

Supplementary tables

Supplementary table 1: The variables available for inclusion in the logistic regression and Cox proportional hazards models investigating factors associated with rehoming and time until rehoming. Data from 791 horses available for rehoming from an equine rehoming charity between 1st January 2013 and 1st January 2014.

Level	Variable	Description
Horse		
	Age	Continuous variable of horse age
	Sex	0= Male (including geldings, colts and stallions) and 1= female (including fillies and mares)
	Size 1	Pony <148cm, Cob 148-155 cm and Horse >155cm
	Size 2	0=Pony <148cm and 1=Horse >148cm
	Breed type	The stated breed or type of horse. Sports horse (1) including British Riding Pony, Irish Draft, Irish Sports Horse, Cleveland Bay; Cob type (2), horses listed as cob or cob cross only; Native (3) including Dell, Dartmoor, Connemara, Shetland, Welsh breeds; Part bred (4) any horse with more than one breed listed; Thoroughbred (5); Warmblood (6); Foreign and other (7) any horse not fitting into one of the previous breed categories including Arabs, Draught horses, American breeds, Standardbreds and horses with no breed listed.
	Companion only	Whether the horse is available as a companion only (no/yes)
	Raced	Whether the horse had been raced or was an ex-racehorse (no/yes)
	With tack and rugs	Whether the horse came with tack and rugs (no/yes)
	Vaccinated	Whether the horse was vaccinated (no/yes)
	Teeth done	Whether a date was listed for the last dental treatment received (no/yes)
	Workload	The highest level of work described for the horse. Daily work (1) horse was able to be in daily work, included hacking and schooling, Light work (2) horse was only able to be in light work, some hacking, No limitation (3) horse was able to be trained and competed at affiliated level, Not ridden (4) horse was unable to be ridden, Unaffiliated competition (5) horse was able to be trained and competed at unaffiliated level, Unbroken (6) horse had not been trained to be ridden
	Temperament	The temperament of the horse; Forward (1), Quiet (2), Novice Ride (3), Other (4), Not stated (5)
	Veterinary inspection allowed	Whether the current owner would allow a veterinary inspection of the horse (0=no, 1= yes)
Home		
	Type	Type of rehoming. 1= permanent loan, 2= permanent rehome with ownership signed, 3= horse available to share, 4= temporary loan of a stated time period
	Type 1	Type of rehoming as a binary. 0= Rehome with no change of ownership, 1=Permanent rehome with change of ownership
	Restricted grazing	Whether the horse required restricted grazing, binary (0/1)

Stabled	Whether the horse required stabling. 0= no, 1 = all year, 2= winter only
Welfare inspection of the property	Whether the charity was to be involved in a welfare inspection of the prospective owner's property (0=no, 1=depends, 2=yes)
Rider	
Rider experience	Experience level of the new rider (1= advanced, 2= intermediate, 3=novice, 4= beginner)
Rider weight	The amount of weight the horse was able to carry when ridden (in kilograms; 1= light (up to 61kg), 2 = medium (between 61kg and 80 kg), 3=weight carrier (81kg and above)
Location	
Region	Six geographic regions in the United Kingdom; 1= Midlands, 2= East of England, 3= South of England, 4= North of England, 5= Scotland, 6=Ireland, Wales and other
Distance from the current owner	Combined categories as offered on the charity's website (1=<50 miles, 2=60 or 80 miles, 3=100 miles, 4=150 or 200 miles, 5=nationwide)
Owner reasons for rehoming	
Time	Described as 'Insufficient time to look after it' (0=no, 1=yes)
Money	Described as 'Can no longer afford to keep it' (0=no, 1=yes)
Family	Described as 'Change in family circumstances, divorce/separation, birth of new child, family bereavement' (0=no, 1=yes)
Health	Described as 'Personal health problems' (0=no, 1=yes)
Behaviour	Described as 'Horse behavioural problems' (0=no, 1=yes)
Other ^a	Any other reason listed for rehoming the horse (0=no, 1=yes)
Other variables	
Donation to the charity required on rehoming	Owners could request a donation for the charity. (1) less than £100, (2) £100 to £249, (3) £250 to £499, or (3) greater than £500.

