## Weekly report

# Fangshu Ye 6/4/2020

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## 1 Pet owners versus no-pet owners

 $\textbf{PetOwner} (1: Yes; \ 0: No): \ Do \ you \ currently \ have \ or \ share \ responsibility \ for \ a \ pet/companion \ animal?$ 

Data size:

T1 T2 T3 821 661 558

## 1.1 Common Questions

#### 1.1.1 Genhealth

How would you describe your general health lately?

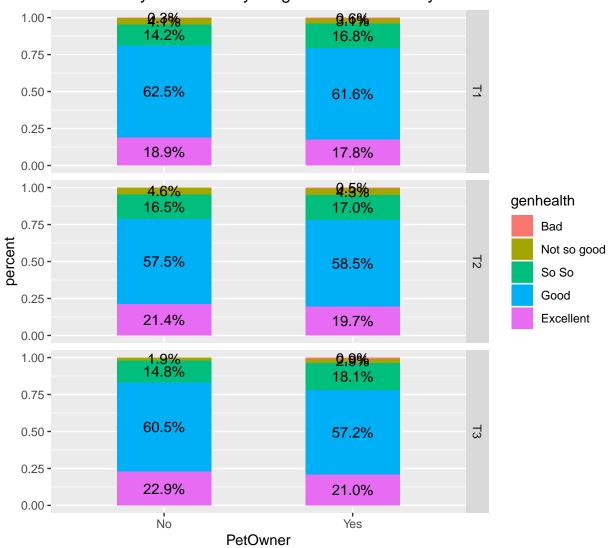


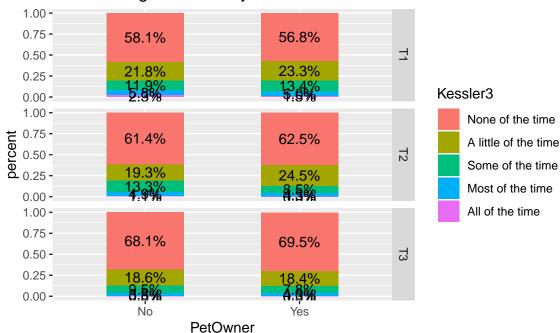
Table 1: Ordinal Logistic Regression: genhealth  $\sim$  PetOwner + time + (1|workerId)

Model	Estimate	Std. Error	pvalue
PetOwnerYes	-0.007	0.370	0.985
timeT2	-0.031	0.209	0.883
timeT3	0.535	0.223	0.016

#### 1.1.2 Kessler 1-10

only show two plots here for example

Kessler3:How often did you feel so nervous that nothing could calm you down?



Kessler4: How often did you feel hopeless?

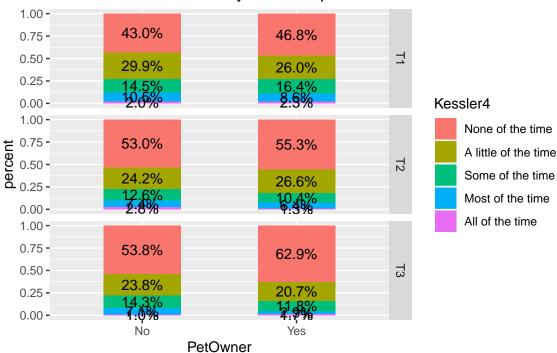


Table 2: Ordinal Logistic Regression: Kessler  $\sim$  PetOwner + time + (1|workerId)

