

Communication innovation supports vet's role in driving change in animal health management

A OneHealth approach underpins national and global efforts to tackle antimicrobial resistance. For many farmers and vets, this will involve making changes to daily routines and practices in animal health management. In this article, Áine Regan, a behavioural scientist with Teagasc, and Alison Burrell, a chartered health psychologist working in Animal Health Ireland, explain the psychology behind changing animal health management on the farm, and outline plans for a communications-based innovation targeted at vets for supporting bottom-up behaviour change

Over the last 18 months, we have witnessed widespread behaviour change at every level in response to the public health threat of Covid-19. Achieving such universal and collective behaviour change has proven impossible for other threats facing society (e.g., antimicrobial resistance, climate change). The psychological study of risk perception can tell us a lot about why and how we react to different threats. Covid-19 ticked all the boxes needed for evoking high levels of risk perception: it was new and unknown to science; it had immediate and devastating consequences; it was seen as uncontrollable; and large numbers of people could be exposed to the risk. Combined, these factors lead to high feelings of dread and a desire to reduce exposure to the risk by engaging in behaviour change (increased hand washing, mask wearing, social distancing etc.).

On the other hand, OneHealth threats such as antimicrobial resistance (AMR) are perceived as more familiar or 'knowable', viewed as controllable, the benefits of taking antibiotics are often seen to outweigh the risks of (mis-)use, and the consequences are viewed as far away and invisible. Collectively, this results in lower levels of risk perception and less motivation to engage in behaviour change.

ANTIMICROBIAL RESISTANCE

So while there has been progress in many areas, it has proven challenging to motivate society to collectively and effectively change their behaviours to respond to the threat of antimicrobial resistance. However, Covid-19 may provide a basis for building momentum as we begin to learn how the pandemic has had a lasting impact on our perceptions and behaviours in relation to 'OneHealth'. A recent survey of almost 1,000 members of the Irish public has shown that awareness of AMR, OneHealth and farm animal welfare has increased as a result of the Covid-19 pandemic. People appear to have become more attuned to global health threats, and the interconnected nature of human and animal health. Ensuring 'collective responsibility' to combat Covid-19 has been a particularly resonant concept emerging from the pandemic. This emphasis on action at all levels and by all people mirrors the OneHealth approach needed to address AMR. AMR requires all types of people in society (e.g., vets, doctors, farmers, patients, food consumers) to change their behaviour so as to minimise the spread and development of AMR; more

responsibly use antibiotics; or alleviate the need for antibiotics in the first place.

This concept of OneHealth – a holistic approach which considers the human, animal, and environment collectively – underpins Ireland's National Action Plan for AMR (iNAP). This roadmap sets out actions for all sectors which requires behaviour change at all levels. In agriculture, the '6Rs approach' outlines the guiding principles for prescribing and using antimicrobials at farm level (Figure 1). Along with ensuring responsible antimicrobial use, there is also a focus on changing the conditions so that less bacterial infections occur and the need for antimicrobials is reduced. Treating the cause rather than the problem involves prioritising numerous different behaviours in areas such as infection control, biosecurity, vaccination, nutrition, hygiene, farm health plans, diagnostics, optimal housing, transport management, and so on. Adopting new approaches to using antimicrobials, and adopting new animal health management practices, will require significant behaviour change for many vets and farmers.

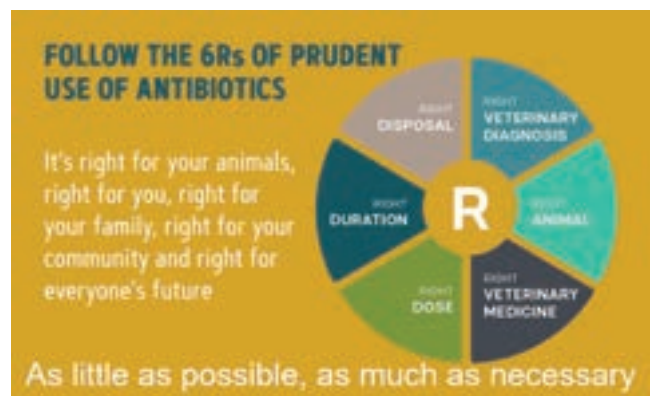


Figure 1. The 6Rs of Prudent Antimicrobial Use. Source: Department of Agriculture, Food and the Marine.

