

Supplementary Table S1—Statistical analysis results examining the relationship between demographic and experiential characteristics among large animal veterinarians in the United States surveyed from June 10, 2019, through October 31, 2019 and knowledge of transmission of select livestock abortion-associated zoonotic disease.

Variable	Brucellosis			Q Fever			Salmonellosis			Leptospirosis			Campylobacteriosis		
	Score Multiplier*	Lower CI†	Upper CI	Score Multiplier	Lower CI	Upper CI	Score Multiplier	Lower CI	Upper CI	Score Multiplier	Lower CI	Upper CI	Score Multiplier	Lower CI	Upper CI
Male	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-
Female	0.974	0.893	1.062	1.124	1.017	1.242	1.000	0.946	1.057	0.999	0.944	1.056	0.978	0.921	1.038
Hours comparison 1															
Hours per workweek 0-19	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-
Hours per workweek 20-39	1.014	0.829	1.242	0.929	0.738	1.169	1.011	0.891	1.147	0.982	0.859	1.121	0.96	0.834	1.106
Hours per workweek ≥40	1.022	0.861	1.213	0.869	0.717	1.054	1.012	0.909	1.126	1.015	0.907	1.135	0.986	0.875	1.11
Hours comparison 2															
Hours per workweek 20-39	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-
Hours per workweek ≥40	1.007	0.881	1.151	0.936	0.8	1.095	1.001	0.921	1.088	1.034	0.946	1.13	1.027	0.934	1.129
Contact comparison 1															
Contact with livestock <25%	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-
Contact with livestock 25%	0.834	0.673	1.033	0.795	0.617	1.025	0.890	0.777	1.020	0.885	0.770	1.017	0.929	0.799	1.080
Contact with livestock 50%	0.924	0.763	1.119	0.857	0.682	1.076	0.950	0.840	1.074	0.951	0.839	1.079	0.939	0.817	1.078
Contact with livestock 75%	1.033	0.834	1.280	1.081	0.844	1.385	1.059	0.923	1.215	1.035	0.898	1.192	1.088	0.934	1.268
Contact with livestock >75%	1.022	0.866	1.205	0.958	0.789	1.164	1.026	0.923	1.142	1.012	0.908	1.129	1.023	0.908	1.153
Contact comparison 2															
Contact with livestock 25%	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-
Contact with livestock 50%	1.108	0.901	1.364	1.077	0.839	1.383	1.067	0.936	1.216	1.075	0.940	1.229	1.011	0.874	1.169
Contact with livestock 75%	1.239	0.986	1.558	1.360	1.040	1.778	1.189	1.029	1.374	1.169	1.007	1.357	1.172	0.999	1.375
Contact with livestock >75%	1.226	1.020	1.472	1.205	0.967	1.501	1.153	1.027	1.293	1.144	1.016	1.287	1.102	0.970	1.252
Contact comparison 3															
Contact with livestock 50%	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-
Contact with livestock 75%	1.118	0.908	1.376	1.262	0.990	1.610	1.115	0.977	1.272	1.088	0.949	1.246	1.159	1.000	1.344
Contact with livestock >75%	1.106	0.946	1.292	1.118	0.926	1.351	1.080	0.978	1.193	1.064	0.961	1.178	1.090	0.975	1.220
Contact comparison 4															
Contact with livestock 75%	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-
Contact with livestock >75%	0.989	0.823	1.188	0.886	0.717	1.095	0.969	0.862	1.090	0.978	0.867	1.104	0.941	0.826	1.071
Classification comparison 1															
Practice classified as mixed	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-
Practice classified as food/large animal	1.040	0.922	1.173	1.069	0.922	1.238	1.048	0.970	1.133	0.978	0.902	1.060	1.040	0.953	1.136
Practice classified as specialty	0.979	0.746	1.286	1.122	0.818	1.539	1.008	0.846	1.200	1.013	0.850	1.209	1.000	0.822	1.218
Practice classified as industry	0.725	0.395	1.331	0.979	0.514	1.867	0.995	0.710	1.393	0.914	0.640	1.304	1.000	0.686	1.459
Practice classified as small animal	1.813	0.772	4.258	2.040	0.757	5.500	1.047	0.506	2.164	1.142	0.564	2.311	1.177	0.545	2.541
Practice classified as other	0.888	0.697	1.131	1.013	0.765	1.342	0.984	0.847	1.143	0.955	0.819	1.113	1.055	0.896	1.242
Classification comparison 2															
Practice classified as food/large animal	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-
Practice classified as specialty	0.942	0.718	1.235	1.050	0.767	1.438	0.961	0.808	1.143	1.036	0.869	1.236	0.962	0.791	1.169
Practice classified as industry	0.697	0.380	1.279	0.916	0.481	1.746	0.949	0.678	1.328	0.934	0.655	1.333	0.962	0.660	1.402
Practice classified as small animal	1.744	0.743	4.093	1.909	0.709	5.144	0.999	0.483	2.064	1.168	0.577	2.363	1.131	0.524	2.442

