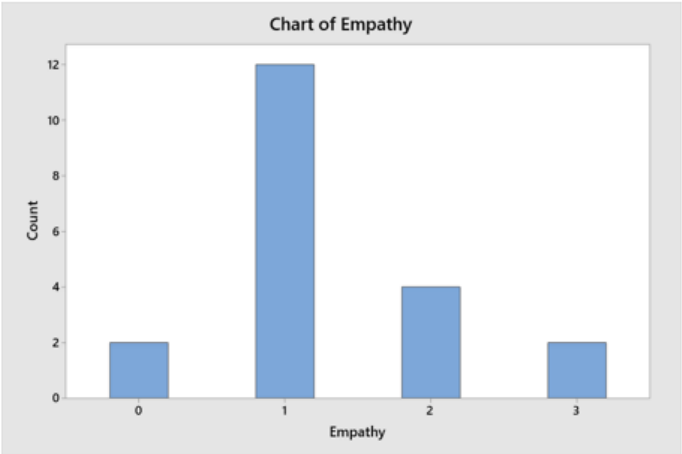


Figure 22: Chart of Empathy

i) Giving Information

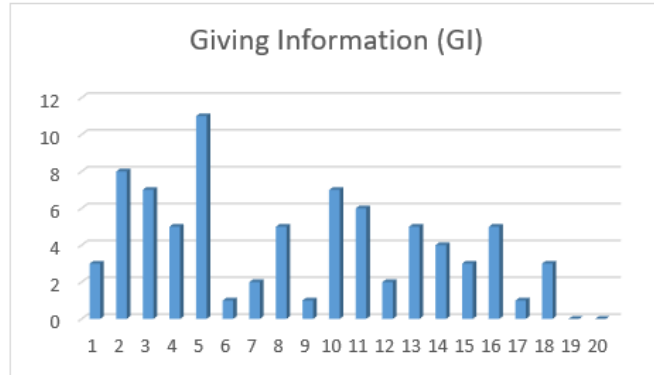


Figure 23: Giving information Graph

'Giving information' varied across the pilot study vets, with counts ranging from 1 to 11 in the coded conversation (Figure 23).

iii) Persuade with Permission

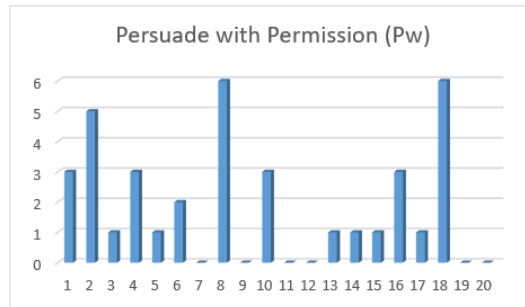


Figure 25: Persuade with Permission Graph

'Persuading with permission' varied across the pilot study vets, with counts ranging from 0 to 6 in the coded conversation (Figure 25).

ii) Persuade

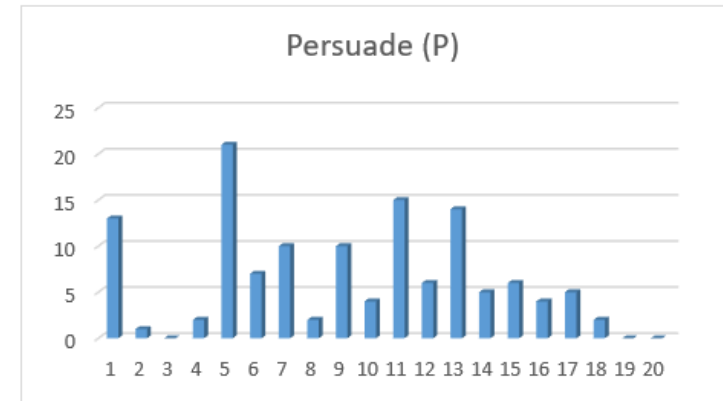


Figure 24: Persuade Graph

'Persuading' varied across the pilot study vets, with counts ranging from 0 to 21 in the coded conversation (Figure 24).

