
PRELIMINARY RESULTS FOR BRAZIL COVID-19 DATASET

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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

Table 1: Number of observations with a specific observation

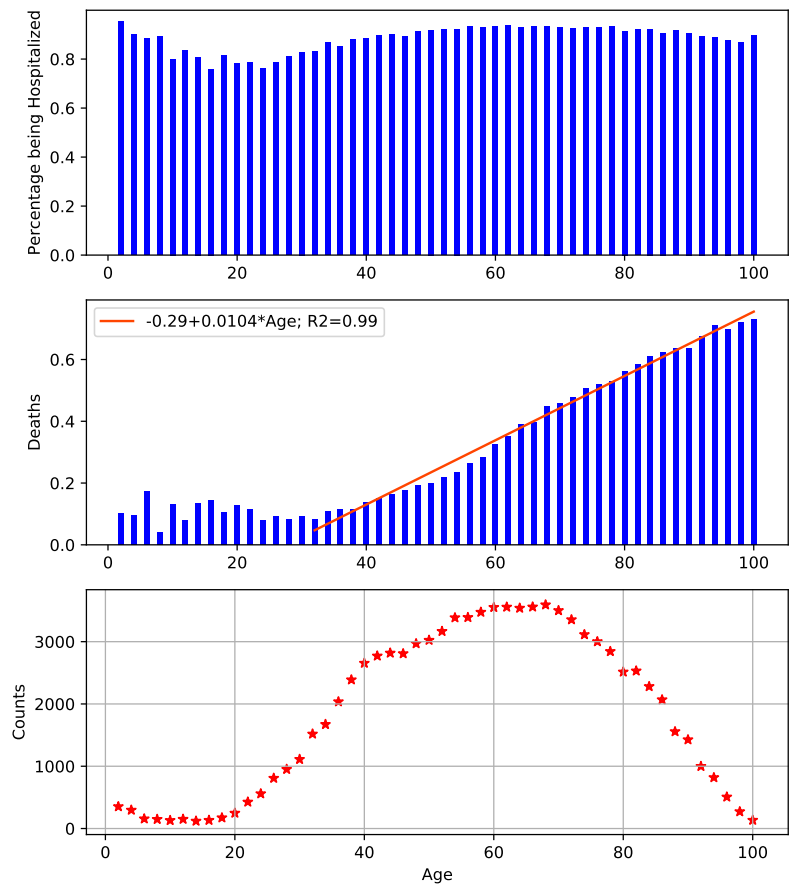


Figure 1: Distribution of hospitalization and deaths by age group

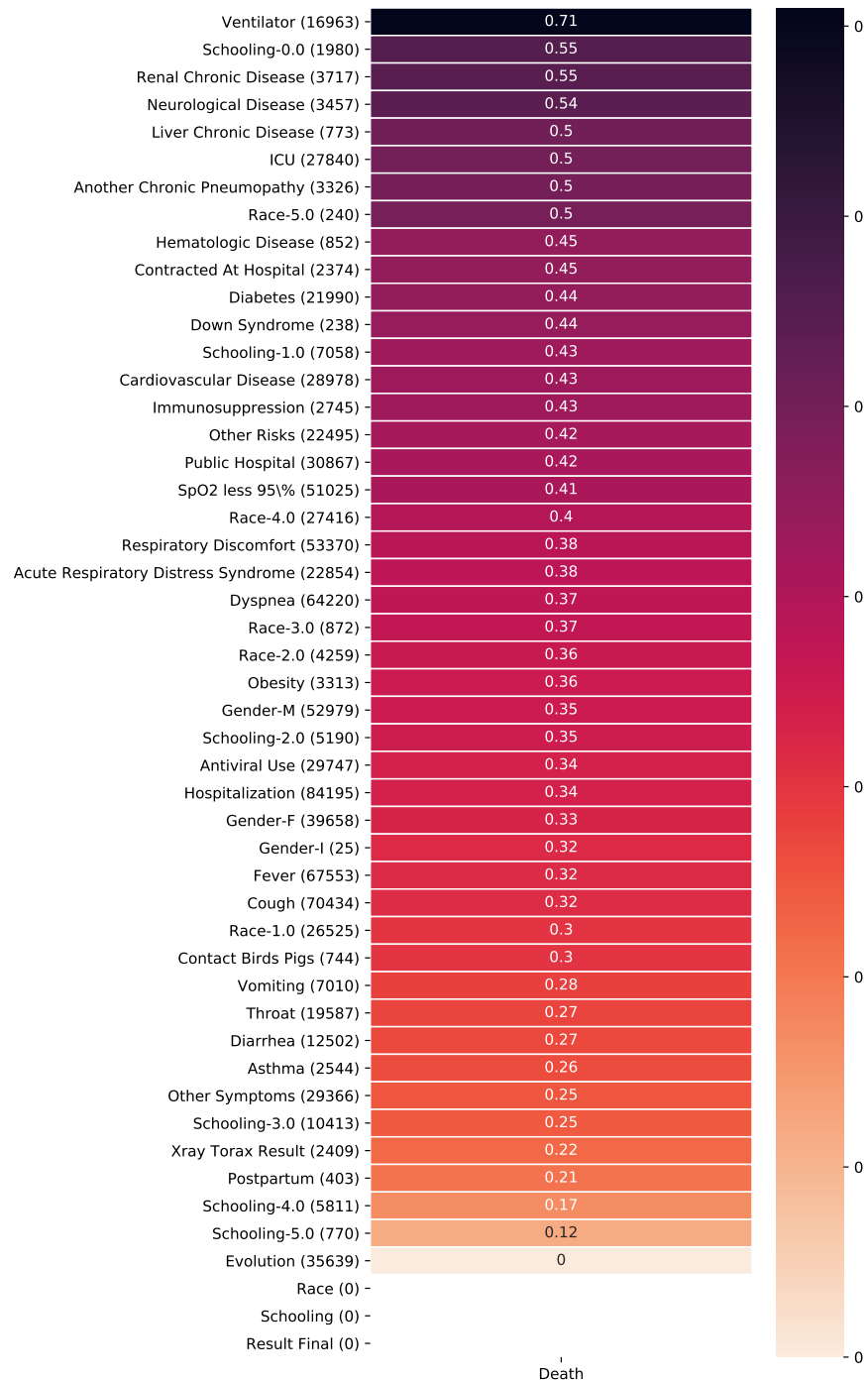