Practice classified as other	0.854	0.671	1.086	0.948	0.717	1.253	0.938	0.809	1.089	0.976	0.838	1.138	1.014	0.862	1.193
Classification comparison 3															
Practice classified as specialty	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref-	-	-
Practice classified as industry	0.741	0.385	1.424	0.873	0.432	1.762	0.987	0.681	1.430	0.901	0.611	1.330	1.000	0.660	1.516
Practice classified as small animal	1.852	0.762	4.499	1.818	0.649	5.092	1.039	0.494	2.183	1.127	0.547	2.319	1.176	0.534	2.591
Practice classified as other	0.907	0.644	1.278	0.903	0.608	1.340	0.976	0.787	1.211	0.942	0.757	1.173	1.055	0.830	1.340
Classification comparison 4															
Practice classified as industry	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref-	-	-
Practice classified as small animal	2.500	0.884	7.074	2.083	0.644	6.737	1.053	0.475	2.335	1.250	0.570	2.742	1.176	0.501	2.760
Practice classified as other	1.224	0.645	2.325	1.034	0.520	2.057	0.989	0.690	1.418	1.045	0.715	1.527	1.055	0.706	1.576
Classification comparison 5															
Practice classified as small animal	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref-	-	-
Practice classified as other	0.490	0.203	1.179	0.497	0.179	1.377	0.940	0.450	1.964	0.836	0.408	1.712	0.897	0.410	1.959
Type comparison 1															
Practice type non-mobile clinic	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref-	-	-
Practice type mixed mobile/clinic	0.942	0.763	1.163	0.843	0.661	1.075	0.953	0.834	1.089	0.979	0.852	1.124	0.881	0.762	1.019
Practice type mobile only clinic	1.012	0.814	1.258	0.945	0.735	1.216	1.010	0.880	1.159	0.971	0.841	1.122	0.943	0.811	1.096
Practice type stationed at farm	0.944	0.699	1.275	0.834	0.583	1.193	0.867	0.713	1.054	0.946	0.776	1.153	0.814	0.656	1.011
Type comparison 2															
Practice type mixed mobile/clinic	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref-	-	-
Practice type mobile only clinic	1.074	0.958	1.204	1.121	0.978	1.286	1.060	0.986	1.139	0.993	0.920	1.071	1.070	0.986	1.161
Practice type stationed at farm	1.002	0.791	1.270	0.989	0.741	1.321	0.910	0.778	1.063	0.967	0.827	1.130	0.924	0.775	1.101
Type comparison 3															
Practice type mobile only clinic	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref-	-	-
Practice type stationed at farm	0.933	0.732	1.190	0.882	0.656	1.186	0.858	0.732	1.007	0.974	0.829	1.144	0.864	0.722	1.034
Species comparison 1															
Primary species beef cattle	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref-	-	-
Primary species dairy cattle	1.043	0.888	1.226	1.075	0.891	1.297	1.053	0.952	1.165	0.984	0.887	1.092	1.037	0.926	1.162
Primary species small ruminant	1.131	0.907	1.411	1.276	0.995	1.635	1.009	0.873	1.166	0.992	0.856	1.150	0.990	0.841	1.166
Primary species swine	0.972	0.736	1.285	0.883	0.629	1.241	1.069	0.904	1.264	0.894	0.744	1.075	1.118	0.929	1.344
Primary species equine	1.025	0.841	1.249	0.871	0.682	1.114	0.977	0.861	1.107	0.943	0.828	1.073	0.958	0.831	1.104
Primary species companion animal	1.040	0.850	1.272	0.962	0.754	1.226	0.997	0.877	1.133	0.977	0.857	1.114	0.954	0.825	1.104
Primary species other	1.058	0.664	1.687	1.143	0.674	1.937	0.778	0.555	1.090	0.928	0.676	1.272	0.948	0.671	1.338
Species comparison 2															
Primary species dairy cattle	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref-	-	-
Primary species small ruminant	1.084	0.868	1.355	1.186	0.925	1.522	0.958	0.828	1.107	1.008	0.867	1.171	0.954	0.810	1.125
Primary species swine	0.932	0.704	1.233	0.822	0.584	1.155	1.015	0.858	1.201	0.908	0.755	1.093	1.077	0.895	1.297
Primary species equine	0.983	0.805	1.200	0.810	0.634	1.037	0.927	0.817	1.052	0.958	0.840	1.093	0.924	0.800	1.066
Primary species companion animal	0.997	0.813	1.222	0.894	0.701	1.141	0.946	0.832	1.077	0.993	0.869	1.135	0.920	0.794	1.066
Primary species other	1.014	0.636	1.618	1.063	0.627	1.802	0.738	0.526	1.035	0.942	0.687	1.294	0.914	0.647	1.290
Species comparison 3															
Primary species small ruminant	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref-	-	-
Primary species swine	0.860	0.625	1.181	0.692	0.475	1.010	1.060	0.870	1.292	0.901	0.728	1.115	1.129	0.906	1.406
Primary species equine	0.906	0.706	1.164	0.683	0.509	0.917	0.968	0.822	1.140	0.950	0.803	1.125	0.968	0.804	1.165
Primary species companion animal	0.919	0.713	1.185	0.754	0.562	1.011	0.988	0.837	1.166	0.985	0.831	1.168	0.964	0.798	1.163

