

Final grant report: Student Grants

Project title:	Importing overseas rescue dogs: an investigation into issues seen in UK veterinary practice
Researcher:	Tobias Hunter, University of Liverpool
Supervisor:	Dr Alan Radford, University of Liverpool
Year awarded:	2019

Provide a lay summary outlining the project, focussing on the project's achievements and potential impact to animal welfare.

The aims of this project were to determine:

- The types of health and behavioural issues presented to vets when dogs are rehomed from abroad
- The prevalence of overseas rescue dogs in the UK domestic canine population
- The measures vets are using when presented with overseas rescue dogs
- And whether these practices are causing an increase in disease risks imported into the UK.

The project was conducted using SAVSNET, a surveillance database collecting from about 10% of veterinary practices in the UK. Text searches were used for all European countries to identify all consultations where these countries were mentioned (total n = 30118). From there, a representative sample of each country's consults was selected using random numbering, in order to read 1503 consults which should represent the overall travelling canine population. The number of consults read is represented in the table below.

Emigration is classified as where an animal was travelling outside the UK with no indication of plans to return.

Immigration is classified as where an animal was not born in the UK but entered the country with no indication of plans to leave.

Outbound travel is classified as where an animal was travelling outside the UK with an indication of plans to return (e.g. going on holiday).

Inbound travel is classified as where an animal had returned to the UK from travelling abroad.

Uncertain travel is classified as where it is not possible to tell from the free text as to how the travel can be classified.

No travel is classified as where the consult was returned by our search terms as a false positive and did not actually involve travel.

Country	Emigration	Immigration	Outbound	Inbound	Uncertain	No Travel	Total
Albania	-	-	-	-	1	-	1
Andorra	1	-	-	1	-	1	3
Austria	3	2	12	6	1	1	25
Azerbaijan	-	2	-	-	-	-	2
Belarus	-	1	1	-	-	1	3
Belgium	3	5	29	5	5	3	50
Bulgaria	6	29	8	2	2	3	50
Croatia	1	12	6	2	2	2	25
Cyprus	4	33	6	2	-	5	50
Denmark	6	6	7	3	1	2	25
Estonia	1	2	1	-	-	1	5
Finland	7	2	7	5	1	3	25
France	3	4	60	12	3	18	100
Georgia	-	2	-	-	-	23	25
Germany	7	11	17	9	1	5	50
Greece	3	31	11	1	2	2	50
Hungary	1	39	4	3	-	3	50
Iceland	4	3	1	2	2	13	25

Ireland	8	50	30	8	4	-	100
Italy	5	11	18	6	3	7	50
Kazakhstan	1	-	-	-	-	1	2
Kosovo	-	1	-	-	-	-	1
Latvia	2	13	8	1	1	-	25
Lithuania	2	14	6	2	-	1	25
Luxembourg	1	1	7	2	-	-	11
Macedonia	-	3	1	1	-	1	6
Malta	6	2	13	1	1	2	25
Moldova	-	1	1	-	-	-	2
Monaco	-	1	1	1	-	-	3
Montenegro	-	1	3	-	-	-	4
Netherlands	7	12	21	6	1	3	50
Norway	12	4	21	7	2	4	50
Poland	2	15	24	7	1	1	50
Portugal	11	5	21	10	-	3	50
Romania	2	87	8	1	-	2	100
Russia	2	23	6	-	2	17	50
San Marino	-	-	-	-	1	-	1

Serbia	1	21	2	1	-	-	25
Slovakia	1	10	12	-	1	1	25
Slovenia	-	3	6	-	1	2	12
Spain	11	27	37	12	5	8	100
Sweden	9	7	21	4	2	7	50
Switzerland	5	4	27	9	2	3	50
Turkey	-	2	-	-	-	48	50
Ukraine	1	5	3	5	-	1	15
United Kingdom	-	-	2	-	-	5	7
Grand Total	139	507	469	137	48	203	1503

Data was classified according to the reason for travelling (emigration, immigration, inbound travel, and outbound travel), the reason for the consult (travel, health check, vaccination, and presenting complaint), and further into the type of complaint and whether it related to travel if applicable.

