



Arwain DGC

Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use

Implementing a National Antimicrobial Stewardship Programme

Dr Gwen Rees BVSc (Hons) PhD MRCVS

Lecturer in Veterinary Science, Aberystwyth University

Veterinary Development Manager, Menter a Busnes

Principal Investigator, Veterinary Prescribing Champions Network



Ariennir gan
Lywodraeth Cymru

Funded by
Welsh Government

menterabusnes.cymru/arwaindgc

Background



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use

- Qualified as a vet 2009
- 6 years in farm and equine practice in Wales and New Zealand
- Teaching Fellow in population medicine at Bristol Vet School
- PhD Fellowship 2016-2019
- Post-doc – Diagnostic Innovation Agriculture & Livestock project
- Senior Research Associate – Arwain Vet Cymru
- Lecturer in Veterinary Science – Aberystwyth University
- Veterinary Development Manager – Menter a Busnes
- President – Welsh Branch of the British Veterinary Association

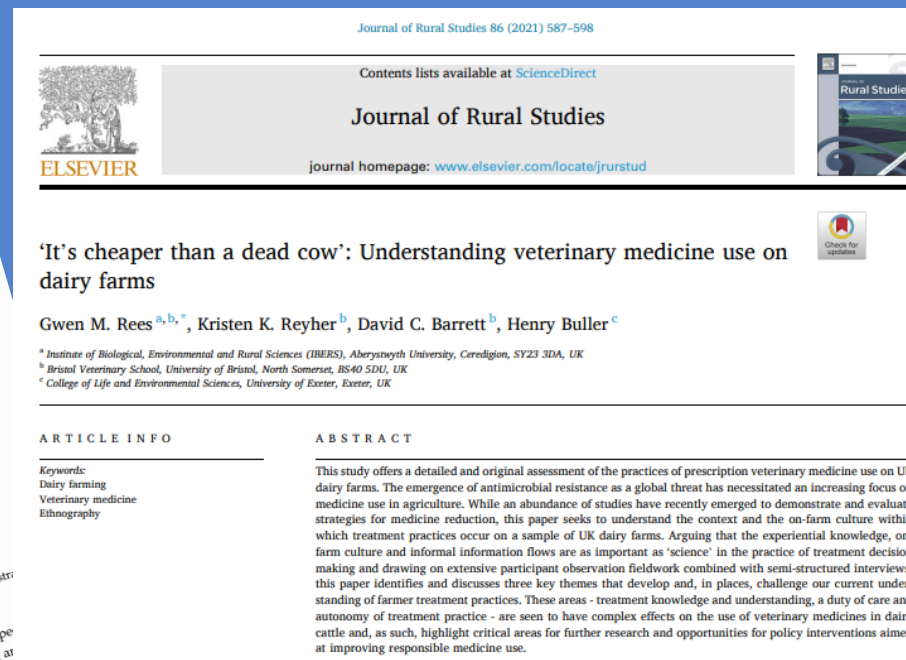


Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

What do we know?



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use



THE FUTURE...



Arwain DGC

Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use

Regulatory change works

Removing the antibiotic works

Voluntary reduction CAN work if:

- Rooted in theoretical understanding of behaviour
- Participatory and co-designed
- Addresses intrinsic and extrinsic motivation
- Works best **ALONGSIDE** favourable policy and regulatory frameworks



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

menterabusnes.cymru/arwaindgc

In the beginning...



