
PRELIMINARY RESULTS FOR BRAZIL COVID-19 DATASET

Salomon Wollenstein-Betech, Christos G. Cassandras, Ioannis Ch. Paschalidis, Amanda Batista, Julia Fleck

1 Basic Analytics

	0
N	92662
N_Hosp	84195
N_Death	31788
Female	39658
Male	52979
Race	26525
Schooling	7058
Acute Respiratory Distress Syndrome	22854
Contracted At Hospital	2374
Contact Birds Pigs	744
Fever	67553
Cough	70434
Throat	19587
Dyspnea	64220
Respiratory Discomfort	53370
SpO2 less 95\%	51025
Diarrhea	12502
Vomiting	7010
Other Symptoms	29366
Postpartum	403
Cardiovascular Disease	28978
Hematologic Disease	852
Down Syndrome	238
Liver Chronic Disease	773
Asthma	2544
Diabetes	21990
Neurological Disease	3457
Another Chronic Pneumopathy	3326
Immunosuppression	2745
Renal Chronic Disease	3717
Obesity	3313
Other Risks	22495
Antiviral Use	29747
Hospitalization	84195
ICU	27840
Ventilator	16963
Xray Torax Result	2409
Result Final	0
Evolution	35639
Public Hospital	30867
Region	0

Table 1: Number of observations with a specific observation

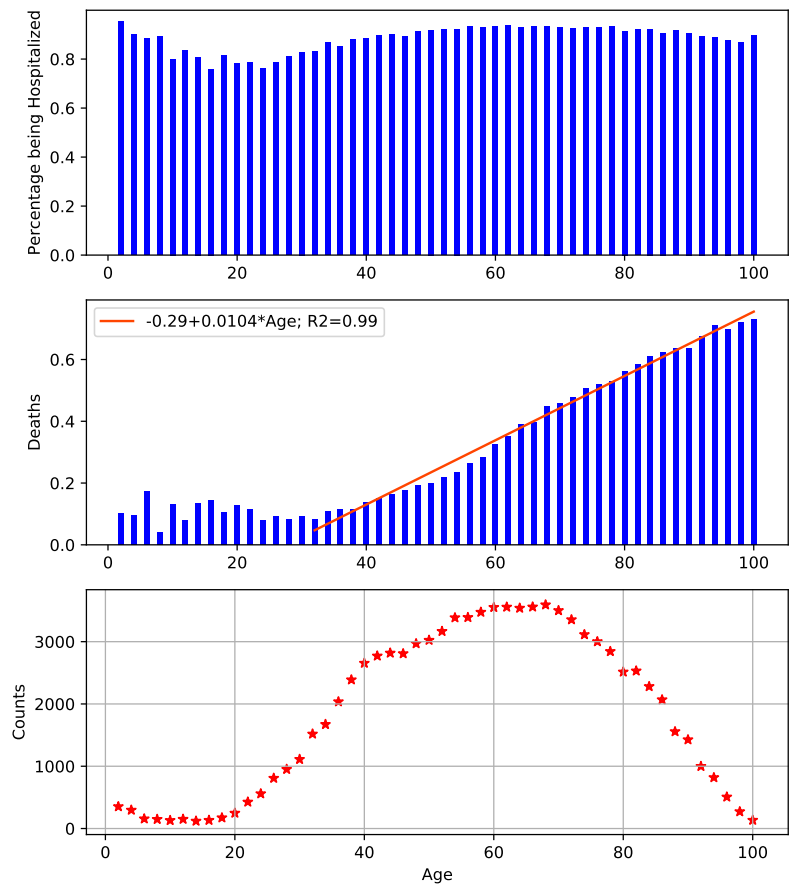


Figure 1: Distribution of hospitalization and deaths by age group

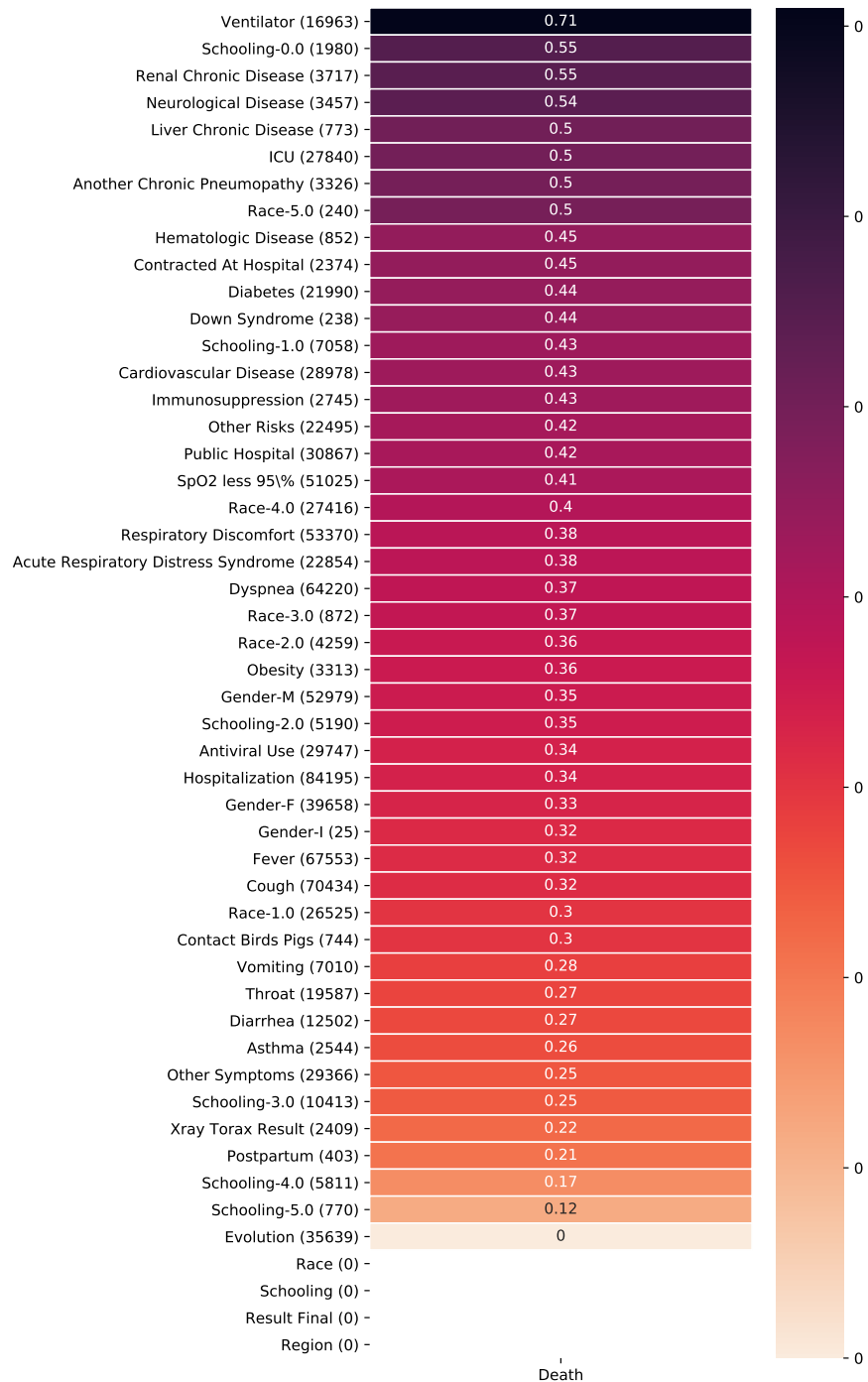


Figure 2: Share of hospitalized and deaths patients given characteristics

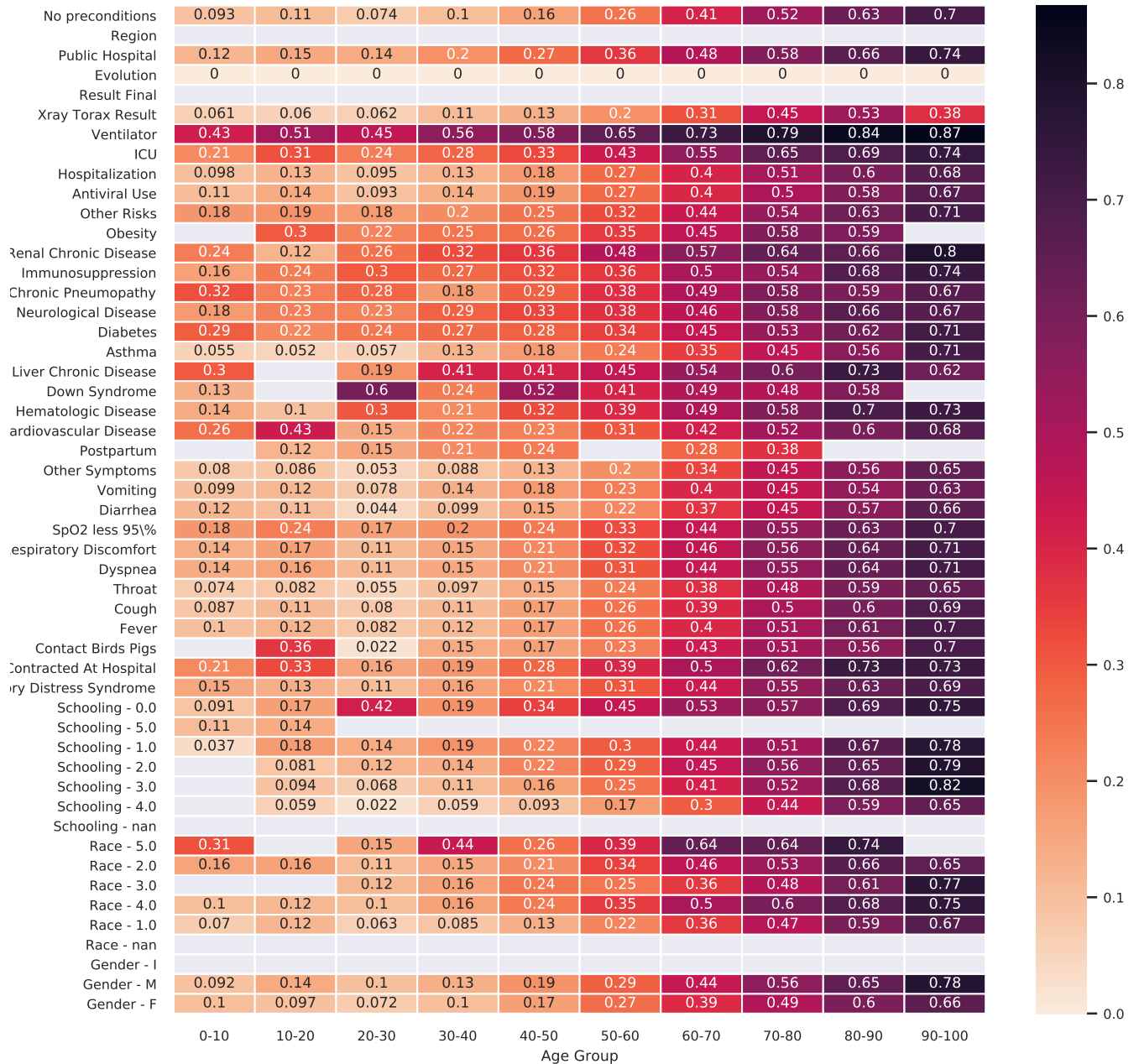
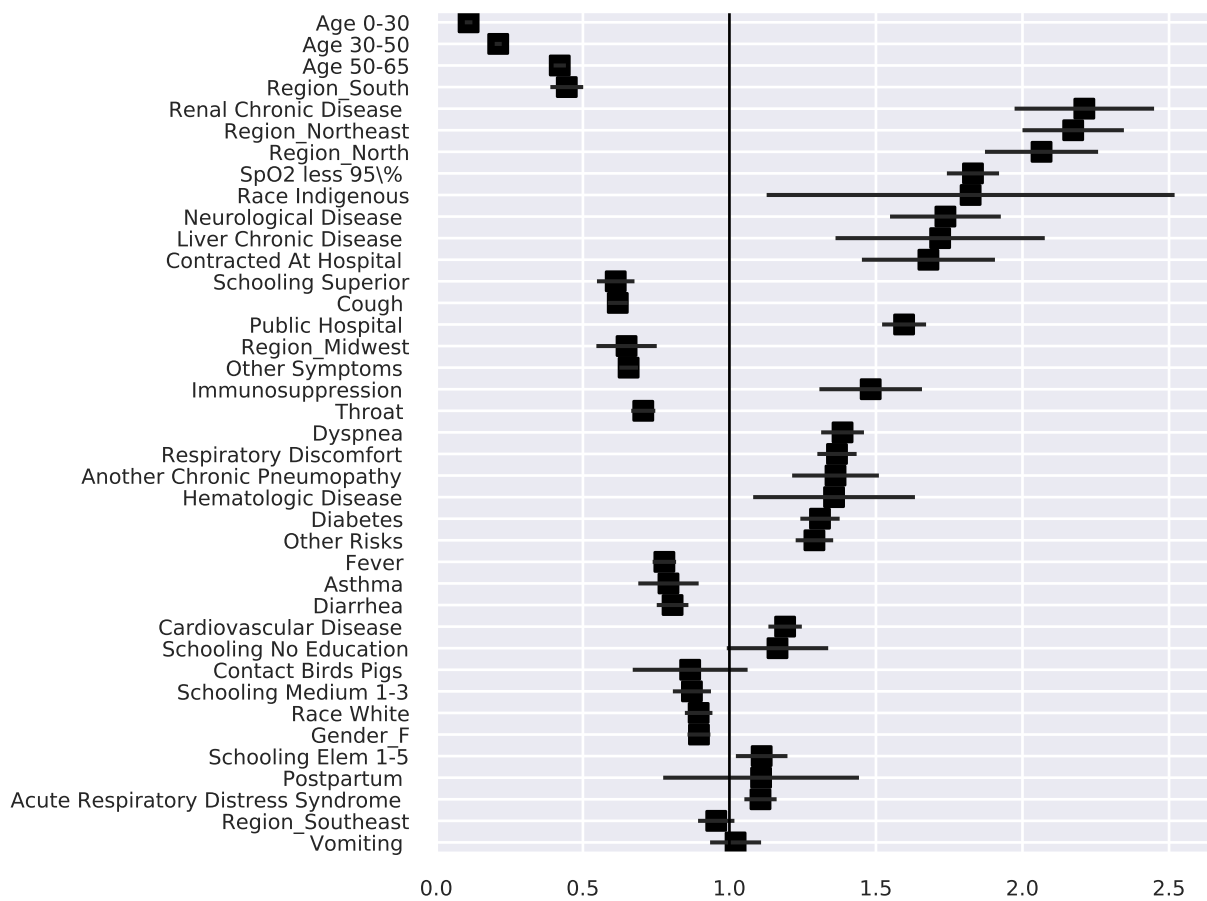


Figure 3: Share of hospitalized and deaths patients given characteristics and age group