Descriptive statistical analysis was then performed on the results to identify the most frequently described countries, the animals most involved, and whether there were any mentions of exotic diseases such as leishmaniasis.

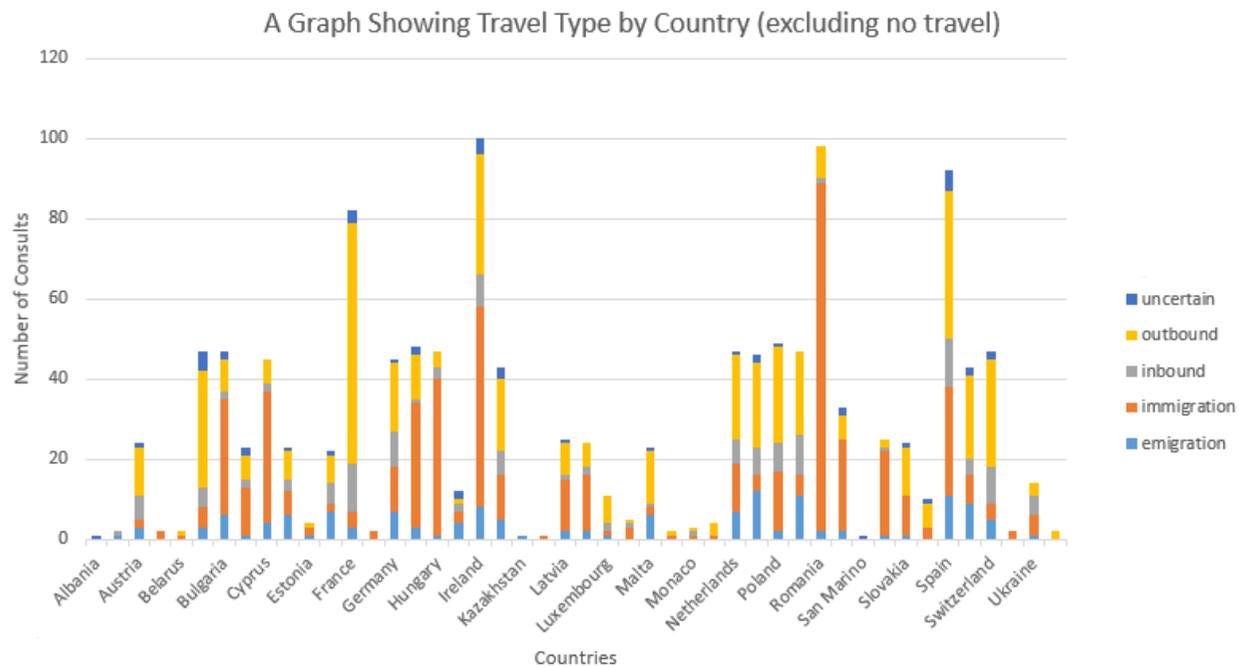
Prevalence of Overseas Rescue Dogs

The most frequent travel type identified was 'immigration', accounting for over a third (34%, 507/1503) of consults read. The top 3 most commonly identified countries involving immigration were Romania (17%, 87/507), Ireland (10%, 50/507), and Hungary (8%, 39/507).

A further 31% (469/1503) of consults involved 'outbound travel, where the most common countries were France (13%, 60/469), Spain (8%, 37/469), and Ireland (6%, 30/469).

