In the intervening time between this report and our last report at the end of August 2020, the country has witnessed further sizeable changes in the way in which COVID-19 has been managed. This has entailed a more regional approach to social distancing measures, a ‘firebreak’ lockdown in Wales, and a further period of lockdown in England before a return to more regional measures. Although the recently instigated rollout of an effective vaccine provides some cause for optimism, we recognise that veterinary professionals are continuing to face real challenges in practice. To reflect on these increasingly varied responses at a devolved nation level, in this report we have included a brief summary of veterinary consultation volume, as recorded by SAVSNET, at such a level of granularity.

To hopefully assist with making continued difficult decisions, we at SAVSNET have released this sixth report detailing the impact of the COVID-19 pandemic on companion animal practice in the UK, as summarised by a voluntary sentinel group of veterinary practices and diagnostic laboratories representing approximately 15% and 50% of available data, respectively. For brevity, we have removed 2019 comparison data summaries from this report; if you are interested in learning more about our methodology please refer to the first report (20/04/2020) available here: www.liverpool.ac.uk/savsnet/covid-19-veterinary-practice-uk/.

We remain keen to hear from you about how such analyses can be improved to support your decision making. If you have any particular suggestions, please feel free to contact us: savsnet@liverpool.ac.uk.

In the meantime, we hope you continue to stay safe and well at this difficult time, and as always, thank you for your participation in SAVSNET.

The SAVSNET team
KEY FINDINGS

- Our latest findings indicate a return to reducing consultation volumes coinciding with instigation of the second period of enhanced social distancing measures in England, though not as dramatically as seen in March 2020.

- When considering consultation volume reductions on a devolved nations basis, some evidence of variation can be seen in response to more local decisions; this is most apparent for Wales which was associated with a sharp drop in consultation volume coinciding with the firebreak lockdown period (23rd Oct – 9th Nov 2020).

- There is some evidence to suggest that this latest phase of social distancing measures in England has resulted in a greater relative drop in consultation volume in cats than dogs.

- Though the absolute number of antimicrobial prescriptions provided has also begun to reduce once more, for animals presenting to veterinary practices unwell, the relative frequency with which practitioners decide to prescribe antimicrobials remains unchanged, compared to median 2019 figures.

- All surveyed vaccine preventable diseases (VPD) have each reported the highest number of tests performed over the past eighteen months observed within the last three months. This increases confidence in our ability to survey VPD prevalence at meaningful levels.

- The percentage of PCR tests testing positive for Leptospira reached a 2020 high in August and September; however, this appears to now have returned to normal levels. As a similar peak in Autumn has been observed in previous years, this might indicate a seasonal pattern in leptospirosis epidemiology.
A note on social distancing phases

As noted earlier, both governmental and veterinary profession policy and guidance has frequently changed throughout the COVID-19 crisis. To assist readers in further understanding how these changes might have impacted on veterinary practice, we have included six of these changes (referred to as social distancing phases) in this report:

- **Social distancing phase 1**: Instigated on 23rd March 2020, in response to announcement of enhanced social distancing policies (commonly referred to as ‘lockdown’) by the UK government ([www.gov.uk/government/speeches/pm-address-to-the-nation-on-coronavirus-23-march-2020](https://www.gov.uk/government/speeches/pm-address-to-the-nation-on-coronavirus-23-march-2020)). Royal College of Veterinary Surgeons (RCVS) and British Veterinary Association (BVA) guidance on how veterinary practices might best respond to government policy was released fairly confluently; hence is considered within this initial phase.


- **Social distancing phase 3**: Instigated on 10th May 2020, in response to announcement of the UK government’s COVID-19 recovery strategy ([www.gov.uk/government/speeches/pm-address-to-the-nation-on-coronavirus-10-may-2020](https://www.gov.uk/government/speeches/pm-address-to-the-nation-on-coronavirus-10-may-2020)).

- **Social distancing phase 4**: Instigated on 19th May 2020, in response to release of further updated RCVS guidance. Please note, the BVA released further complementary guidance on 28th May 2020; as this development took occurred towards the end of the surveillance window analysed for this report, we have included this guidance within phase 4.

- **Social distancing phase 5**: Instigated on 15th June 2020, in response to re-opening of non-essential shops in England.