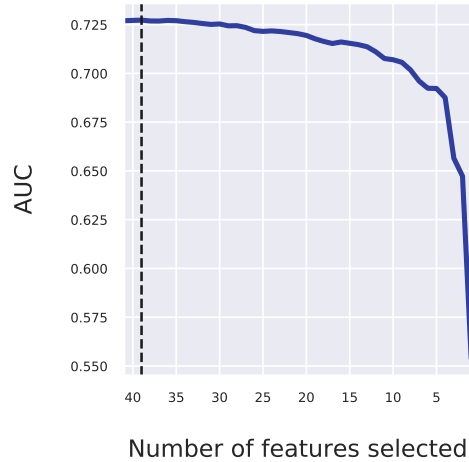
2 Results

2.1 Mortality (previous)

SVM-I1	Coef LR-I1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Age 0-30	-2.210	-2.337	-2.084	0.110	0.097	0.124	0.480	0.147	0.000	0.000
0.408	0.097	0.013								
Age 30-50	-1.554	-1.615	-1.493	0.211	0.199	0.225	0.543	0.230	0.000	0.000
0.506	0.190	0.012								
Age 50-65	-0.865	-0.918	-0.813	0.421	0.400	0.444	0.475	0.425	0.000	0.000
0.662	0.384	0.021								
Region_South	-0.809	-0.945	-0.673	0.445	0.389	0.510	0.473	0.229	0.000	0.000
0.622	0.280	0.056								
Renal Chronic Disease	0.794	0.680	0.907	2.211	1.973	2.478	0.449	0.712	0.000	0.000
1.346	2.155	0.238								
Region_Northeast	0.776	0.693	0.860	2.173	2.000	2.362	0.431	0.617	0.000	0.000
1.109	1.300	0.173								
Region_North	0.725	0.627	0.823	2.065	1.872	2.278	0.444	0.603	0.000	0.000
1.104	1.276	0.193								
SpO2 less 95\%	0.605	0.555	0.655	1.831	1.742	1.925	0.345	0.541	0.000	0.000
1.240	1.763	0.089								
Race Indigenous	0.600	0.119	1.081	1.823	1.127	2.948	0.461	0.683	0.000	0.014
1.214	1.671	0.696								
Neurological Disease	0.552	0.437	0.667	1.737	1.548	1.949	0.451	0.688	0.000	0.000
1.214	1.653	0.189								
Liver Chronic Disease	0.542	0.309	0.775	1.719	1.362	2.170	0.459	0.638	0.000	0.000
1.225	1.691	0.357								
Contracted At Hospital	0.518	0.373	0.664	1.679	1.452	1.942	0.457	0.625	0.000	0.000
1.199	1.613	0.227								
Schooling Superior	-0.492	-0.602	-0.382	0.612	0.548	0.683	0.474	0.248	0.000	0.000
0.836	0.604	0.064								
Cough	-0.480	-0.536	-0.424	0.619	0.585	0.654	0.577	0.427	0.000	0.000
0.801	0.557	0.034								
Public Hospital	0.468	0.419	0.516	1.596	1.521	1.675	0.404	0.556	0.000	0.000
1.200	1.610	0.075								
Region_Midwest	-0.432	-0.605	-0.259	0.649	0.546	0.772	0.464	0.319	0.000	0.000
0.707	0.396	0.103								
Other Symptoms	-0.422	-0.472	-0.373	0.656	0.624	0.689	0.508	0.356	0.000	0.000
0.835	0.619	0.032								
Immunosuppression	0.394	0.267	0.520	1.482	1.307	1.682	0.458	0.558	0.000	0.000
1.158	1.465	0.175								
Throat	-0.349	-0.407	-0.290	0.706	0.665	0.748	0.482	0.381	0.000	0.000
0.878	0.707	0.041								
Dyspnea	0.327	0.272	0.381	1.386	1.313	1.463	0.377	0.492	0.000	0.000
1.096	1.273	0.073								
Respiratory Discomfort	0.313	0.262	0.363	1.367	1.300	1.438	0.392	0.505	0.000	0.000
1.111	1.311	0.067								
Another Chronic Pneumopathy	0.309	0.194	0.424	1.362	1.214	1.528	0.454	0.632	0.000	0.000
1.116	1.321	0.148								
Hematologic Disease	0.305	0.078	0.532	1.357	1.081	1.702	0.460	0.584	0.000	0.008
1.115	1.321	0.276								
Diabetes	0.269	0.217	0.322	1.309	1.242	1.380	0.421	0.579	0.000	0.000
1.101	1.278	0.067								
Other Risks	0.255	0.204	0.306	1.290	1.226	1.358	0.436	0.534	0.000	0.000
1.085	1.244	0.064								
Fever	-0.251	-0.304	-0.198	0.778	0.738	0.820	0.559	0.428	0.000	0.000
0.874	0.707	0.040								
Asthma	-0.233	-0.372	-0.093	0.792	0.689	0.911	0.464	0.351	0.000	0.001
0.920	0.804	0.103								
Diarrhea	-0.215	-0.285	-0.146	0.806	0.752	0.865	0.474	0.375	0.000	0.000
0.918	0.799	0.054								
Cardiovascular Disease	0.174	0.125	0.224	1.190	1.133	1.251	0.410	0.564	0.000	0.000
1.049	1.135	0.057								
Schooling No Education	0.151	-0.009	0.312	1.164	0.991	1.366	0.457	0.676	0.000	0.064
1.040	1.113	0.173								
Contact Birds Pigs	-0.144	-0.400	0.112	0.866	0.670	1.118	0.462	0.371	0.005	0.269
0.949	0.860	0.196								
Schooling Medium 1-3	-0.138	-0.214	-0.061	0.872	0.807	0.941	0.475	0.345	0.000	0.000
0.949	0.869	0.065								
Race White	-0.111	-0.164	-0.058	0.895	0.848	0.944	0.490	0.393	0.000	0.000
0.943	0.855	0.047								
Gender_F	-0.109	-0.154	-0.065	0.896	0.857	0.937	0.468	0.451	0.006	0.000
0.934	0.830	0.039								
Schooling Elem 1-5	0.104	0.021	0.187	1.110	1.022	1.206	0.452	0.567	0.000	0.014
1.029	1.072	0.088								
Postpartum	0.103	-0.256	0.462	1.108	0.774	1.587	0.462	0.290	0.000	0.574
1.019	1.084	0.334								
Acute Respiratory Distress Syndrome	0.101	0.050	0.152	1.106	1.051	1.164	0.445	0.509	0.000	0.000
1.027	1.073	0.055								
Region_Southeast	-0.046	-0.113	0.021	0.955	0.893	1.021	0.530	0.413	0.000	0.175
0.810	0.576	0.062								

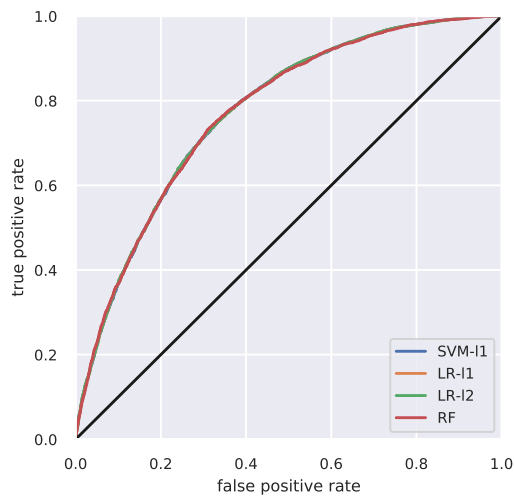


Recursive Feature Elimination:



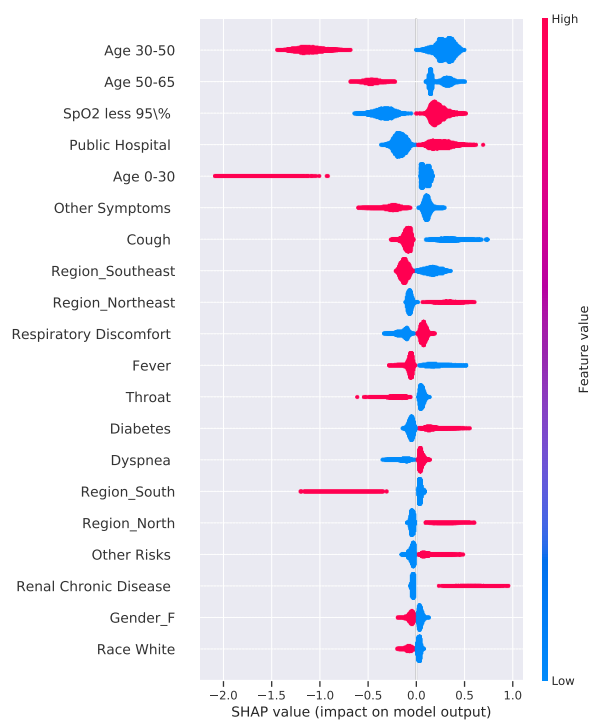
Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.706	0.705	0.705	0.706	0.706
F1w	0.706	0.705	0.705	0.706	0.706
AUC	0.773	0.774	0.774	0.773	0.776



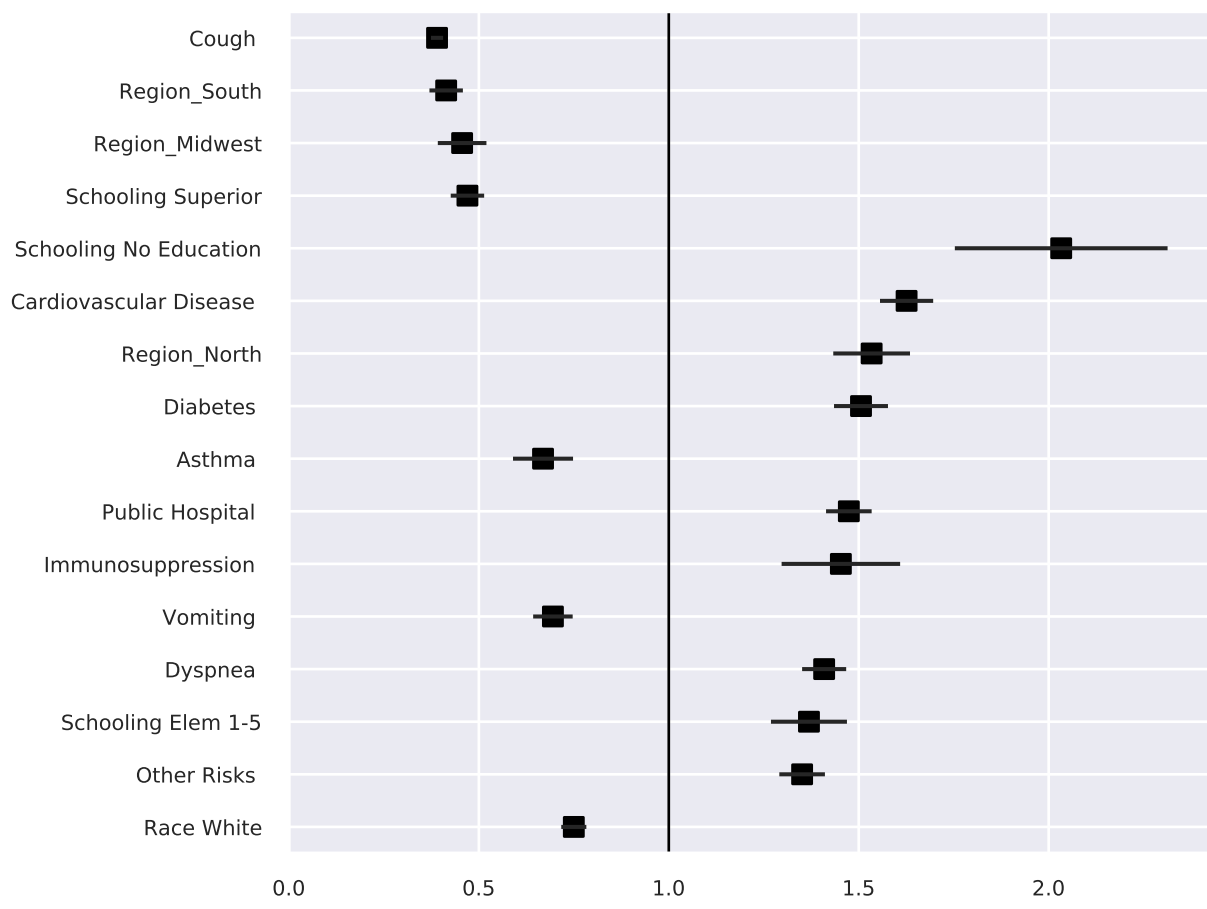
Coefficients:

	SVM-l1	LR-l1
Age 0-30	0.408	0.097
Age 30-50	0.506	0.190
Region_South	0.622	0.280
Age 50-65	0.662	0.384
Region_Midwest	0.707	0.396
Cough	0.801	0.557
Region_Southeast	0.810	0.576
Schooling Superior	0.836	0.604
Other Symptoms	0.835	0.619
Fever	0.874	0.707
Throat	0.878	0.707
Diarrhea	0.918	0.799
Asthma	0.920	0.804
Gender_F	0.934	0.830
Race White	0.943	0.855
Contact Birds Pigs	0.949	0.860
Schooling Medium 1-3	0.949	0.869
Vomiting	1.005	1.015
Schooling Elem 1-5	1.029	1.072
Acute Respiratory Distress Syndrome	1.027	1.073
Postpartum	1.019	1.084
Schooling No Education	1.040	1.113
Cardiovascular Disease	1.049	1.135
Other Risks	1.085	1.244
Dyspnea	1.096	1.273
Region_North	1.104	1.276
Diabetes	1.101	1.278
Region_Northeast	1.109	1.300
Respiratory Discomfort	1.111	1.311
Another Chronic Pneumopathy	1.116	1.321
Hematologic Disease	1.115	1.321
Immunosuppression	1.158	1.465
Public Hospital	1.200	1.610
Contracted At Hospital	1.199	1.613
Neurological Disease	1.214	1.653
Race Indigenous	1.214	1.671
Liver Chronic Disease	1.225	1.691
SpO2 less 95\%	1.240	1.763
Renal Chronic Disease	1.346	2.155

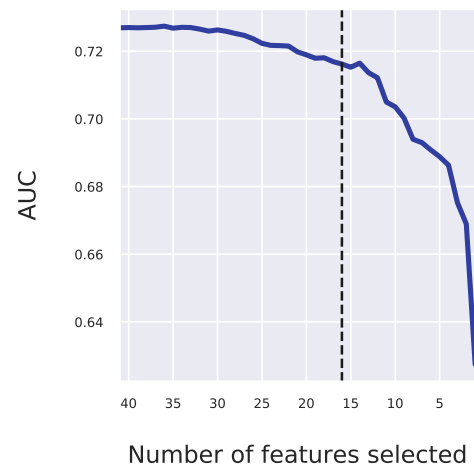


2.2 Mortality (previous) small

SVM-l1	Coef LR-l1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Cough	-0.940	-0.982	-0.898	0.390	0.374	0.407	0.578	0.429	0.0	0.0
0.719	0.480	0.016								
Region_South	-0.883	-0.994	-0.771	0.414	0.370	0.462	0.474	0.234	0.0	0.0
0.715	0.430	0.044								
Region_Midwest	-0.785	-0.936	-0.635	0.456	0.392	0.530	0.465	0.311	0.0	0.0
0.731	0.488	0.064								
Schooling Superior	-0.756	-0.853	-0.658	0.470	0.426	0.518	0.475	0.255	0.0	0.0
0.759	0.503	0.044								
Schooling No Education	0.710	0.562	0.858	2.033	1.753	2.358	0.457	0.688	0.0	0.0
1.366	2.028	0.280								
Cardiovascular Disease	0.486	0.442	0.530	1.626	1.556	1.698	0.410	0.566	0.0	0.0
1.280	1.726	0.070								
Region_North	0.428	0.360	0.497	1.534	1.433	1.643	0.446	0.604	0.0	0.0
1.229	1.574	0.101								
Diabetes	0.409	0.361	0.457	1.506	1.435	1.580	0.421	0.583	0.0	0.0
1.221	1.554	0.071								
Asthma	-0.402	-0.527	-0.276	0.669	0.590	0.759	0.465	0.363	0.0	0.0
0.851	0.696	0.079								
Public Hospital	0.388	0.346	0.429	1.474	1.414	1.536	0.406	0.556	0.0	0.0
1.235	1.592	0.060								
Immunosuppression	0.373	0.260	0.487	1.453	1.297	1.627	0.459	0.563	0.0	0.0
1.208	1.514	0.156								
Vomiting	-0.364	-0.442	-0.286	0.695	0.643	0.751	0.468	0.390	0.0	0.0
0.873	0.735	0.052								
Dyspnea	0.343	0.300	0.385	1.409	1.351	1.470	0.373	0.495	0.0	0.0
1.246	1.652	0.058								
Schooling Elem 1-5	0.314	0.238	0.390	1.369	1.269	1.477	0.454	0.563	0.0	0.0
1.162	1.393	0.100								
Other Risks	0.301	0.255	0.346	1.351	1.291	1.413	0.435	0.539	0.0	0.0
1.181	1.451	0.060								
Race White	-0.287	-0.333	-0.242	0.750	0.717	0.785	0.491	0.396	0.0	0.0
0.911	0.810	0.033								