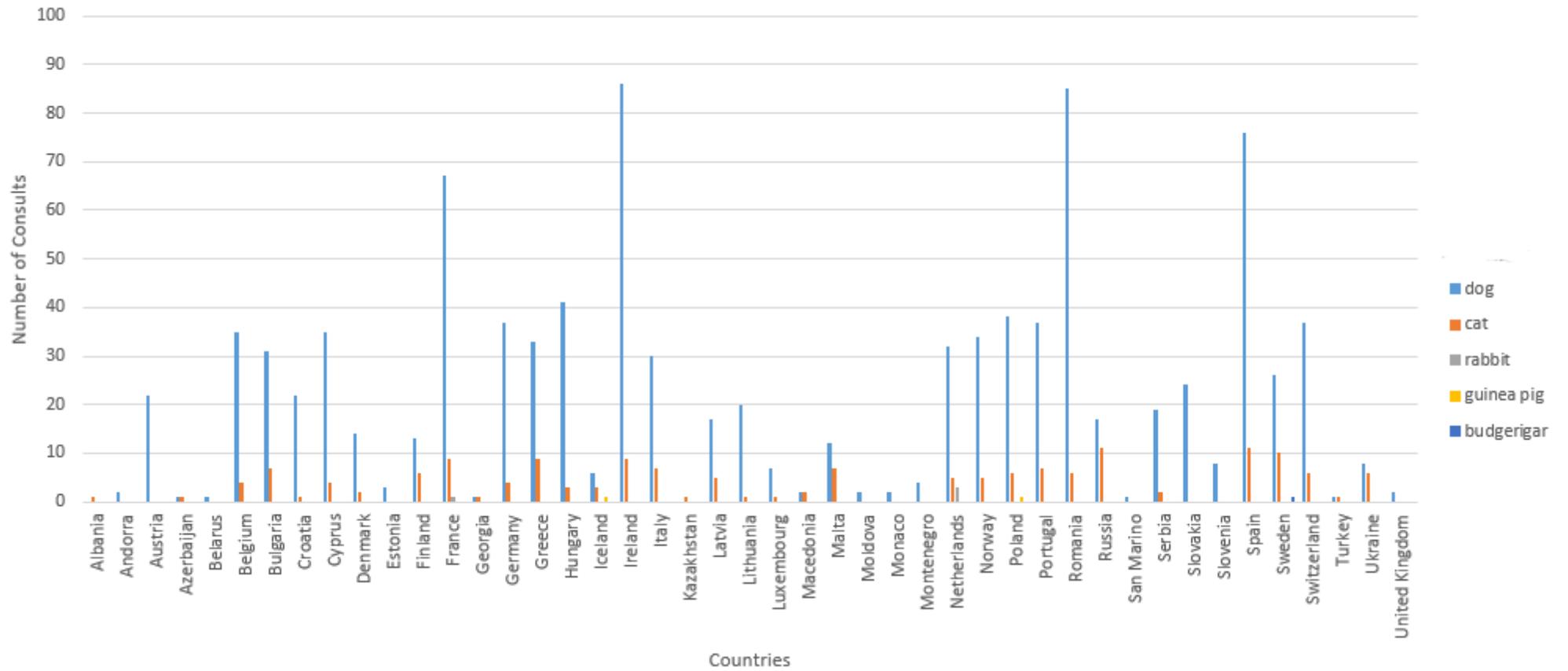
9% (139/1503) of consults were classified as 'emigration' with common countries including Norway (9%, 12/139), Spain (8%, 11/139), and Portugal (8%, 11/139). Another 9% (137/1503) of consults were identified as 'inbound travel', where common countries were France (9%, 12/137), Spain (9%, 12/137), and Portugal (7%, 10/137).

Only 3% (48/1503) of consults involving travel were unable to be classified and therefore marked as 'uncertain', and 14% (203/1503) of consults returned by our search were false positives and did not actually involve travel.



If the results are separated out by species, as 13% (164/1300) of the consults identified were cats and out of those, 40% (65/164) were immigration consults, then the most common countries mentioned when cats immigrated were Russia (11%, 7/65), Greece (11%, 7/65), and Romania (8%, 5/65) while the most common countries for dogs immigrating to the UK were unchanged. These results are not unsurprising in regard to the countries of origin for dogs immigrating to the UK as Romania and Hungary are often 'targets' for charities that rescue overseas dogs, and it is common for Dogs Trust to source a proportion of their rescues from Ireland.