			( 1 /
Model	Estimate	Std. Error	pvalue
Kessler1: how o	ften did y	ou feel tire	d for no good reason?
PetOwnerYes	0.193	0.233	0.407
timeT2	-0.726	0.124	0
timeT3	-0.814	0.132	0
Kessler2: how o	ften did v	ou feel nerv	yous?
PetOwnerYes	-0.101	0.001	0
timeT2	-0.798	0.001	0
timeT3	-1.459	0.001	0
Kessler3: how o	ften did y	ou feel so n	ervous that nothing could calm you down?
PetOwnerYes	-0.145	0.226	0.52
timeT2	-0.291	0.001	0
timeT3	-0.713	0.001	0
Kessler4: how o	ften did y	ou feel hop	eless?
PetOwnerYes	-0.272	0.247	0.27
timeT2	-0.576	0.130	0
timeT3	-0.842	0.143	0
Kessler5: how o	ften did y	ou feel rest	less or fidgety?
PetOwnerYes	0.491	0.212	0.02
timeT2	-0.576	0.118	0
timeT3	-0.929	0.129	0
Kessler6: how o	ften did y	ou feel so r	estless that you could not sit still?
PetOwnerYes	-0.127	0.000	0
timeT2	-0.646	0.000	0
timeT3	-0.756	0.000	0
Kessler7: how o	ften did y	ou feel dep	ressed?
PetOwnerYes	0.205	0.002	0
timeT2	-0.675	0.002	0
timeT3	-0.757	0.001	0
Kessler8: how o	ften did y	ou feel so d	epressed that nothing could cheer you up?
PetOwnerYes	-0.543	0.000	0
timeT2	-0.561	0.000	0
timeT3	-0.761	0.000	0
Kessler9: how o	ften did y	ou feel that	everything was an effort?
PetOwnerYes	0.377	0.259	0.145
timeT2	-0.361	0.125	0.004
timeT3	-0.521	0.136	0
Kessler10: how	often did	you feel wo	rthless?
PetOwnerYes	-0.139	0.000	0
timeT2	-0.314	0.000	0
timeT3	-0.606	0.000	0

### 1.1.3 Grad 1-7

only show two plots here for example

Gad1:how often have you been bothered by feeling nervous, anxious or on edge?



Gad4: How often have you had trouble relaxing?

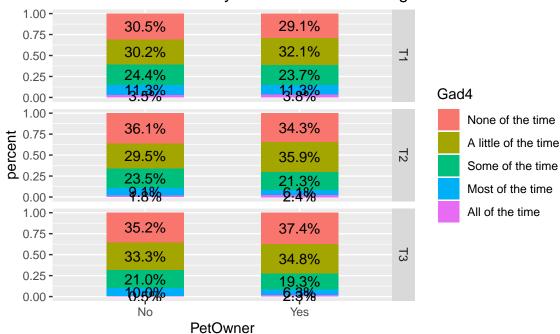
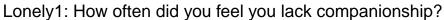


Table 3: Ordinal Logistic Regression: Grad  $\sim$  PetOwner + time + (1|workerId)

Table 3: Ordinal Logistic Regression: Grad $\sim$ PetOwner + time + (1 workerId)						
Model	Estimate	Std. Error	pvalue			
Gad1: how oft	Gad1: how often have you been bothered by feeling nervous, anxious or on edge?					
PetOwnerYes	0.495	0.246	0.045			
timeT2	-0.467	0.122	0			
timeT3	-0.914	0.134	0			
Gad2: how oft	-		hered by not being able to stop or control worrying?			
PetOwnerYes	0.254	0.002	0			
timeT2	-0.535	0.001	0			
timeT3	-0.612	0.001	0			
Gad3: how oft	en have yo	u been botl	hered by worrying too much about different things?			
PetOwnerYes	0.145	0.240	0.545			
timeT2	-0.576	0.123	0			
timeT3	-0.927	0.134	0			
Gad4: how oft	en have yo	u had troul	ble relaxing?			
PetOwnerYes	-0.028	0.242	0.908			
timeT2	-0.599	0.124	0			
timeT3	-0.664	0.131	0			
Gad5: how oft	en have yo	u been so r	restless that it's hard to sit still?			
PetOwnerYes	0.395	0.003	0			
timeT2	-0.263	0.003	0			
timeT3	-0.648	0.003	0			
Gad6: how oft	en have yo	u become e	easily annoyed or irritable?			
PetOwnerYes	0.288	0.244	0.238			
timeT2	-0.132	0.121	0.275			
timeT3	-0.440	0.130	0.001			
Gad7: how oft	en have yo	u been botl	hered by feeling afraid as if something awful might happen?			
PetOwnerYes	0.065	0.241	0.788			
timeT2	-0.635	0.127	0			
timeT3	-1.095	0.141	0			