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use



menterabusnes.cymru/arwaindgc



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

The Journey



Arwain DGC

Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use

2023 Arwain DGC2

Continue to expand on
all workstreams

2021 Arwain DGC

AMU and AMR surveillance
Develop clinical guidelines
and a code of conduct

2019 Arwain Vet Cymru

Establish the Veterinary
Prescribing Champions
Network

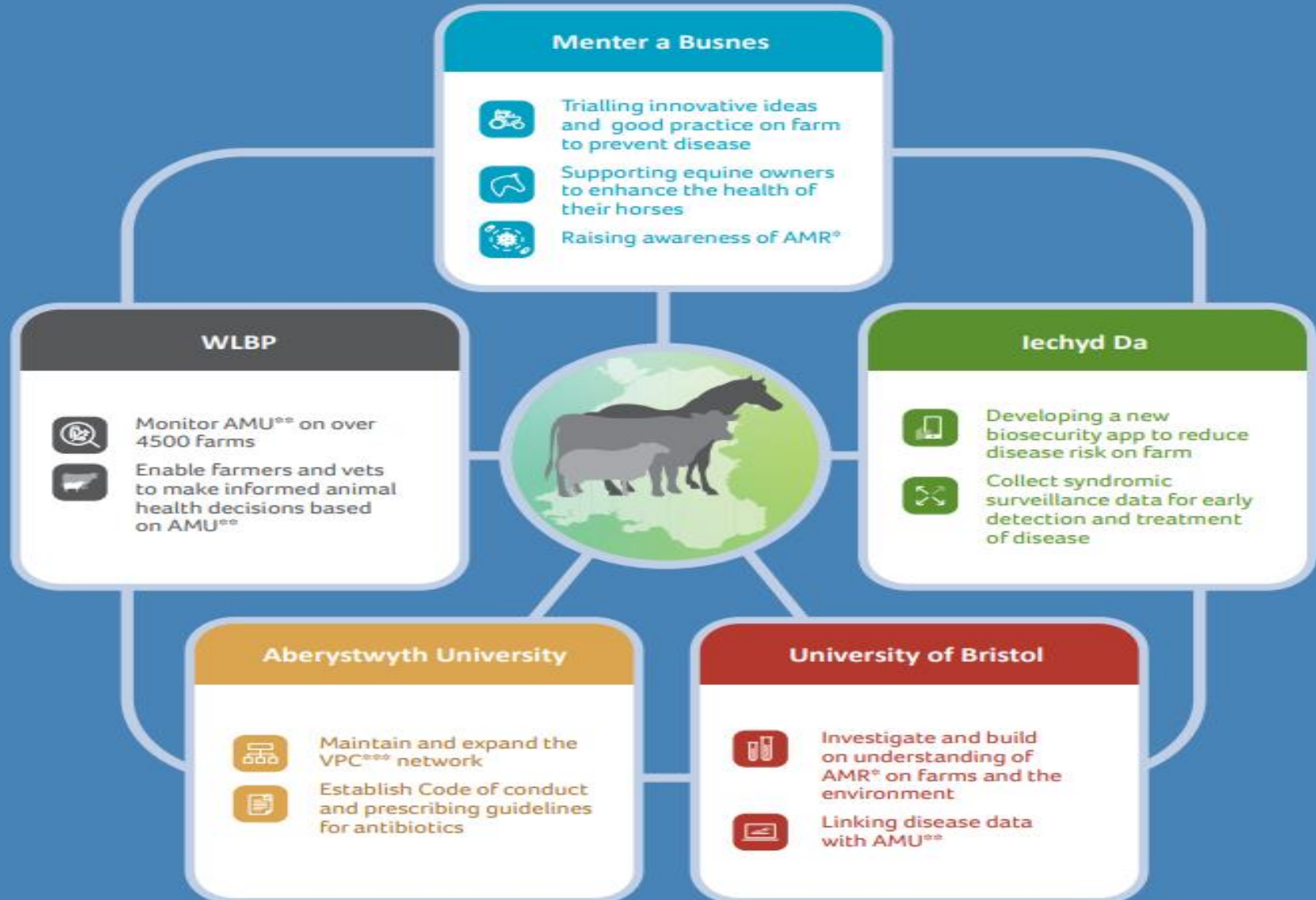
2016

Vets in practice
agree policy on
responsible
medicine use



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

menterabusnes.cymru/arwaindgc



Arwain DGC

Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use



AMR = Antimicrobial Resistance* | AMU = Antimicrobial Usage** | VPC = Veterinary Prescribing Champions***



Ariennir gan
Lywodraeth Cymru

Funded by
Welsh Government

menterabusnes.cymru/arwaindgc

Connecting industry experts, researchers, farmers and vets to lead the way in responsible antimicrobial use in Wales



Arwain DGC

Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use

Aberystwyth University



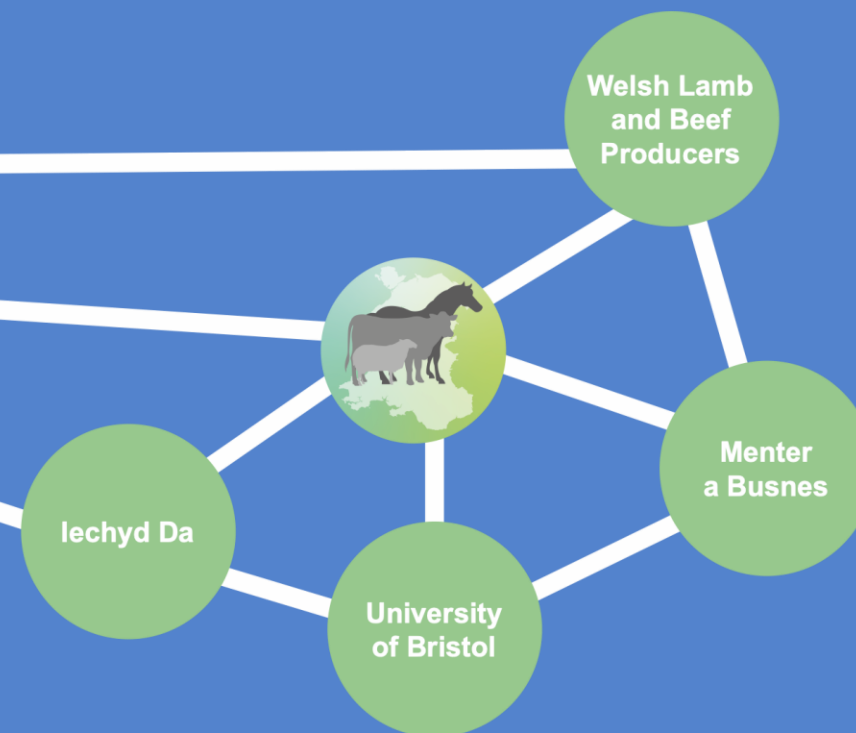
Expanding the successful Veterinary Prescribing Champions network



Developing collaborative clinical guidelines for cattle and sheep vets and a voluntary code of conduct for veterinary prescribing



Researching the use of antibiotics in the Welsh equine industry



AM = Antimicrobial
AMU = Antimicrobial Usage
AMR = Antimicrobial Resistance

Arwain DGC
Cywodraeth Cymru

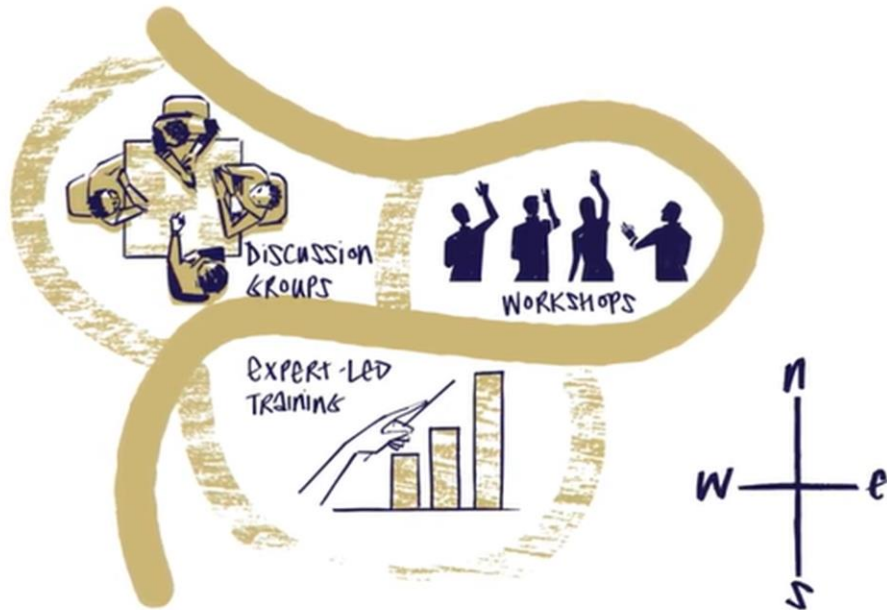
Funded by
Welsh Government

menterabusnes.cymru/arwaindgc

Veterinary Prescribing Champions Network



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use



Develop a national collaborative network of highly motivated and trained vets

One vet from each farm or mixed practice in Wales invited: '*Veterinary Prescribing Champion*'