Recursive Feature Elimination:

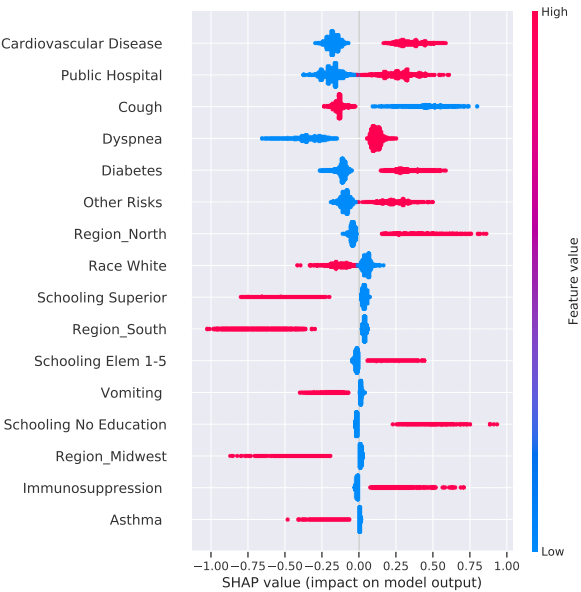
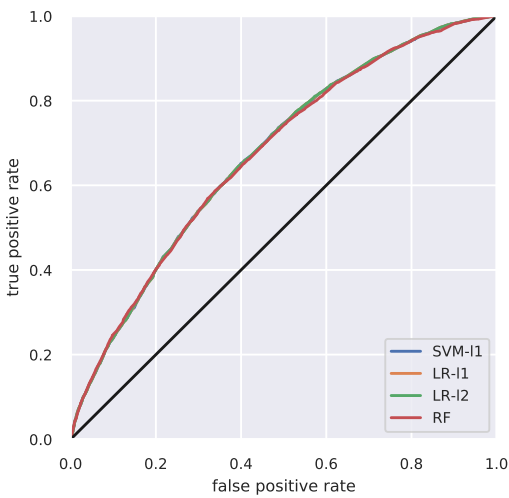


Coefficients:

	SVM-l1	LR-l1
Region_South	0.715	0.430
Cough	0.719	0.480
Region_Midwest	0.731	0.488
Schooling Superior	0.759	0.503
Asthma	0.851	0.696
Vomiting	0.873	0.735
Race White	0.911	0.810
Schooling Elem 1-5	1.162	1.393
Other Risks	1.181	1.451
Immunosuppression	1.208	1.514
Diabetes	1.221	1.554
Region_North	1.229	1.574
Public Hospital	1.235	1.592
Dyspnea	1.246	1.652
Cardiovascular Disease	1.280	1.726
Schooling No Education	1.366	2.028

Performance:

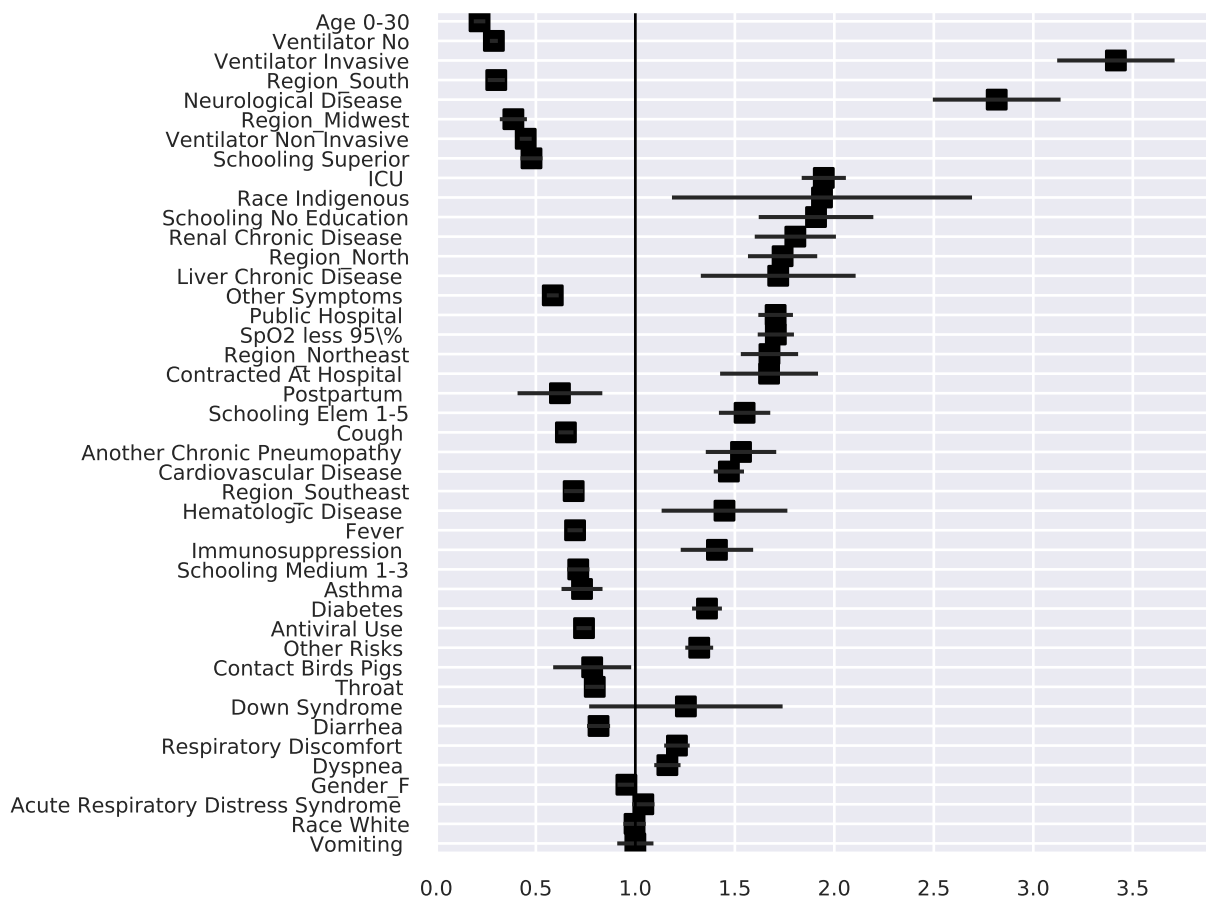
	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.624	0.624	0.624	0.624	0.62
F1w	0.624	0.624	0.624	0.622	0.62
AUC	0.674	0.674	0.674	0.673	0.67



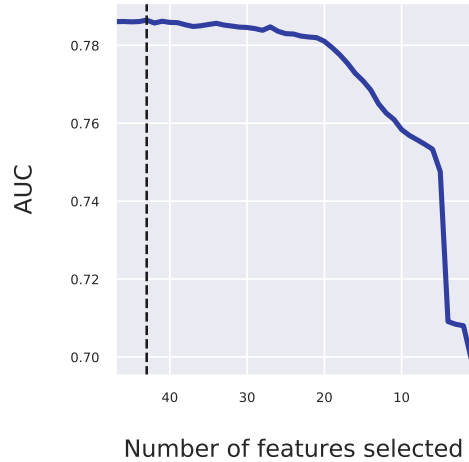
2.3 Mortality (advanced)

Include variables: Antiviral, ICU, Ventilator

SVM-I1	Coef LR-I1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Age 0-30	-1.528	-1.670	-1.385	0.217	0.188	0.250	0.480	0.147	0.000	0.000
0.607	0.214	0.029								
Ventilator No	-1.240	-1.313	-1.166	0.289	0.269	0.312	0.548	0.204	0.000	0.000
0.600	0.269	0.020								
Ventilator Invasive	1.228	1.138	1.319	3.415	3.120	3.739	0.346	0.856	0.000	0.000
1.522	3.253	0.295								
Region_South	-1.201	-1.355	-1.048	0.301	0.258	0.351	0.473	0.229	0.000	0.000
0.618	0.245	0.043								
Neurological Disease	1.035	0.914	1.157	2.816	2.495	3.180	0.451	0.697	0.000	0.000
1.474	2.757	0.321								
Region_Midwest	-0.948	-1.144	-0.753	0.387	0.319	0.471	0.464	0.324	0.000	0.000
0.657	0.316	0.068								
Ventilator Non Invasive	-0.801	-0.869	-0.734	0.449	0.419	0.480	0.517	0.366	0.000	0.000
0.705	0.426	0.030								
Schooling Superior	-0.739	-0.859	-0.619	0.478	0.423	0.538	0.474	0.252	0.000	0.000
0.778	0.476	0.055								
ICU	0.666	0.608	0.725	1.947	1.836	2.065	0.356	0.664	0.000	0.000
1.270	1.909	0.111								
Race Indigenous	0.662	0.169	1.155	1.938	1.184	3.174	0.461	0.679	0.000	0.009
1.256	1.589	0.754								
Schooling No Education	0.646	0.482	0.810	1.908	1.620	2.248	0.457	0.671	0.000	0.000
1.297	1.865	0.288								
Renal Chronic Disease	0.590	0.470	0.710	1.804	1.600	2.033	0.451	0.691	0.000	0.000
1.242	1.779	0.204								
Region_North	0.554	0.448	0.659	1.740	1.566	1.934	0.445	0.601	0.000	0.000
1.133	1.381	0.174								
Liver Chronic Disease	0.541	0.284	0.798	1.718	1.329	2.222	0.460	0.641	0.000	0.000
1.222	1.643	0.389								
Other Symptoms	-0.535	-0.589	-0.482	0.585	0.555	0.618	0.508	0.357	0.000	0.000
0.818	0.569	0.030								
Public Hospital	0.534	0.481	0.586	1.705	1.618	1.797	0.404	0.556	0.000	0.000
1.217	1.702	0.087								
SpO2 less 95\%	0.534	0.480	0.588	1.706	1.615	1.801	0.340	0.544	0.000	0.000
1.208	1.680	0.091								
Region_Northeast	0.515	0.425	0.606	1.674	1.530	1.833	0.430	0.618	0.000	0.000
1.107	1.306	0.144								
Contracted At Hospital	0.514	0.355	0.673	1.672	1.426	1.959	0.457	0.631	0.000	0.000
1.191	1.612	0.246								
Postpartum	-0.476	-0.896	-0.055	0.621	0.408	0.946	0.462	0.310	0.000	0.027
0.841	0.701	0.213								
Schooling Elem 1-5	0.437	0.350	0.524	1.549	1.420	1.689	0.453	0.560	0.000	0.000
1.179	1.527	0.129								
Cough	-0.430	-0.490	-0.370	0.651	0.613	0.691	0.578	0.428	0.000	0.000
0.836	0.615	0.038								
Another Chronic Pneumopathy	0.426	0.303	0.548	1.531	1.354	1.730	0.455	0.620	0.000	0.000
1.166	1.507	0.177								
Cardiovascular Disease	0.385	0.333	0.438	1.470	1.394	1.550	0.411	0.562	0.000	0.000
1.145	1.451	0.076								
Region_Southeast	-0.371	-0.444	-0.298	0.690	0.642	0.743	0.531	0.413	0.000	0.000
0.797	0.543	0.048								
Hematologic Disease	0.370	0.124	0.617	1.448	1.132	1.854	0.460	0.584	0.000	0.003
1.134	1.388	0.316								
Fever	-0.361	-0.417	-0.304	0.697	0.659	0.738	0.557	0.429	0.000	0.000
0.860	0.662	0.038								
Immunosuppression	0.344	0.205	0.483	1.410	1.228	1.620	0.458	0.565	0.000	0.000
1.128	1.384	0.182								
Schooling Medium 1-3	-0.338	-0.420	-0.256	0.713	0.657	0.775	0.476	0.345	0.000	0.000
0.884	0.708	0.056								
Asthma	-0.313	-0.463	-0.162	0.732	0.629	0.850	0.464	0.361	0.000	0.000
0.899	0.747	0.103								
Diabetes	0.307	0.251	0.364	1.360	1.285	1.438	0.421	0.580	0.000	0.000
1.114	1.346	0.075								
Antiviral Use	-0.299	-0.351	-0.247	0.742	0.704	0.781	0.473	0.441	0.000	0.000
0.897	0.747	0.038								
Other Risks	0.279	0.224	0.334	1.321	1.251	1.396	0.435	0.536	0.000	0.000
1.100	1.301	0.070								
Contact Birds Pigs	-0.245	-0.532	0.042	0.783	0.587	1.043	0.462	0.353	0.001	0.094
0.921	0.833	0.196								
Throat	-0.229	-0.290	-0.167	0.796	0.748	0.846	0.483	0.381	0.000	0.000
0.920	0.799	0.048								
Down Syndrome	0.227	-0.263	0.716	1.254	0.768	2.047	0.461	0.602	0.028	0.365
1.077	1.059	0.486								
Diarrhea	-0.205	-0.279	-0.131	0.815	0.757	0.877	0.475	0.372	0.000	0.000
0.929	0.813	0.058								
Respiratory Discomfort	0.189	0.135	0.243	1.209	1.145	1.276	0.390	0.507	0.000	0.000
1.064	1.180	0.064								

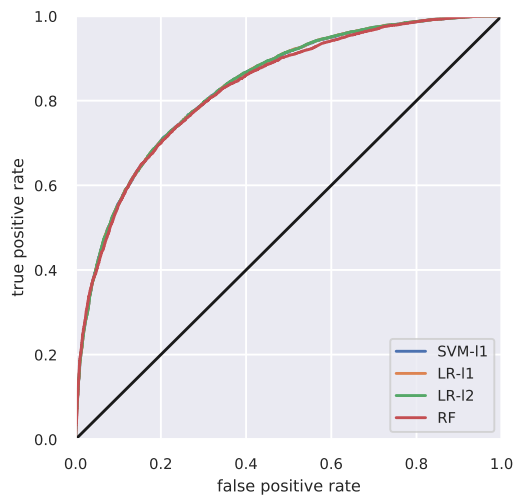


Recursive Feature Elimination:



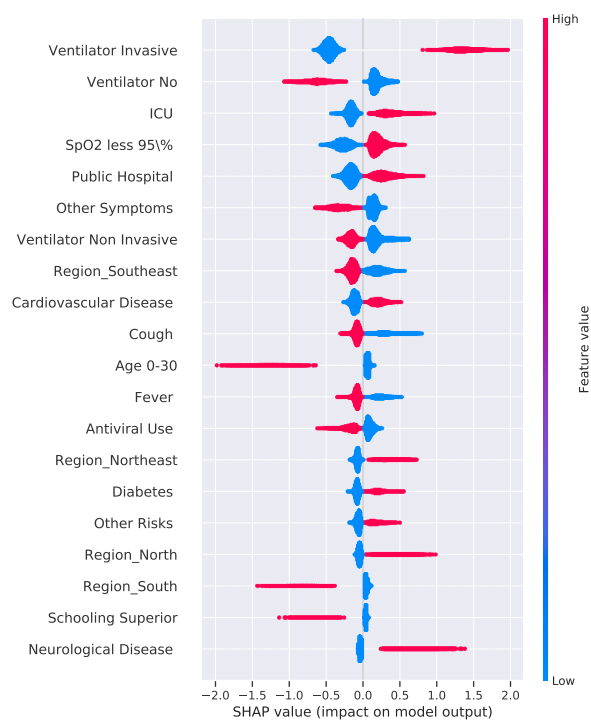
Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.755	0.754	0.754	0.749	0.759
F1w	0.754	0.753	0.753	0.745	0.758
AUC	0.836	0.837	0.837	0.832	0.840



Coefficients:

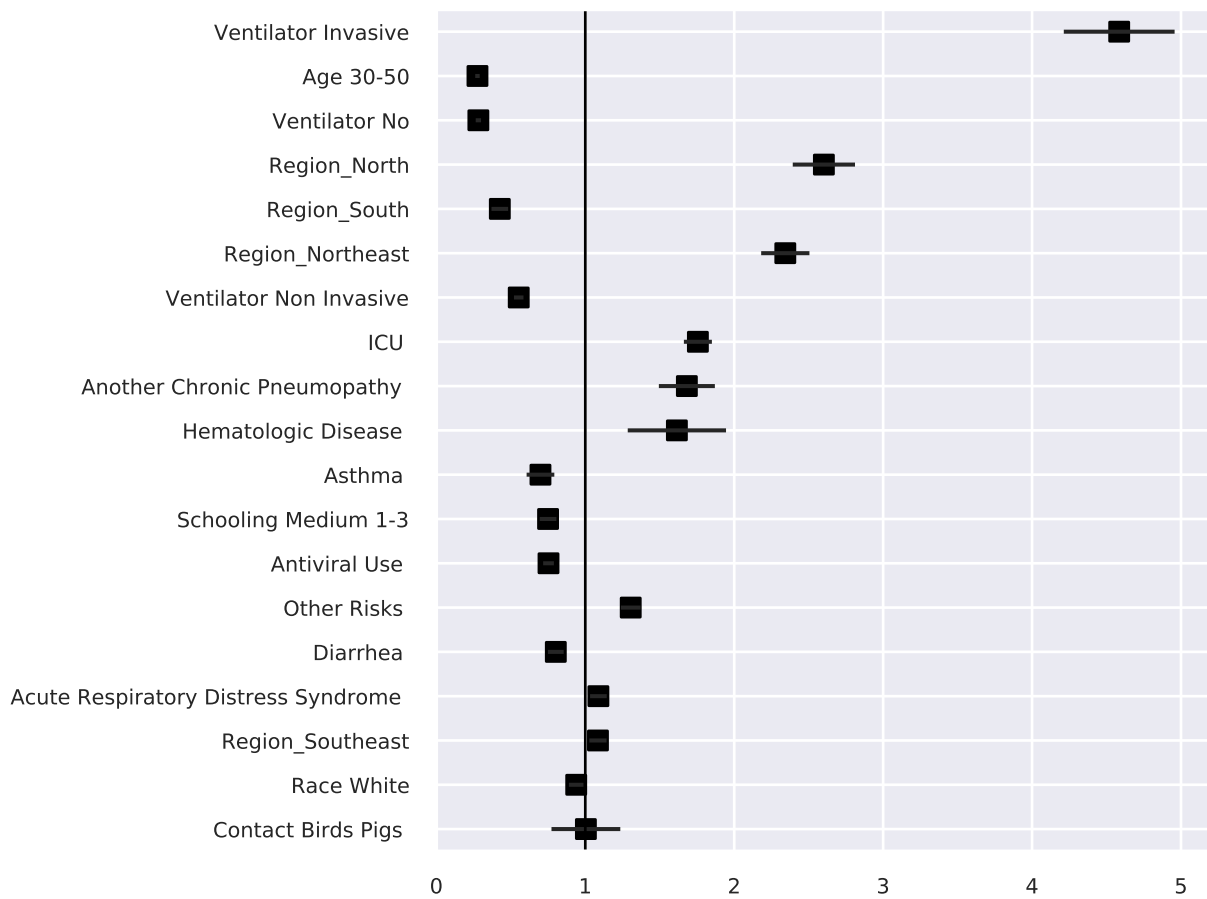
	SVM-l1	LR-l1
Age 0-30	0.607	0.214
Region_South	0.618	0.245
Ventilator No	0.600	0.269
Region_Midwest	0.657	0.316
Ventilator Non Invasive	0.705	0.426
Schooling Superior	0.778	0.476
Region_Southeast	0.797	0.543
Other Symptoms	0.818	0.569
Cough	0.836	0.615
Fever	0.860	0.662
Postpartum	0.841	0.701
Schooling Medium 1-3	0.884	0.708
Asthma	0.899	0.747
Antiviral Use	0.897	0.747
Throat	0.920	0.799
Diarrhea	0.929	0.813
Contact Birds Pigs	0.921	0.833
Gender_F	0.971	0.918
Race White	0.996	0.979
Vomiting	0.997	1.000
Acute Respiratory Distress Syndrome	1.008	1.027
Down Syndrome	1.077	1.059
Dyspnea	1.038	1.105
Respiratory Discomfort	1.064	1.180
Other Risks	1.100	1.301
Region_Northeast	1.107	1.306
Diabetes	1.114	1.346
Region_North	1.133	1.381
Immunosuppression	1.128	1.384
Hematologic Disease	1.134	1.388
Cardiovascular Disease	1.145	1.451
Another Chronic Pneumopathy	1.166	1.507
Schooling Elem 1-5	1.179	1.527
Race Indigenous	1.256	1.589
Contracted At Hospital	1.191	1.612
Liver Chronic Disease	1.222	1.643
SpO2 less 95%	1.208	1.680
Public Hospital	1.217	1.702
Renal Chronic Disease	1.242	1.779
Schooling No Education	1.297	1.865
ICU	1.270	1.909
Neurological Disease	1.474	2.757
Ventilator Invasive	1.522	3.253



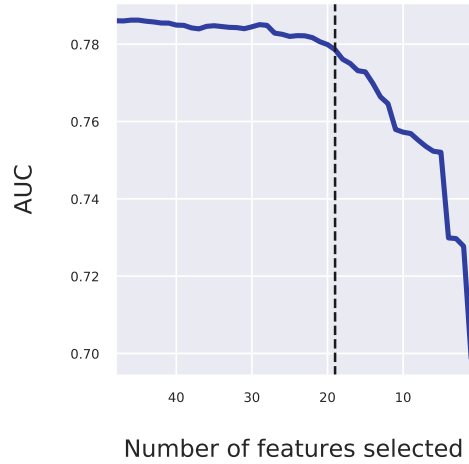
2.4 Mortality (advanced) small

Include variables: Antiviral, ICU, Ventilator

SVM-I1	Coef LR-I1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Ventilator Invasive 1.664	1.523 4.248	1.438 0.372	1.608	4.585	4.213	4.990	0.348	0.860	0.000	0.000
Age 30-50 0.632	-1.287 0.270	-1.344 0.015	-1.229	0.276	0.261	0.293	0.545	0.232	0.000	0.000
Ventilator No 0.578	-1.265 0.260	-1.332 0.018	-1.198	0.282	0.264	0.302	0.550	0.209	0.000	0.000
Region.North 1.334	0.956 2.108	0.873 0.209	1.040	2.602	2.393	2.829	0.447	0.601	0.000	0.000
Region.South 0.713	-0.854 0.360	-0.995 0.056	-0.714	0.426	0.370	0.490	0.475	0.224	0.000	0.000
Region.Northeast 1.277	0.852 1.899	0.780 0.162	0.923	2.343	2.181	2.518	0.431	0.624	0.000	0.000
Ventilator Non Invasive 0.742	-0.592 0.510	-0.652 0.032	-0.533	0.553	0.521	0.587	0.519	0.367	0.000	0.000
ICU 1.229	0.563 1.727	0.508 0.094	0.618	1.756	1.662	1.856	0.358	0.665	0.000	0.000
Another Chronic Pneumopathy 1.207	0.520 1.629	0.402 0.188	0.638	1.682	1.494	1.893	0.456	0.629	0.000	0.000
Hematologic Disease 1.189	0.479 1.527	0.251 0.330	0.708	1.615	1.285	2.029	0.462	0.587	0.000	0.000
Asthma 0.876	-0.358 0.704	-0.501 0.093	-0.216	0.699	0.606	0.806	0.466	0.360	0.000	0.000
Schooling Medium 1-3 0.900	-0.287 0.750	-0.366 0.056	-0.209	0.750	0.694	0.812	0.477	0.347	0.000	0.000
Antiviral Use 0.895	-0.284 0.746	-0.333 0.036	-0.234	0.753	0.717	0.791	0.477	0.439	0.000	0.000
Other Risks 1.097	0.267 1.283	0.214 0.066	0.319	1.305	1.239	1.375	0.436	0.539	0.000	0.000
Diarrhea 0.918	-0.221 0.792	-0.289 0.053	-0.153	0.802	0.749	0.859	0.476	0.379	0.000	0.000
Acute Respiratory Distress Syndrome 1.022	0.085 1.065	0.032 0.056	0.137	1.088	1.032	1.147	0.446	0.511	0.000	0.002
Region.Southeast 0.960	0.082 0.890	0.026 0.058	0.138	1.085	1.027	1.148	0.531	0.416	0.000	0.004
Race White 0.971	-0.063 0.920	-0.117 0.049	-0.009	0.939	0.890	0.991	0.491	0.397	0.000	0.022
Contact Birds Pigs 1.001	0.004 1.000	-0.258 0.231	0.266	1.004	0.773	1.305	0.464	0.386	0.025	0.976

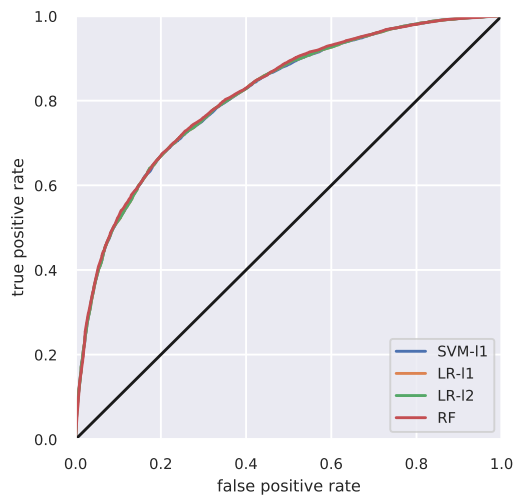


Recursive Feature Elimination:



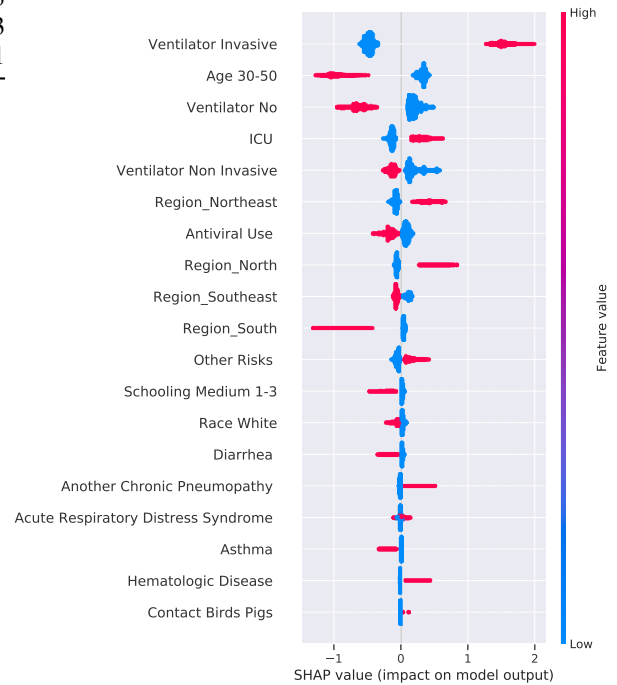
Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.739	0.739	0.739	0.738	0.73 ^α
F1w	0.738	0.738	0.738	0.735	0.73
AUC	0.813	0.813	0.813	0.815	0.81



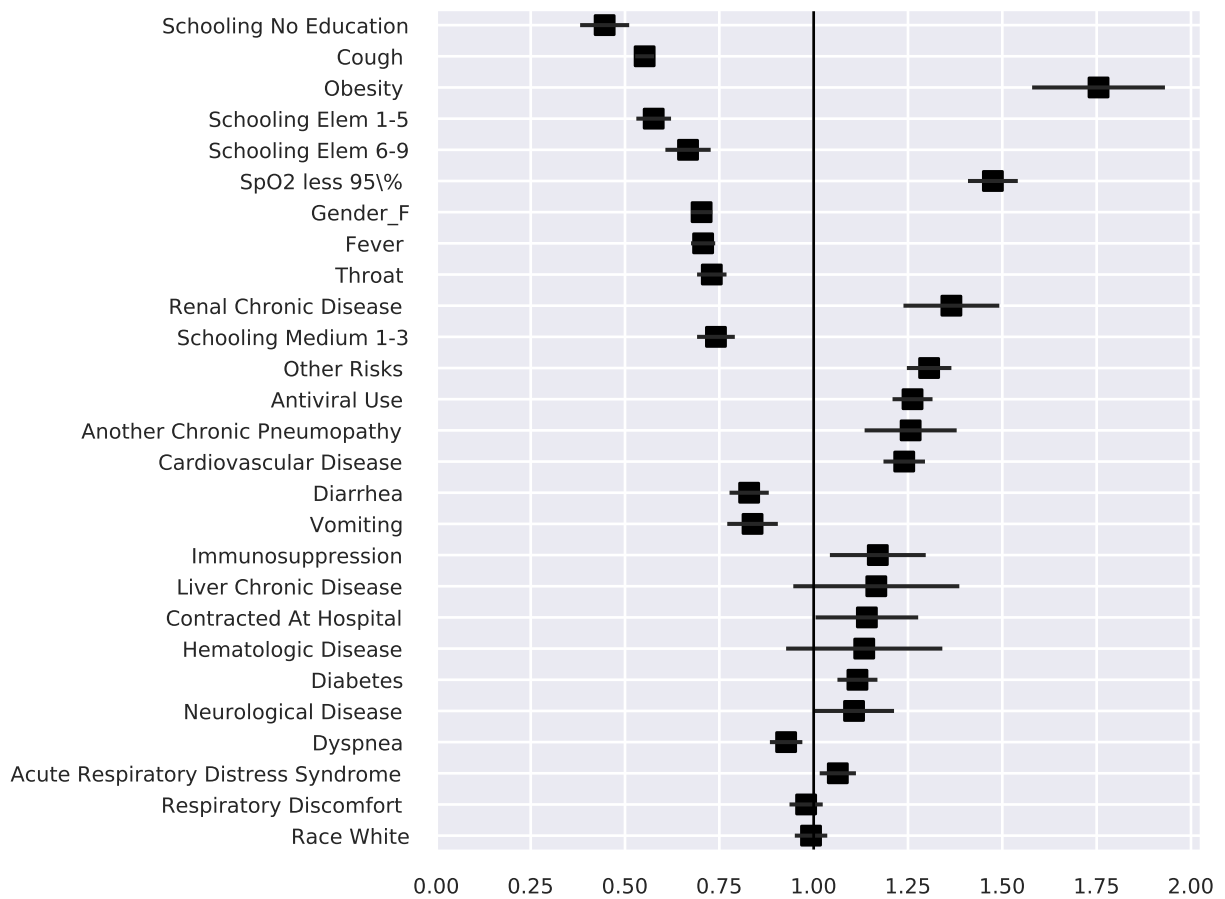
Coefficients:

	SVM-l1	LR-l1
Ventilator No	0.578	0.260
Age 30-50	0.632	0.270
Region_South	0.713	0.360
Ventilator Non Invasive	0.742	0.510
Asthma	0.876	0.704
Antiviral Use	0.895	0.746
Schooling Medium 1-3	0.900	0.750
Diarrhea	0.918	0.792
Region_Southeast	0.960	0.890
Race White	0.971	0.920
Contact Birds Pigs	1.001	1.000
Acute Respiratory Distress Syndrome	1.022	1.065
Other Risks	1.097	1.283
Hematologic Disease	1.189	1.527
Another Chronic Pneumopathy	1.207	1.629
ICU	1.229	1.727
Region_Northeast	1.277	1.899
Region_North	1.334	2.108
Ventilator Invasive	1.664	4.248

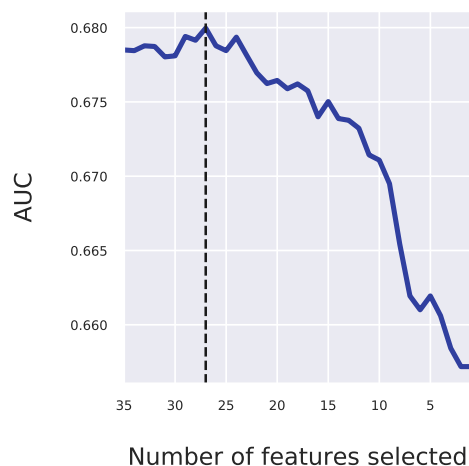


2.5 ICU

SVM-I1	Coef LR-I1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Schooling No Education	-0.807	-0.965	-0.649	0.446	0.381	0.523	0.345	0.229	0.000	0.000
0.742	0.472	0.065								
Cough	-0.594	-0.641	-0.546	0.552	0.527	0.579	0.399	0.326	0.000	0.000
0.867	0.719	0.025								
Obesity	0.562	0.457	0.668	1.755	1.579	1.950	0.337	0.495	0.000	0.000
1.281	1.718	0.176								
Schooling Elem 1-5	-0.552	-0.634	-0.471	0.576	0.530	0.625	0.348	0.281	0.000	0.000
0.812	0.606	0.046								
Schooling Elem 6-9	-0.406	-0.499	-0.312	0.667	0.607	0.732	0.345	0.302	0.000	0.000
0.867	0.712	0.060								
SpO2 less 95\%	0.388	0.343	0.434	1.475	1.409	1.544	0.263	0.397	0.000	0.000
1.227	1.637	0.066								
Gender_F	-0.353	-0.393	-0.312	0.703	0.675	0.732	0.354	0.327	0.000	0.000
0.934	0.849	0.028								
Fever	-0.347	-0.393	-0.302	0.707	0.675	0.740	0.371	0.333	0.000	0.000
0.968	0.930	0.032								
Throat	-0.315	-0.369	-0.260	0.730	0.691	0.771	0.361	0.273	0.000	0.000
0.872	0.709	0.039								
Renal Chronic Disease	0.311	0.213	0.409	1.365	1.238	1.505	0.336	0.481	0.000	0.000
1.186	1.450	0.127								
Schooling Medium 1-3	-0.300	-0.370	-0.231	0.741	0.691	0.794	0.347	0.306	0.000	0.000
0.915	0.808	0.050								
Other Risks	0.267	0.221	0.313	1.306	1.247	1.367	0.316	0.421	0.000	0.000
1.184	1.473	0.059								
Antiviral Use	0.232	0.190	0.275	1.262	1.209	1.317	0.314	0.392	0.000	0.000
1.130	1.335	0.053								
Another Chronic Pneumopathy	0.229	0.127	0.331	1.257	1.135	1.393	0.338	0.455	0.000	0.000
1.125	1.290	0.122								
Cardiovascular Disease	0.215	0.170	0.260	1.240	1.185	1.297	0.308	0.413	0.000	0.000
1.142	1.359	0.055								
Diarrhea	-0.188	-0.252	-0.124	0.829	0.777	0.884	0.349	0.302	0.000	0.000
0.944	0.868	0.052								
Vomiting	-0.176	-0.260	-0.093	0.838	0.771	0.911	0.347	0.297	0.000	0.000
0.951	0.881	0.067								
Immunosuppression	0.157	0.042	0.273	1.170	1.043	1.313	0.340	0.428	0.000	0.007
1.104	1.249	0.127								
Liver Chronic Disease	0.154	-0.056	0.364	1.166	0.946	1.439	0.342	0.441	0.001	0.150
1.105	1.254	0.220								
Contracted At Hospital	0.132	0.005	0.259	1.141	1.005	1.296	0.340	0.442	0.000	0.041
1.127	1.301	0.136								
Hematologic Disease	0.126	-0.076	0.327	1.134	0.927	1.387	0.342	0.428	0.003	0.222
1.082	1.193	0.207								
Diabetes	0.110	0.061	0.158	1.116	1.063	1.172	0.321	0.408	0.000	0.000
1.075	1.180	0.053								
Neurological Disease	0.101	0.001	0.202	1.107	1.001	1.224	0.339	0.428	0.000	0.048
1.066	1.151	0.106								
Dyspnea	-0.075	-0.123	-0.028	0.927	0.884	0.973	0.291	0.362	0.000	0.002
1.069	1.179	0.043								
Acute Respiratory Distress Syndrome	0.062	0.016	0.109	1.064	1.016	1.115	0.333	0.371	0.000	0.009
1.065	1.162	0.048								
Respiratory Discomfort	-0.020	-0.066	0.026	0.980	0.936	1.026	0.311	0.363	0.000	0.390
1.035	1.078	0.044								
Race White	-0.007	-0.052	0.038	0.993	0.950	1.039	0.336	0.359	0.000	0.768
1.047	1.112	0.043								

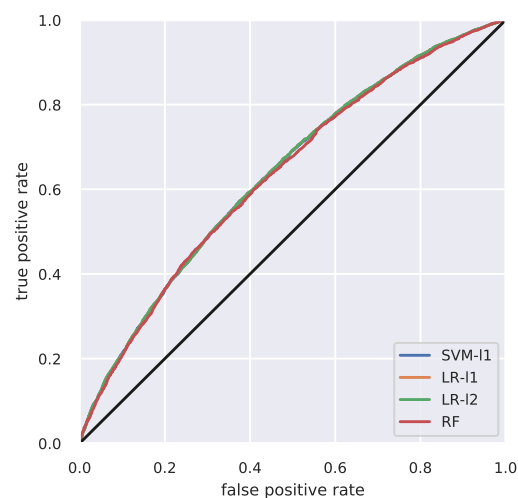


Recursive Feature Elimination:



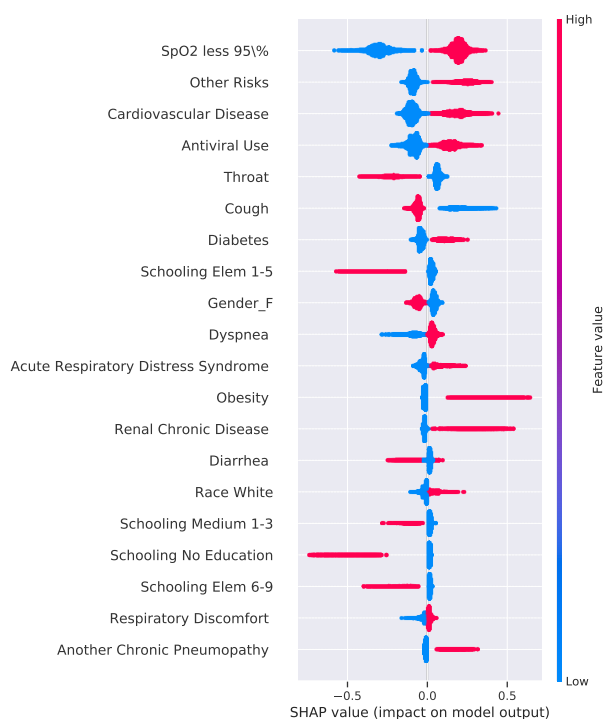
Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.654	0.652	0.652	0.651	0.652
F1w	0.599	0.598	0.599	0.571	0.592
AUC	0.638	0.638	0.638	0.634	0.636



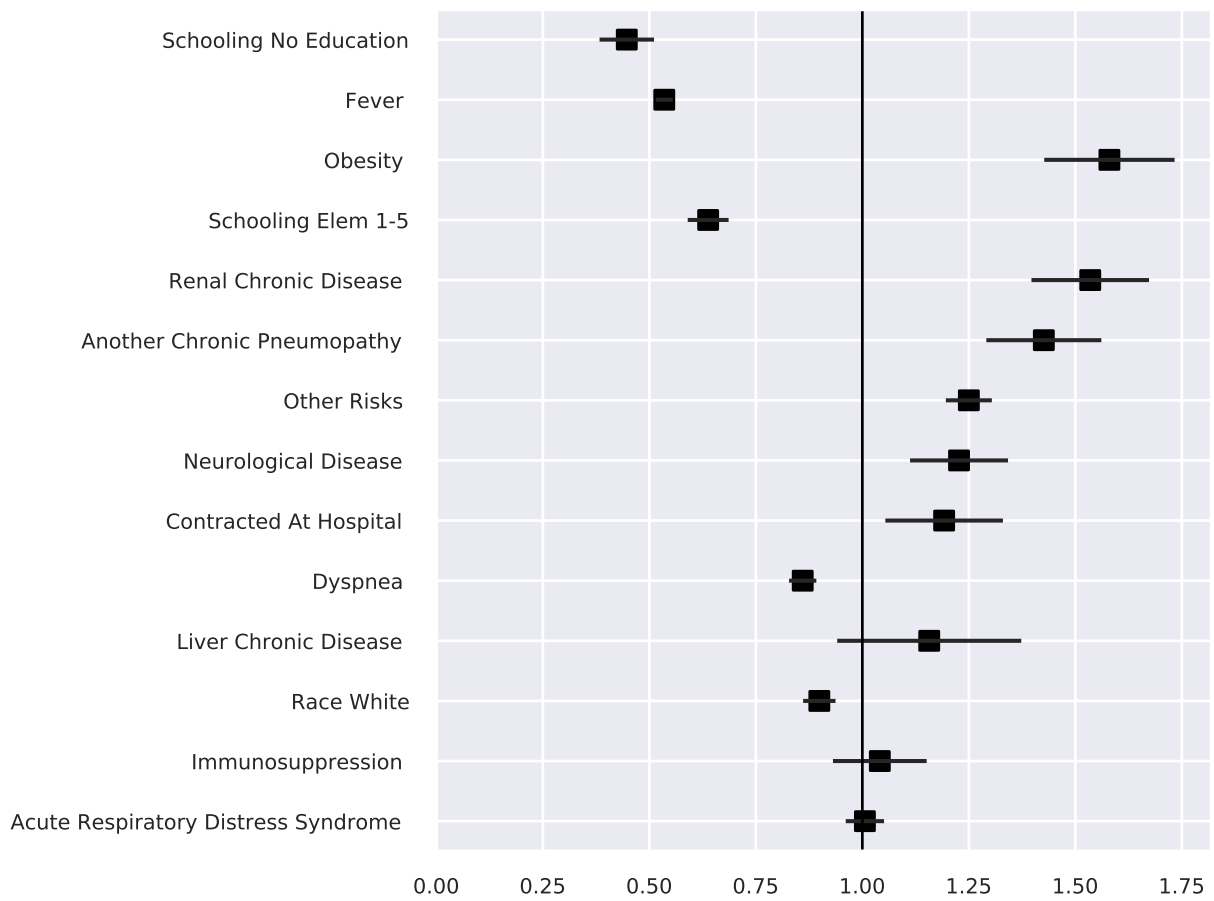
Coefficients:

	SVM-l1	LR-l1
Schooling No Education	0.742	0.472
Schooling Elem 1-5	0.812	0.606
Throat	0.872	0.709
Schooling Elem 6-9	0.867	0.712
Cough	0.867	0.719
Schooling Medium 1-3	0.915	0.808
Gender_F	0.934	0.849
Diarrhea	0.944	0.868
Vomiting	0.951	0.881
Fever	0.968	0.930
Respiratory Discomfort	1.035	1.078
Race White	1.047	1.112
Neurological Disease	1.066	1.151
Acute Respiratory Distress Syndrome	1.065	1.162
Dyspnea	1.069	1.179
Diabetes	1.075	1.180
Hematologic Disease	1.082	1.193
Immunosuppression	1.104	1.249
Liver Chronic Disease	1.105	1.254
Another Chronic Pneumopathy	1.125	1.290
Contracted At Hospital	1.127	1.301
Antiviral Use	1.130	1.335
Cardiovascular Disease	1.142	1.359
Renal Chronic Disease	1.186	1.450
Other Risks	1.184	1.473
SpO2 less 95\%	1.227	1.637
Obesity	1.281	1.718

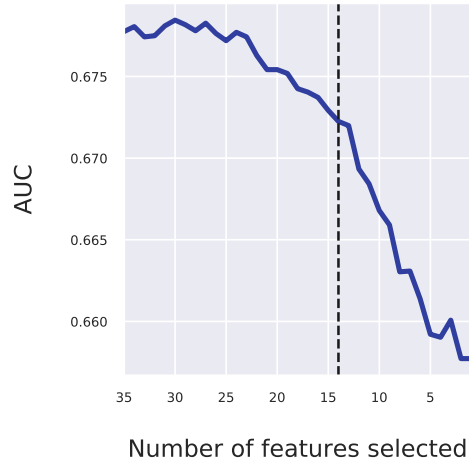


2.6 ICU small

SVM-I1	Coef LR-I1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Schooling No Education	-0.804	-0.961	-0.648	0.447	0.383	0.523	0.345	0.227	0.000	0.000
0.759	0.545	0.064								
Fever	-0.626	-0.663	-0.589	0.535	0.515	0.555	0.369	0.333	0.000	0.000
0.932	0.859	0.020								
Obesity	0.458	0.355	0.560	1.580	1.427	1.750	0.337	0.471	0.000	0.000
1.274	1.625	0.153								
Schooling Elem 1-5	-0.449	-0.528	-0.371	0.638	0.590	0.690	0.347	0.289	0.000	0.000
0.862	0.722	0.048								
Renal Chronic Disease	0.429	0.334	0.523	1.535	1.397	1.687	0.336	0.486	0.000	0.000
1.295	1.702	0.138								
Another Chronic Pneumopathy	0.355	0.255	0.454	1.426	1.291	1.575	0.337	0.468	0.000	0.000
1.226	1.505	0.135								
Other Risks	0.223	0.179	0.267	1.250	1.196	1.306	0.316	0.417	0.000	0.000
1.205	1.502	0.054								
Neurological Disease	0.205	0.106	0.304	1.227	1.112	1.355	0.339	0.422	0.000	0.000
1.140	1.295	0.115								
Contracted At Hospital	0.176	0.053	0.299	1.192	1.054	1.349	0.339	0.452	0.000	0.005
1.164	1.338	0.138								
Dyspnea	-0.151	-0.188	-0.113	0.860	0.828	0.893	0.292	0.361	0.000	0.000
1.145	1.361	0.032								
Liver Chronic Disease	0.145	-0.061	0.352	1.157	0.941	1.422	0.341	0.438	0.001	0.168
1.114	1.116	0.216								
Race White	-0.107	-0.150	-0.064	0.899	0.861	0.938	0.336	0.357	0.000	0.000
1.041	1.090	0.038								
Immunosuppression	0.040	-0.072	0.153	1.041	0.931	1.165	0.340	0.415	0.000	0.482
1.059	1.101	0.110								
Acute Respiratory Distress Syndrome	0.006	-0.039	0.051	1.006	0.961	1.052	0.333	0.369	0.000	0.797
1.068	1.153	0.045								