### 1.1.4 Lonely 1-3



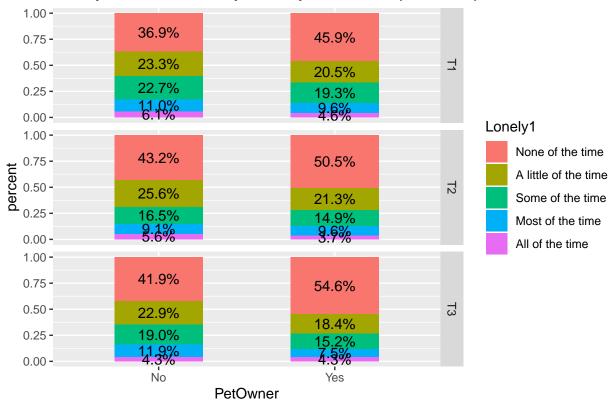


Table 4: Ordinal Logistic Regression: Lonely  $\sim$  PetOwner + time + (1|workerId)

Model	Estimate	Std. Error	pvalue				
Lonely1: how often did you feel you lack companionship?							
PetOwnerYes	-0.339	0.275	0.217				
timeT2	-0.361	0.129	0.005				
timeT3	-0.186	0.139	0.181				
Lonely2: how	often did y	ou feel left	out?				
PetOwnerYes	-0.445	0.270	0.099				
timeT2	-0.119	0.133	0.369				
timeT3	-0.235	0.144	0.103				
Lonely3: how often did you feel isolated from others?							
PetOwnerYes	-0.128	0.081	0.116				
timeT2	-0.557	0.113	0				
timeT3	-0.764	0.120	0				

#### 1.1.5 Risk 1-3

Risk2:How serious do you think COVID-19 would be if you contracted it?

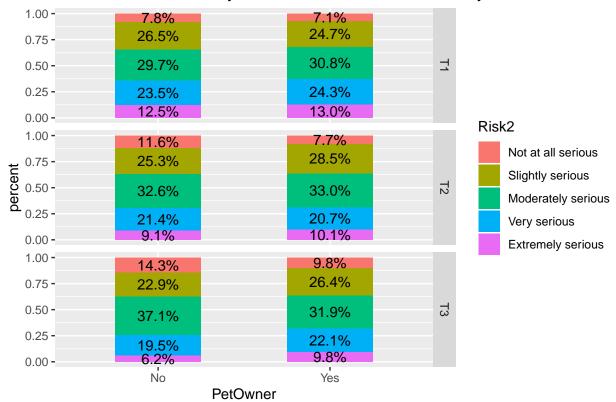


Table 5: Ordinal Logistic Regression: Risk  $\sim$  PetOwner + time + (1|workerId)

Model	Estimate	Std. Error	pvalue			
Risk1:In your opinion, how likely is it that you will contract COVID-19?						
PetOwnerYes	0.408	0.001	0			
timeT2	-0.184	0.001	0			
timeT3	-0.545	0.001	0			
Risk2:How seri	ious do you	u think CO	VID-19 would be if you contracted it?			
PetOwnerYes	0.516	0.247	0.036			
timeT2	-0.450	0.118	0			
timeT3	-0.606	0.126	0			
Risk3:How concerned are you about the COVID-19?						
PetOwnerYes	0.126	0.002	0			
timeT2	-0.879	0.002	0			
timeT3	-1.415	0.002	0			

## Unique Questions for Wave3

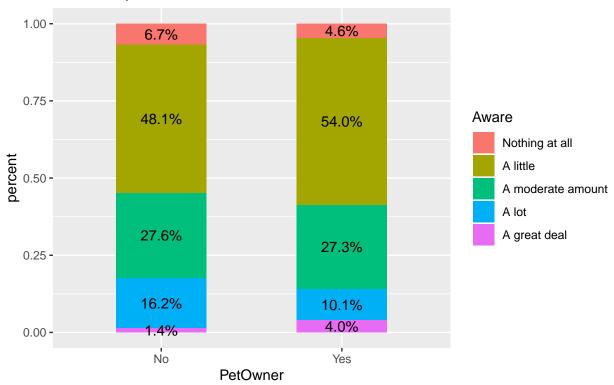
Data Size

No Yes

210 348

### 1.2.1 Aware

How much have you read or heard about on the topic of COVID-19 and animals?