UNDERSTANDING BEHAVIOUR CHANGE

The European Commission's From Farm to Fork strategy has set a 2030 target of reducing sales of antimicrobials for farmed animals and in aquaculture by 50 per cent. The EU will also introduce new regulations in 2022 on veterinary medicinal products and medicated feed. Through top-down regulations and legislation, public policy is one useful tool for approaching behaviour change. However, in the absence of also targeting

the motivation of individuals to want to change, and targeting the beliefs that individuals have about change, top-down interventions can sometimes have unintended impacts. Anticipating changes brought about by the new veterinary medicines regulations could lead to increased stress for farmers and vets and they may have concerns about how changing their practices will impact both animal health and business viability. These developments will intersect with pre-existing stressors including uncertainty and concerns about labour availability; lack of infrastructure; workload; skills gap; and fear of stigma and may, if not supported, exacerbate stress and negatively impact farmer and vet well-being. For this reason, it is important to understand all the underlying beliefs driving behaviour, and work with farmers and vets to bring about positive change.

Sustainable behaviour change will be best achieved by addressing the multi-faceted individual, interpersonal, organisational, financial and societal-level determinants shaping antimicrobial use on farms. In behavioural science, the COM-B model is frequently used to help us understand, in a holistic way, what drives behaviour and what are the most effective methods for bringing about behaviour change. The COM-B Model helps to understand and identify the wide range of factors influencing behaviour. This is an important starting step in behaviour change – if we don't first fully understand the problem, how can we come up with an effective, targeted, and acceptable, solution? In behavioural science, we use the COM-B model to explore, in a structured and evidence-based way, what is driving a given behaviour. Specifically, we explore what factors might be preventing or prompting an individual to have the 'capability', 'opportunity', and 'motivation' to engage in the behaviour. An individual must feel they are both psychologically and physically able to carry out the behaviour (capability); have the physical and social opportunity to do the behaviour (opportunity); and have a

desire or need to carry out the behaviour (motivation). We use methods such as interviews, focus groups, workshops and surveys to find out directly from farmers and vets themselves, the factors which influence their behaviours and practices. COM-B is intrinsically linked to intervention design through the Behaviour Change Wheel. So what we learn from our COM-B investigations, directly informs the types of behaviour change interventions we choose to develop. The Behaviour Change Wheel is an approach used widely in the public health literature to coordinate and develop strategies to change behaviour. The starting point for developing interventions using the Behaviour Change Wheel approach is the behavioural analysis carried out using the COM-B model. Once we understand the range of factors which may be preventing a behaviour or practice from changing, we can then tackle those factors through targeted interventions. Based on the insights from the behavioural analysis, a range of targeted interventions can then be chosen. Evidence suggests interventions which combine restrictive and enabling measures (e.g., education and training, restructuring the environment, communications and messaging, incentives, and intervention targeting) are more successful than restrictive, legislative measures alone. This is because restrictive measures may not be targeting those factors which are likely to bring about motivation to change one's behaviour. For example, new legislation may mean that a farmer knows they have to change their behaviour ('capability') but they may not see the need or value to them personally of changing their behaviour ('motivation').

The AMU project funded by safefood has been using this behavioural science approach to explore what is driving farmers' and vets' behaviour when it comes to antimicrobial use and make recommendations on evidence-based behaviour change interventions. One of the factors which has emerged as a significant driver of behaviour, and behaviour



Figure 2. The COM-B Model of Behaviour and the Behaviour Change Wheel.

change, on farms is the farmer-vet relationship as farmers report vets as some of their main sources of information on good animal health practices and advice. At the same time, vets report challenges in effectively communicating to farmers about changes required on the farm. This has led to the development of a behaviour change intervention focused specifically on supporting effective communications between farmers, vets, and farm advisors who are also viewed as an important and trusted source of information.