Primary species other	0.936	0.573	1.528	0.896	0.516	1.556	0.771	0.541	1.098	0.935	0.670	1.306	0.957	0.665	1.378
Species comparison 4															
Primary species swine	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref-	-	-
Primary species equine	1.054	0.779	1.427	0.987	0.678	1.436	0.913	0.760	1.098	1.055	0.863	1.289	0.857	0.699	1.051
Primary species companion animal	1.070	0.788	1.451	1.089	0.749	1.583	0.932	0.774	1.123	1.093	0.893	1.338	0.854	0.694	1.050
Primary species other	1.088	0.648	1.830	1.294	0.710	2.356	0.727	0.505	1.046	1.038	0.730	1.474	0.848	0.583	1.233
Species comparison 5															
Primary species equine	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref-	-	-
Primary species companion animal	1.014	0.803	1.281	1.103	0.825	1.476	1.021	0.879	1.185	1.037	0.889	1.209	0.996	0.840	1.181
Primary species other	1.032	0.638	1.669	1.311	0.756	2.275	0.796	0.563	1.126	0.984	0.710	1.363	0.989	0.693	1.412
Species comparison 6															
Primary species companion animal	Ref	-	-	Ref	-	-	Ref	-	-	Ref	-	-	Ref-	-	-
Primary species other	1.018	0.628	1.649	1.189	0.686	2.060	0.780	0.551	1.104	0.949	0.685	1.316	0.993	0.695	1.420
	Score Estimate‡	Lower CI	Upper CI	Score Estimate*	Lower CI	Upper CI	Score Estimate*	Lower CI	Upper CI	Score Estimate*	Lower CI	Upper CI	Score Estimate*	Lower CI	Upper CI
Age (y)	1.002	1.000	1.005	1.002	1.000	1.005	0.999	0.997	1.000	0.999	0.997	1.001	0.999	0.997	1.001
Number of clinicians in practice	1.002	0.997	1.008	1.005	0.999	1.011	1.003	1.000	1.006	1.001	0.997	1.004	1.003	0.999	1.007
Years since graduation	1.002	0.999	1.005	0.997	0.993	1.000	0.999	0.997	1.001	0.999	0.998	1.001	1.000	0.998	1.002

*Knowledge score was calculated for each pathogen (out of five possible points) based on selecting correct routes of transmission. A Quasi-Poisson generalized linear model was used to test whether any demographic information collected in the survey was a useful predictor for knowledge score of a given pathogen. Each pathogen knowledge score was analyzed separately. Linear hypothesis tests were used to detect differences in score between categories of each possible predictor for each pathogen score. Score multiplier refers to how well an individual in one demographic group is predicted to measure in knowledge score of a given pathogen in comparison to the referent group (Ref).

‡CI = Confidence interval. Lower and upper bound of the 95% confidence interval for the score multiplier are provided. Comparisons with 95% confidence intervals that do not span one (i.e., predict a unidirectional relationship between compared groups) are bolded.

‡For continuous variables of respondent age (in years), number of other clinicians at the respondent's practice, and years since graduation from veterinary school, the score estimate refers the percent change in knowledge score for each one unit increase in the predictor variable.