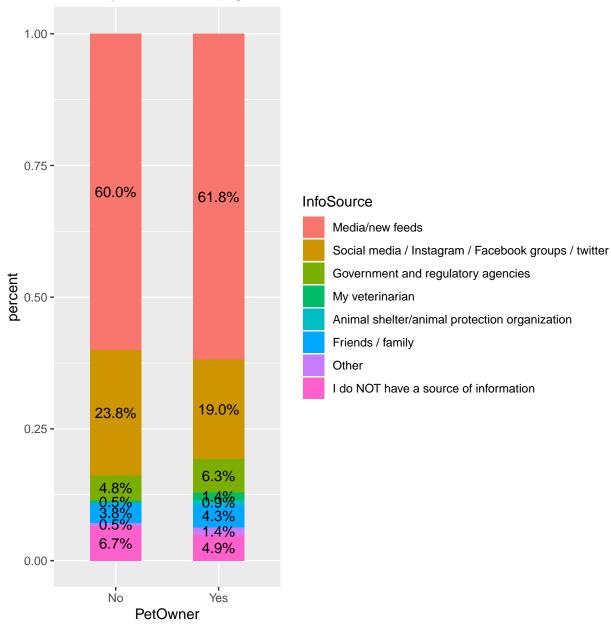


Estimate Std. Error z value Pr(>|z|)

0.166 -0.626 PetOwnerYes -0.104

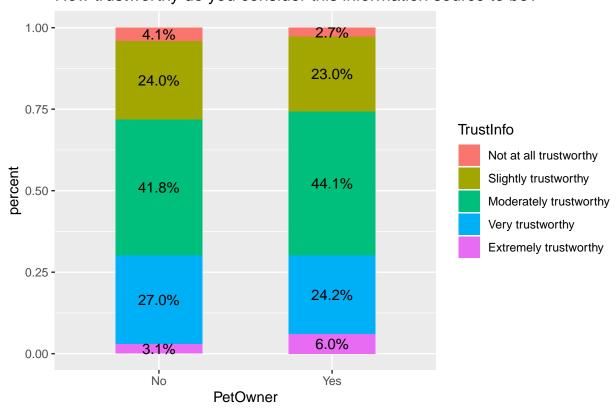
### 1.2.2 InfoSource

## Which of the following options best describes where you are obtaining information about COVID-19 and animals?



	(Intercept)	PetOwnerYes
2	-0.925	-0.256
3	-2.534	0.254
4	-4.844	1.080
5	-12.226	7.951
6	-2.757	0.095
7	-4.842	1.081
8	-2.198	-0.339

## 1.2.3 TrustInfo How trustworthy do you consider this information source to be?



Estimate Std. Error z value Pr(>|z|)PetOwnerYes 0.099 0.166 0.595 0.552

#### 1.2.4 SusceptAnimal 1-7 and Q92 1-9

- SusceptAnimal\_1-7: The question realted to these 7 variables is: Based on your current knowledge, rate the extent to which you think each of the following animals can "catch" COVID-19. There are 7 animals listed in this question.
- Q92\_1-9: The question realted to these 9 variables is the same as the above. There are 9 animals listed in this question.

Therefore, they are the same questions but different animals listed.

## Based on your current knowledge, rate the extent to which you think Ferrets can catch COVID-19.

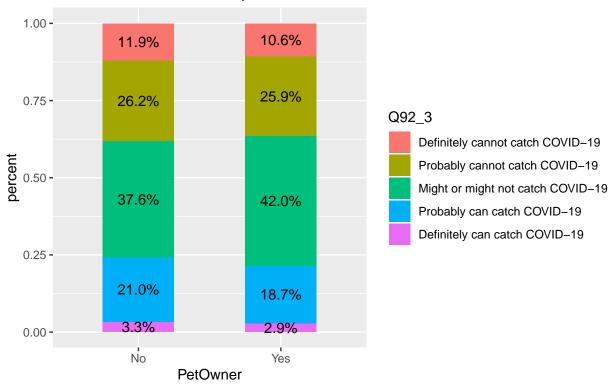


Table 6: The coef of PetOwnerYes in Ordinal Logistic Regression: SusceptAnimal  $\sim$  PetOwner for different animals