Role to be a responsible prescribing champion and practice prescribing lead



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

menterabusnes.cymru/arwaindgc

VPC Network

49 Practices
44 sub-branches
34 Wales
10 England

62 VPCs
2 Working Groups



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use

Cefnogi Defnydd Gwrthfotig Cyfrifol
Supporting Responsible Antibiotic Use



Lleoliad Pencampwyr Presgripsiynu Milfeddygol Veterinary Prescribing Champions Locations

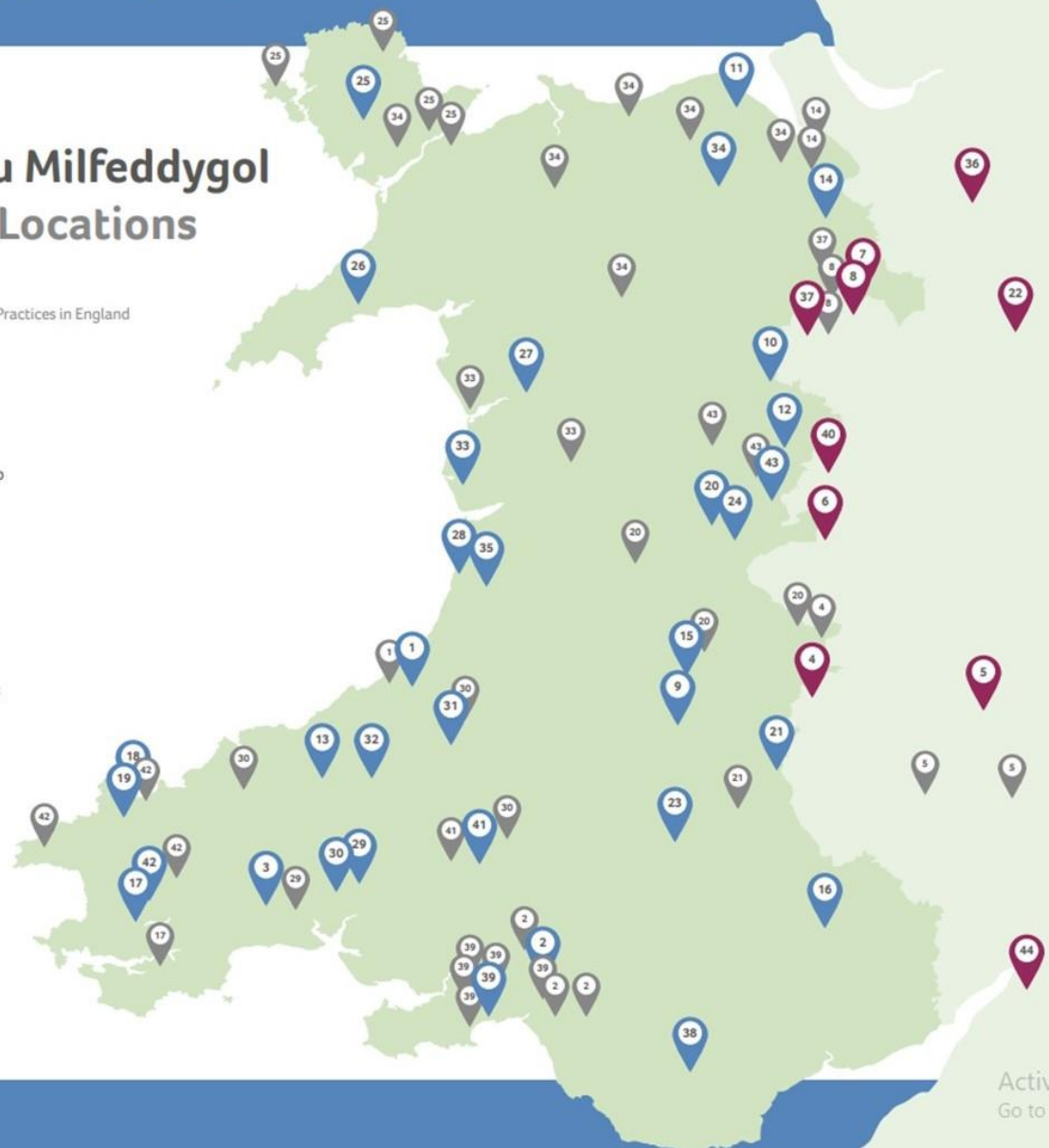
Allwedd | Key

Prif filfeddygfa | Main vet practice | Is-ganghennau | Sub-branches | Milfeddygfa yn Lloegr | Vet Practices in England

Milfeddygfeydd | Vet Practices

1. Aeron Vets
2. Afon Veterinary Centre
3. Allen & Partners Veterinary Services Ltd
4. Arrowfield Veterinary Practice Ltd
5. Belmont Farm & Equine Vets
6. Bishops Castle Vets
7. Blakemere Veterinary Centre
8. Brownlow Veterinary Group
9. Builth Wells Veterinary Practice
10. Cain Farm Vets
11. Calcoed Vets
12. Camlas Farm Vets LLP
13. Castle House Veterinary Practice
14. Daleside Veterinary Group
15. Ddole Road Veterinary Clinic
16. Farm First Vets
17. Fenton Vets
18. Fishguard Veterinary Services Ltd
19. Gwaun Veterinary Group
20. Hafren Veterinary Group
21. Hay Veterinary Group
22. Haywood Farm Vets
23. Honddu Veterinary Practice Ltd
24. Kerry Vale Vets
25. Milfeddygon Bodrwnsiwn Veterinary Group
26. Milfeddygon Deufor
27. Milfeddygon Dolgellau Cyf
28. Milfeddygon Downes Veterinary Services
29. Milfeddygon Fferm Dyfed Farm Vets
30. Milfeddygon ProStock Vets
31. Milfeddygon Steffan Vets
32. Milfeddygon Tysul Vets
33. Milfeddygon Williams Veterinary Surgeons
34. Milfeddygon y Wern Veterinary Surgeons
35. Milfeddygon Ystwyth Vets
36. Nantwich Farm Vets LLP
37. Park Issa Veterinary Hospital
38. South Wales Farm Vets
39. St James Veterinary Group
40. Stapeley Veterinary Practice Ltd
41. Teilo Vets Ltd
42. The Oak Veterinary Group
43. Trefaldwyn Vets
44. Tyndale Farm Veterinary Practice

Correct as at April 2023.



