



THE FECAVA SYMPOSIUM 2013*

The proper use of antimicrobials in companion animal practice

Antimicrobial resistance and the work of the Bella Moss foundation

Mark Doshier MSc¹, Jill Moss¹#

INTRODUCTION

The Bella Moss Foundation was established as a charity to inform and support owners of domestic pets that either developed, or were at risk of developing, antimicrobial-resistant infections. Key elements in achieving this have been the development of a close working relationship with the veterinary profession particularly with regard to creating accurate and verifiable information for pet owners, support for improvements in day-to-day veterinary practice, continuing professional development for vets, and the promotion of collaborative understanding between vets and pet owners.

Development

The Bella Moss Foundation (BMF) was initially conceived as an information website for pet owners following the death in 2004, from the effects of MRSA and Pseudomonas contracted following cruciate ligament surgery, of a ten-year-old Samoyed, Bella. The goals of The Foundation have remained broadly unchanged since its inception in 2005 and fall into two areas; firstly, providing information and support to pet owners whose pets contract, or are at risk of contracting, resistant infections, and secondly, to provide information and access to professional support to the veterinary profession.

These aims were not adopted at the same time. Initially, The Bella Moss Foundation (BMF) was created only to provide the information to pet owners on resistant infections that, in 2005 at least, was virtually non-existent in the public domain. Additionally, even though centres such as The Royal Veterinary College had conducted research on resistant infections in dogs, there was little attention paid to this by a significant proportion of front-line vets. In seeking collaboration with leading researchers and academics to

develop an accurate and accessible source of information for pet owners it was realised that raising the issue with vets through the same mechanism would have greater benefits than limiting the focus to pet owners alone, but this took time to develop; at the outset the main target audience was pet owners.



Jill with Bella

1 The Bella Moss Foundation (charity headquarters), 135 Edgwarebury Lane Edgware, Middlesex, GB-HA8 8ND

Corresponding author, President Bella Moss Foundation. E-mail: jillmoss@btconnect.com

* Held during the 19th FECAVA /VICAS/BSAVA Eurocongress, Dublin October 2013

In developing the material for pet owners, which was The Foundation's first task, the priorities were to ensure that the information was presented in an understandable way with an emphasis on the need to comply with antimicrobial administration, understand potential risks of transmission of pathogens from pet to owner and vice versa and carriage of multi-resistant microorganisms without overstating the risks or consequences of resistant infection. In the general public, certainly in 2004/5 there was great fear and dread of contracting MRSA, although it is also fair to say that few lay people properly understood the important details relevant to the risks of such infections. Therefore The Foundation sought to emphasise proper caution without descending into irrational catastrophism.

Certainly at the beginning the focus of The Foundation was less on overcoming antimicrobial resistance and more on reducing exposure and minimising the consequences to pets. Owners were guided towards a more rigorous process in selecting their vet with particular emphasis on finding out if a practice had infection-control protocols in place and was using antimicrobials, particularly the broad-spectrum antibiotics, appropriately. Information also sought to put risks in their proper context with an emphasis on the resilience of healthy animals and the vulnerability of those not in good health, as well as the importance of moderating owners' expectations of having antibiotics routinely prescribed. The aim was, and remains,

to develop a greater sense of awareness and responsibility among pet owners as a means of reducing the risks. All of the health-related information published on The Foundation's first full website, including what to look for in a veterinary practice, issues of vulnerability and good health-awareness, was either written or approved by the veterinary professionals who had agreed to help, and this ensured that should vets or other health professional come across the website, they would find nothing objectionable in the clinical content.

Among the veterinary professionals assisting The Foundation at this time there was also an acknowledgement that vets and vet nurses needed the opportunity to discover where research into resistant pathogens in animals was going, and so in 2006 The Foundation, in association with the University of Liverpool, presented the 1st International Conference on MRSA in Animals. Supported by Defra and with significant sponsorship, the event attracted delegates from across Europe and the United States, and presented the most recent research and opinion on the issue.

Importantly for The Foundation, this event led to the establishment of an informal advisory group of expert clinicians. This had now become a pressing issue because, since its launch in 2005, The Foundation had received regular requests from pet owners for help in dealing with the practical, and sometimes veterinary, aspects of coping with a resistant infection in their pet. Frequently this



Photo 2a) and b)

Princess.