iv) Question

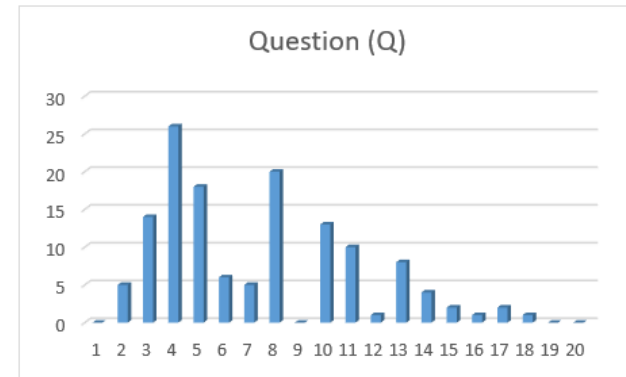


Figure 26: Question Graph

'Questioning' varied across the pilot study vets, with counts ranging from 0 to 26 in the coded conversation (Figure 26).

v) Simple Reflection

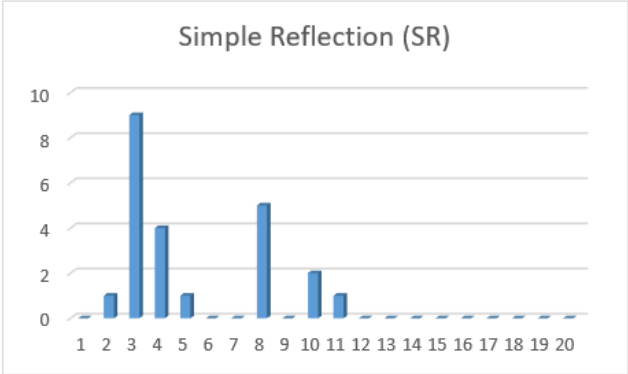


Figure 27: Simple Reflection Graph

‘Simple reflection’ varied across the pilot study vets, with counts ranging from 0 to 9 in the coded conversation (Figure 27).

vi) Complex Reflection

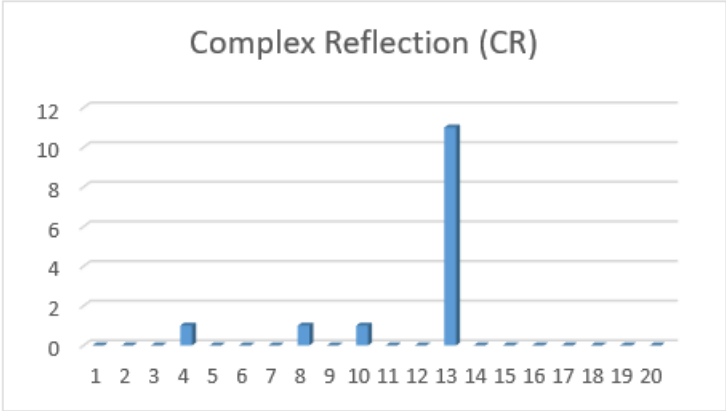


Figure 28: Complex Reflection Graph

‘Complex reflection’ varied across the pilot study vets, with counts ranging from 0 to 11 in the coded conversation, but was little used overall as a skill (Figure 28).

vii) Affirm

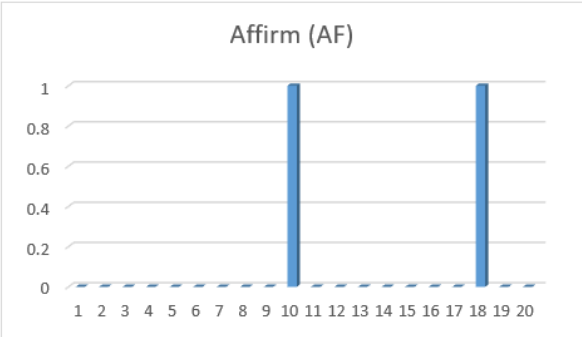


Figure 29: Affirm Graph

‘Affirmation’ was hardly used, with just two single counts in the coded conversation (Figure 29).