Figure 2: Share of hospitalized and deaths patients given characteristics

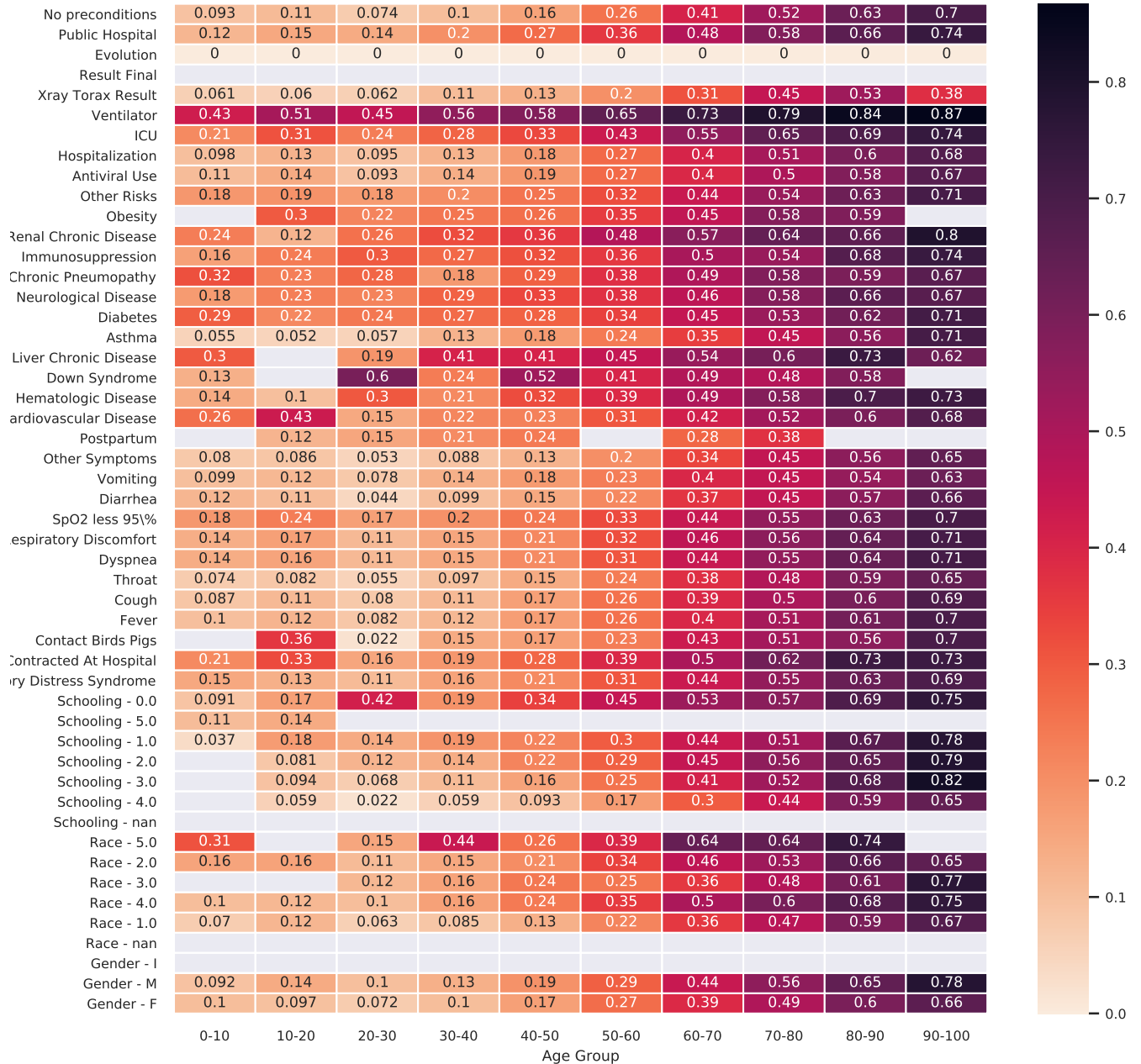
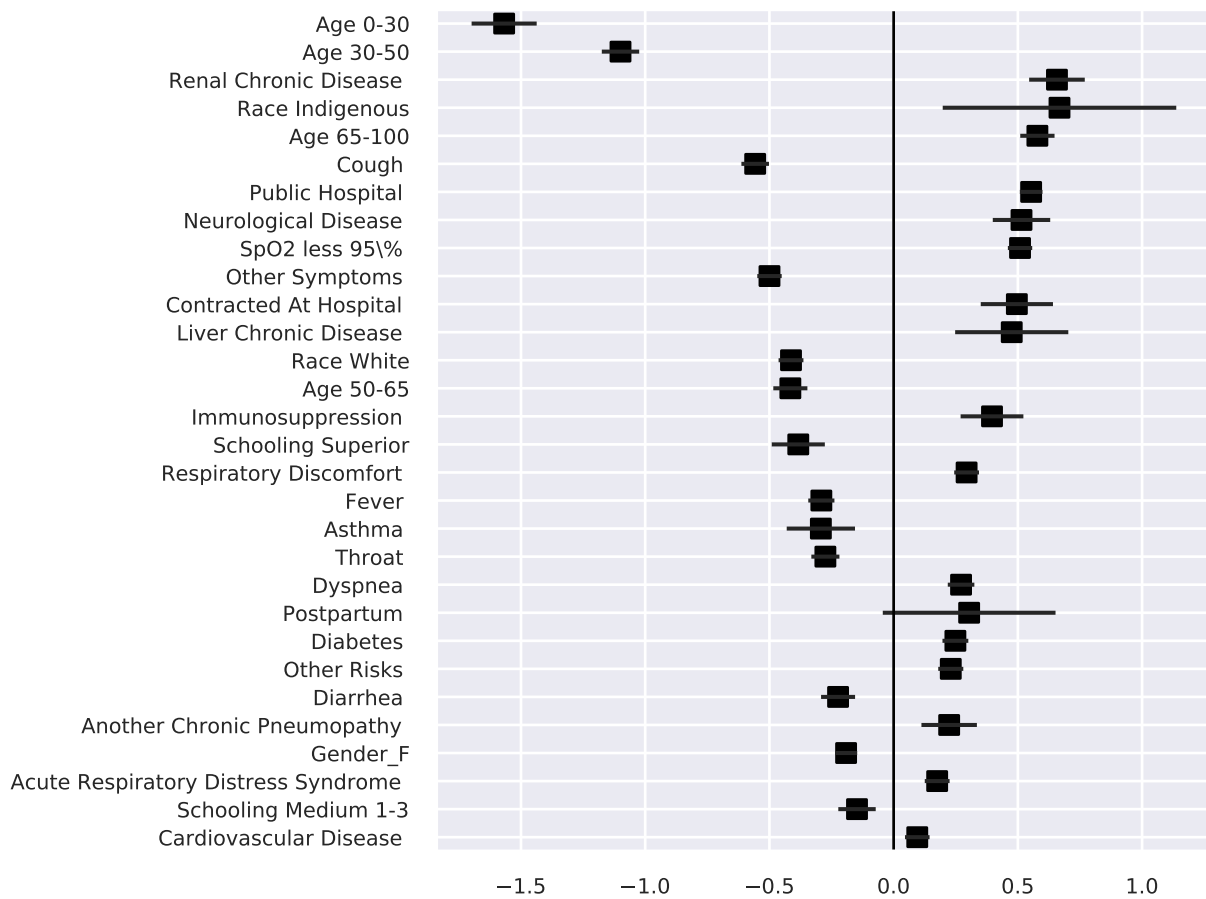