Princess had seen three different veterinary surgeons and each had failed to achieve any improvement with treatment and gradually Princess's condition worsened. After a gradual decline and only after several weeks of lack of response to treatment were samples sent for examination. MRSA was identified and a very poor prognosis was given. From a sense of desperation, her owner searched the internet and came across the BMF website.

Dr Scott Weese (our Canadian clinical advisor) was asked to help and talked to the vet treating Princess. A new clinical regime was put into place which effectively saved her life.



Photos 3a and b illustrate the case of Cassandra and her cat, Chloe. Cassandra had been diagnosed with MRSA infection of her arm and contacted BMF. She was advised her to take her cat to see her vet, who sent off a sample for bacterial culture. The results confirmed that the cat also had MRSA. How transmission occurred was never clear, but here is what Cassandra said in press statements:

"I was terrified and both my cat and I suffered for many months with a resistant infection. I am so grateful to the Bella Moss Foundation for support and information that we desperately needed."

amounted to concerns about the risk to the rest of the household, but often it related to questions of clinical judgement or outcomes of courses of treatment. With a group of veterinary experts The Foundation would be able to offer expert guidance to vets if they wanted it.

The key issue for The Foundation though, was that these contacts almost always occurred after a vet had come across MRSA. Typically, these concerned long-term or non-responding skin infections or infections following surgery or use of catheters. Consequently, input from The Foundation's advisors focussed on dealing with clinical problems rather than preventing their occurrence in the first place. This situation led to the decision to begin developing information specifically for practising vets and which would include recommendations for good practice that would reduce the potential for exposure to resistant organisms.

In discussions with the leading veterinary researchers and academics it was determined that front-line vets would best be helped by information that focussed on the need to ensure that animals were only treated with antimicrobials when appropriate, that when necessary the right antimicrobials were used, and to use isolate analysis where feasible to inform those two decisions. In addition it was felt important to emphasise the need for awareness of how proper hygiene protocols would contribute to the clinical outcomes within the practice.

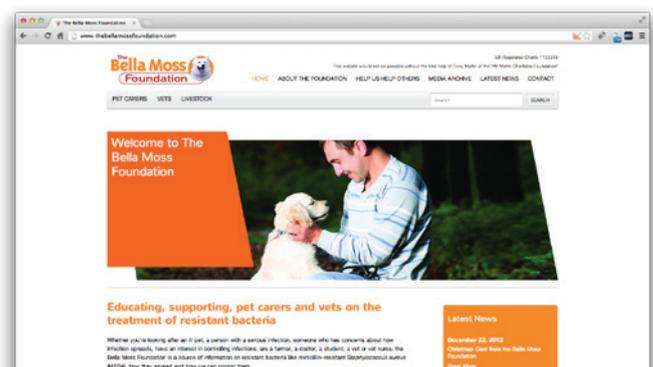
The most significant step in achieving this at the time was the development of The Foundation's travelling Seminars. These day-long events were presented by leading researchers and academics and combined the facts about resistant bacteria with the appropriate clinical practices and approaches to treat and prevent them. They took place

across the UK and Ireland in two series between 2007 and 2009, and represented the first proper attempt to take the facts on the issue out to the localities where vets practised.

Realising that veterinary nurses would also benefit from dedicated information, The Foundation collaborated with the College of Animal Welfare on a website, Veterinary Nurse Training Online (VNT0), to provide the sort of information that would emphasise good clinical practice and give nurses the opportunity to test their knowledge and obtain a Certificate of Achievement.

In parallel to these developments in UK-based events, The Foundation's website began to reflect a changing profile in visitors.

In the beginning, the aspiration of the founders had been to provide information for UK-based pet owners only, but without any promotion other than its presence on the Web, contact was being made by pet owners and some vets in the United States who were struggling with the same lack



'The Foundation's website began to reflect a changing profile in visitors.'

of information that The Foundation had been created to correct.

Fortunately, the contacts that The Foundation had made at its conference included experts based in North America more than willing to offer guidance and advice to vets working there, and now The Foundation's profile became international.

Just as the target audience was broadened, the initial limited focus on MRSA was also expanded over time to include details of *E. coli*, *Pseudomonas aeruginosa*, and *Enterococcus spp.* which are known to develop resistance to antimicrobials and also have the potential to pass elements of that resistance on to other pathogens.

These two strands of work - the development of information and support for veterinary professionals and pet owners and specifically dedicated to each with updates and refinements to reflect progress in the real world - would now become The Foundation's main activity.