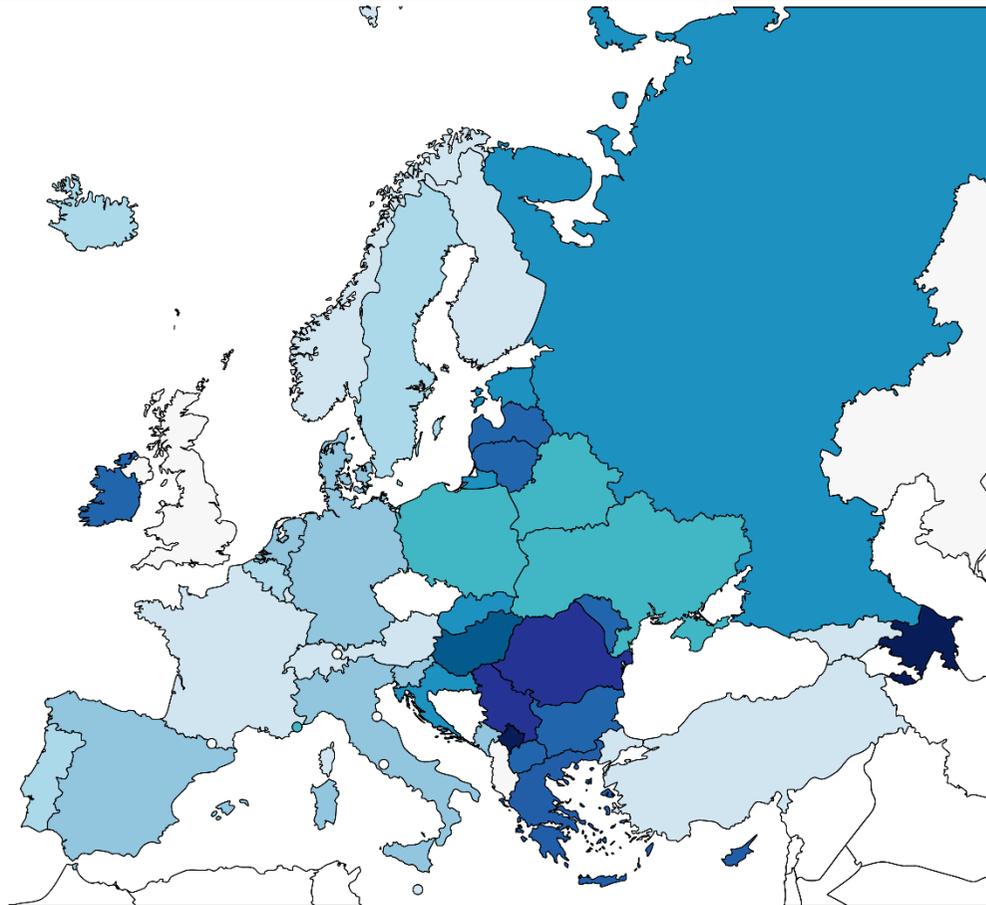
A Graph Showing Species Travelled by Country



The following maps show the number of consultations of each travel type as a percentage of overall travelled animals with that country:

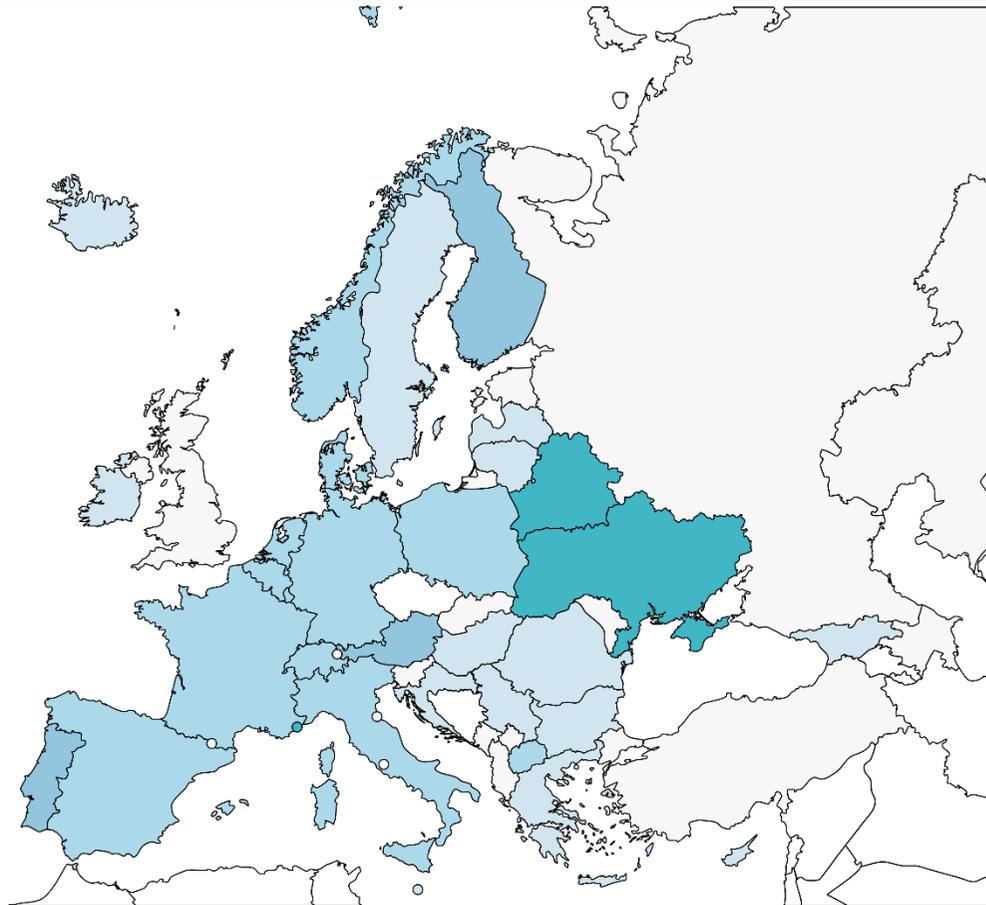
Immigration

- No data
- $x = 0$
- $0 < x < 10$
- $10 \leq x < 20$
- $20 \leq x < 30$
- $30 \leq x < 40$
- $40 \leq x < 50$
- $50 \leq x < 60$
- $60 \leq x < 70$
- $70 \leq x < 80$
- $80 \leq x < 90$
- $x = 100$

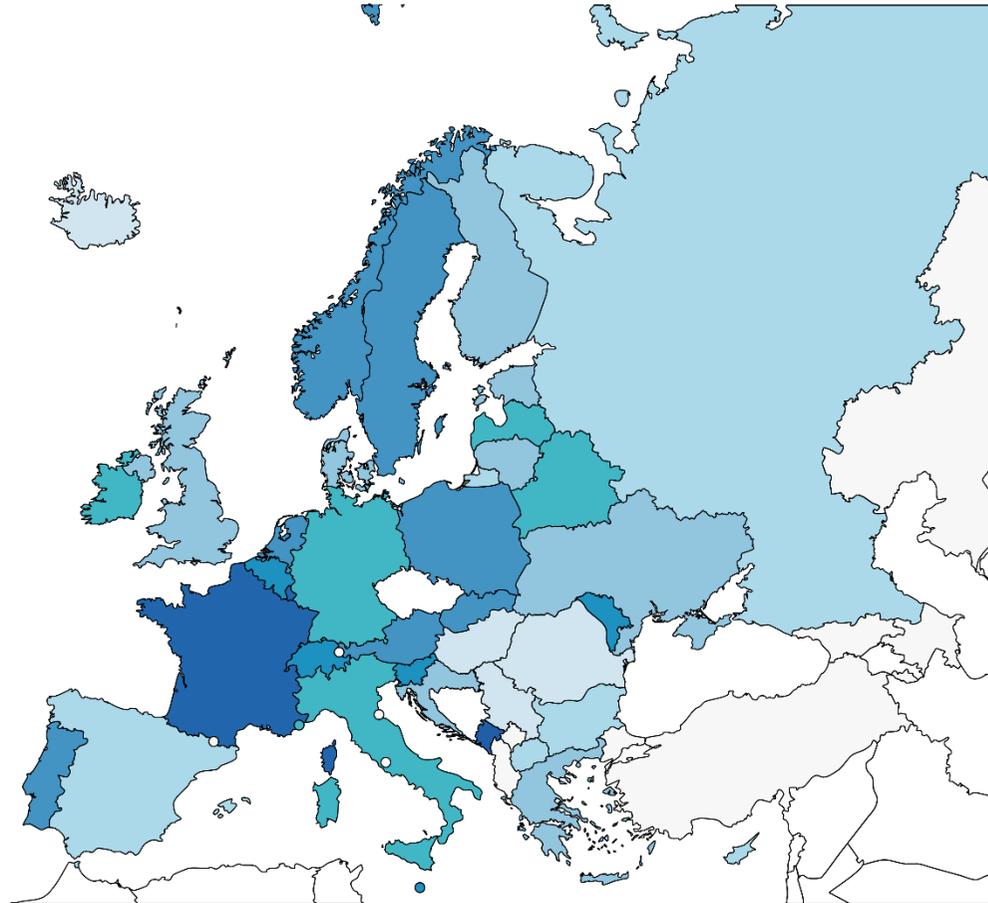
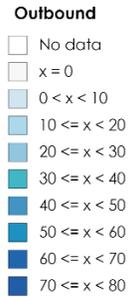


