SVEPM 2020 — resilience and community support in the first year of the COVID-19 pandemic: the Society for Veterinary Epidemiology and Preventive Medicine Annual Conference, extraordinarily held online

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The 2020 Annual Meeting of the Society for Veterinary Epidemiology and Preventive Medicine (SVEPM) was scheduled to take place in Westport, Ireland, March 25-27. The committee reviewed 68 abstracts and prepared a scientific programme that included 21 oral presentations, 89 posters, 30 poster pitches, and five hands-on workshops. The local organising committee, chaired by Damien Barrett, prepared an excellent social schedule to welcome delegates to Westport. All this work was nearly finished when, in January 2020, the world focussed on news describing the emergence and spread of the SARS-CoV-2 virus. As epidemiologists we followed closer still, and in a true disease outbreak mitigation approach, by the time the World Health Organization (WHO) announced on March 11 2020 that the COVID-19 outbreak was a pandemic, our preparation phase had already begun with the committee having met in a virtual environment several times. We had discussed the ramifications and implications of physically convening for 202 registered participants at our annual event; we were ready to communicate a decision to not go ahead with the physical meeting in Westport. To keep our membership informed of our planning, we held our Annual General Meeting online, consistent with the planned meeting schedule.

We knew it would take time to assess and try to mitigate the financial losses incurred with this last-minute cancellation. It took a few months of working within the pandemic phase and its associated lockdown for the global population to learn how to adapt to remote working; as a result, it was also not immediately clear how we could replace the physical meeting with an online alternative, but we were keen to do our best. Our priority was to deliver the scientific programme developed by the committee, and provide researchers, particularly those in the early phase of their career, with the opportunity to publicise their work first-hand through the society's annual conference.

The agreed solution was a series of online meetings covering the traditional sessions which would have happened at the Westport conference. On May 12, in an online meeting attended by 170 participants, Dr. Matthew Stone, Deputy-Director of the World Organisation for Animal Health (OIE),

47 opened the 2020 scientific programme discussing *Supporting evidence-based policy with science*
48 *across OIE's strategies, standards and programmes,* followed by Dr. Sam Thevasagayam, Head of the
49 Livestock Division with the Agriculture Development Programme within the Bill and Melinda Gates
50 Foundation, talking about *A funder's perspective of global disease studies.* The programme continued
51 weekly, until on June 16, Professor Jonathan Rushton delivered the traditional Gareth Davies
52 Lecture, closing the scientific programme discussing the Global Burden of Animal Diseases (GBADs)
53 programme, and H*ow GBADs will link to clinical practice and veterinary epidemiology*.

54 Twenty speakers presented their original work in four core online conference sessions. The ten
55 presenters who chose to contribute to this special issue reported studies in various animal species,
56 including livestock, wildlife and companion animals. Using a variety of quantitative and qualitative
57 methods, these authors also covered a wide breadth of epidemiological themes, for which we
58 provide an overview below.

59 The herd and regional control of paratuberculosis represents an important challenge in livestock
60 health and management, frequently addressed in research presented at the SVEPM conference.
61 Biemans et al. (2021) adapted an individual-based epidemiological simulation model to the specific
62 seasonal herd demographic settings of the Irish dairy sector and investigated the probability of
63 persistence over time under different control strategies. Testing and culling was shown to be
64 particularly effective when used prior to the calving season. Acknowledging the key role of testing in
65 planning control strategies, Barden et al. (2020) used Bayesian statistics to study milk antibody ELISA
66 tests and calculate the probability of infection under various circumstances. The authors
67 demonstrated a reduction in test specificity associated with parallel bovine tuberculosis testing,
68 highlighting the complex management and health settings which can affect test interpretation, and
69 under which control decisions must be made. Robinson (2020) conducted semi-structured interviews
70 with dairy farmers and veterinarians in England to capture their views on the complex scenario of
71 paratuberculosis control, exploring the drivers and incentives for control, in particular. These were

found to be a variety of factors at various scales of influence, and as the author concluded, the findings “illustrate the importance of considering the political economy and societal impact of animal disease”.