Refining and improving this would be a constant process, and in 2012 the website underwent a complete redesign to include dedicated sections for pet owners and vets, and including newly developed video clips answering specific clinical and care issues. Again, collaboration was the key and contributions were made by many experienced clinicians and academics, and the content underwent an exhaustive review.

Structure of the Bella Moss Foundation

Like many small organisations that arise from the personal experience of an individual, The B M F started small with limited ambition and no clear idea of how to proceed. Formulated as a Charitable Company with two Directors, it achieved charitable status in 2007 managed by two Trustees. Although it was initially planned to fund activities through public donations, the bulk of The Foundation's income came from commercial sponsorship for specific projects such as conferences, the travelling seminars and VNT0.

With funding limited The Foundation relied on the generosity of supporters both within and without to provide the skills and abilities that the Trustees lacked. Two important decisions were made at the outset; 1) to keep access to the website content free to all visitors and, 2) to decline requests from commercial companies to endorse particular products or sell such products in return for cash considerations and to apply the same prohibition to paid advertising.

For the first of these the main consideration was the

predicted disincentive that would result in requiring visitors, pet owners particularly, to pay for access; but more than that, The Foundation held the view that the information of the website should be accessible to everyone regardless of their ability or willingness to pay. For the second, it was felt that The Foundation needed to remain unaligned to everything except the need to improve the care and treatment of pets. Therefore, the only commercial presence on The Foundation's website remains the logos of companies that have sponsored projects or events and have expressed support for The Foundation's aims and objectives.

While this has severely limited the Foundation's income and freedom to spend, it has allowed it to remain truly independent of outside influence. This independence has, in part, been the reason why The Foundation has been able to engage with so many different professional and governmental organisations.

The issue of funding was also behind the decision not to attempt the move into clinical research either as a primary researcher or as funder of others' research projects. While the profile of the charity would doubtless have been enhanced, it was clear that The Foundation was completely unequipped to undertake such a role.

The Foundation had worked since 2005 with just two main activists. By 2013 the need to broaden the skill base had become acute and so three additional Trustees were appointed to bring specialised and general clinical expertise and business experience into the heart of the organisation. The new Board of Trustees began to operate in September 2013.

Future Developments

The Foundation constantly seeks to convey its message by promoting and producing events, leaflets and online resources. Three major initiatives are in development:

- 1) A conference to bring human and animal health professionals together in 2014 supported in the UK by the Department for Environment, Food and Rural Affairs (Defra), by Defra, the Department of Health and all of the major veterinary organisations of Europe under the banner of the One Health concept. Simply put, the approach sees human and animal health as inextricably linked, that each is affected by the other, and that approaches to issues in one can benefit from an understanding of the other. This conference has drawn widespread support from all

areas of health, both animal and human, and will aim to present work of value to both.

- 2) A video series under development with the Peoples Dispensary for Sick Animals (PDSA) aimed at improving the quality and scope of the information available to pet owners. This will offer accessible information on a range of topics of value to pet owners
- 3) Collaboration with the Royal College of Veterinary Surgeons on a series of clinical protocols to go in tandem with its own Practice Standards Scheme.

Refinement of the content of the website will continue in order to reflect developments in clinical knowledge and changes to the structure of The Foundation and its Governance will undoubtedly evolve.

What Has Been Achieved?

When The Foundation was created there was virtually no information available to the public on resistant infections in animals. After the website 'thebellamossfoundation.com' had been running for a year it was still the most common result from a web search. Now, however, a similar search will produce many pages of results from a wide range of source. This is, in part, due to the greater awareness among veterinary organisations and owners groups, particularly in the UK, that has come, in part, from the work of The Foundation.

In the UK, too, pet owners are better informed than they were a decade ago and demand more of their vets. Fortunately, this has been matched by a rapid improvement in both awareness and practice within the UK veterinary profession. The emphasis has changed in the profession towards preventing exposure to resistant microbials and The Bella Moss Foundation can take some of the credit for that.

The Foundation's most important achievement has been, as a small charity run by people outside of the veterinary profession, to raise the profile of antimicrobial resistance and provide a forum where accurate information can be freely accessed. The BMF is well recognised within the UK veterinary profession, and is seen as an ally of good veterinary practice. Achieving this would have been impossible if the urge to become a strident, campaigning voice intent only on confrontation with the veterinary profession had been followed. That it was resisted has reaped benefits for vets and pet owners alike.

Further relevant Information

BMF infection control website for vets and nurses

www.veterinarynursetrainingonline.org

One Health Conference www.onehealthbmf.com