^a Other reasons were defined as: i) owner giving-up, retiring, relocating, or having no rider, ii) having nowhere to keep the horse, iii) unsuitability of the owner or horse, iv) horse health, v) horse size, vi) horse numbers and other reasons.

Supplementary Table 2: Unvariable logistic regression analysis of factors associated with rehoming horses listed with an equine rehoming charity (n=755) and considered in the final multivariable logistic regression model (P<0.25). Data from 791* horses available for rehoming between 1st January 2013 and 1st January 2014.

Variable	Level	Rehomed	Total	Odds Ratio	95% Confidence interval	Wald P-value	Likelihood Ratio Test P-value
Region n=755	Mid-England	80	163	1			0.01
	East England	72	114	1.78	1.09 - 2.9	0.02	
	South England	165	293	1.34	0.91 - 1.96	0.14	
	North England	59	110	1.20	0.74 - 1.95	0.46	
	Scotland	16	28	1.38	0.62 - 3.11	0.43	
	Ireland, Wales and other	18	47	0.64	0.33 - 1.25	0.19	
	Radius from current owner n=754	<50 miles	39	89	1		
60-80 miles		86	165	1.4	0.83 - 2.34	0.21	
100 miles		76	133	1.71	0.99 - 2.94	0.05	
150-200 miles		4	17	0.39	0.12 - 1.3	0.13	
National		205	350	1.81	1.13 - 2.90	0.01	
Type of rehome n=755	Permanent rehome	271	440	1			0.03
	Permanent loan	108	235	0.53	0.38 - 0.73	<0.001	
	Sharer	3	17	0.13	0.04 - 0.47	0.002	
	Temporary loan	28	63	0.50	0.29 - 0.85	0.01	
Level of rider n=503	Advanced	30	65	1			0.01
	Intermediate	198	325	1.82	1.06 - 3.11	0.03	
	Novice	53	93	1.55	0.82 - 2.92	0.18	
	Beginner	13	20	2.17	0.77 - 6.13	0.15	
Companion n=755	No	371	655	1			0.001
	Yes	39	100	0.49	0.32 - 0.75	0.001	
Workload n=755	Daily work	35	56	1			0.03
	Light work	50	91	0.73	0.37 - 1.45	0.37	
	No limitation	38	81	0.53	0.26 - 1.06	0.07	
	Non-competitive use	63	107	0.86	0.44 - 1.67	0.65	

	Not ridden	82	172	0.55	0.29 - 1.01	0.06
	Unaffiliated competition	104	166	1.01	0.54 - 1.88	0.98
	Unbroken	38	82	0.52	0.26 - 1.04	0.06
Vaccinated	No	101	206			0.08
n=755	Yes	309	549	1.34	0.97 - 1.85	0.08
Home suitability check n=755	No	44	91	1		0.14
n=755	Depends	214	370	1.47	0.93 - 2.32	0.10
	Yes	152	294	1.14	0.71 - 1.83	0.58
Veterinary inspection allowed	No	5	14	1		0.16
n=755	Yes	405	741	2.17	0.72 - 6.54	0.17

*Horses that died or were euthanased prior to rehoming were not included in this analysis (n=36)

Supplementary Table 3: Univariable Cox proportional hazards survival analysis for the time until rehoming for horses listed with an equine rehoming charity and considered in the final multivariable logistic regression model ($P < 0.25$). Data from 791* horses available for rehoming between 1st January 2013 and 1st January 2014.