Recursive Feature Elimination:

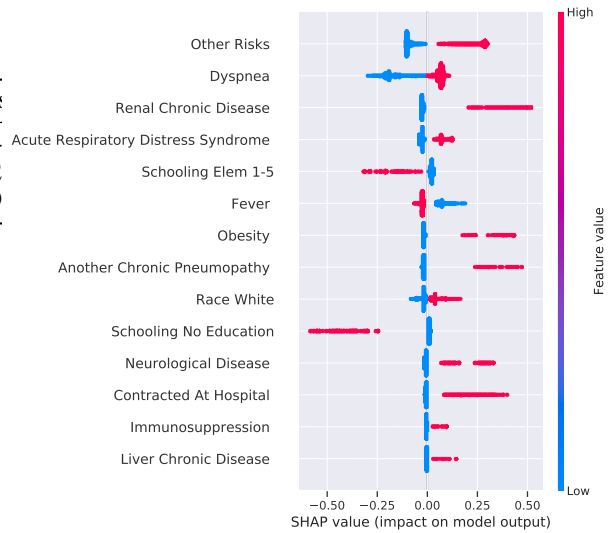
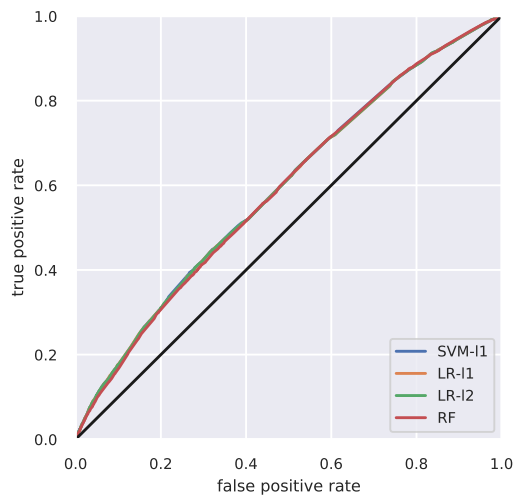


Coefficients:

	SVM-l1	LR-l1
Schooling No Education	0.759	0.545
Schooling Elem 1-5	0.862	0.722
Fever	0.932	0.859
Race White	1.041	1.090
Immunosuppression	1.059	1.101
Liver Chronic Disease	1.114	1.116
Acute Respiratory Distress Syndrome	1.068	1.153
Neurological Disease	1.140	1.295
Contracted At Hospital	1.164	1.338
Dyspnea	1.145	1.361
Other Risks	1.205	1.502
Another Chronic Pneumopathy	1.226	1.505
Obesity	1.274	1.625
Renal Chronic Disease	1.295	1.702

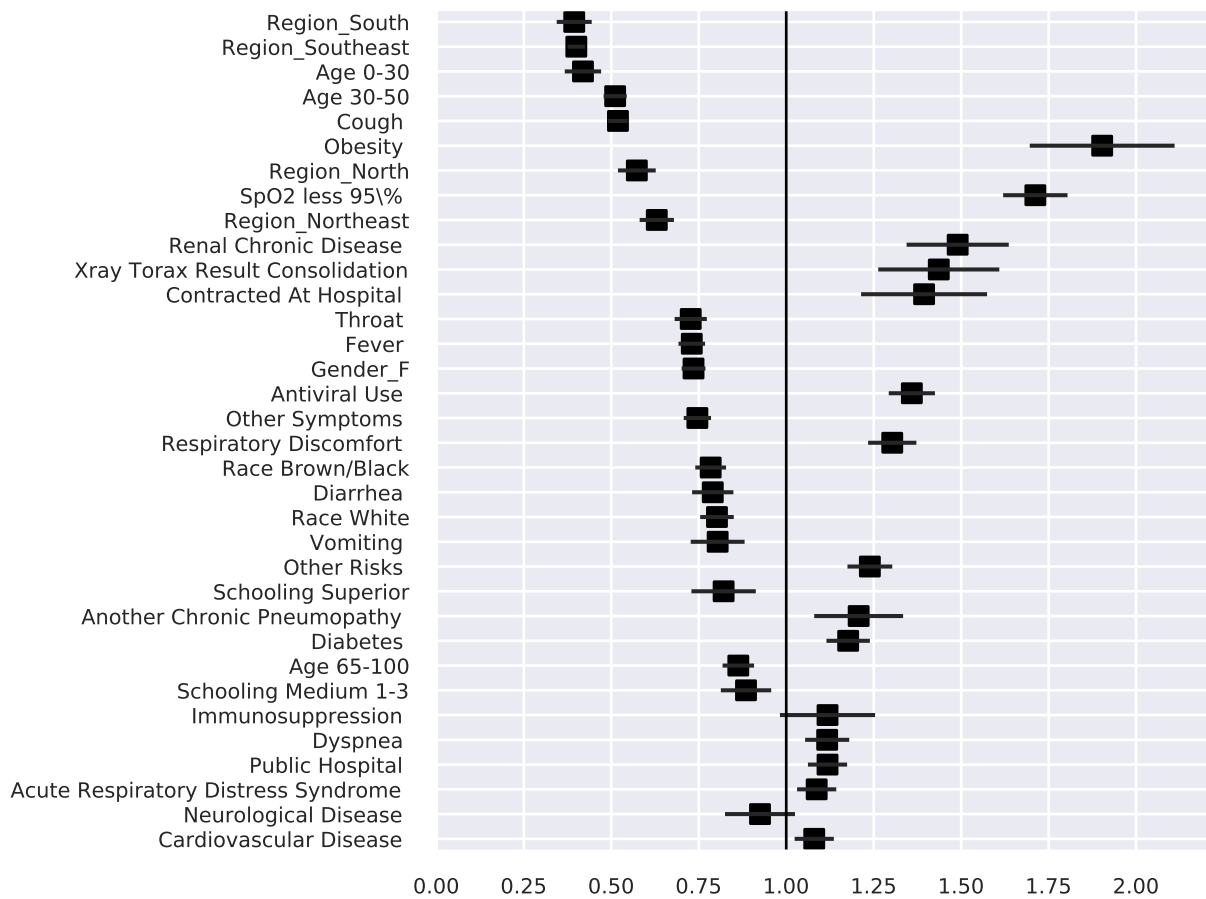
Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.644	0.644	0.644	0.641	0.64
F1w	0.547	0.542	0.545	0.539	0.52
AUC	0.593	0.592	0.592	0.590	0.59

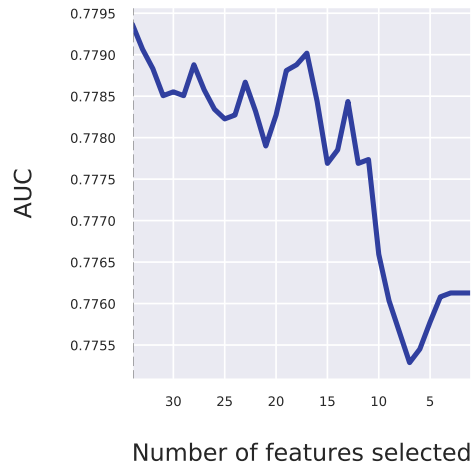


2.7 Ventilator

SVM-I1	Coef LR-I1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Region.South	-0.931	-1.066	-0.796	0.394	0.344	0.451	0.226	0.178	0.000	0.000
0.950	0.848	0.050								
Region.Southeast	-0.916	-0.981	-0.851	0.400	0.375	0.427	0.248	0.207	0.000	0.000
0.971	0.916	0.025								
Age 0-30	-0.870	-1.003	-0.736	0.419	0.367	0.479	0.230	0.119	0.000	0.000
0.883	0.612	0.052								
Age 30-50	-0.671	-0.739	-0.604	0.511	0.478	0.547	0.251	0.147	0.000	0.000
0.906	0.697	0.033								
Cough	-0.656	-0.712	-0.600	0.519	0.491	0.549	0.275	0.209	0.000	0.000
0.860	0.647	0.028								
Obesity	0.643	0.528	0.758	1.903	1.696	2.135	0.219	0.341	0.000	0.000
1.246	1.827	0.207								
Region.North	-0.557	-0.656	-0.457	0.573	0.519	0.633	0.221	0.250	0.002	0.000
1.053	1.169	0.054								
SpO2 less 95\%	0.537	0.482	0.593	1.712	1.620	1.809	0.134	0.285	0.000	0.000
1.214	1.904	0.092								
Region.Northeast	-0.462	-0.543	-0.381	0.630	0.581	0.683	0.210	0.292	0.000	0.000
1.129	1.421	0.049								
Renal Chronic Disease	0.398	0.295	0.502	1.490	1.344	1.651	0.217	0.362	0.000	0.000
1.191	1.556	0.146								
Xray Torax Result Consolidation	0.362	0.234	0.490	1.436	1.263	1.633	0.221	0.315	0.000	0.000
1.169	1.523	0.173								
Contracted At Hospital	0.332	0.194	0.470	1.394	1.214	1.600	0.221	0.342	0.000	0.000
1.182	1.539	0.180								
Throat	-0.319	-0.384	-0.255	0.727	0.681	0.775	0.236	0.178	0.000	0.000
0.900	0.713	0.046								
Fever	-0.314	-0.368	-0.260	0.730	0.692	0.771	0.250	0.215	0.000	0.000
0.968	0.917	0.038								
Gender.F	-0.308	-0.356	-0.260	0.735	0.701	0.771	0.232	0.213	0.001	0.000
0.951	0.855	0.034								
Antiviral Use	0.307	0.257	0.356	1.359	1.293	1.428	0.200	0.266	0.000	0.000
1.108	1.368	0.066								
Other Symptoms	-0.294	-0.347	-0.240	0.746	0.707	0.787	0.238	0.193	0.000	0.000
0.960	0.879	0.039								
Respiratory Discomfort	0.265	0.210	0.319	1.303	1.234	1.376	0.158	0.266	0.000	0.000
1.134	1.464	0.069								
Race Brown/Black	-0.243	-0.301	-0.185	0.784	0.740	0.831	0.217	0.237	0.001	0.000
0.968	0.911	0.044								
Diarrhea	-0.236	-0.313	-0.158	0.790	0.731	0.854	0.231	0.178	0.000	0.000
0.939	0.817	0.059								
Race White	-0.220	-0.283	-0.158	0.802	0.754	0.854	0.230	0.209	0.000	0.000
0.976	0.925	0.048								
Vomiting	-0.218	-0.318	-0.117	0.804	0.727	0.890	0.228	0.173	0.000	0.000
0.938	0.821	0.077								
Other Risks	0.214	0.161	0.267	1.239	1.175	1.306	0.203	0.282	0.000	0.000
1.104	1.337	0.064								
Schooling Superior	-0.198	-0.316	-0.080	0.821	0.729	0.924	0.228	0.162	0.000	0.001
0.972	0.898	0.092								
Another Chronic Pneumopathy	0.188	0.077	0.300	1.207	1.080	1.349	0.220	0.324	0.000	0.001
1.087	1.225	0.127								
Diabetes	0.163	0.109	0.218	1.177	1.115	1.243	0.200	0.296	0.000	0.000
1.085	1.255	0.062								
Age 65-100	-0.147	-0.200	-0.093	0.863	0.818	0.911	0.185	0.283	0.000	0.000
1.046	1.134	0.045								
Schooling Medium 1-3	-0.122	-0.207	-0.037	0.885	0.813	0.963	0.229	0.183	0.000	0.005
0.972	0.911	0.072								
Immunosuppression	0.112	-0.019	0.242	1.118	0.982	1.274	0.222	0.274	0.002	0.093
1.049	1.152	0.136								
Dyspnea	0.111	0.052	0.169	1.117	1.054	1.185	0.145	0.253	0.000	0.000
1.112	1.443	0.063								
Public Hospital	0.111	0.060	0.163	1.118	1.062	1.177	0.203	0.259	0.000	0.000
1.047	1.158	0.056								
Acute Respiratory Distress Syndrome	0.084	0.030	0.137	1.087	1.031	1.147	0.211	0.262	0.000	0.002
1.055	1.168	0.056								
Neurological Disease	-0.078	-0.192	0.037	0.925	0.825	1.038	0.222	0.270	0.001	0.184
0.976	0.950	0.100								
Cardiovascular Disease	0.077	0.024	0.129	1.080	1.024	1.138	0.197	0.278	0.000	0.004
1.050	1.163	0.056								

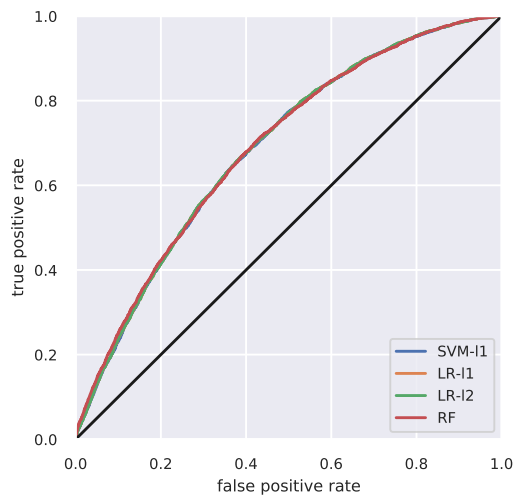


Recursive Feature Elimination:



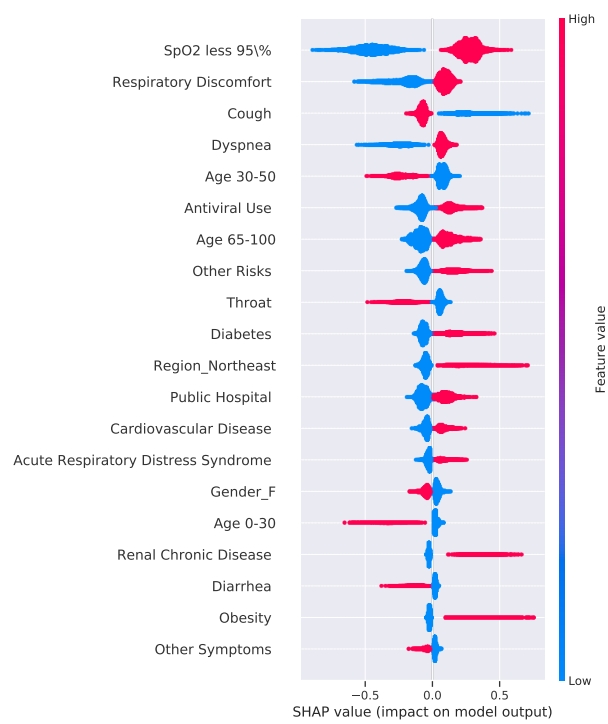
Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.747	0.748	0.748	0.753	0.752
F1w	0.675	0.675	0.674	0.650	0.676
AUC	0.686	0.688	0.688	0.689	0.689