Figure 3: Share of hospitalized and deaths patients given characteristics and age group

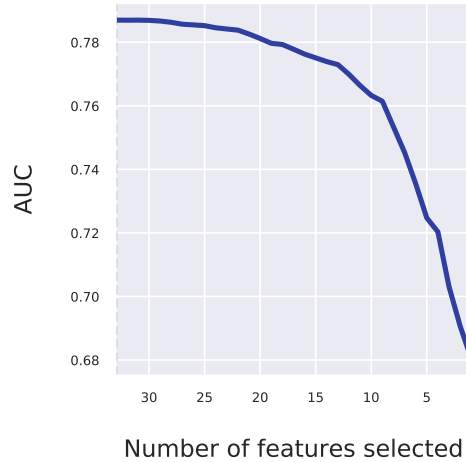
2 Results

2.1 Mortality (previous)

	Coef	2.5	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Age 0-30	-1.568	-1.699	-1.437	0.209	0.183	0.238	0.480	0.154	0.000	0.000
Age 30-50	-1.099	-1.175	-1.024	0.333	0.309	0.359	0.547	0.224	0.000	0.000
Race Indigenous	0.668	0.198	1.138	1.949	1.218	3.119	0.461	0.663	0.001	0.005
Renal Chronic Disease	0.657	0.545	0.769	1.930	1.725	2.158	0.450	0.697	0.000	0.000
Age 65-100	0.579	0.510	0.648	1.783	1.665	1.911	0.307	0.676	0.000	0.000
Cough	-0.557	-0.613	-0.502	0.573	0.542	0.605	0.574	0.428	0.000	0.000
Public Hospital	0.553	0.508	0.599	1.739	1.662	1.820	0.405	0.554	0.000	0.000
Neurological Disease	0.515	0.399	0.630	1.673	1.490	1.878	0.451	0.699	0.000	0.000
SpO2 less 95\%	0.509	0.460	0.558	1.663	1.584	1.747	0.343	0.542	0.000	0.000
Other Symptoms	-0.500	-0.549	-0.451	0.607	0.578	0.637	0.508	0.354	0.000	0.000
Contracted At Hospital	0.496	0.351	0.641	1.642	1.420	1.899	0.456	0.643	0.000	0.000
Liver Chronic Disease	0.475	0.248	0.703	1.608	1.281	2.020	0.459	0.626	0.000	0.000
Age 50-65	-0.416	-0.484	-0.347	0.660	0.616	0.707	0.481	0.416	0.000	0.000
Race White	-0.413	-0.463	-0.363	0.662	0.629	0.696	0.490	0.393	0.000	0.000
Immunosuppression	0.396	0.270	0.522	1.486	1.309	1.686	0.458	0.561	0.000	0.000
Schooling Superior	-0.384	-0.491	-0.277	0.681	0.612	0.758	0.473	0.259	0.000	0.000
Postpartum	0.304	-0.044	0.652	1.355	0.957	1.918	0.462	0.304	0.000	0.087
Respiratory Discomfort	0.294	0.244	0.343	1.341	1.276	1.410	0.389	0.507	0.000	0.000
Asthma	-0.293	-0.430	-0.156	0.746	0.650	0.856	0.464	0.352	0.000	0.000
Fever	-0.291	-0.344	-0.238	0.748	0.709	0.788	0.554	0.430	0.000	0.000
Throat	-0.275	-0.331	-0.218	0.760	0.718	0.804	0.481	0.386	0.000	0.000
Dyspnea	0.271	0.218	0.325	1.312	1.243	1.384	0.375	0.493	0.000	0.000
Diabetes	0.249	0.197	0.301	1.282	1.217	1.351	0.421	0.578	0.000	0.000
Other Risks	0.230	0.179	0.280	1.258	1.197	1.324	0.435	0.536	0.000	0.000
Diarrhea	-0.224	-0.292	-0.155	0.800	0.747	0.856	0.474	0.377	0.000	0.000
Another Chronic Pneumopathy	0.223	0.112	0.335	1.250	1.118	1.398	0.454	0.633	0.000	0.000
Gender_F	-0.191	-0.236	-0.147	0.826	0.790	0.863	0.468	0.452	0.007	0.000
Acute Respiratory Distress Syndrome	0.175	0.125	0.225	1.191	1.133	1.252	0.444	0.511	0.000	0.000
Hematologic Disease	0.163	-0.061	0.387	1.177	0.941	1.473	0.460	0.573	0.000	0.154
Schooling Medium 1-3	-0.147	-0.223	-0.072	0.863	0.800	0.930	0.476	0.337	0.000	0.000
Cardiovascular Disease	0.095	0.046	0.144	1.100	1.047	1.155	0.407	0.568	0.000	0.000
Vomiting	-0.059	-0.147	0.029	0.943	0.863	1.029	0.467	0.386	0.000	0.188
Schooling Elem 1-5	0.045	-0.036	0.126	1.046	0.965	1.134	0.453	0.560	0.000	0.276

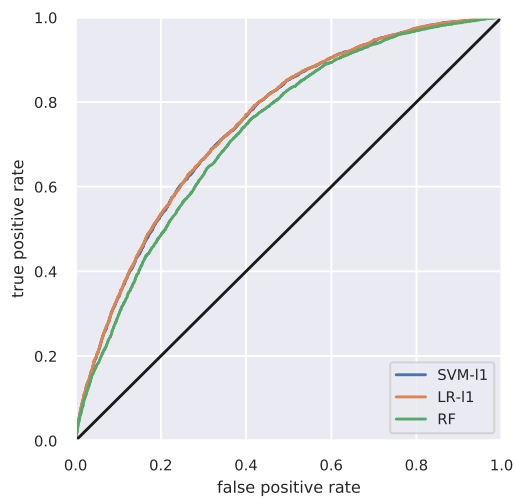


Recursive Feature Elimination:



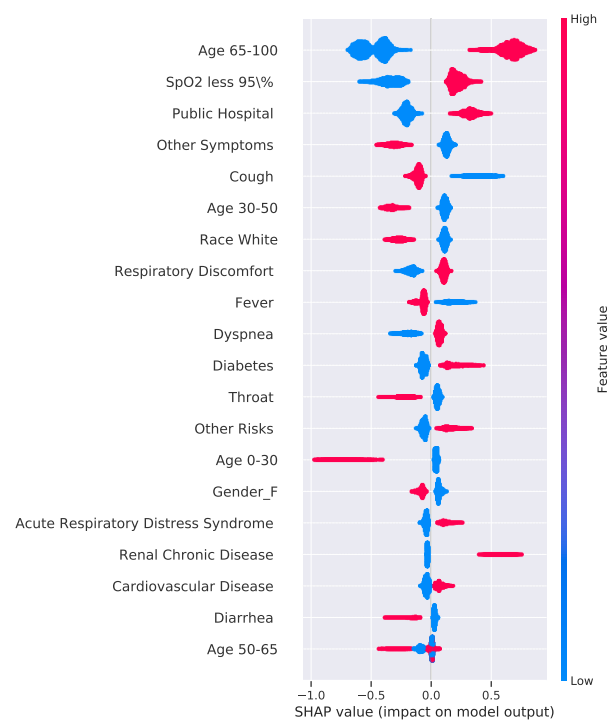
Performance:

	SVM-l1	LR-l1	RF	XGBoost
Accuracy	0.684	0.685	0.664	0.686
F1w	0.683	0.684	0.663	0.686
AUC	0.751	0.752	0.731	0.754