- **Social distancing phase 6**: Instigating on 4th July 2020, in response to re-opening of restaurants, pubs etc. across much of the UK.

- **Social distancing phase 7**: Instigating 7th September 2020, broadly in line with primary and secondary school pupils returning to school across much of the UK.


We are aware that these phases represent a relative over-simplification of the many complexities of this unique situation, not least what is now a divergent policy response between the respective devolved nations that together constitute the UK. As the majority of practices participating in SAVSNET operate within England, we consider changes of relevance to English practices as the primary consideration for most of the views presented below. However, we have also considered an overall consultation volume view at a devolved nation-level for this first time in this report too, which will hopefully assist planning on a more local level.
VETERINARY CONSULTATIONS

To assess the impact of COVID-19 on companion animal veterinary practice, we have summarised data collected by SAVSNET from consultations between Monday 2nd March 2020 and Sunday 22nd November 2020. Whilst clearly other activities will be continuing in practice which we may not capture, we believe data submitted to SAVSNET from booked consultations can be a valid surrogate of overall practice activity. In total, this corresponds to 429,418 canine, 163,243 feline and 47,872 other or unclassified species consultations located in 219 veterinary practices (466 sites) throughout the UK. As explained in the first report, to assess impact we have utilised median 2019 data as a proxy for a ‘normal’ week of SAVSNET data collection. We have also included a plot trend line, explained in our third report.

As can be seen in figure 1, the number of recorded consultations remains reduced across all species groups. Whilst there was a steady increase in consultation volume between Mid-April and Mid-July, across all species groups this appeared to peak at a reduction of approximately 25%, followed by a fairly level period between mid-July and mid-September. More recently, a downwards trend broadly corresponding with the latest period of national-level enhanced social distancing measures in England (phase #8) has been observed, trending towards an approximate 40-50% reduction in consultation volume by 22nd November 2020. However, it should be noted that the rapid decline in consultation volume observed with instigation of the first national period of enhanced social distancing measures instigated on 23rd March 2020 has not been replicated currently, suggesting that veterinary practices are continuing to offer wider care access now than was the case in March 2020.

Figure 1: Percentage change in consultation data volume submitted to SAVSNET between 2nd March 2020 and 22nd November 2020, compared against median 2019 data, in total and by species group.
For this report, we have provided an additional view of consultation volume variation for all animal species between 2\textsuperscript{nd} March and 22\textsuperscript{nd} November 2020. As with other analyses, data is compared as a percentage reduction relative to median 2019 values. As can be seen in Figure 2, all UK devolved nations were associated with a rapid decline in consultation volume from mid to late March 2020. For England (n=408 veterinary practice sites), consultation volume reductions broadly correspond with variations seen at the full UK national picture (Figure 1); this is likely due to veterinary practice sites located in England comprising the majority of veterinary practice sites contributing data to the SAVSNET project. Considering Northern Ireland (n=15 veterinary practice sites), the period of 50% or greater reductions in consultation volume extended longer than England by approximately 2-3 weeks, and with time reporting a less than 50% reduction in consultation volume being smaller in comparison to England.

Interestingly, Scotland (n=25 veterinary practice sites) has not yet reported any return to a reducing consultation volume trend beyond the initial lockdown period; however, for practice sites surveyed the return to presumed normal consultation volume appears much more gradual compared to other countries. Wales (n=18 veterinary practice sites) perhaps provides the greatest contrasts to other countries observed, with survey practices reporting a relatively rapid return to median 2019 consultation volumes around the beginning of July 2020; this being sustained through to Autumn 2020. However, an approximate two-week spell of returned 40-50% consultation volume reductions can be seen, this broadly corresponding with the ‘firebreak’ lockdown enforced in Wales between 23\textsuperscript{rd} October and 9\textsuperscript{th} November 2020, before a rapid return to near median 2019 consultation volumes hereafter. We caution the reader about over-interpreting these data. For Northern Ireland, Scotland, and Wales particularly, a small number of veterinary practice sites were observed; as such, it is possible that findings more closely represent individual practice policy rather than provide evidence of a more national trend.