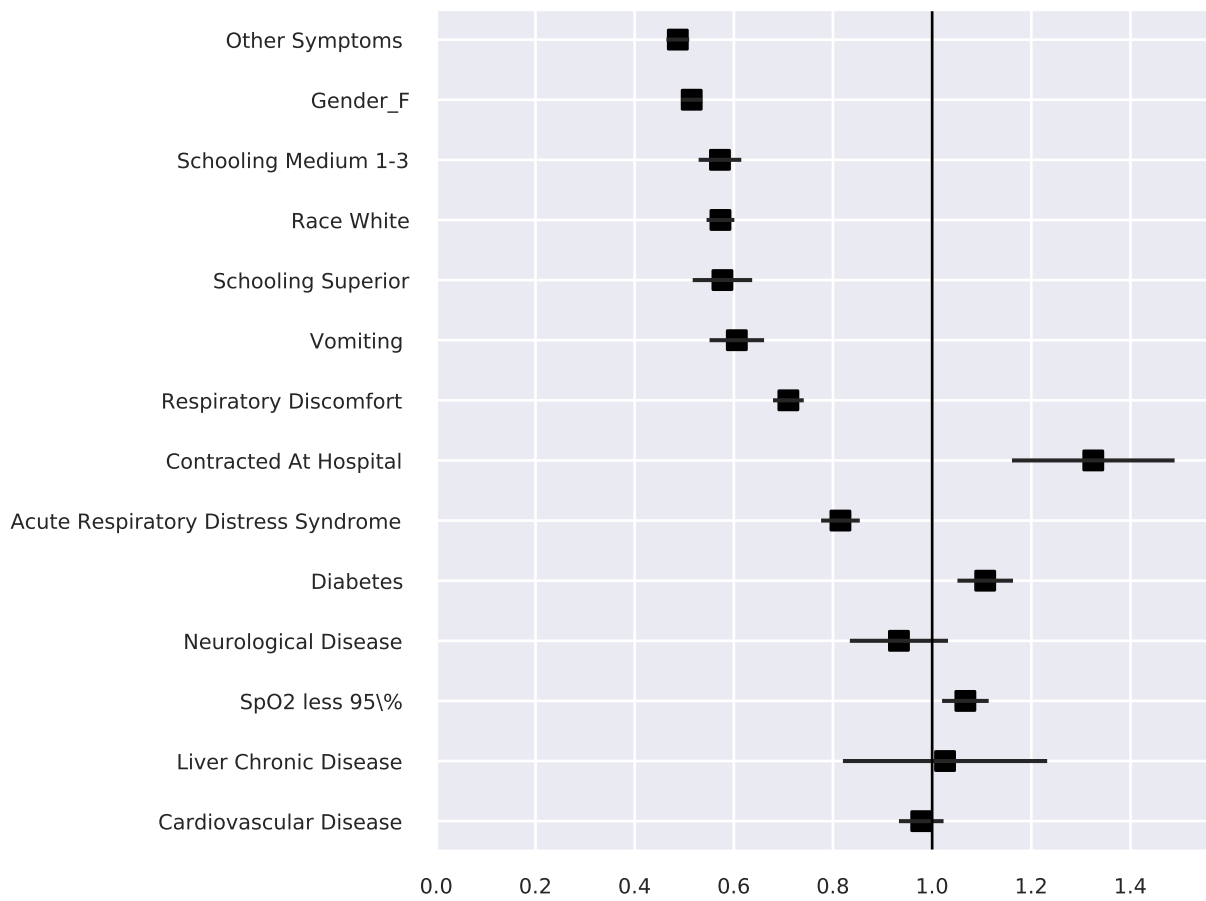
Coefficients:

	SVM-l1	LR-l1
Age 0-30	0.883	0.612
Cough	0.860	0.647
Age 30-50	0.906	0.697
Throat	0.900	0.713
Diarrhea	0.939	0.817
Vomiting	0.938	0.821
Region_South	0.950	0.848
Gender_F	0.951	0.855
Other Symptoms	0.960	0.879
Schooling Superior	0.972	0.898
Race Brown/Black	0.968	0.911
Schooling Medium 1-3	0.972	0.911
Region_Southeast	0.971	0.916
Fever	0.968	0.917
Race White	0.976	0.925
Neurological Disease	0.976	0.950
Age 65-100	1.046	1.134
Immunosuppression	1.049	1.152
Public Hospital	1.047	1.158
Cardiovascular Disease	1.050	1.163
Acute Respiratory Distress Syndrome	1.055	1.168
Region_North	1.053	1.169
Another Chronic Pneumopathy	1.087	1.225
Diabetes	1.085	1.255
Other Risks	1.104	1.337
Antiviral Use	1.108	1.368
Region_Northeast	1.129	1.421
Dyspnea	1.112	1.443
Respiratory Discomfort	1.134	1.464
Xray Torax Result Consolidation	1.169	1.523
Contracted At Hospital	1.182	1.539
Renal Chronic Disease	1.191	1.556
Obesity	1.246	1.827
SpO2 less 95\%	1.214	1.904

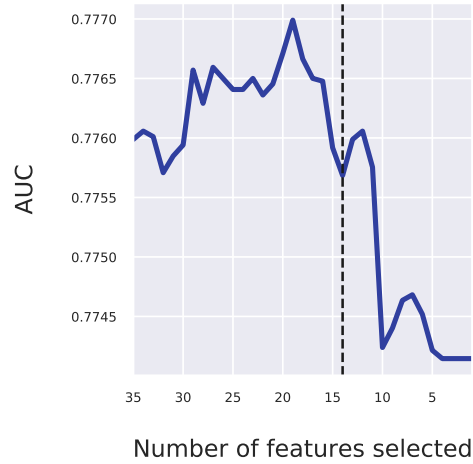


2.8 Ventilator small

SVM-II	Coef LR-II	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Other Symptoms	-0.719	-0.767	-0.670	0.487	0.464	0.511	0.240	0.195	0.000	0.000
0.964	0.893	0.023								
Gender_F	-0.663	-0.706	-0.620	0.515	0.494	0.538	0.235	0.213	0.000	0.000
0.957	0.876	0.021								
Schooling Medium 1-3	-0.559	-0.637	-0.480	0.572	0.529	0.619	0.231	0.187	0.000	0.000
0.935	0.822	0.043								
Race White	-0.558	-0.608	-0.508	0.573	0.545	0.602	0.235	0.204	0.000	0.000
0.940	0.831	0.028								
Schooling Superior	-0.549	-0.660	-0.438	0.577	0.517	0.645	0.229	0.174	0.000	0.000
0.943	0.848	0.060								
Vomiting	-0.501	-0.596	-0.407	0.606	0.551	0.666	0.230	0.180	0.000	0.000
0.909	0.756	0.055								
Respiratory Discomfort	-0.342	-0.387	-0.298	0.710	0.679	0.742	0.162	0.266	0.000	0.000
1.118	1.411	0.031								
Contracted At Hospital	0.282	0.149	0.414	1.325	1.161	1.513	0.223	0.333	0.000	0.000
1.218	1.599	0.164								
Acute Respiratory Distress Syndrome	-0.204	-0.253	-0.155	0.815	0.776	0.856	0.212	0.265	0.000	0.000
1.070	1.209	0.039								
Diabetes	0.102	0.050	0.153	1.107	1.051	1.165	0.202	0.295	0.000	0.000
1.130	1.398	0.056								
Neurological Disease	-0.069	-0.182	0.043	0.933	0.834	1.044	0.224	0.267	0.004	0.226
1.007	1.000	0.099								
SpO2 less 95\%	0.065	0.020	0.110	1.067	1.020	1.117	0.135	0.288	0.000	0.005
1.267	2.134	0.047								
Liver Chronic Disease	0.026	-0.199	0.251	1.026	0.820	1.285	0.225	0.297	0.036	0.821
1.092	1.083	0.206								
Cardiovascular Disease	-0.022	-0.070	0.026	0.978	0.933	1.026	0.197	0.284	0.000	0.366
1.111	1.351	0.045								



Recursive Feature Elimination:

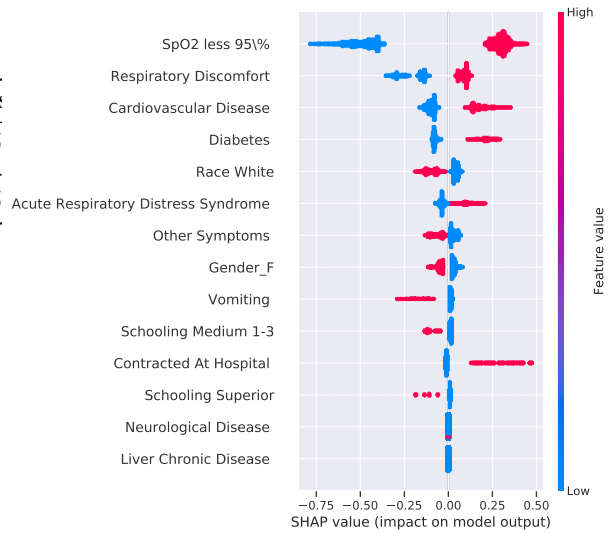
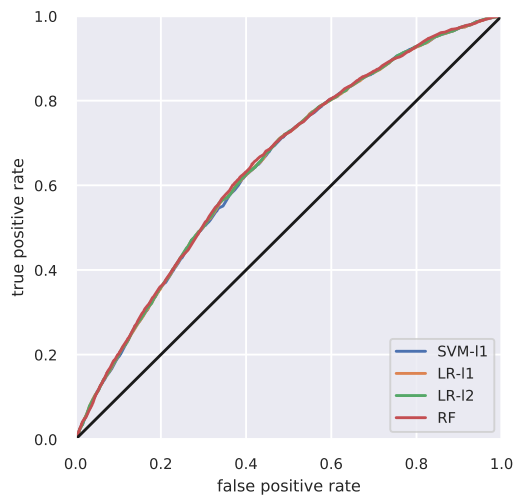


Coefficients:

	SVM-l1	LR-l1
Vomiting	0.909	0.756
Schooling Medium 1-3	0.935	0.822
Race White	0.940	0.831
Schooling Superior	0.943	0.848
Gender_F	0.957	0.876
Other Symptoms	0.964	0.893
Neurological Disease	1.007	1.000
Liver Chronic Disease	1.092	1.083
Acute Respiratory Distress Syndrome	1.070	1.209
Cardiovascular Disease	1.111	1.351
Diabetes	1.130	1.398
Respiratory Discomfort	1.118	1.411
Contracted At Hospital	1.218	1.599
SpO2 less 95\%	1.267	2.134

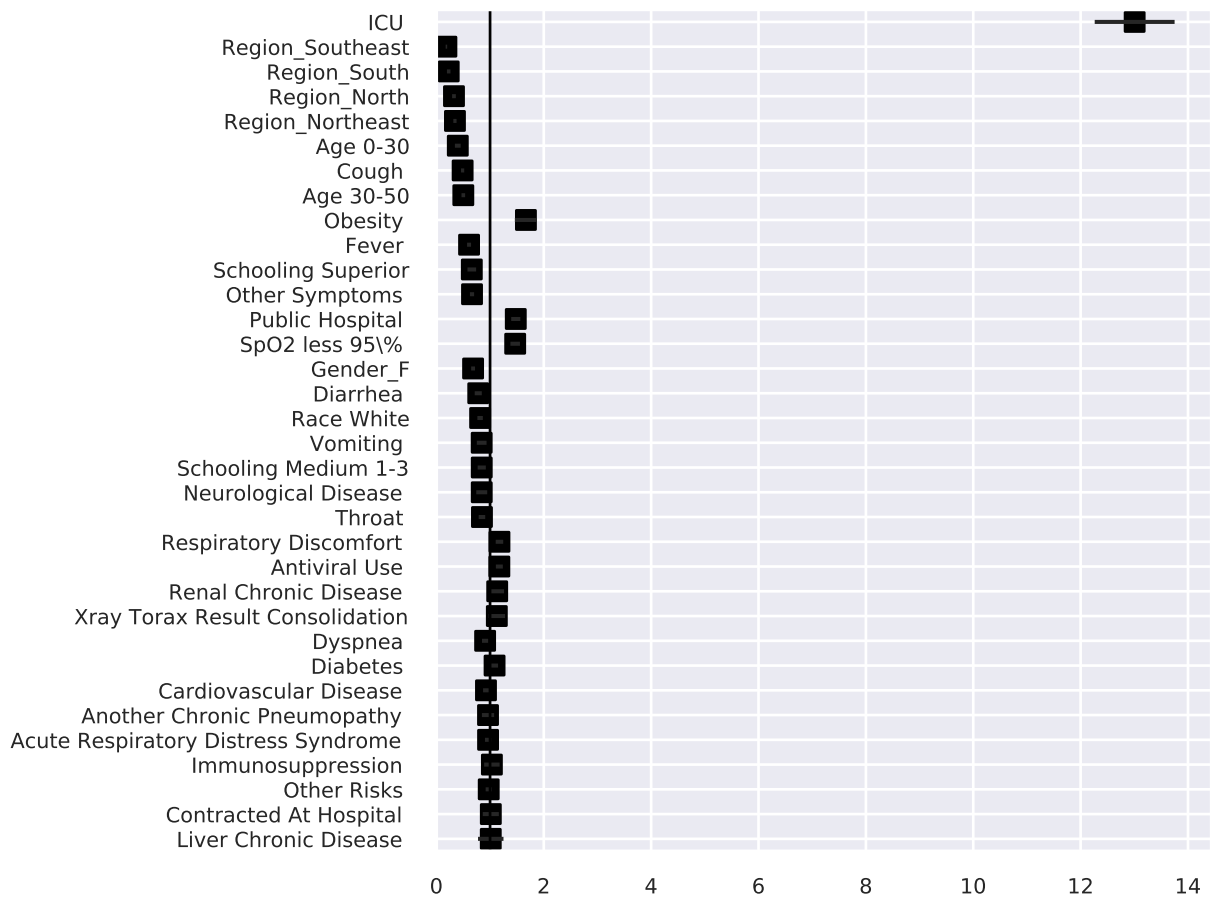
Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.752	0.753	0.753	0.753	0.75
F1w	0.651	0.649	0.649	0.647	0.64
AUC	0.649	0.650	0.651	0.652	0.65