Animal	Estimate	Std. Error	pvalue
Tigers	0.440	0.156	0.005
Chimpanzees	0.019	0.160	0.907
Gorillas	0.134	0.159	0.398
Deer	-0.246	0.162	0.128
Lions	0.362	0.157	0.021
Birds	-0.157	0.160	0.324
Bats	0.265	0.159	0.095
Dogs	-0.103	0.156	0.509
Cats	0.205	0.158	0.194
Ferrets	-0.007	0.160	0.966
Rabbits	-0.179	0.159	0.258
Hamsters	-0.232	0.159	0.146
Horses	-0.169	0.159	0.288
Pigs	0.037	0.159	0.816
Cattle	-0.097	0.159	0.54
Chickens	-0.251	0.160	0.117

#### 1.2.5 InfectHumans 1-5

Table 7: The coef of PetOwnerYes in Ordinal Logistic Regression: InfectHumans  $\sim$  PetOwner for different animals

Model	Estimate	Std. Error	pvalue
Cats	-0.017	0.156	0.913
Dogs	-0.069	0.157	0.659
Pigs	-0.330	0.159	0.038
Chickens	-0.392	0.160	0.015
Tigers	0.047	0.157	0.765

#### 1.2.6 HumansInfectAnimal 1-5

Table 8: The coef of PetOwnerYes in Ordinal Logistic Regression: HumansInfectAnimal  $\sim$  PetOwner for different animals

Model	Estimate	Std. Error	pvalue
Cats	0.162	0.156	0.299
Dogs	-0.137	0.156	0.379
Pigs	-0.143	0.159	0.369
Chickens	-0.291	0.160	0.069
Tigers	0.139	0.155	0.37

## 2 Cat owners versus dogs owners

## 2.1 Common Questions

## 2.1.1 Compliance



Model	Estimate	Std. Error	pvalue			
T1: Compliance MostAttachCat		tach 0.228	0.002			
T2: Compliance MostAttachCat		tach 0.259	0.001			
T3: Compliance MostAttachCat		tach 0.258	0.005			
T1+T2+T3: Co	T1+T2+T3: Compliance $\sim$ MostAttach + time + (1 workerId)					
MostAttachCat	-1.283	0.585	0.028			
timeT2	0.823	0.328	0.012			
timeT3	0.979	0.337	0.004			

### 2.1.2 Interact

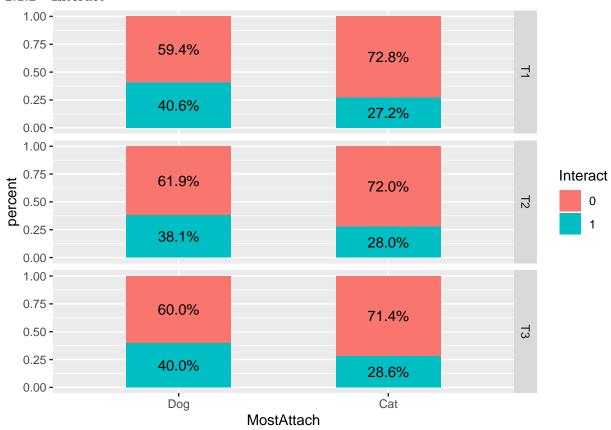


Table 9: Interact  $\sim$  MostAttach + time + (1|workerId)

Model	Estimate	Std. Error	pvalue
MostAttachCat timeT2	-0.993 -0.038	0.200	0.001 0.854
timeT3	0.063	0.201	0.764