Created with mapchart.net ©

- Inbound**
- No data
 - $x = 0$
 - $0 < x < 10$
 - $10 \leq x < 20$
 - $20 \leq x < 30$
 - $30 \leq x < 40$

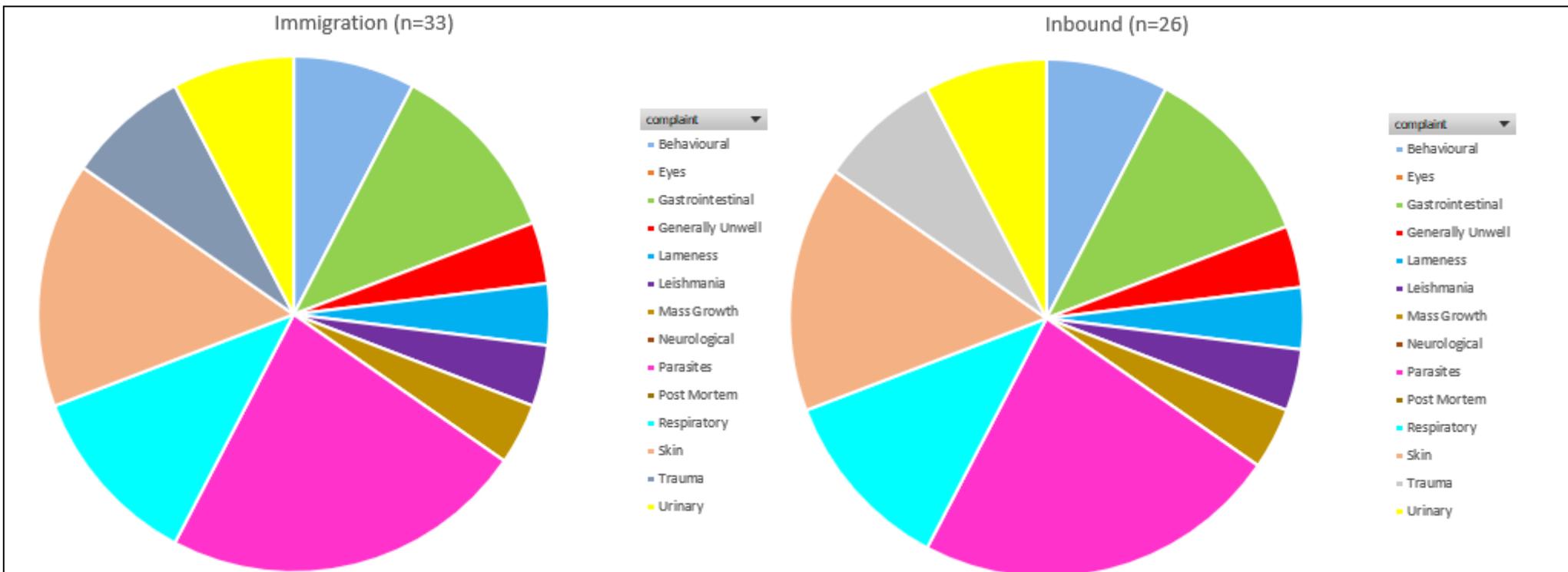


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Types of Health and Behavioural Issues