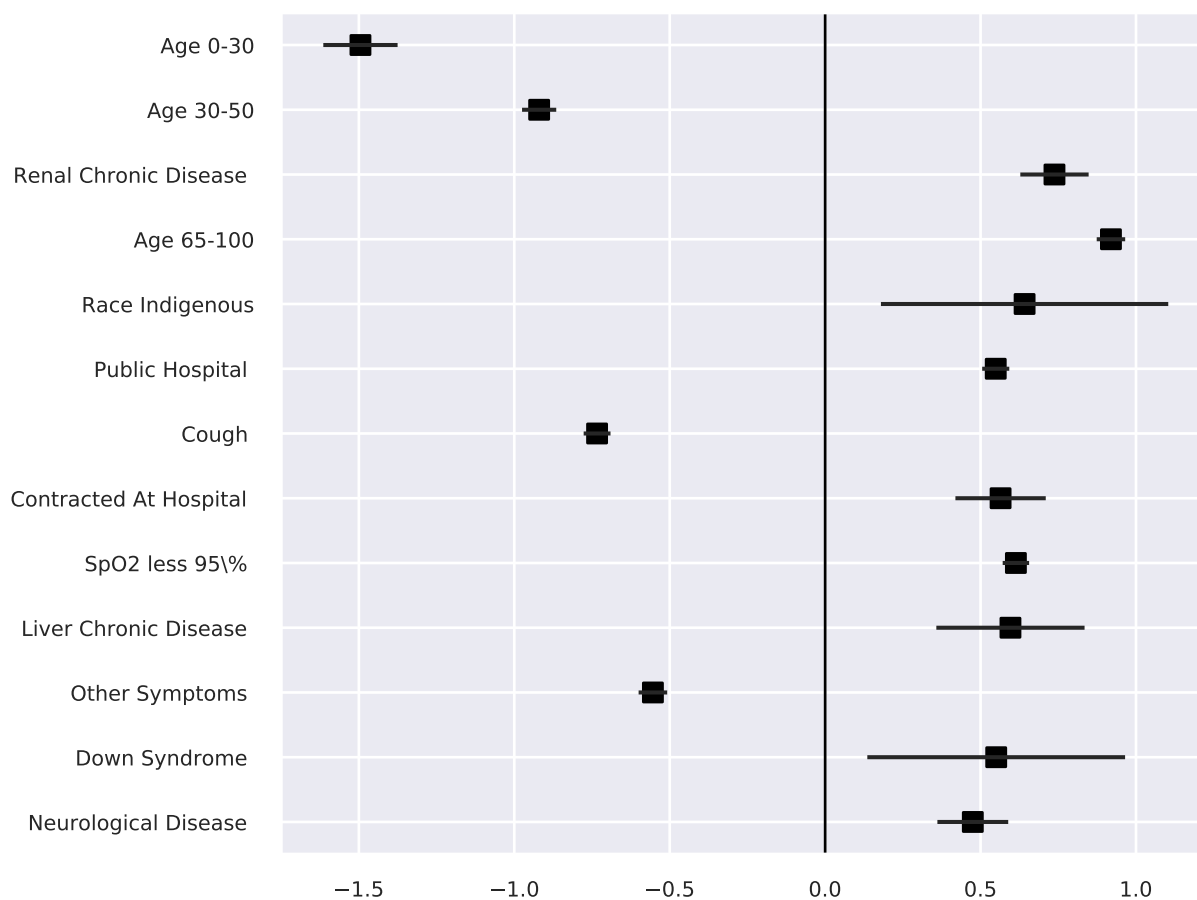
Coefficients:

	SVM-l1	LR-l1
Renal Chronic Disease	0.465	0.424
Race Indigenous	0.436	0.395
Age 65-100	0.525	0.385
Public Hospital	0.395	0.359
Neurological Disease	0.360	0.331
SpO2 less 95\%	0.358	0.329
Contracted At Hospital	0.342	0.318
Liver Chronic Disease	0.344	0.300
Immunosuppression	0.278	0.254
Respiratory Discomfort	0.211	0.190
Dyspnea	0.191	0.176
Postpartum	0.178	0.175
Diabetes	0.182	0.161
Other Risks	0.162	0.149
Another Chronic Pneumopathy	0.160	0.143
Acute Respiratory Distress Syndrome	0.124	0.113
Hematologic Disease	0.105	0.098
Cardiovascular Disease	0.067	0.061
Schooling Elem 1-5	0.035	0.028
Vomiting	-0.042	-0.038
Schooling Medium 1-3	-0.100	-0.094
Gender_F	-0.131	-0.123
Diarrhea	-0.156	-0.144
Throat	-0.191	-0.177
Asthma	-0.205	-0.186
Fever	-0.209	-0.188
Schooling Superior	-0.244	-0.247
Age 50-65	-0.275	-0.258
Race White	-0.289	-0.267
Other Symptoms	-0.349	-0.323
Cough	-0.391	-0.359
Age 30-50	-0.749	-0.700
Age 0-30	-1.000	-1.000