# 2.1.3 Concern How concerned are you about your ability

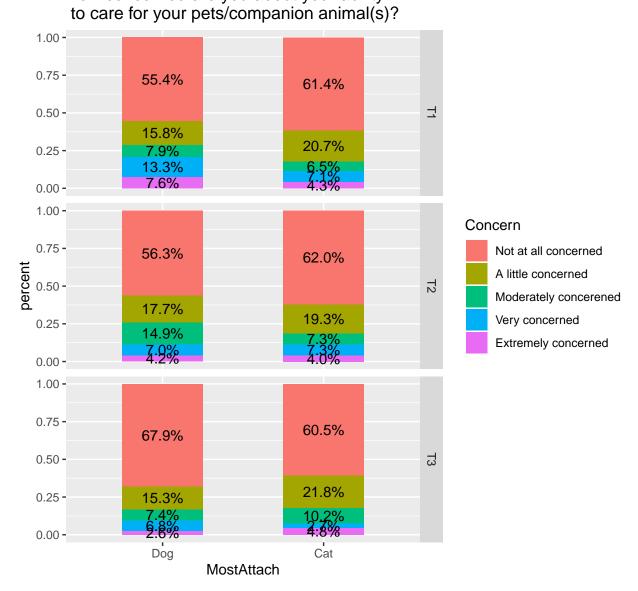


Table 10: Concern  $\sim$  MostAttach + time + (1|workerId)

Model	Estimate	Std. Error	pvalue
MostAttachCat	-0.622	0.001	0
timeT2	-0.023	0.001	0
timeT3	-0.522	0.001	0

### 2.1.4 CCAS 1-13

CCAS2: Having a pet/animal gives me something to care for

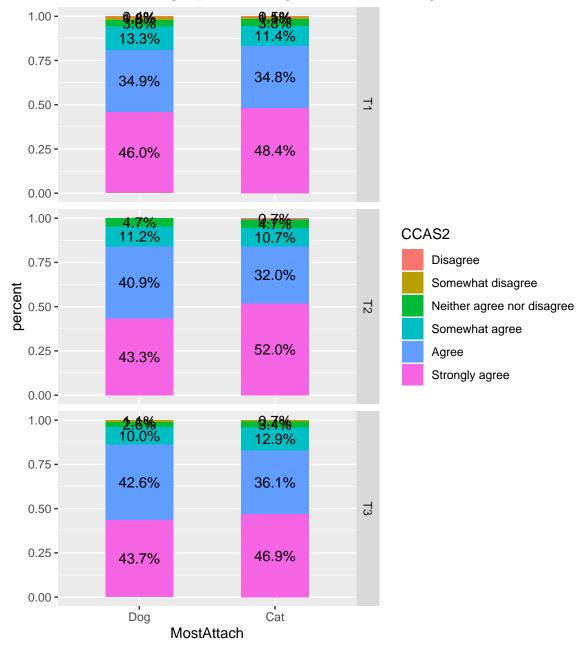


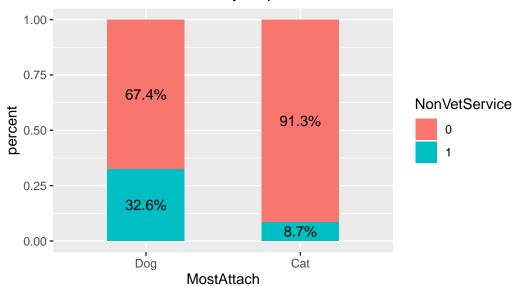
Table 11: CCAS  $\sim MostAttach + time + (1|workerId)$ 