Participatory methods aimed at capturing stakeholders’ perspectives in complex control scenarios were also employed by Dhand et al. (2021) and Urner et al. (2021). Dhand et al. (2021) organized focus groups of veterinarians, farmers and other stakeholders in India to discuss strategies for brucellosis control in the unique context of Hindu society, where cattle are considered sacred and test-and-cull strategies are not feasible. Urner and colleagues (2021) also highlighted the need to consider stakeholder acceptability when designing disease control strategies, as compliance is necessary for effectiveness. The authors reached out to hunters in Latvia to assess their willingness and motivation to support passive surveillance in wild boars, a key component of African swine fever control. Both studies provide essential information to design evidence-based, context-aware disease control programs.

Keeping with the theme of informing the design of control strategies, Hautefeuille et al. (2020) evaluated the potential efficiency of different avian influenza vaccination strategies. Using a previously developed decision support tool, complemented with a cost-benefit analyses, the authors showed that both hatchery and farm level vaccination could enable protective immunity levels for the control of avian influenza in France, but hatchery vaccination would provide a higher population immunity level.

Buzdugan et al. (2020) retrospectively analyzed a large dataset of slaughterhouse condemnations aiming to identify common reasons for this decision to be made, and inform strategies to reduce levels. The study was further supported by a longitudinal collection of 109 explanatory variables which were used in risk factors analyses, uncovering production chain practices that can be targeted by the industry to reduce condemnations.

Callaby et al. (2020) reported on an ambitious and unique longitudinal study – the Infectious Diseases of East African Livestock (IDEAL) project. The initiative developed and launched an extensive open-access database and biobank supporting many research initiatives. The authors reflected on the project's legacy, sharing their own views on the lessons learned, and the challenges still to overcome.

Companion animals were the focus in two studies, both of which offer perspectives beyond companion animal health. Doit et al. (2021) proposed a core outcome set (COS) for research of feline chronic kidney treatment trials. The proposed COS, as the authors state, will strengthen the evidence-base produced by treatment efficacy trials in the future, reducing research waste and maximizing study comparability. Being the first COS in feline medicine, however, this paper also represents an important methodological step towards informing the development of other COS in companion animal medicine. Tompson et al. (2020) investigated antimicrobial usage in companion animals using a large dataset of dispensing events, while using anthropological methods to consider the organizational context of veterinary practice. Being aware of the social context in which antimicrobials are prescribed to companion animals, this study provided insights into the drivers of usage; it will inform the design of sustainable stewardship schemes to address what the authors called "a largely overlooked contributor to the complex problem of antimicrobial resistance".

These ten articles are an excellent representation of the quality and diversity of the twenty oral presentations held online in 2020 during the SVEPM meeting.

Every year, we conclude this preface thanking the hosts for their efforts delivering a high-quality meeting, and the Special Issue reviewers for their help in evaluating manuscripts submitted. This year is no different. While the social programme prepared for Westport could not be enjoyed by SVEPM members and others supporting the annual conference, the local organising committee did an exceptional job preparing, and then coping with the unavoidable consequences of the pandemic. All researchers faced an increase in their workload concurrent with their working conditions

changing drastically in 2020, particularly challenging for those with caring responsibilities. Despite these circumstances, we were able to enrol and receive help from reviewers with limited delay compared to previous years.

We reiterate our thanks to the conference organisers and peer-reviewers, however this year we also close this editorial with a big thanks to the conference delegates. The SVEPM committee was overwhelmed by the help and support we received from our community. Despite the last-minute cancellation, and the improvised online format, we have had only positive responses; the moral and financial support of members will ensure that the Society can continue delivering a high-quality scientific programme for years to come; thank you everyone!

As veterinary epidemiologists, our global community has in 2020 united to discuss our experience in animal disease to aid development of disease control strategies to help public health decision-making; One Health is about transformative, transdisciplinary thinking, not just about zoonotic disease transmission. We thank the SVEPM community for their support to the Society, to each other, and to the collective knowledge explosion in epidemiology and preventive medicine, that has occurred during this difficult year.

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