![Figure 2: Percentage change in consultation data volume submitted to SAVSNET between 2\textsuperscript{nd} March 2020 and 22\textsuperscript{nd} November 2020, compared against median 2019 data, by country in which the submitting veterinary practice site is located.](image-url)
**Vaccination consultations**

Much like overall consultations, whilst vaccination consultations remain reduced, some evidence of an increasing trend can be observed up to approximately mid-July 2020, followed by a levelling off and return to a reducing trend from the end of October 2020 (figure 3). However, this latter reducing trend is not as dramatic as that observed in March 2020. For cats, vaccine consultation volume did return to something approaching median 2019 values between September and October 2020, but conversely has also been associated with a more dramatic reduction of late than that seen in dogs.

Of animals visiting practices during this period, 71.8%, 66.7% and 48.5% of dogs, cats and other or unclassified species had recorded evidence of prior vaccination; of those with a vaccination history, time since last vaccination was comparative with 2019 data. Of animals vaccinated in 2019, 17.7%, 14.6% and 21.0% of dogs, cats and other species were aged 6 months or less at time of vaccination, comparing with 18.1%, 19.6% and 23.8% vaccinated on or after 23rd March 2020, respectively. In all three species groups but particularly in dogs, the percentage of animals aged 6 months or less at vaccination has steadily decreased over the last four reports, accompanied with a comparative increased median age at vaccination, which suggests that veterinary practitioners are now vaccinating a broader range of ages.

![Figure 3: Percentage change in vaccine consultation data collection volume between 2\textsuperscript{nd} March 2020 and 22\textsuperscript{nd} November 2020, compared against median 2019 data, in total and by species group. Green shaded area relates to a systematic data reporting error; findings in this period should be disregarded](image-url)
**Gastroenteric clinical signs**

Of 12,879 canine, 3,525 feline, and 1,100 other/unclassified species primarily presenting for investigation or treatment of gastroenteric clinical signs since 2nd March 2020. As with total consultations, gastroenteric consultation remain reduced compared to median 2019 gastroenteric consultation volumes, though a steady increase was observed in dogs and cats up until mid-July 2020 (figure 4). In both dogs and cats this increase has tailed off, with consultation volumes remaining broadly static, and perhaps gently reducing over the past three months. It is currently unknown whether social distancing measures have had some impact on actual incidence of gastroenteric disease or veterinary practice presentation likelihood to explain these noted reductions.

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**Figure 4:** Percentage change in gastroenteric consultation data collection volume between 2nd March 2020 and 22nd November 2020, compared against median 2019 data, in total and by species group. Green shaded area relates to a systematic data reporting error; findings in this period should be disregarded.
**Respiratory clinical signs**

Of 3,461 canine, 1,999 feline, and 674 other/unclassified species primarily presenting for investigation or treatment of respiratory clinical signs since 2\textsuperscript{nd} March 2020, it can be seen that as with total consultations, whilst in Spring a trend towards a return to median 2019 consultation volumes could be seen, this largely levelled off over the Summer and into Autumn in dogs (figure 5). Some evidence of a more rapid return to median 2019 values could be seen in October; however, this return has more recently reversed. By comparison, cats appear to be associated more with a gradual return to median 2019 levels. It should be noted that as a comparatively rare clinical presentation, low consult volumes tend to be associated with increased day-to-day variability. As such, we advise a degree of caution when interpreting these values over time. Like gastroenteric disease, it is currently unknown whether the observed reduction might be explained by an increased telemedicine use, or whether social distancing measures have had some impact on actual incidence of respiratory disease or veterinary practice presentation likelihood.

![Figure 5: Percentage change in respiratory consultation data collection volume between 2\textsuperscript{nd} March 2020 and 22\textsuperscript{nd} November 2020, compared against median 2019 data, in total and by species group. Green shaded area relates to a systematic data reporting error; findings in this period should be disregarded](image-url)
Pruritus

Of 23,867 canine, 3,811 feline, and 1,652 other/unclassified species primarily presenting for investigation or treatment of pruritus since 2nd March 2020, it can be seen that as with total consultations, pruritus consultation volume also steadily increased until early-August; this perhaps representing a more rapid increase compared to other broad clinical presentations (figure 6). However, since this point the trend has broadly reverse, with a gradual reduction in consultation volumes being seen since this time.