viii) Seeking Collaboration

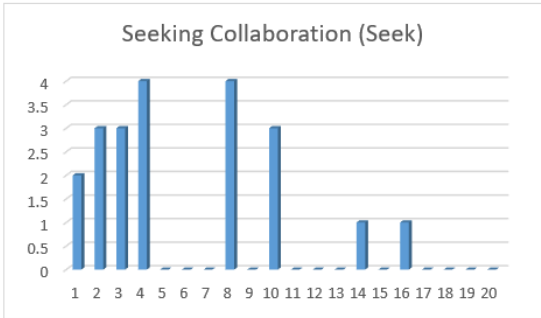


Figure 30: Seeking Collaboration

‘Seeking collaboration’ varied across the pilot study vets, with counts ranging from 0 to 4 in the coded conversation (Figure 30).

Discussion



- Vets are regarded as the centre of AH&W, yet they don't always provide excellent vet-client communication skills.
- Studies have reported that training of vets in *MI* can improve their communication skills while interacting with clients (Enlund et al., 2021).
- While there are advantages of using MI by vets, one study reported that conversations were mostly dominated by vets with minimal attempt to involve the client.
- Svensson *et al.* 2020 'Training in motivational interviewing improves cattle veterinarians' communication skills for Herd Health Management'

Investigating the effect of dairy cattle veterinarians' MI skills on client Change and Sustain Talk

- **6 months** MI training for vets
- Some Positive associations-but inconclusive ...

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doi:10.1017/S175173112000107X



Dairy veterinarians' skills in motivational interviewing are linked to client verbal behavior

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of MI to facilitate behavior change in veterinary herd health management (VHHM) by investigating the effect of dairy cattle veterinarians' MI skills on client Change and Sustain Talk. We recorded VHHM consultancies on 170 Swedish cattle farms performed by 36 veterinarians, randomly distributed into 2 groups: MI veterinarians (n = 18) had received 6-month training in MI and control veterinarians (n = 18) had not received any training. Veterinarians' MI skills were assessed using the Motivational Interviewing Treatment Integrity coding system 4.2.1 and categorized as poor_untrained, poor_trained, near_moderate and moderate. Client communication was coded using the Client Language Easy Rating coding system. The effect of MI skills on Change Talk, Sustain Talk and Proportion of Change Talk (Change Talk divided by the sum of Sustain Talk plus Change Talk) was investigated using cross-classified regression models with random intercepts for veterinarian and client (farm). The models also included additional explanatory variables (e.g. type of veterinarian and client's satisfaction with the consultation). The veterinarian's MI skills were associated with the client's Change Talk, but results regarding Sustain Talk or Proportion of Change Talk were inconclusive. Clients of veterinarians reaching the highest (i.e. moderate) MI skills expressed 1.5 times more Change Talk than clients of untrained veterinarians. Clients of general large animal practitioners expressed less Sustain Talk than clients of animal health veterinarians and had higher Proportion of Change Talk. Results indicate that learning to practice MI may be one means to improve adherence to veterinary recommendations and to improve efficiency in VHHM services.

Conclusions and ongoing work: AH & W Pathway

Defra England

- Svensson et al. ([2020](#)) demonstrated that cattle veterinarians were able to reach 'moderate' MI skills from a 6-month training program consisting of 6 days of workshops separated by period of literature studies and practical training of their new skills.

A positive support for needing to change approach for vets but a caution that MI requires significant training-6months-to deliver even 'moderate' skills

- **The study provides a further platform for future work targeting veterinary communication training as vets delivered few MI skills in practice.**
- Need to prepare vets on how to achieve it?
- Study – some vets received training others not. No significant difference reported-see literature
- Should this be about including in the undergrad or post grad? Curriculum time?!!
- Vets not good at delivering well structured discussions with farmers.

Acknowledgements



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Sheffield Hallam University MITI coders

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‘Evaluating the Effect of Motivational Interviewing and Farmer Training on Effectively Delivering the AHDB Mastitis Control Plan’



Thank you
Any questions?

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