Variable	Level	Rehomed	Total	Hazard ratio	95% confidence interval	Wald P-value	Likelihood Ratio Test P-value
Region (n=508)	Mid England	33	116	1			0.10
	East England	22	64	1.31	0.76 - 2.24	0.33	
	Ireland, Wales and other	5	34	0.49	0.19 - 1.25	0.13	
	South England	70	198	1.35	0.89 - 2.04	0.16	
	North England	24	75	1.17	0.69 - 1.98	0.55	
	Scotland	9	21	1.87	0.89 - 3.91	0.10	
Radius from current home (n=507)	Less than 50 miles	11	61	1			0.004
	60 to 80 miles	27	106	1.48	0.73 - 2.97	0.28	
	100 miles	32	89	2.32	1.17 - 4.60	0.02	
	150 to 200 miles	2	15	0.73	0.16 - 3.30	0.69	
	Nationwide	91	236	2.39	1.28 - 4.47	0.01	
Type of rehome (n=508)	Permanent Rehome	110	279	1			<0.001
	Permanent loan	41	168	0.54	0.37 - 0.77	0.001	
	Share	1	15	0.14	0.02 - 0.98	0.05	
	Temporary loan	11	46	0.54	0.29 - 1.00	0.05	
Behaviour as a reason for rehoming (n=508)	No	157	477	1			0.11
	Yes	6	31	0.54	0.24 - 1.23	0.14	
Size (n=508)	Cob	17	63	1			0.03
	Horse	101	271	1.47	0.88 - 2.47	0.14	
	Pony	45	174	0.96	0.55 - 1.68	0.90	
Age (n=508)	<5 years	10	53	1			0.02
	5 to 10 years	40	139	1.60	0.80 - 3.20	0.19	
	11 to 17 years	77	193	2.34	1.21 - 4.53	0.01	
	>17 years	36	123	1.60	0.80 - 3.23	0.19	

Breed (n=508)	Sporthorse	22	54	1			0.06
	Cob	19	45	1.20	0.62 - 2.31	0.59	
	Foreign or other	15	43	1.35	0.69 - 2.66	0.38	
	Native	26	120	0.57	0.30 - 1.07	0.08	
	Partbred	24	75	0.91	0.47 - 1.73	0.76	
	Thoroughbred	31	100	0.84	0.45 - 1.56	0.58	
	Warmblood	26	71	1.08	0.57 - 2.04	0.81	
Workload (n=508)	Daily work	15	36	1			0.04
	Light work only	21	62	0.79	0.41 - 1.54	0.50	
	No limitation	20	63	0.74	0.38 - 1.44	0.37	
	Non-competitive use	25	69	0.85	0.45 - 1.62	0.63	
	Not ridden	28	118	0.52	0.28 - 0.98	0.04	
	Unaffiliated competition	43	105	1.00	0.56 - 1.81	0.99	
	Unbroken	11	55	0.43	0.20 - 0.95	0.04	
Companion only (n=508)	No	153	437	1			0.001
	Yes	10	71	0.35	0.19 - 0.67	0.001	
Teeth done in last year (n=508)	No	79	267	1			0.22
	Yes	84	241	1.21	0.89 - 1.65	0.22	
Vaccinated (n=508)	No	39	144	1			0.16
	Yes	124	364	1.28	0.90 - 1.84	0.17	
Tack and rugs provided with horse (n=507)	No	62	219	1			0.13
	Yes	101	289	1.28	0.93 - 1.76	0.13	
Home suitability check (n=508)	Depends	84	240	1			0.11
	No	13	60	1.79	1.00 - 3.22	0.05	
	Yes	66	208	1.57	0.86 - 2.84	0.14	
Previous health conditions (n=506)	No	113	374	1			0.13
	Yes	50	132	1.30	0.93 - 1.82	0.12	

Donation amount (n=450)	Less than £100	82	286				0.001
	£100 to £249	31	94	1.18	0.78 - 1.78	0.44	
	£250 to £499	34	64	2.33	1.56 - 3.48	0.001	
	Greater than £500	3	6	2.01	0.63 - 6.35	0.24	

*Horses that died or were euthanased prior to rehoming or were rehomed outside of the charity (n=283) were not included in this analysis