		C. L. E	
Model	Estimate	Std. Error	pvalue
CCAS1			
${\bf MostAttachCat}$	-0.456	0.345	
timeT2	0.413	0.183	0.024
timeT3	0.426	0.190	0.025
CCAS2			
MostAttachCat	0.369	0.001	0
timeT2	0.170	0.001	
timeT3	0.074	0.001	0
CCAS3			
MostAttachCat	-0.391	0.325	0.228
timeT2	-0.014	0.169	
timeT3	0.137	0.175	0.434
CCAS4	0.101	0.1.0	0.101
MostAttachCat	0.184	0.322	0.567
timeT2	-0.038	0.322 $0.168$	
time 12 $time T3$	-0.038 $0.175$	0.108 $0.176$	
	0.110	0.170	0.913
CCAS5	0.050	0.005	0.050
MostAttachCat	-0.250	0.285	
timeT2	0.252	0.146	
timeT3	0.535	0.149	0
CCAS6			
MostAttachCat	-1.552	0.308	
timeT2	0.131	0.148	0.376
timeT3	0.562	0.156	0
CCAS7			
MostAttachCat	-0.264	0.292	0.366
timeT2	0.016	0.165	0.922
timeT3	-0.047	0.170	0.783
CCAS8			
MostAttachCat	0.419	0.356	0.24
timeT2	0.107	0.177	
timeT3	0.310	0.184	
CCAS9	3.010	0.101	0.002
MostAttachCat	-3.839	0.941	0
		0.241	
timeT2 $ timeT3$	-0.013 $0.275$	$0.017 \\ 0.142$	$0.467 \\ 0.053$
	0.273	0.142	0.055
CCAS10	0 51 1	0.015	0.46=
MostAttachCat	0.514	0.346	0.137
timeT2	0.177	0.177	
timeT3	0.159	0.183	0.383
CCAS11			
MostAttachCat	0.395	0.328	0.228
timeT2	0.336	0.002	0
timeT3	0.202	0.002	0
CCAS12			
MostAttachCat	-0.292	0.332	0.38
timeT2	0.182	0.170	0.285
timeT3	0.284	0.176	0.107
CCAS13			
MostAttachCat	-0.198	0.274	0.472
timeT2	0.127	0.274 $0.158$	0.472 $0.422$
time 12 $time T3$	0.127 $0.213$	0.158 $0.165$	0.422 $0.198$
ише <b>т</b> 9	0.213	0.100	0.198

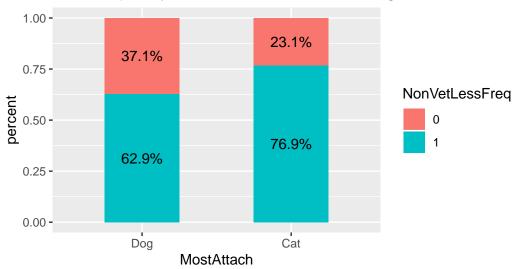
## 2.2 Unique Questions for Wave2

### 2.2.1 NonVetService and NonVetLessFreq

In the past 12 months have you used an animal care service that does NOT normally require a veterinarian?



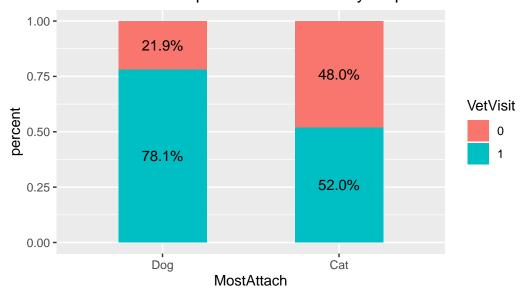
Since the COVID-19 outbreak began, have you used any of these non-veterinary services less frequently than before the outbreak began?



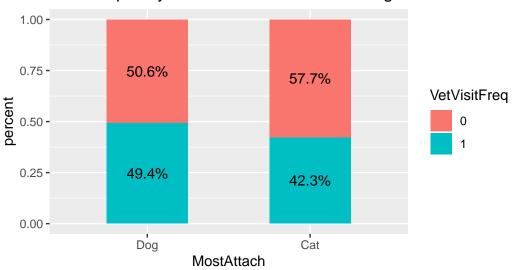
Model	Estimate	Std. Error	pvalue		
NonVetService ~ MostAttach					
MostAttachCat	-1.627	0.325	0		
$NonVetLessFreq \sim MostAttach$					
MostAttachCat	0.678	0.703	0.335		

### 2.2.2 VetVisit and VetVisitFreq

## In the past 12 months, have you visited a veterinarian for preventative care for your pet?



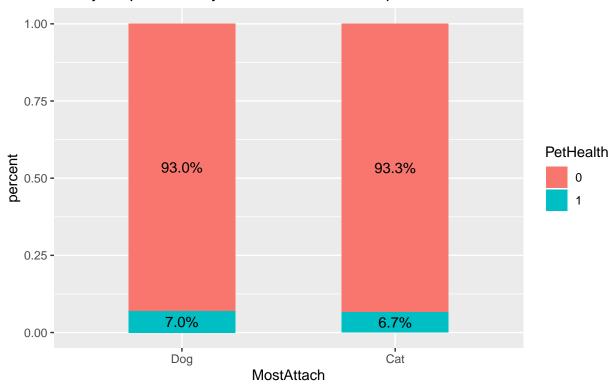
Since the COVID-19 outbreak began, have you used these preventative veterinary services less frequently than before the outbreak began?