Figure 6: Percentage change in pruritus consultation data collection volume between 2nd March 2020 and 22nd November 2020, compared against median 2019 data, in total and by species group. Green shaded area relates to a systematic data reporting error; findings in this period should be disregarded.
**Trauma**

Of 18,995 canine, 7,825 feline, and 1,902 other/unclassified species primarily presenting for investigation or treatment of trauma since 2\textsuperscript{nd} March 2020, as with other broad clinical presentations, a levelling of in consultation volume is apparent from mid-July onwards. More recently, a reduction in feline consultation volume broadly corresponding with instigation of the second lockdown period at the beginning of November 2020 can be seen, though no such trend is yet apparent in dogs (figure 7). Unlike the aforementioned main presenting complaints, each possessing an infectious disease component, these findings perhaps more strongly suggest a direct COVID-19 impact on animal care and welfare, either via reduced actual incidence of trauma, perhaps reflecting changes in animal exercise patterns, reduced willingness to present such animals to veterinary practices, or reduced capacity of veterinary practices taking part in SAVSNET to accommodate such cases.

**Figure 7:** Percentage change in trauma consultation data collection volume between 2\textsuperscript{nd} March 2020 and 22\textsuperscript{nd} November 2020, compared against median 2019 data, in total and by species group. Green shaded area relates to a systematic data reporting error; findings in this period should be disregarded.
Tumour

Of 8,752 canine, 2,101 feline, and 1,005 other/unclassified species primarily presenting for investigation or treatment of tumours since 2nd March 2020, it can be seen that as with total consultations, tumour consultation volume has also levelled off, and perhaps reduced in cats, of late (figure 8). Unlike the aforementioned main presenting complaints, it is unlikely that actual tumour incidence would have been affected by COVID-19 restrictions.

![Figure 8: Percentage change in tumour consultation data collection volume between 2nd March 2020 and 22nd November 2020, compared against median 2019 data, in total and by species group. Green shaded area relates to a systematic data reporting error; findings in this period should be disregarded.](image)
Phone consultations / telemedicine

Considering phone consultations and telemedicine, though there was an initial increase in such consultations over the first social distancing phase that was broadly maintained for the first half of the second phase, these do seem to have reduced to approaching pre-COVID-19 levels (figure 9). However, we remind readers that due to significant changes in practice workflow, it is likely that we are under-estimating the frequency of phone consultation/telemedicine adoption over this time period. It is possible therefore that practitioners might be recording phone consultations / telemedicine in differed ways as this crisis progresses, or alternatively might reflect the gradual return to in-person consultations already discussed.

Figure 9: Percentage of total consultations recorded as being a phone consultation or telemedicine between 2nd March 2020 and 22nd November 2020, in total and by species group.
Antimicrobial prescription

It can be seen that as with total consultations the volume of antimicrobial prescriptions markedly fell from 23rd March 2020, compared with median 2019 values (figure 10). Since this time, as with overall consultation volumes, antimicrobial prescription volume steadily increased to mid-summer before starting to decrease in November 2020; this latter trend being more apparent in cats than dogs.

Due to the existence of the SAVSNET window enabling every recorded consultation to be broadly classified into a range of main presenting complaints, we have been able to define the percentage of consultations including animals presenting for investigation and/or management of ill health alone, in which an antimicrobial was prescribed (figure 11). These findings suggest that although some daily variation is apparent, overall, there appears to be no clear impact of COVID-19 on the relative frequency with which veterinary practitioners decide to prescribe antimicrobials to unwell animals under their care.

![Figure 10: Percentage change in antimicrobial prescription volume between 2nd March 2020 and 22nd November 2020, compared against median 2019 data, in total and by species group.](image-url)
Figure 11: Percentage change in antimicrobial prescription percentage of ill health consultations between 2\textsuperscript{nd} March 2020 and 22\textsuperscript{nd} November 2020, compared against median 2019 data, in total and by species group.
VACCINE PREVENTABLE DISEASE

In addition to collection of veterinary practice data, SAVSNET has also collected veterinary diagnostic laboratory (VDL) test results for a number of years. These data for some pathogens are already summarised on our website: https://www.liverpool.ac.uk/savsnet/real-time-data. Please note these findings focus on laboratory confirmed pathogen reports by PCR or qPCR alone. We are aware that for some of these pathogens in-practice ‘snap’ tests are available – these have not been summarised here. Additionally, this does not currently encompass suspected cases that have not undergone diagnostic testing. As such, these figures should be viewed as a guide and not definitive, complete evidence.