Activa
Go to Se



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

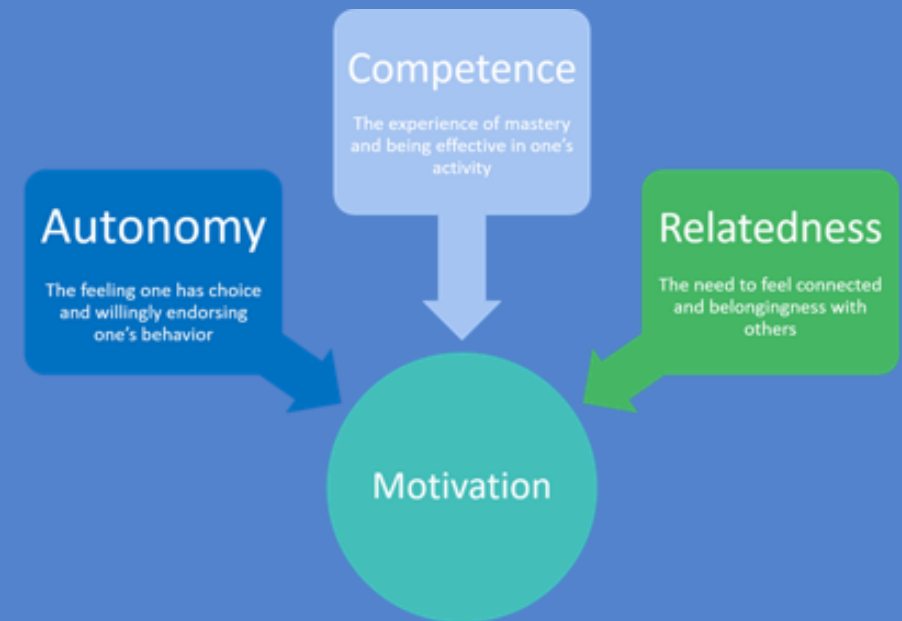
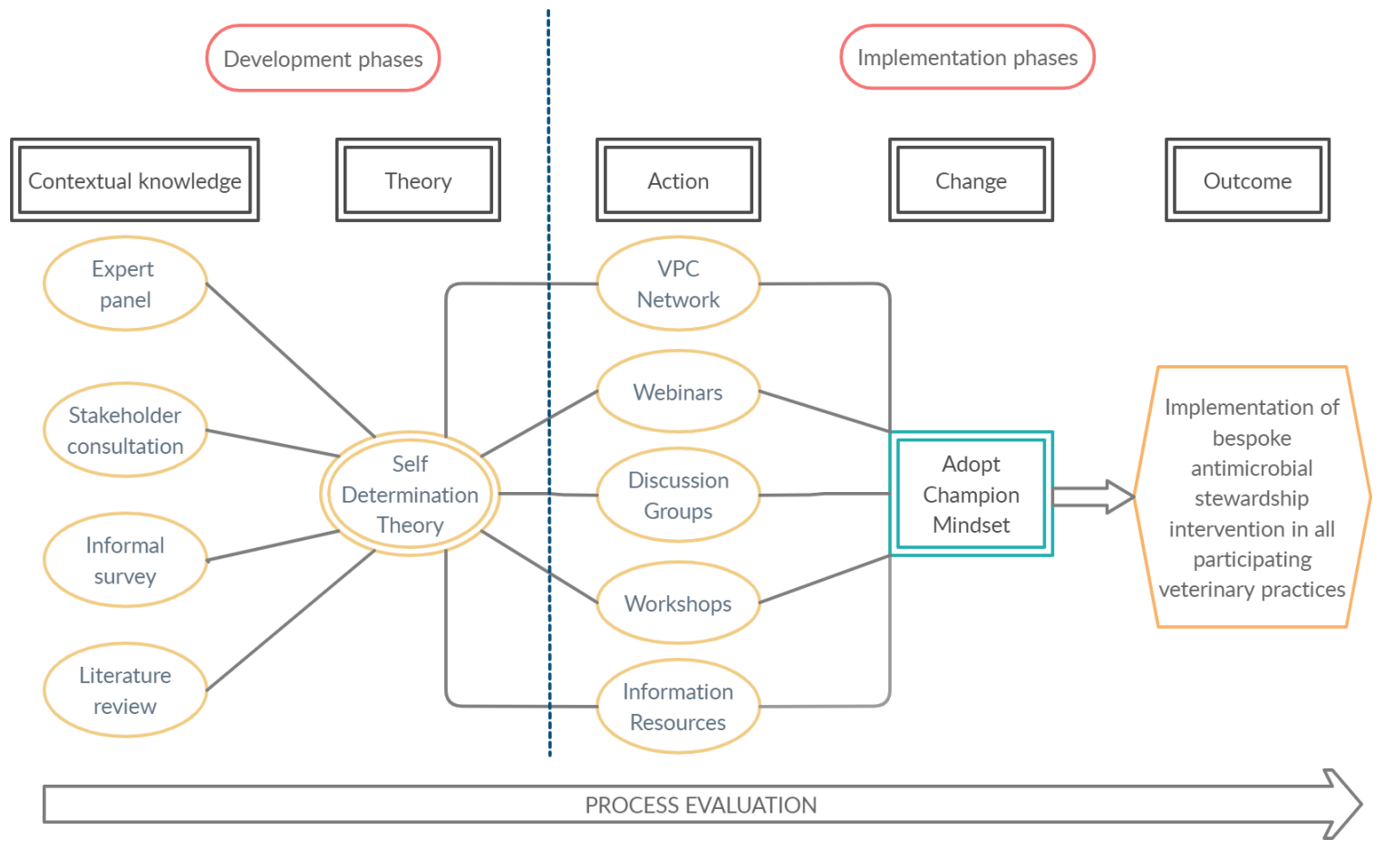
Dilynwch ni / Follow us
@ ArwainDGC



Theory and implementation



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use



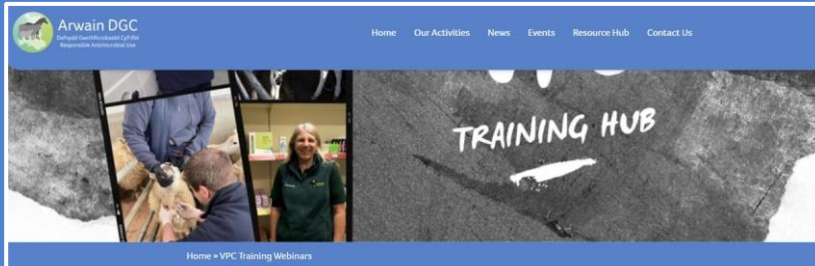
Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

menterabusnes.cymru/arwaindgc

Training and CPD



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use



VPC Training Webinars

Here you can watch recordings of the VPC Webinars:



Digwyddiad gwych yn Aberystwyth yr wythnos hon gyda Brian Faulkner yn hyfforddi rhai o'r derbynyddion/staff blaen tŷ o bractisau ein Pencampwyr Presgripsiynu Milfeddygol (VPC)... See more

✓ AMR Trainer
✓ AMR Training

A great event in Aberystwyth this week with Brian Faulkner training some of the receptionists/front of house staff on practices for our International Prescription Champions (VPC)... See more

Hide Translation · Rate this translation



Discussion Groups Webinars Workshops

- **Specific disease / sub-sector information**
 - *BVD, mastitis*
 - *Clinical forum (routine surgery)*
 - *Sheep lameness and common ailments*
- **Health management systems**
 - *AMU calculator and FAWL*
 - *WVSC and surveillance*
 - *Alternative medicine*
- **Client management**
 - *Front of house and client liaison*
 - *Facilitating / motivating change*
 - *Vet peer : peer workshops*




Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

Antibiotic Action Plans



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use

Arwain DGC Introduction

 **Creating your prescribing champion strategy**

Meeting goal: To enable you to explore and discuss practical antimicrobial stewardship options with fellow prescribing champions.

Meeting task: To consolidate what you have learnt so far in Arwain DGC by creating and recording your own choice of practical strategy – an Action Plan - you and your practice can implement from September 2022.

What will you do to reduce, rationalise and replace antimicrobial use (prescribed and administered) in your daily work as a vet? How will you achieve this?

Specific – what exactly are you going to change and how, be as precise as you can

Measurable – How will you and your colleagues know it has worked, had an impact or has been achieved? Can you quantify or qualify this?

Achievable – Make sure it is realistic and within you/your practices remit in the timescale

Relevant – Keep focused on the task of antibiotic stewardship

Time-bound – Give you and your colleagues a date by which you will have partially or fully implemented your strategy

Assignable – Give you and your colleagues tasks to be responsible for so you can achieve your plan

Please complete this worksheet and return it by 7th September 2022 to alb142@aber.ac.uk

VPC co-created recommendations for responsible prescribing

Ca. 100 antimicrobial stewardship interventions underway

“Education – Data – Dispensing”

- Reorganisation of practice dispensaries
- Training practice staff to ensure consistent messaging
- Increased use of rapid, point of care diagnostics
- Benchmarking antimicrobial use on practice farms
- Introducing on-farm medicine cupboard “health checks”



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

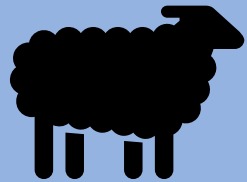
menterabusnes.cymru/arwaindgc

Clinical Guidelines

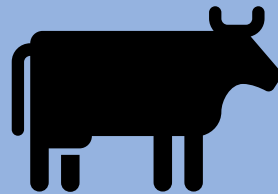
Co-develop series of guidelines to help decision-making

Profession led: 6 VPC working group members
2 literature reviews + clinical experience

Clinical prescribing guidelines
6 key sheep and cattle diseases



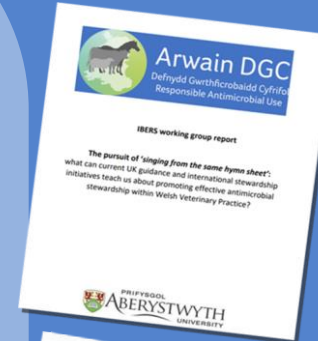
Watery Mouth
Joint Ill
Lameness



Bovine Respiratory Disease
Neonatal scours
Mastitis / SDCT



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use



“To inform, rather than teach”

“Clinical freedom is important”



Lywodraeth Cymru
Funded by
Welsh Government

menterabusnes.cymru/arwaindgc

Clinical Guidelines – For Practices



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use



Introduction

These guidelines were produced by vets working with farm animals in Wales. They are intended to support vets working in Wales with clinical decision-making, helping the profession to treat disease effectively and use antimicrobials responsibly.

Antimicrobials and Threat of Resistance

Antimicrobials, and particularly antibiotics, have been an essential tool for treating bacterial infections in animals and humans for nearly 80 years¹.

This has radically improved treatment outcomes, alongside patient health and welfare. It's now very difficult to imagine daily life in a pre-antibiotic world.

However, bacteria can rapidly reproduce billions of cells at an infection site. A spontaneous mutation in any one of these cells could make it resistant to an antibiotic. This bacterial cell could survive and produce more offspring with the same characteristics.

Indiscriminate antibiotic use encourages drug resistance, since bacteria are exposed more frequently to the medicines used to treat them.

It is therefore unsurprising that antimicrobial growth promoters are banned, whilst restrictions on veterinary prophylactic and metaphylactic use are being considered.

However, the "golden age" of antibiotic discovery ended some 30 years ago. Very few novel antimicrobials are under development for commercial use.

As a vet, how would you support animal health without antimicrobials? How would the health and welfare of your family be impacted without access to effective antibiotics?

Vets have the authority to prescribe antibiotics, and a responsibility to prescribe them prudently.

Together, we need to conserve the antibiotics we have remaining for future use.



Arwain DGC

Since 2019, the Arwain Vet Champions and Arwain DGC projects have promoted veterinary antimicrobial stewardship, and improved prescribing standards for livestock in Wales².

To address national antimicrobial resistance policy³, a Welsh network of Veterinary Prescribing Champions (VPCs) was established. This network is made up of clinical, practising farm vets working in Wales and represents 90% of all practices treating cattle and sheep. The network is highly trained, meet regularly and have been tasked with creating and delivering bespoke antimicrobial stewardship initiatives for their practice, colleagues and clients.

Two specialist working groups within the VPC network have been working together for 12 months to develop a series of Clinical Treatment Guidelines for livestock, alongside an overarching voluntary Code of Conduct for prescribing within Welsh veterinary practices.

Combined, these collaborative and vet-led efforts are designed to support Welsh vets to lead the way in encouraging responsible antimicrobial use on farm.



Clinical Guidelines

Formulating a united approach to livestock care and welfare across the veterinarian profession will support the impact of antimicrobial stewardship initiatives.

Vets were asked to choose six key diseases of cattle and sheep, where structured guidance would make the highest impact in supporting disease prevention and prudent antimicrobial use in Wales.