Model	Estimate	Std. Error	pvalue		
$VetVisit \sim MostAttach$					
MostAttachCat	-1.194	0.232	0		
$VetVisitFreq \sim MostAttach$					
MostAttachCat	-0.286	0.276	0.3		

### 2.2.3 PetHealth

Thinking about the time since the COVID-19 outbreak began, has your pet had any health issues that required a veterinarian?

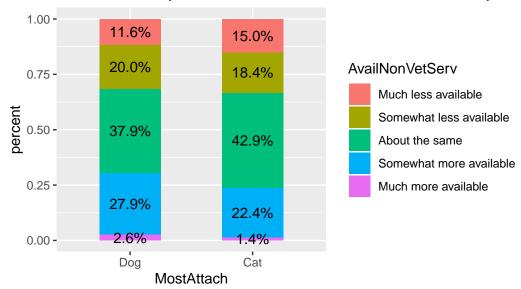


Estimate Std. Error z value Pr(>|z|)
(Intercept) -2.59026717 0.2677058 -9.675798 3.820992e-22
MostAttachCat -0.04879016 0.4228576 -0.115382 9.081423e-01

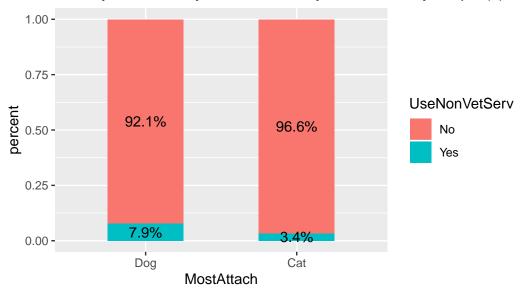
## 2.3 Unique Questions for Wave3

### 2.3.1 AvailNonVetServ and UseNonVetServ

## Compared to two weeks ago, would you say non-veterinary services are more or less available today?



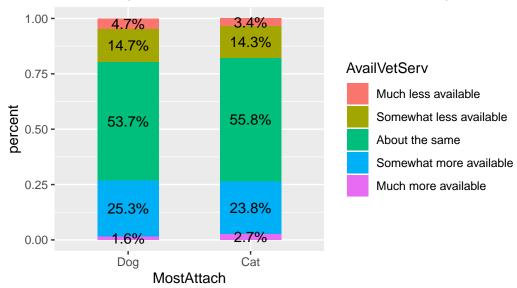
## In the last two weeks, have you used any non-veterinary services for your pet(s)?



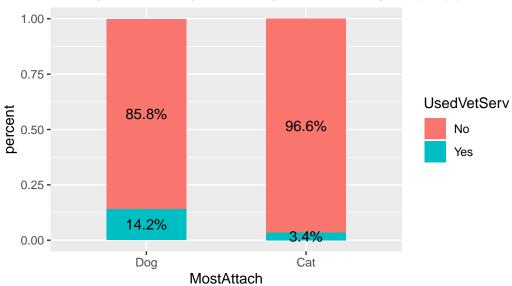
Model	Estimate	Std. Error	pvalue	
AvailNonVetServ ~ MostAttach				
MostAttachCat	· · · · ·	0.199	0.255	
$UseNonVetServ \sim MostAttach$				
MostAttachCat	-0.890	0.529	0.092	

### 2.3.2 AvailVetServ and UsedVetServ

## Compared to two weeks ago, would you say veterinary services are more or less available today?



## In the last two weeks, have you used any veterinary services for your pet(s)?



Model	Estimate	Std. Error	pvalue	
AvailVetServ ~ MostAttach				
MostAttachCat		0.21	0.788	
UsedVetServ ~ MostAttach				
MostAttachCat	-1.548	0.50	0.002	