DOGS

Parvo

Between 1st January 2019 and 22nd November 2020, 3,931 PCR tests for parvovirus were performed by 6 VDLs; such samples originating from 740 veterinary practice sites in the UK. Of these, 7.1% (n=279) tested positive, with percentage testing positive generally varying between 5 and 10% per month over this time (figure 12). Whilst April and May 2020 did exceed this typical range, figures now appear to have returned to within normal range. The highest number of tests conducted in the last 18 months was in July 2020, indicating a relative return to normality compared to a dip in tests noted in March and April.

![Figure 12: Number and percentage of PCR parvovirus positives tests (left axis) and number of total tests by month (right axis), January 2019 – 22nd November 2020. 95% CI = 95% confidence interval.](image-url)
We have provided the broad geographical location (by postcode area) of tests performed and the number of positive tests in 2019, and in 2020 to date in figure 13. A total of 106 and 173 positive tests were recorded in 2019 and 2020 to date respectively; positive tests with known practice locations were recorded throughout the country. Please note, white corresponds to no tests having been performed in that postcode area in the relevant month; as such we would advise caution with using these data for estimating local disease risk in such postcode areas.

![Canine parvovirus PCR results 2019](image1.png) ![Canine parvovirus PCR results 2020 to date (Jan - Nov)](image2.png)

**Figure 13**: Number of PCR parvovirus positives recorded by postcode area in 2019 (left) and 2020 (right).

**Distemper**

Between 1\textsuperscript{st} January 2019 and 22\textsuperscript{nd} November 2020, 4,582 PCR tests for distemper were performed by 7 VDLs; such samples originating from 809 veterinary practice sites in the UK. Of these, 1.7% (n=80) tested positive, with percentage testing positive generally varying between 1 and 3% per month over this time (figure 14). As with parvovirus test numbers, distemper test numbers appear to have recovered, and in June - August exceeded monthly test numbers recorded over the past 18 months.

To further assist decision making, we have provided the broad geographical location (by postcode area) of tests performed and the number of positive tests in 2019 and 2020 to date in figure 15. A total of 41 and 39 positive tests were recorded in 2019 and 2020 to date respectively; positive tests with known practice locations were not closely associated geographically. Please note, white

Report by The Small Animal Veterinary Surveillance Network at the University of Liverpool

[www.liverpool.ac.uk/savsnet](http://www.liverpool.ac.uk/savsnet)
corresponds to no tests having been performed in that postcode area in the relevant month; as such we would advise caution with using these data for estimating local disease risk in such postcode areas.

Figure 14: Number and percentage of PCR distemper positives tests (left axis) and number of total tests by month (right axis), January 2019 – 22nd November 2020. 95% CI = 95% confidence interval.
Figure 15: Number of PCR distemper positives recorded by postcode area in 2019 (left) and 2020 (right).

**Leptospirosis**

Between 1\textsuperscript{st} January 2019 and 22\textsuperscript{nd} November 2020, 2,169 PCR test submissions for leptospirosis were performed by 6 VDLs; such samples originating from 804 veterinary practice sites in the UK. Of these, 8.3% \((n=180)\) tested positive (either via urine, blood or both). Although percentage testing positive generally varied between 0 and 6% per month over this time, percentage testing positive was increased between October and December 2019, potentially indicating increased cases in this period (figure 16). An increase was also observed in August and September 2020; however, over the past two months percentage testing positive appears to have normalised to prior rates. We have observed a tendency, though inconsistent, for percentage testing positive for leptospirosis to increase in Autumn, potentially indicating a seasonally driven factor associated with disease epidemiology. However, further detailed analyses would be needed to demonstrate this definitively.
To further assist decision making, we have provided the broad geographical location (by postcode area) of tests performed and the number of positive tests in 2019 and 2020 to date in figure 17. A total of 90 and 90 positive tests were recorded in 2019 and 2020 to date respectively; positive tests with known practice locations were not closely associated geographically. Please note, white corresponds to no tests having been performed in that postcode area in the relevant month; as such we would advise caution with using these data for estimating local disease risk in such postcode areas.
Figure 17: Number of PCR leptospira positives recorded by postcode area in 2019 (left) and 2020 (right).

