



Title: Arwain Vet Cymru

Author: Gwen Rees

- Hello, my name is Dr. Gwen Rees, I'm a lecturer in Veterinary Science at Aberystwyth University, and the project lead for Arwain Vet Cymru. This webinar is a brief overview of Arwain Vet Cymru and how we approached anti-microbial stewardship among farm vet practises in Wales. So, we have some learning objectives for this webinar, and after listening to me, you should be able to describe the overall design of Arwain Vet Cymru. You should be able to explain how Arwain Vet Cymru uses behaviour change theory to improve antibiotic stewardship. You should be able to list the three key policy recommendations that have emerged from the project. And, you should also be able to reflect on how Arwain Vet Cymru and Farm Vet Champions can help achieve change in antibiotic prescribing.

So, what is Arwain Vet Cymru? Well, Arwain is a Welsh word for "Leading" and what we really wanted to do here was create a network of veterinary prescribing champions to act as leaders in prescribing of anti-microbials and other veterinary medicines across Wales. So, Wales has approximately 50 vet practises who undertake farm animal work. This number's influx, some of these practises are over the border in England that do a significant proportion of work in Wales. And of these, we have 41 with a Veterinary Prescribing Champion as part of Arwain Vet Cymru. So, over 80% of practises who do any farm work in Wales have their own Veterinary Prescribing Champion as part of this programme. As part of that, we have over 39 at the moment, different Antibiotic Stewardship Action Plans being implemented in these practises. A little bit of background then on Arwain Vet Cymru and how it came about. Really, Arwain Vet Cymru has been born from a very favourable policy background that we have here in Wales.

The Welsh government have an Animal Health and Welfare Framework Group. And a few years ago, they set up an AMR Delivery Group, who went about publishing the anti-microbial resistance in animals in the environment, five-year implementation plan for Wales 2019 to 2024. And that document's available online. It aligns very well with the UK five-year action plan, but is more specifically tailored to the picture in Wales. And, in that plan were two key points that we wanted to address with Arwain Vet Cymru. One was improving standards of antibiotic selection and prescribing. The other was improving standards of antibiotic supply. So, we developed a project proposal for Arwain Vet Cymru which received Welsh Government Rural Development Programme funding from 2019 until the end of the summer this year, 2021. And, it is a collaborative project between the University of Bristol, Aberystwyth University, Iechyd Da and Welsh Lamb and Beef Producers.

So, who and what are our veterinary prescribing champions? The overall aim of Arwain Vet Cymru was to develop a national collaborative network of highly motivated and trained vets. So, what we did was we went out and we recruited one vet from each farm or mixed practise in Wales. We

invited one from every practise, and we got all 80% of practises signing up. That person would act as the responsible prescribing champion for their practise and their practice's prescribing lead. And, they will also represent their practise among the network. We expected that these veterinary prescribing champions attended a programme of training and a series of discussion forums and workshops which took place last year. At the end of this training programme, each veterinary prescribing champion was expected to develop and implement at least one bespoke anti-microbial stewardship intervention in their practise this year, 2021. So, each prescribing champion has complete freedom to develop their own plan for their practise. And, they could take that in any direction that they wanted to. But, they had to do something, essentially.

Arwain Vet Cymru was designed using Behaviour Change Theory, which we'll talk a little bit about soon. And, I think that's been really important part of its success so far. And, the rate of the project now is to measure the impact and the legacy of this project. With Arwain Vet Cymru, we really wanted to ground the whole design of the programme in the theory. We thought it was very important to engage with Behaviour Change Theory, in order to maximise the value and the effectiveness of the intervention. So, during the development phase of Arwain Vet Cymru, we initially gathered a lot of contextual knowledge. So, we had an expert panel who fed in. We consulted with a lot of different stakeholders. We did an informal survey of practising vets in Wales about what it was that they wanted to get from the programme. And, also quite an extensive literature review of anti-microbial stewardship interventions and complex interventions, usually in the medical literature, actually. We then took all that knowledge and wanted to really kind of filter it through the lens of Behaviour Change Theory. And, it became apparent that for us, the theory that was going to be very important and really cover what we needed was one called "Self-Determination Theory". So, this is a theory that sort of covers people's intrinsic and extrinsic motivations for doing things, for making a change. And, in order to feel motivated to change, people need, so our vets needed to have these three main needs I suppose, met.

And, one is autonomy. So, the vets needed to feel like they had a choice. They had a choice to make these changes and they had a choice in which changes that they made. Competence. So, vets needed to feel like the changes they were making were within their skillset were possible, and they were able to do it. And, relatedness. And, that's a really important one. That's people's need to feel connected with other people and appreciated. And for that, we really wanted to build a sense of community. So then, we moved to the implementation phases, various actions, we developed this veterinary prescribing network of champions, we ran a whole series of webinars some discussion groups, workshops and provided information resources, which I'll go on to on the next slide. That was all intended to create this champion mindset amongst our veterinary prescribing champions. And that, is what we theorised would lead to the outcome that we wanted. So, the implementation of bespoke, antimicrobial stewardship interventions in all participating veterinary practises. And throughout this entire process, we have been doing something called Process Evaluation, which is what my research is looking at how this process has worked, how we think it worked how it actually works in real life, whether it works at all.

So, to expand a little bit on the actions that we took after having this, all of this design in the theory as I've described. The actions that we created during this programme. So, from the recruitment of our vets at the beginning of 2020, they were provided with resource pack, lots of information about antimicrobial stewardship, about antimicrobial use, and then a series of webinars were undertaken. So, we had two introductory webinars. One talking about the concept of antimicrobial stewardship, the importance of this to veterinary practise in Wales. And one, really talking about Behaviour

Change Theory and how vets can use theories of behaviour change in their practise, and when changing prescribing.