Out of the 1300 consults identified that involved travel, 25% (330/1300) were classified as a consult involving a presenting complaint as opposed to a health check, vaccination, or travel consult. Of the presenting complaint consults, 19% (63/330) had some indication from the vet that the complaint was related to travel, and 94% (59/63) were consults involving either immigration or inbound travel. These consults were categorized according to the type of complaint and further investigation and analysis would be necessary to determine if there are any patterns between the countries and the complaint types. Of particular note are the 3 diagnosed cases of leishmaniasis, of which 2 cases were dogs immigrating from Portugal and 1 case was a dog immigrating from Spain.



Concerns may also be raised when notes show that a dog has been brought into the country with kennel cough or a cat has been brought in with flu, raising the question as to whether the screening protocols currently in place are adequate for disease prevention, and whether animals should require a certificate of health in order to enter the UK to protect our own domestic species population.

Unfortunately, the free text information field in the consults we examined was not enough to conclusively determine if the dog was rehomed from abroad. Therefore, aside from being able to analyse the health and behavioral issues in immigration and inbound travel cases above, we cannot specifically analyse the health and behavioural issues in dogs rehomed from abroad alone. This would need to be investigated further in following research, potentially through surveys sent to practicing vets themselves that allows for more information to be collected than through the free text information field in SAVSNET. This is the same reason that the aim of investigating the measures that vets are using when presented with overseas rescue dogs was unable to be investigated as the information provided during consults was not enough.

Limitations of Research Methods

Some limitations were discovered during the initial stages of performing searches based on country names in order to identify consults related to travel, when such names may have double meanings and/or be close to misspellings for commonly used veterinary terms. Examples include where vets were found to have misspelled sprain as Spain, the word hungry was autocorrected to Hungary, and turkey was clearly referencing the food rather than the country. Other instances included breed names that

involved a country such as Netherland Dwarf rabbits and Russian Blue cats. Overall, the prevalence of false positives was 14% (203/1503) which, while higher than preferable, did not overly obstruct data collection and analysis and the method still yielded relevant and accurate results.

Time limits of the research project meant that not all consults could be read and therefore only a sample could be classified. Furthermore, in instances where the search terms returned only a few results for a country, the results are much less reliable due to the lack of data, whereas with those countries that returned many consults such as France and Spain, the results are much more reliable.

Provide a short description of your personal experience in undertaking this project

Despite a few challenges starting the project due to technical difficulties with the classification system on the SAVSNET database meaning we had to resort to classifying through Excel, the rest of the project and analysis went smoothly. I developed my Excel skills and enjoyed interpreting the free-text consult data, albeit tricky when it came to misspellings and autocorrect. The research skills I learned through this project will be of great use for my future research projects and in my career.

I intend to continue working with this pilot study and the SAVSNET team to analyse the data and to work towards further projects that enable this to go to publication.

Use the space below for any other relevant information you wish to report on.

This project will act as a pilot study for future students and researchers wishing to investigate the prevalence of overseas rescue dogs in the UK. Future plans should include determining if the import of rescue dogs from abroad is causing an increase in disease risk or possibly introducing exotic diseases into the UK. It should also include investigations in order to specifically determine whether a dog is a rescue dog rehomed from abroad or simply a dog entering the country due to their owner immigrating etc.

Data collected in this project may still undergo further analysis during write up for submission to journals or as a talk for conferences. In the event of this AWF will be supplied with any further write ups or reports. However, this project will mainly be used as pilot data to be presented to the SAVSNET investigators. There is a keen interest in taking the research forward and expanding upon it over future years with more investigators, but the current data is not enough to warrant publication and peer review at this time without much more analysis. The research will be presented as an abstract to upcoming conferences such as BSAVA Congress 2021, where we hope it will be presented as a poster or a talk and thus sharing the information with practicing vets.