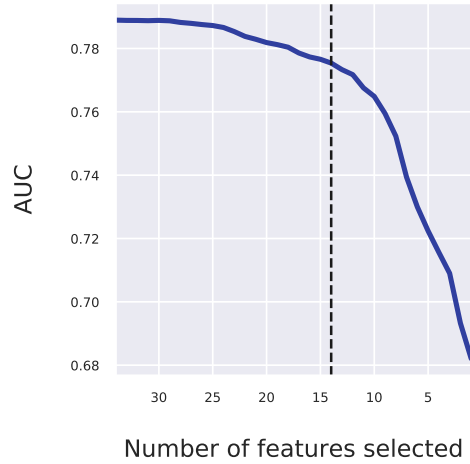


2.2 Mortality (previous) small

	Coef	2.5	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Age 0-30	-1.495	-1.614	-1.375	0.224	0.199	0.253	0.483	0.144	0.000	0.000
Age 30-50	-0.920	-0.975	-0.865	0.399	0.377	0.421	0.549	0.225	0.000	0.000
Age 65-100	0.919	0.874	0.965	2.508	2.396	2.625	0.308	0.680	0.000	0.000
Renal Chronic Disease	0.738	0.628	0.848	2.091	1.874	2.334	0.452	0.699	0.000	0.000
Cough	-0.734	-0.777	-0.690	0.480	0.460	0.501	0.575	0.431	0.000	0.000
Race Indigenous	0.642	0.179	1.104	1.900	1.197	3.016	0.462	0.654	0.001	0.007
SpO2 less 95\%	0.614	0.571	0.656	1.847	1.770	1.927	0.341	0.546	0.000	0.000
Liver Chronic Disease	0.596	0.358	0.835	1.815	1.430	2.304	0.461	0.636	0.000	0.000
Contracted At Hospital	0.564	0.419	0.710	1.758	1.521	2.033	0.458	0.646	0.000	0.000
Other Symptoms	-0.554	-0.600	-0.508	0.575	0.549	0.602	0.509	0.358	0.000	0.000
Down Syndrome	0.550	0.136	0.965	1.734	1.145	2.625	0.463	0.585	0.050	0.009
Public Hospital	0.549	0.505	0.592	1.731	1.657	1.808	0.406	0.557	0.000	0.000
Neurological Disease	0.475	0.361	0.589	1.608	1.435	1.802	0.453	0.691	0.000	0.000
Race White	-0.470	-0.517	-0.423	0.625	0.596	0.655	0.492	0.395	0.000	0.000

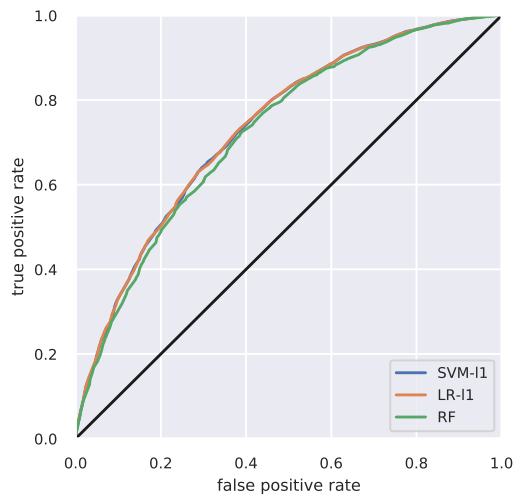


Recursive Feature Elimination:



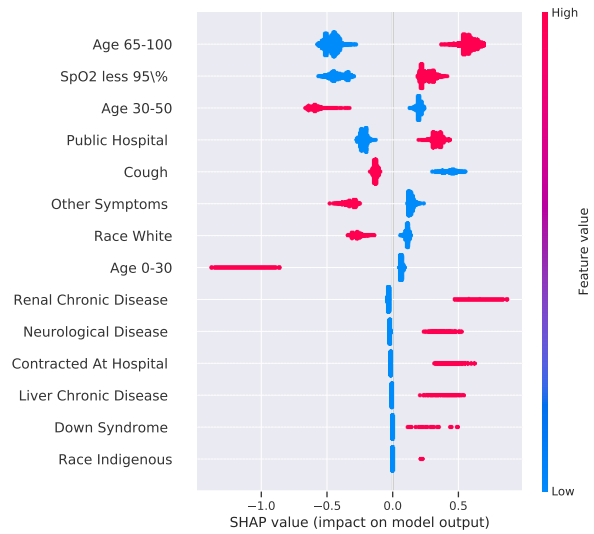
Performance:

	SVM-l1	LR-l1	RF	XGBoost
Accuracy	0.673	0.674	0.658	0.673
F1w	0.672	0.673	0.658	0.672
AUC	0.736	0.737	0.725	0.737



Coefficients:

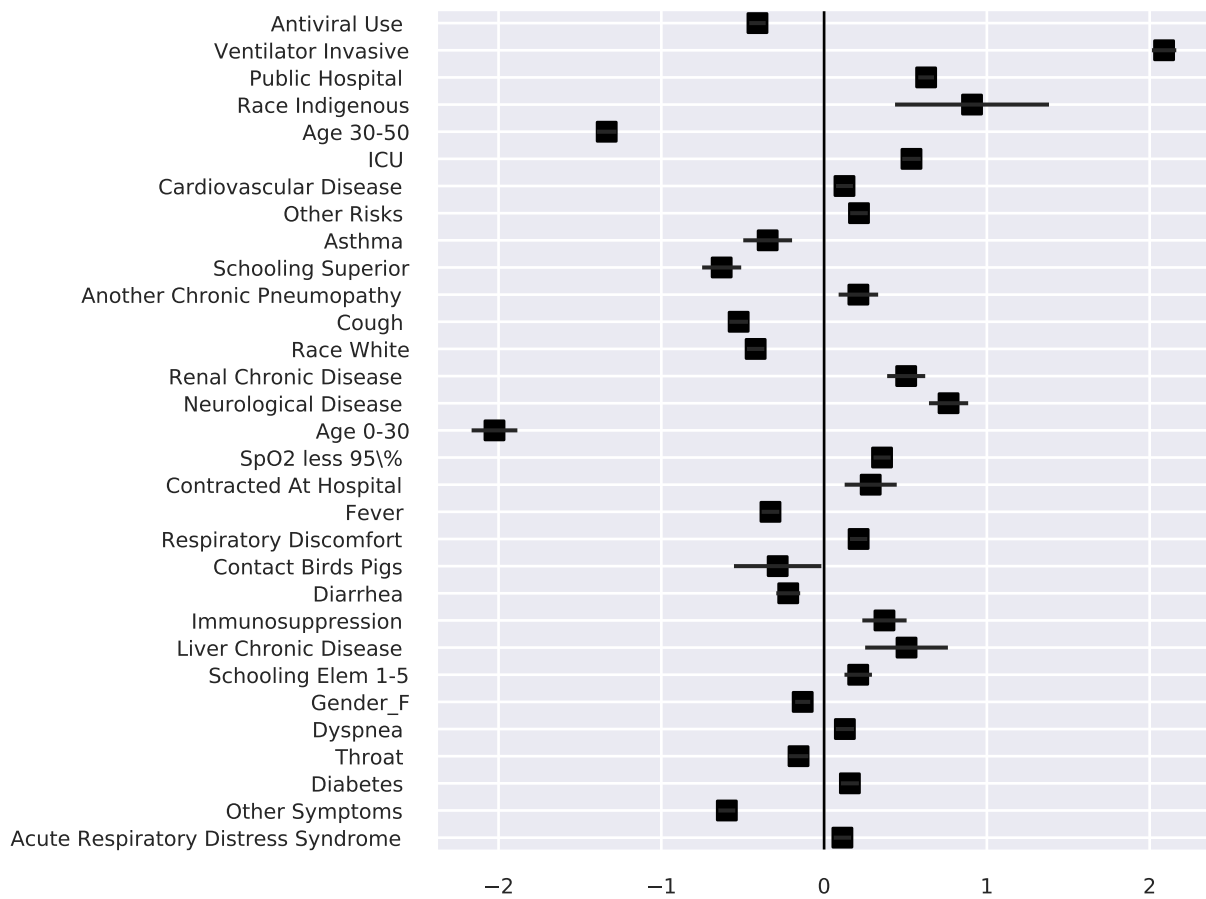
	SVM-l1	LR-l1
Age 65-100	0.945	0.739
Renal Chronic Disease	0.617	0.557
SpO2 less 95\%	0.549	0.492
Liver Chronic Disease	0.508	0.445
Contracted At Hospital	0.475	0.437
Public Hospital	0.486	0.433
Race Indigenous	0.492	0.432
Down Syndrome	0.428	0.375
Neurological Disease	0.387	0.350
Race White	-0.340	-0.310
Other Symptoms	-0.398	-0.359
Cough	-0.482	-0.434
Age 30-50	-0.656	-0.592
Age 0-30	-1.000	-1.000



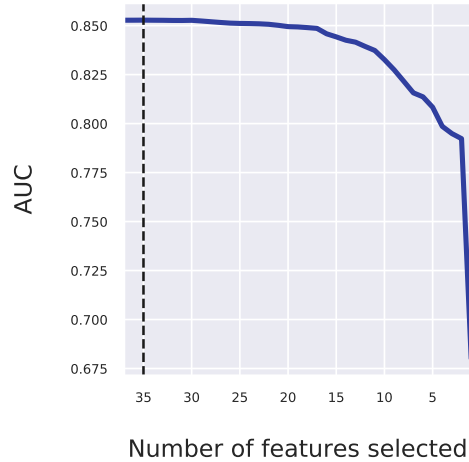
2.3 Mortality (advanced)