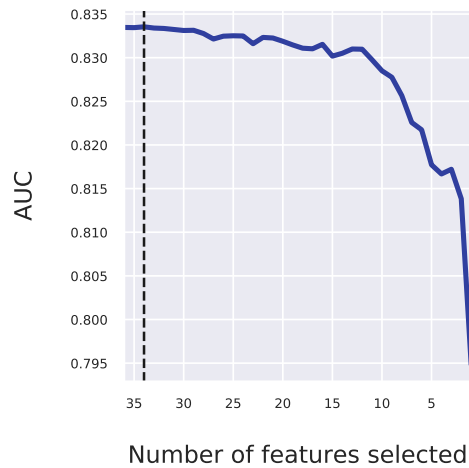


2.9 Ventilator with ICU

SVM-II	Coef LR-II	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
ICU	2.565	2.506	2.624	13.006	12.262	13.795	0.068	0.531	0.000	0.000
2.528	16.554	0.744								
Region.Southeast	-1.677	-1.753	-1.601	0.187	0.173	0.202	0.251	0.209	0.000	0.000
0.918	0.779	0.014								
Region.South	-1.468	-1.624	-1.312	0.230	0.197	0.269	0.228	0.186	0.002	0.000
0.948	0.813	0.033								
Region.North	-1.116	-1.228	-1.004	0.328	0.293	0.366	0.224	0.246	0.034	0.000
1.059	1.281	0.035								
Region.Northeast	-1.061	-1.153	-0.969	0.346	0.316	0.379	0.211	0.301	0.000	0.000
1.122	1.514	0.030								
Age 0-30	-0.918	-1.064	-0.772	0.399	0.345	0.462	0.233	0.122	0.000	0.000
0.865	0.590	0.054								
Cough	-0.715	-0.779	-0.652	0.489	0.459	0.521	0.279	0.211	0.000	0.000
0.896	0.712	0.030								
Age 30-50	-0.689	-0.760	-0.617	0.502	0.468	0.539	0.254	0.148	0.000	0.000
0.890	0.664	0.034								
Obesity	0.512	0.380	0.643	1.668	1.462	1.903	0.222	0.347	0.000	0.000
1.138	1.473	0.206								
Fever	-0.497	-0.558	-0.435	0.609	0.572	0.647	0.258	0.216	0.000	0.000
0.956	0.879	0.037								
Schooling Superior	-0.416	-0.546	-0.286	0.660	0.579	0.751	0.230	0.173	0.000	0.000
0.896	0.738	0.081								
Other Symptoms	-0.410	-0.471	-0.349	0.664	0.625	0.705	0.238	0.200	0.000	0.000
0.949	0.853	0.039								
Public Hospital	0.392	0.332	0.451	1.479	1.394	1.570	0.206	0.261	0.000	0.000
1.167	1.696	0.085								
SpO2 less 95\%	0.384	0.321	0.446	1.468	1.379	1.562	0.134	0.290	0.000	0.000
1.183	1.791	0.089								
Gender.F	-0.380	-0.434	-0.326	0.684	0.648	0.722	0.235	0.214	0.000	0.000
0.974	0.919	0.036								
Diarrhea	-0.249	-0.337	-0.160	0.780	0.714	0.852	0.234	0.178	0.000	0.000
0.942	0.818	0.066								
Race White	-0.204	-0.269	-0.139	0.815	0.764	0.870	0.234	0.209	0.000	0.000
0.979	0.932	0.051								
Vomiting	-0.170	-0.284	-0.055	0.844	0.753	0.946	0.230	0.179	0.000	0.004
0.964	0.882	0.091								
Schooling Medium 1-3	-0.168	-0.263	-0.073	0.845	0.769	0.930	0.231	0.190	0.000	0.001
0.972	0.884	0.076								
Neurological Disease	-0.168	-0.298	-0.039	0.845	0.743	0.961	0.224	0.276	0.000	0.011
0.985	0.984	0.102								
Throat	-0.164	-0.238	-0.090	0.849	0.788	0.914	0.239	0.178	0.000	0.000
0.952	0.841	0.061								
Respiratory Discomfort	0.162	0.100	0.223	1.175	1.105	1.250	0.162	0.267	0.000	0.000
1.128	1.457	0.070								
Antiviral Use	0.159	0.103	0.216	1.173	1.108	1.241	0.202	0.269	0.000	0.000
1.058	1.171	0.065								
Renal Chronic Disease	0.125	0.005	0.245	1.133	1.005	1.278	0.221	0.347	0.000	0.041
1.071	1.232	0.128								
Xray Torax Result Consolidation	0.118	-0.028	0.265	1.126	0.972	1.303	0.224	0.316	0.000	0.113
1.086	1.288	0.154								
Dyspnea	-0.097	-0.163	-0.031	0.908	0.850	0.970	0.148	0.255	0.000	0.004
1.107	1.404	0.058								
Diabetes	0.081	0.018	0.143	1.084	1.019	1.154	0.202	0.299	0.000	0.011
1.065	1.229	0.065								
Cardiovascular Disease	-0.079	-0.139	-0.020	0.924	0.870	0.981	0.197	0.284	0.000	0.009
1.033	1.097	0.054								
Another Chronic Pneumopathy	-0.039	-0.164	0.087	0.962	0.848	1.091	0.222	0.319	0.000	0.547
1.016	1.044	0.114								
Acute Respiratory Distress Syndrome	-0.038	-0.099	0.023	0.963	0.905	1.024	0.213	0.264	0.000	0.224
1.026	1.094	0.058								
Immunosuppression	0.033	-0.116	0.183	1.034	0.890	1.201	0.225	0.275	0.002	0.662
1.035	1.112	0.144								
Other Risks	-0.025	-0.086	0.035	0.975	0.918	1.036	0.207	0.281	0.000	0.410
1.040	1.129	0.057								
Contracted At Hospital	0.014	-0.146	0.174	1.014	0.864	1.190	0.224	0.319	0.000	0.865
1.065	1.203	0.150								
Liver Chronic Disease	0.013	-0.253	0.279	1.013	0.776	1.322	0.226	0.305	0.015	0.926
1.028	1.092	0.237								

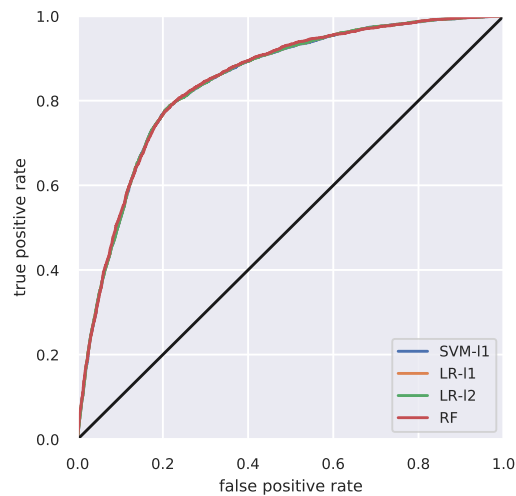


Recursive Feature Elimination:



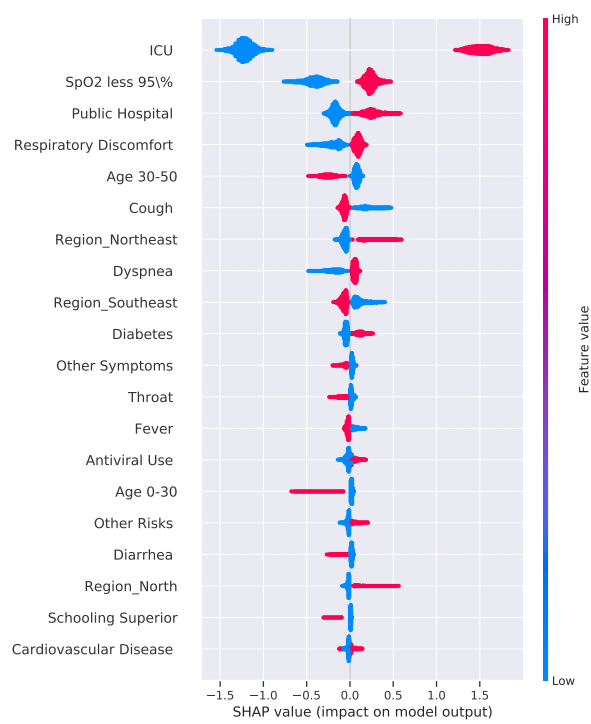
Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.811	0.810	0.809	0.810	0.816
F1w	0.808	0.806	0.806	0.798	0.814
AUC	0.844	0.845	0.845	0.846	0.848



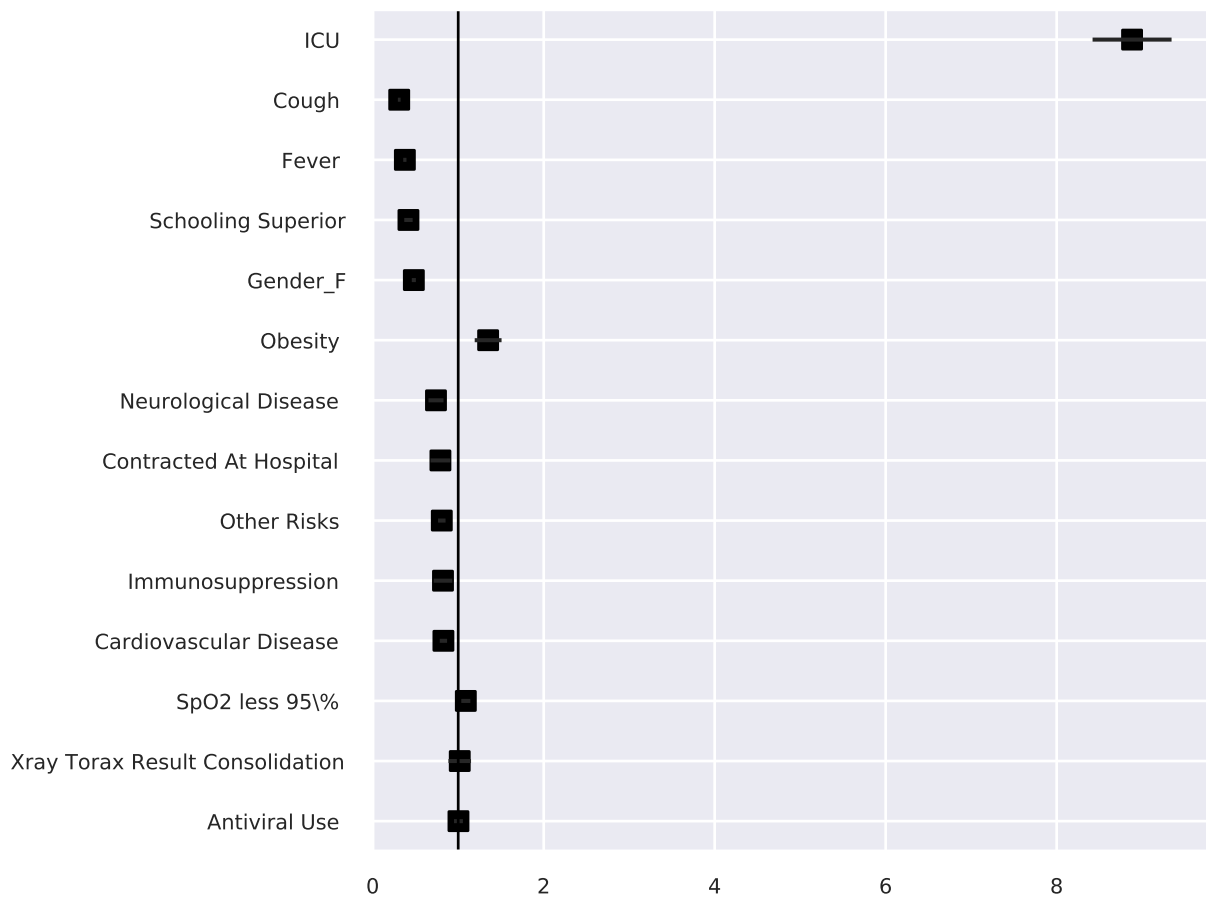
Coefficients:

	SVM-l1	LR-l1
Age 0-30	0.865	0.590
Age 30-50	0.890	0.664
Cough	0.896	0.712
Schooling Superior	0.896	0.738
Region_Southeast	0.918	0.779
Region_South	0.948	0.813
Diarrhea	0.942	0.818
Throat	0.952	0.841
Other Symptoms	0.949	0.853
Fever	0.956	0.879
Vomiting	0.964	0.882
Schooling Medium 1-3	0.972	0.884
Gender_F	0.974	0.919
Race White	0.979	0.932
Neurological Disease	0.985	0.984
Another Chronic Pneumopathy	1.016	1.044
Liver Chronic Disease	1.028	1.092
Acute Respiratory Distress Syndrome	1.026	1.094
Cardiovascular Disease	1.033	1.097
Immunosuppression	1.035	1.112
Other Risks	1.040	1.129
Antiviral Use	1.058	1.171
Contracted At Hospital	1.065	1.203
Diabetes	1.065	1.229
Renal Chronic Disease	1.071	1.232
Region_North	1.059	1.281
Xray Torax Result Consolidation	1.086	1.288
Dyspnea	1.107	1.404
Respiratory Discomfort	1.128	1.457
Obesity	1.138	1.473
Region_Northeast	1.122	1.514
Public Hospital	1.167	1.696
SpO2 less 95\%	1.183	1.791
ICU	2.528	16.554

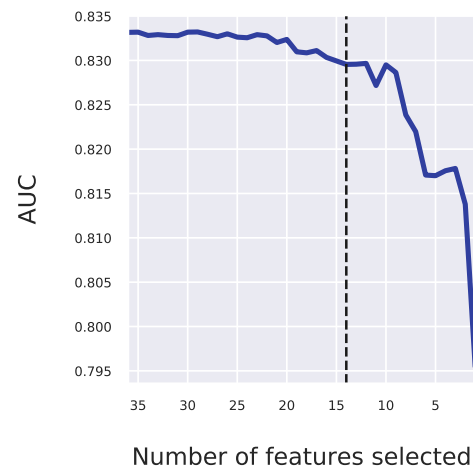


2.10 Ventilator with ICU small

SVM-I1	Coef LR-I1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
ICU	2.184	2.131	2.238	8.882	8.420	9.371	0.066	0.529	0.000	0.000
2.427	14.439	0.462								
Cough	-1.172	-1.226	-1.118	0.310	0.294	0.327	0.274	0.210	0.000	0.000
0.920	0.749	0.016								
Fever	-0.978	-1.031	-0.925	0.376	0.357	0.396	0.253	0.215	0.000	0.000
0.962	0.873	0.019								
Schooling Superior	-0.872	-0.997	-0.747	0.418	0.369	0.474	0.228	0.162	0.000	0.000
0.832	0.559	0.049								
Gender_F	-0.732	-0.782	-0.683	0.481	0.457	0.505	0.234	0.212	0.000	0.000
0.970	0.894	0.024								
Obesity	0.300	0.176	0.424	1.350	1.193	1.528	0.220	0.348	0.000	0.000
1.104	1.346	0.157								
Neurological Disease	-0.300	-0.428	-0.173	0.740	0.652	0.841	0.223	0.269	0.002	0.000
0.969	0.923	0.088								
Contracted At Hospital	-0.233	-0.391	-0.076	0.792	0.676	0.927	0.222	0.312	0.000	0.004
1.060	1.157	0.116								
Other Risks	-0.213	-0.270	-0.156	0.808	0.764	0.855	0.204	0.282	0.000	0.000
1.051	1.186	0.044								
Immunosuppression	-0.196	-0.338	-0.055	0.822	0.713	0.947	0.223	0.281	0.000	0.007
1.017	1.047	0.109								
Cardiovascular Disease	-0.190	-0.244	-0.137	0.827	0.784	0.872	0.197	0.279	0.000	0.000
1.050	1.193	0.043								
SpO2 less 95\%	0.086	0.035	0.136	1.089	1.036	1.146	0.132	0.288	0.000	0.001
1.218	2.206	0.053								
Xray Torax Result Consolidation	0.018	-0.121	0.158	1.018	0.886	1.171	0.222	0.315	0.000	0.798
1.063	1.210	0.132								
Antiviral Use	0.003	-0.050	0.056	1.003	0.951	1.057	0.199	0.269	0.000	0.917
1.068	1.256	0.052								



Recursive Feature Elimination:



Coefficients:

	SVM-l1	LR-l1
Schooling Superior	0.832	0.559
Cough	0.920	0.749
Fever	0.962	0.873
Gender_F	0.970	0.894
Neurological Disease	0.969	0.923
Immunosuppression	1.017	1.047
Contracted At Hospital	1.060	1.157
Other Risks	1.051	1.186
Cardiovascular Disease	1.050	1.193
Xray Torax Result Consolidation	1.063	1.210
Antiviral Use	1.068	1.256
Obesity	1.104	1.346
SpO2 less 95\%	1.218	2.206
ICU	2.427	14.439

Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoo:
Accuracy	0.792	0.792	0.792	0.791	0.79
F1w	0.792	0.791	0.791	0.788	0.79
AUC	0.820	0.820	0.820	0.820	0.82