CATS

Calicivirus

Between 1st January 2019 and 22nd November 2020, 8,414 PCR tests for calicivirus were performed by 6 VDLs; such samples originating from 1,718 veterinary practice sites in the UK. Of these, 20.5% (n=1,727) tested positive. Percentage testing positive has generally varied between 15% and 25% per month over this time (figure 18). A large reduction in testing volume can be observed in April 2020; this now appears to have largely recovered to levels comparative with 2019, with October recording the highest volume of tests performed in the last 18 months.

To further assist decision making, we have provided the broad geographical location (by postcode area) of tests performed and the number of positive tests in 2019 and 2020 to date in figure 19. A total of 815 and 912 positive tests were recorded in 2019 and 2020 to date, respectively. Positive tests with known practice locations were located throughout the UK. Please note, white corresponds to no tests having been performed in that postcode area in the relevant month; as such we would advise caution with using these data for estimating local disease risk in such postcode areas.
Figure 18: Number and percentage of PCR calicivirus positives tests (left axis) and number of total tests by month (right axis), January 2019 – 22nd November 2020. 95% CI = 95% confidence interval.
Enteritis / panleukopenia

Between 1st January 2019 and 22nd November, 4,828 PCR tests for calicivirus were performed by 7 VDLs; such samples originating from 1,027 veterinary practice sites in the UK. Of these, 2.7% (n=128) tested positive. Percentage testing positive was relatively stable throughout this time, generally varying between 1% and 6% per month (figure 20). A large reduction in testing volume can be observed for April 2020; however, test numbers in appear to have returned to levels comparative with pre-COVID-19 times, with August and September 2020 recording the highest numbers of tests over the previous 18 months.
Figure 20: Number and percentage of PCR enteritis positives tests (left axis) and number of total tests by month (right axis), January 2019 – 22nd November 2020. 95% CI = 95% confidence interval.

To further assist decision making, we have provided the broad geographical location (by postcode area) of tests performed and the number of positive tests in 2019 and 2020 to date in figure 21. In total 84 and 44 positives tests were recorded in 2019 and 2020 to date respectively; cases with known practice locations were not closely associated geographically. Please note, white corresponds to no tests having been performed in that postcode area in the relevant month; as such we would advise caution with using these data for estimating local disease risk in such postcode areas.
Figure 21: Number of PCR enteritis positives recorded by postcode area in 2019 (left) and 2020 (right).
Report summary

UK veterinary practices continue to work under very difficult conditions. Despite the serious COVID-19 situation, it is positive to see these practices, although currently experiencing 40-50% reductions in consultation volumes, adapting and avoiding the severe consultation reductions seen during the first March lockdown. The added dimension in this report, of trends from devolved nations, provides an opportunity to understand and compare regional approaches.

Trends to watch and potentially address going forward will be the decreasing trend in vaccination consultations, and the more dramatic reductions in cat vaccination and trauma consultations, which could become more pronounced or protracted as more areas move to Tier 3 restrictions in England. Finally, it was interesting to read about a potential autumn seasonal leptospirosis pattern, a finding that warrants further investigation to establish the epidemiology.

Grace O’Gorman BSc, MSc, PhD, MVB. NOAH Technical Policy Manager

This latest SAVSNET surveillance report shows how small animal consultations and laboratory testing of pathogens has continued to be affected by COVID-19. The overall number of consultations this autumn is still reduced in comparison with the same period in 2019. Focusing on specific disease presentations, the majority of conditions studied have been seen at constant rates over the past few months. However, there is an interesting reduction in the numbers of cats seen for either trauma or tumours since November. Whereas reduced trauma cases could be explained by changes to owner and animal behaviour, the same cannot be said for tumours. This does suggest that fewer animals have been presented to clinics in the past few weeks which raises potential welfare concerns. This report also gives a nice overview of tests performed for pathogens for which vaccines are available. It is good news that there is no obvious increase in the number of positive cases over the past 2 years. An interesting peak in the number of positive leptospirosis cases has been shown in the autumn of both 2019 and 2020 though, suggesting a possible seasonal distribution of disease which requires further exploration.

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