The clinical guidelines developed are:



CATTLE

- A. Neonatal Enteritis
- B. Bovine Respiratory Disease
- C. Mastitis and Dry Cow Therapy



SHEEP

- A. Watery Mouth
- B. Joint Ill
- C. Lameness

- Aetiology
- Risk factors
- Prevention
- Diagnosis
- Treatment



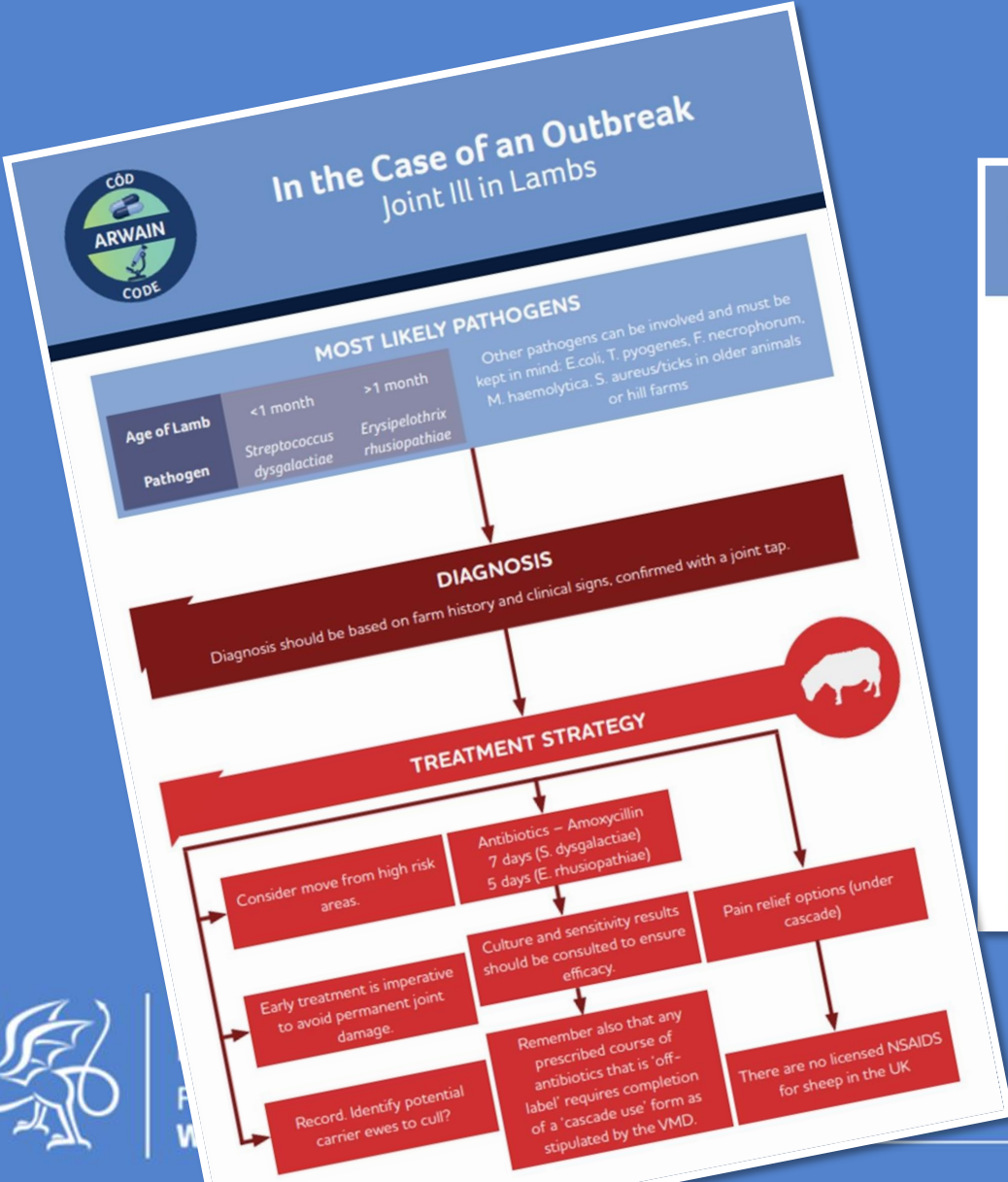
Arian
Lywodraeth
Ffeder
Wladys

menterabusnes.cymru/arwaindgc

Clinical Guidelines – For Vets



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use



Approaching Joint Ill in Lambs
Preparation and Planning are Key to Reducing the Risk of Disease

Joint ill is a suppurative polyarthritis, and is a bacterial infection. Prevention is key, and requires a multifactorial approach. Discuss during the flock health plan review in plenty of time before the risk period. Farm history will help you to focus in on problem areas. Some factors to consider include:

THE EWE		THE LAMBING ENVIRONMENT	
Body Condition Score (BCS)	Monitor BCS of ewes at vital points throughout the year. It can be difficult to gain condition close to lambing.	Disease Challenge	Indoors or outdoors? Maintain hygiene in lambing pens and areas. Use disinfectant and plenty of clean bedding to replenish pens between occupants.
Concurrent Disease	Control concurrent disease to reduce pressure on the ewe (foot-rot, worm burden). Follow SCOPS principles and monitor burden in lead up to lambing.	Hygiene	Are there washing facilities in the lambing shed or nearby? Are there enough feeding tubes and bottles to ensure time for adequate sterilisation between uses.
Nutritional Status	Assess nutritional status of ewes before lambing. Any deficits can be addressed to reduce the risk of metabolic disease	Assistance	Wear gloves if assisting with lambing, use a clean glove for each ewe (possible spread from vaginal wall).
INFLUENCE COLOSTRUM QUALITY		LIGHT DISEASE CHALLENGE	