We then held the first of a series of discussion groups among the network where the network was split into two groups, North Wales and South Wales. And, some informal discussion sessions were held via video conference. Discussing anything that had come up, any questions people had from the initial webinars and also some structured discussions based on where they wanted to see the programme going. We followed that with another couple of webinars. One looking at evidence-based veterinary medicine and the practical application of evidence-based veterinary medicine in your prescribing. We had one looking at the difference in prescribing of antibiotics between beef, sheep, and dairy cattle. Followed by another discussion group, another two webinars, a third discussion group, and then an additional set of resources were sent out with more information based on the webinars and the discussion groups that had already occurred. So, that was the end of the formal training.

We then moved into a series of workshops. The first workshop was a three hour, sort of formal structured workshop looking at actually supporting each vet to develop their individualised implementation plans. And from that, the vets then had to work up their action plan and send that back to us. And, that was outlining exactly what they were going to do in their practise to change prescribing, when they were going to do it by. It was very much organised by the sub-smart goals that you see. Another workshop was run, and that was in order to elicit some policy recommendations from our veterinary champions. And from that, we have created a series of policy recommendations and a policy brief that will be circulated amongst a lot of various, different policymakers. And, the overall outcome then from all of this programme is the individual antimicrobial stewardship interventions that each of our veterinary prescribing champions has taken back to their practise and is currently implementing.

So, what are the outcomes of Arwain Vet Cymru so far? As you can see on the right here, we have a table of participant demographics. So, these are our Veterinary Prescribing Champions. This was recently published in a paper we have out in antibiotics describing the design of the programme. And as you can see, it's slightly more male than female champions. The majority of our champions are experienced vets and are either practise partners or clinical directors which was an interesting outcome because that wasn't necessarily what we had anticipated going into it. The practices ranged in size from employing fewer than five vets to employing greater than 15 farm vets. And, we had the majority of our prescribing champions coming from a mixed species practise. Of all of the veterinary prescribing champions who enrolled, we had 95% develop their own personalised practice action plan and complete the training. So, they are all now creating that change back in their practice.

Those action plans fell in different categories of change which we found quite interesting. And, the main ones that came up were within practice communication. So, these were where practices and practise champions really wanted to focus on improving communication between that, between vets and front of house staffs. So SQPs, receptionists, nurses, anyone who's involved in the process of taking orders for medicines from farmers and dispensing those medicines. As a lot of our champions described it, they wanted everyone to be singing from the same hymn sheet. Other category of change, farmer knowledge transfer. So, increasing and improving communication on prescribing between vets and farmers. Implementing some prescribing protocols was also quite common. So, actually having written set protocols for different diseases perhaps, or for different species within the practice. Some champions decided to reorganise their dispensary, perhaps to put some of the more important or second, third line antimicrobials on a higher shelf, some more difficult to reach.

Or, labelling them with a traffic light system. And then, some vets went down the benchmarking of antibiotic prescribing and amongst vets and also of antibiotic use in most of the farmers.

Some of the key policy recommendations that have come out of Arwain Vet Cymru, our vets want more regulatory support to govern farmers and how they buy and use antibiotics. So for example, there was a lot of concern about situations perhaps where farmers may be sourcing their medicines from more than one veterinary practice, meaning that, as the main practice for that farm, you may not have full oversight and knowledge of the antibiotics going on to that farm. And, our vets believe that there needed to be more policy and regulatory support in order to help ensure that one vet and one veterinary practise had oversight for all of the prescribing to each farm. Our vets wanted an industry wide mechanism to reward best practise. So, you know, the carrot, as well as the stick. Really, you need some regulatory support, but you also need there to be a reward for doing well. And, if you are really pushing antimicrobial stewardship, there should be some sort of framework in place to reward that.

And, the third thing that, the third recommendation that our vets came up with was that, there really was a desire for there to be more funding available for farmers and for vets to undertake preventative livestock health care. So, we're talking about livestock health schemes that benefit farmers and advertising these tools development of better tools for improving preventative health and therefore reducing the needs to prescribe. The lessons that I think can be taken away from Arwain Vet Cymru. I suppose, developing a "Champion Mindset" really does require motivation and dedication. And, that's really been shown by the champions on our programme. They have put in a lot of effort and a lot of time, but it can be really effective. And, we've been blown away by how successful it has been so far in a number of different interventions that are now taking place.

Obviously, farm vets are very busy, so time constraints can be problematic. Stewardship does take time. So don't, don't underestimate the time that you need to put into creating change. Farm vets very much enjoy the opportunity to discuss challenges and brainstorm solutions. Especially with that, some other practises you might not normally have direct lines of communication with. I think that was something that was very much appreciated. Main lesson is, there are no easy answers and there's no "one-size-fits-all" antibiotic stewardship intervention. I think, it's really important that they are tailored and specific to your practice, your context, and your needs. But farm vets really do have excellent ideas for policy makers. So, we should ask you guys more often.

So, we have some further reading here for those of you who are interested. We published a paper, outlining in a lot more detail, the design and the theory behind the programme which is available in the journal antibiotics. There is a BVA blog. And, also if you wanted to have a look at the Welsh Government's implementation plan, that is readily available online as well. And here, we've just have some of the Behaviour Change Theory references and some of the things we've discussed in this webinar. Thank you very much.

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