MOTIVATIONAL INTERVIEWING

Research increasingly talks of a shift in the role of veterinarians and farm advisors on farms from reactive to proactive. Rather than a traditional role of responding to disease on farms, they play an active part in providing advice on best herd health management practices and with that, information on best antibiotic practices and the mantra 'as little as possible, but as much as necessary'. For this role to work successfully, they must be able to deliver information successfully and where necessary, promote behavioural changes in farmers through motivating them and facilitating collaborative decision making.

Without the correct communication skills, what may seem like providing good advice and expert opinion may in fact have the opposite effect, in a phenomenon known as psychological reactance (Figure 3). If advice and information is provided to someone by an expert in a top-down, instructive way, rather than having the intended consequence (the person making the necessary changes) it can result in the opposite – the person starts to think of all the reasons not to change and subsequent disengagement with the well-intended advice. For this reason, the safefood AMU project has started designing a specialised communication training programme for vets, and farm advisors, to help them to cultivate a collaborative community of practice to improve herd health management strategies.

Motivational interviewing (MI) is a collaborative communication approach developed by psychologists which draws on individuals' inner motivation to change, rather than external pressures. It uses OARS (Figure 4) communication strategies to deliver more complex interventions to address a person's ambivalence to change. It stresses the importance of providing people with the autonomy to explore their own reasoning for making changes in order to make more meaningful, sustainable changes to behaviour. It has been used successfully by professionals in a wide variety of settings such as health care, rehabilitation, public health, social work,

and dentistry and recently has been successfully used by veterinarians.

Open Questions	Using questions beginning with "what" 'how" or "how come" – questions that cannot be answered with a simple yes/no answer will elicit as much information as possible.
Affirmations	Recognising and acknowledging what is good or going well, highlighting the client's strengths, building rapport and client's confidence to change.
Reflections	Providing a statement of understanding to promote empathy and acceptance
Summaries	Pulling together what the client has said to show that they are being heard and understood as well as ensuring correct understanding.

Figure 4. Communication techniques ('OARS') shown to improve a collaborative relationship between client and professional.

The motivational interviewing programme being developed under the safefood AMU project will be taken forward into a new Teagasc-funded project (AMU-FARM) in collaboration with Animal Health Ireland commencing at the end of 2021. AMU-FARM brings together veterinary science and epidemiology, and behavioural and social science. This interdisciplinary scientific expertise will be merged with practical and local knowledge through a multi-actor partnership with animal health experts, knowledge transfer specialists, farm advisors, vet practitioners, chartered psychologists and farming organisations. A primary aim of the AMU-FARM project is to equip farm advisors and vets with communication skills to address farmers' motivations to engage with animal health advice, and reduce antimicrobial use on their farms. A cohort of vets will receive extensive training in motivational interviewing while a cohort of farm advisors will receive training in behaviour change techniques (e.g., action planning, goal-setting, cognitive restructuring, framing). These vets and farm advisors will implement their training over two years as part of multi-actor animal health action planning carried out with purposively-selected dairy and pig farms. The provision of technical animal health advice and information using specialised communication strategies will improve awareness and understanding of AMR and influence motivations to reduce AMU in the farming community.

Although in its infancy, the use of motivational interviewing in veterinary medicine has shown to improve communication between vets and farmers, as well as promoting positive changes to farm practices. In the context of antimicrobial resistance and antibiotic use, veterinarians are well-positioned to a) deliver information to farmers about the need to employ good antimicrobial stewardship and b) motivate farmers to make changes to their farm practices to reduce AMU. By employing the core values and communication techniques of MI (Figure 4), vets can avoid the effects of psychological reactance to change, explore and resolve individuals' ambivalence and deliver important, tailored information to farmers to establish more meaningful and sustainable changes than traditional, top-down interventions.



Figure 3. Psychological reactance can happen during a consult when a top-down communication approach is used.

References available on request.