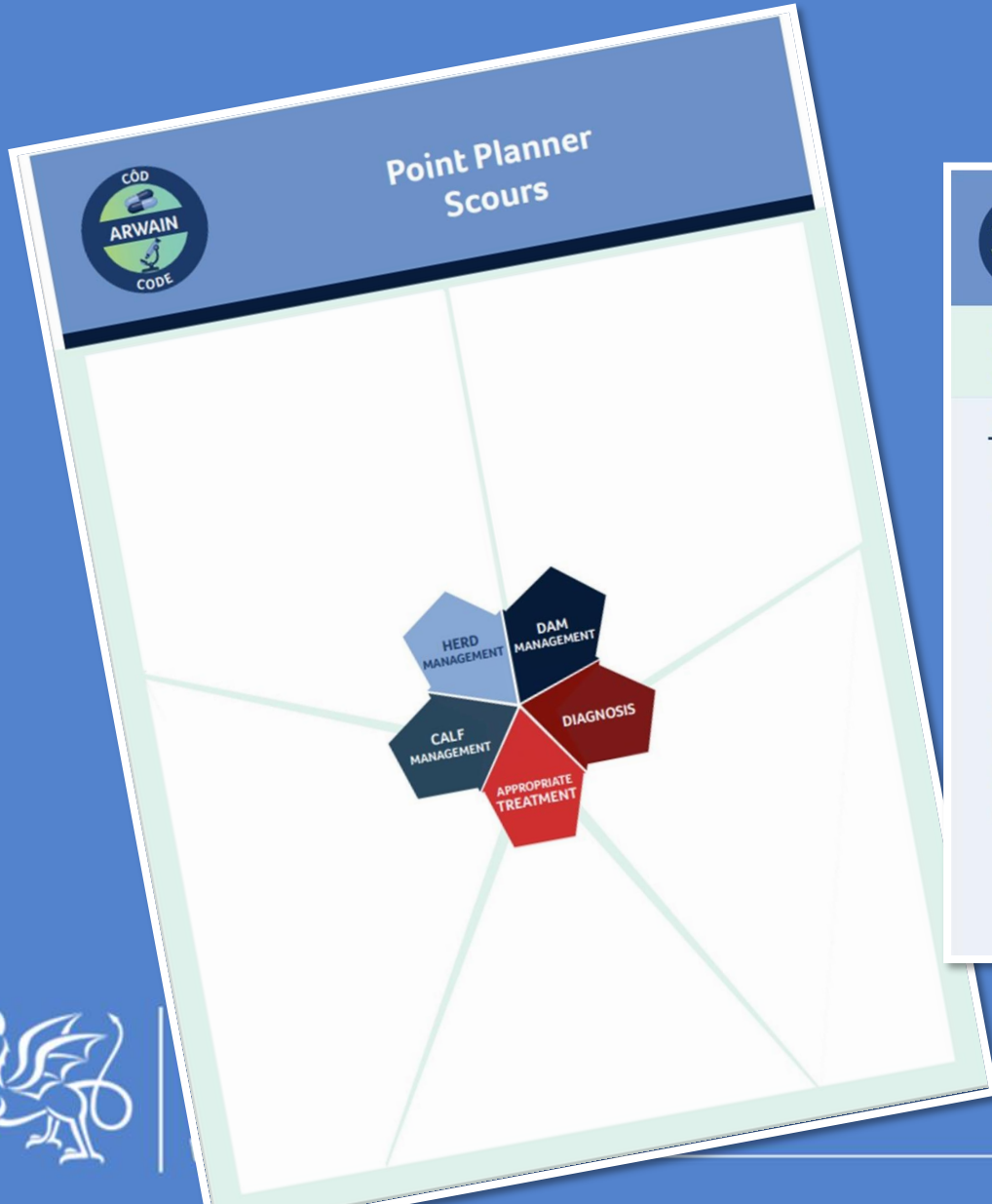
LAMB MANAGEMENT
maximise the ability of the lamb to withstand challenge

Navel care at birth	Treat navel at birth and repeat twice within 12 hours. Use strong iodine and replenish daily.	ABILITY TO WITHSTAND CHALLENGE
Colostrum Intake	Ensure lambs receive adequate good quality colostrum as soon as possible after birth. 50ml/kg in first 2 hours, 10% BW in first 24 hours. Check quality using a refractometer; >26% is good 26<>22 = ok, <22% = discard/top up.	
Tagging, castrating, and tailing	Ensure tagging equipment is well maintained, cleaned and sterilised. Do they need to be castrated and tails docked?	

Clinical Guidelines – For Farms



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use



Calf Scour Treatment Plan

CŉD
ARWAIN
CODE

Farm Name: _____
Vet Name: _____
Vet Contact: _____

Mild Cases	Severe Cases
Definition: _____	Definition: _____
Give supportive treatment and monitor regularly	Consult with vet where possible – likely to require IV fluids
Oral Rehydration	Otherwise treat as for mild cases plus:
On this Farm Use _____	
Dose _____ Frequency _____ Withdrawal _____	
Pain Relief / NSAID	Antibiotic
On this Farm Use _____	First choice antibiotic _____
Dose _____ Frequency _____ Withdrawal _____	Dose _____ Frequency _____ Withdrawal _____
Other	
On this Farm Use _____	Second choice antibiotic _____
Dose _____ Frequency _____ Withdrawal _____	_____
	Dose _____ Frequency _____ Withdrawal _____



Code of Conduct



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use

- **Core Prescribing Practice**
 - *All farms should have a named CCP who can prescribe*
 - *Regular in depth animal health reviews*

- **Under Care definition**
 - *Agreement between CPP and non-CPP*
 - *No POM-V outside this agreement*

- **Defining responsible use**
- **Engaging with client**
- **Holistic approach to treatment and prevention**
- **Audit and Review**





CODE OF CONDUCT

This code of conduct has been developed by Welsh farm vets, for Welsh farm vets.

This Code of Conduct is a voluntary agreement by leading veterinary practices in Wales, aimed at supporting responsible medicines use in cattle and sheep.

Veterinary practices who sign up to the Code of Conduct demonstrate their commitment to responsible medicine use, to tackling the global challenge of antibiotic resistance, and to ensuring that the Welsh veterinary profession leads the way on prescribing.

This code should be read alongside the supporting document, which outlines in more detail what is expected by practices under this code.

For further information on the development of this Code of Conduct, please visit:
<https://menterabusnes.cymru/arwaindgc/resource-hub/>

The Code – Overarching Values:

- This practice will only prescribe medicines to farms where the practice is identified as the Core Prescribing Practice (CPP) for that farm or species, or where the CPP has been notified that the prescription is taking place.
- This practice will use the Arwain Defnydd Gwrthficroaidd Cyfrifol - Responsible Antimicrobial Use Code of Conduct definition of "Under Care" when considering prescribing to animals.
- This practice will prescribe all veterinary medicines responsibly. Use needs to be justified, targeted, involve engaging the client effectively and reviewing and reporting outcomes as necessary.
- This practice will always consider the risks of antibiotic resistance when making prescribing decisions and will only prescribe antibiotics when the veterinary surgeon considers that the benefits of using them outweigh the risks.
- This practice has a Veterinary Prescribing Champion who acts as the clinical prescribing lead for the practice. This Veterinary Prescribing Champion (VPC) is
- This practice keeps accurate medicine prescription and sales records and works with farming clients to submit accurate data for farm assurance purposes.
- This practice uses the Arwain DGC Clinical Guidelines, where relevant, to help with clinical decision making.

PRACTICE PARTNER/CLINICAL DIRECTOR
SIGNATURE(S)

DATE

ARWAIN DGC PRESCRIBING LEAD
SIGNATURE

DATE



Arwain DGC

Defnydd Gwrthficroaidd Cyfrifol
Responsible Antimicrobial Use



Supporting Guidance



Arwain DGC
Defnydd Gwrthficroaidd Cyfrifol
Responsible Antimicrobial Use



European Union
Defnydd Gwrthficroaidd Cyfrifol
Responsible Antimicrobial Use



Llywodraeth Cymru
Welsh Government



Arwain DGC
Defnydd Gwrthficroaidd Cyfrifol
Responsible Antimicrobial Use



European Union
Defnydd Gwrthficroaidd Cyfrifol
Responsible Antimicrobial Use



Llywodraeth Cymru
Welsh Government



Ariennir gan
Llywodraeth Cymru
Funded by
Welsh Government

menterabusnes.cymru/arwaindgc

The next steps



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use

Clinical guidelines

- Update and incorporate feedback
 - Suggest further key diseases
- Include treatment selection guidance where possible

Code of Conduct

- Support adoption and implementation across Wales
- Refine and align with changing UK regulation
 - Longer term: assess impact on AMU

Stewardship

Examine effectiveness and feasibility of stewardship initiatives

Develop similar model for companion animal practice



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

menterabusnes.cymru/arwaindgc



Arwain DGC

Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use



Article Designing a National Veterinary Prescribing Champion Programme for Welsh Veterinary Practices: The Arwain Vet Cymru Project

Gwen M. Rees^{1,2,*}, Alison Bard² and Kristen K. Reyher²



¹ Institute of Biological, Environmental and Rural Sciences (IBERS), Aberystwyth University, Penglais, Aberystwyth SY23 3DA, UK
² Bristol Veterinary School, University of Bristol, Langford BS40 5DU, UK; alison.bard@bristol.ac.uk (A.B.); kristen.reyher@bristol.ac.uk (K.K.R.)
* Correspondence: gwr15@aber.ac.uk

Abstract: Antimicrobial use in agriculture has been identified as an area of focus for reducing overall antimicrobial use and improving stewardship. In this paper, we outline the design of a complex antimicrobial stewardship (AMS) intervention aimed at developing a national Veterinary Prescribing Champion programme for Welsh farm animal veterinary practices. We describe the process by which participants were encouraged to design and deliver bespoke individualised AMS activities at practice level by forging participant "champion" identities and communities of practice through participatory and educational online activities. We describe the key phases identified as important when designing this complex intervention, namely (i) involving key collaborators in government and industry to stimulate project engagement; (ii) grounding the design in the literature, the results of stakeholder engagement, expert panel input, and veterinary clinician feedback to implementing intervention design and appropriateness; and (iii) taking a theoretical approach to participant motivation and scheme involvement. With recruitment of over 80% of all farm animal practices in Wales to the programme, we also describe

RESEARCH ARTICLE

Validation, visibility, vagueness and variation: A qualitative assessment of existing veterinary guidelines for antimicrobial use in cattle and sheep in the UK

Caroline M. Best^{1,*}, Alison M. Bard^{1,2}, Gwen M. Rees², Kristen K. Reyher¹

¹ University of Bristol Veterinary School, Langford, Bristol, United Kingdom; ² Department of Life Sciences, Aberystwyth University, Aberystwyth, Ceredigion, United Kingdom

* caroline.best@bristol.ac.uk

Abstract

Antimicrobials are essential in veterinary medicine to treat and control bacterial disease in animals. Their prudent use in food-producing animals has been encouraged to reduce the development and spread of antimicrobial resistance. National and international guidelines for responsible antimicrobial use have been developed as tools to guide and rationalise antimicrobial prescribing decisions by veterinarians and usage decisions by farmers. Yet, there is little understanding of whether these existing guidelines are fit for purpose. Accordingly, this study rigorously assessed 128 veterinary guidelines for antimicrobial use in ruminants in the UK, following established qualitative methodologies. Findings revealed four pertinent themes: validation of the veterinarian as the prescriber, visibility of responsible use realities, vagueness in interpretation and variation in directing behaviour. These themes encompassed the roles and responsibilities of the veterinarian and the realities of prescribing scenarios, alongside concerns relating to the specificity within and variation between guidelines. Resultant recommendations to inform and support the future development of guidelines include establishing species-specific and disease-specific guidelines, expanding guidelines to include disease prevention measures, including definitions to resolve vagueness and promoting congruence in interpretation, encouraging the development of practice-level guidelines to endorse collaboration and ownership, and fostering active working between stakeholders to align priorities and messaging.

OPEN ACCESS

Citation: Best CM, Bard AM, Rees GM, Reyher KK (2023) Validation, visibility, vagueness and variation: A qualitative assessment of existing veterinary guidelines for antimicrobial use in cattle and sheep in the UK. *PLoS ONE* 18(11): e0294733. <https://doi.org/10.1371/journal.pone.0294733>

Editor: Claudia Cobo-Angel, Cornell University College of Veterinary Medicine, UNITED STATES

Received: July 3, 2023

Accepted: November 6, 2023

Published: November 30, 2023

Copyright: © 2023 Best et al. This is an open access article distributed under the terms of the [Creative Commons Attribution License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original



Citation: Rees, G.M.; Bard, A.; Reyher, K.K. Designing a National Veterinary Prescribing Champion Programme for Welsh Veterinary Practices: The Arwain Vet Cymru



Funded by
Welsh Government

Lessons learned



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use

Participatory co-creation requires time and effort

Giving vets control = losing control

Farm animal formulary = the holy grail!

Timing is everything

Working together is greater than the sum of its parts



“All singing from the same hymn sheet”



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

menterabusnes.cymru/arwaindgc

Diolch yn fawr!



Arwain DGC
Defnydd Gwrthficrobaidd Cyfrifol
Responsible Antimicrobial Use



Contact: Dr Gwen Rees

gwen.rees@menterabusnes.co.uk

 @drgwenrees



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government

menterabusnes.cymru/arwaindgc