Include variables: Antiviral, ICU, Ventilator

	Coef	2.5	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Ventilator Invasive	2.089	2.014	2.164	8.075	7.492	8.702	0.346	0.859	0.000	0.000
Age 0-30	-2.025	-2.166	-1.884	0.132	0.115	0.152	0.480	0.141	0.000	0.000
Age 30-50	-1.336	-1.396	-1.275	0.263	0.248	0.279	0.547	0.223	0.000	0.000
Race Indigenous	0.909	0.436	1.382	2.481	1.546	3.982	0.461	0.680	0.000	0.000
Neurological Disease	0.765	0.644	0.885	2.148	1.905	2.423	0.451	0.692	0.000	0.000
Schooling Superior	-0.629	-0.749	-0.509	0.533	0.473	0.601	0.473	0.254	0.000	0.000
Public Hospital	0.627	0.578	0.675	1.872	1.783	1.965	0.405	0.555	0.000	0.000
Other Symptoms	-0.598	-0.650	-0.545	0.550	0.522	0.580	0.509	0.353	0.000	0.000
ICU	0.537	0.480	0.594	1.711	1.616	1.810	0.357	0.661	0.000	0.000
Cough	-0.525	-0.582	-0.468	0.592	0.559	0.626	0.573	0.429	0.000	0.000
Liver Chronic Disease	0.506	0.252	0.761	1.659	1.287	2.139	0.459	0.664	0.000	0.000
Renal Chronic Disease	0.504	0.387	0.621	1.656	1.473	1.861	0.451	0.680	0.000	0.000
Race White	-0.421	-0.474	-0.367	0.657	0.623	0.693	0.491	0.392	0.000	0.000
Antiviral Use	-0.409	-0.460	-0.359	0.664	0.631	0.699	0.472	0.442	0.000	0.000
Immunosuppression	0.371	0.235	0.507	1.449	1.265	1.660	0.457	0.576	0.000	0.000
SpO2 less 95\%	0.356	0.303	0.408	1.428	1.355	1.504	0.341	0.543	0.000	0.000
Asthma	-0.347	-0.497	-0.197	0.707	0.609	0.821	0.464	0.350	0.000	0.000
Fever	-0.330	-0.384	-0.275	0.719	0.681	0.759	0.551	0.430	0.000	0.000
Contracted At Hospital	0.286	0.126	0.446	1.331	1.135	1.562	0.457	0.630	0.000	0.000
Contact Birds Pigs	-0.285	-0.554	-0.017	0.752	0.575	0.983	0.462	0.369	0.005	0.037
Diarrhea	-0.220	-0.294	-0.147	0.802	0.745	0.863	0.474	0.375	0.000	0.000
Other Risks	0.214	0.160	0.268	1.239	1.174	1.308	0.433	0.542	0.000	0.000
Respiratory Discomfort	0.212	0.159	0.265	1.236	1.172	1.304	0.389	0.507	0.000	0.000
Another Chronic Pneumopathy	0.211	0.089	0.332	1.234	1.093	1.394	0.454	0.622	0.000	0.001
Schooling Elem 1-5	0.210	0.125	0.294	1.233	1.133	1.342	0.453	0.555	0.000	0.000
Schooling Medium 1-3	-0.189	-0.272	-0.107	0.827	0.762	0.898	0.475	0.345	0.000	0.000
Postpartum	0.168	-0.236	0.573	1.183	0.789	1.774	0.462	0.297	0.000	0.415
Diabetes	0.158	0.103	0.214	1.172	1.109	1.238	0.421	0.577	0.000	0.000
Throat	-0.157	-0.218	-0.097	0.855	0.805	0.908	0.482	0.383	0.000	0.000
Gender_F	-0.132	-0.178	-0.085	0.877	0.837	0.918	0.471	0.447	0.000	0.000
Dyspnea	0.128	0.072	0.183	1.136	1.074	1.201	0.375	0.492	0.000	0.000
Cardiovascular Disease	0.125	0.073	0.177	1.133	1.076	1.194	0.409	0.564	0.000	0.000
Hematologic Disease	0.119	-0.120	0.358	1.127	0.887	1.431	0.460	0.564	0.000	0.328
Acute Respiratory Distress Syndrome	0.112	0.059	0.166	1.119	1.061	1.180	0.444	0.511	0.000	0.000
Vomiting	-0.031	-0.125	0.062	0.969	0.883	1.064	0.467	0.391	0.000	0.514

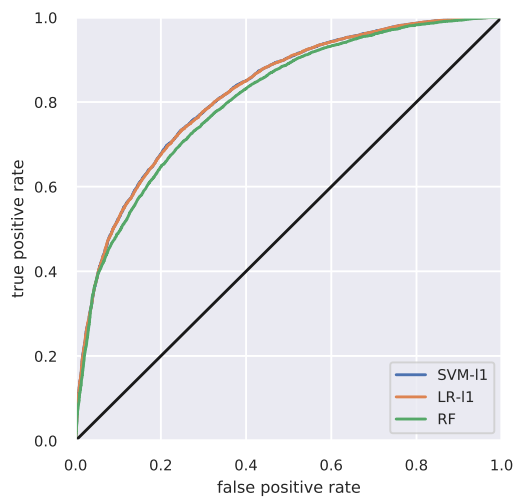


Recursive Feature Elimination:



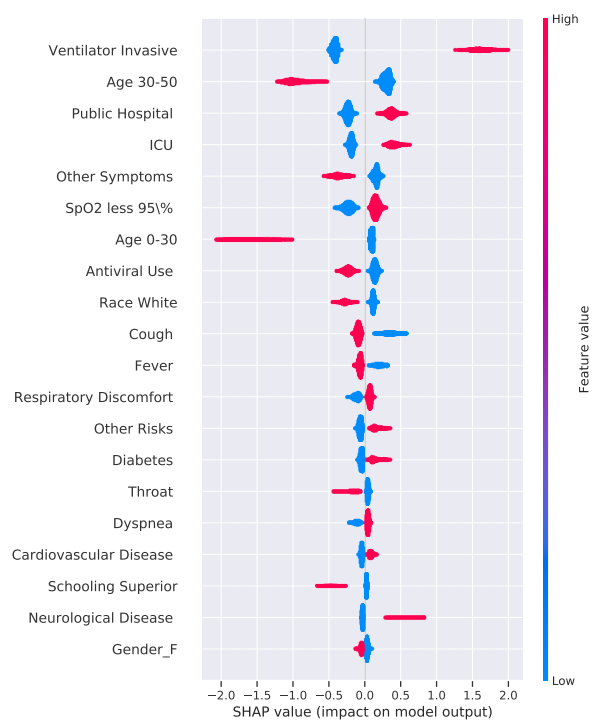
Performance:

	SVM-l1	LR-l1	RF	XGBoost
Accuracy	0.743	0.742	0.713	0.744
F1w	0.742	0.741	0.706	0.743
AUC	0.824	0.823	0.808	0.826



Coefficients:

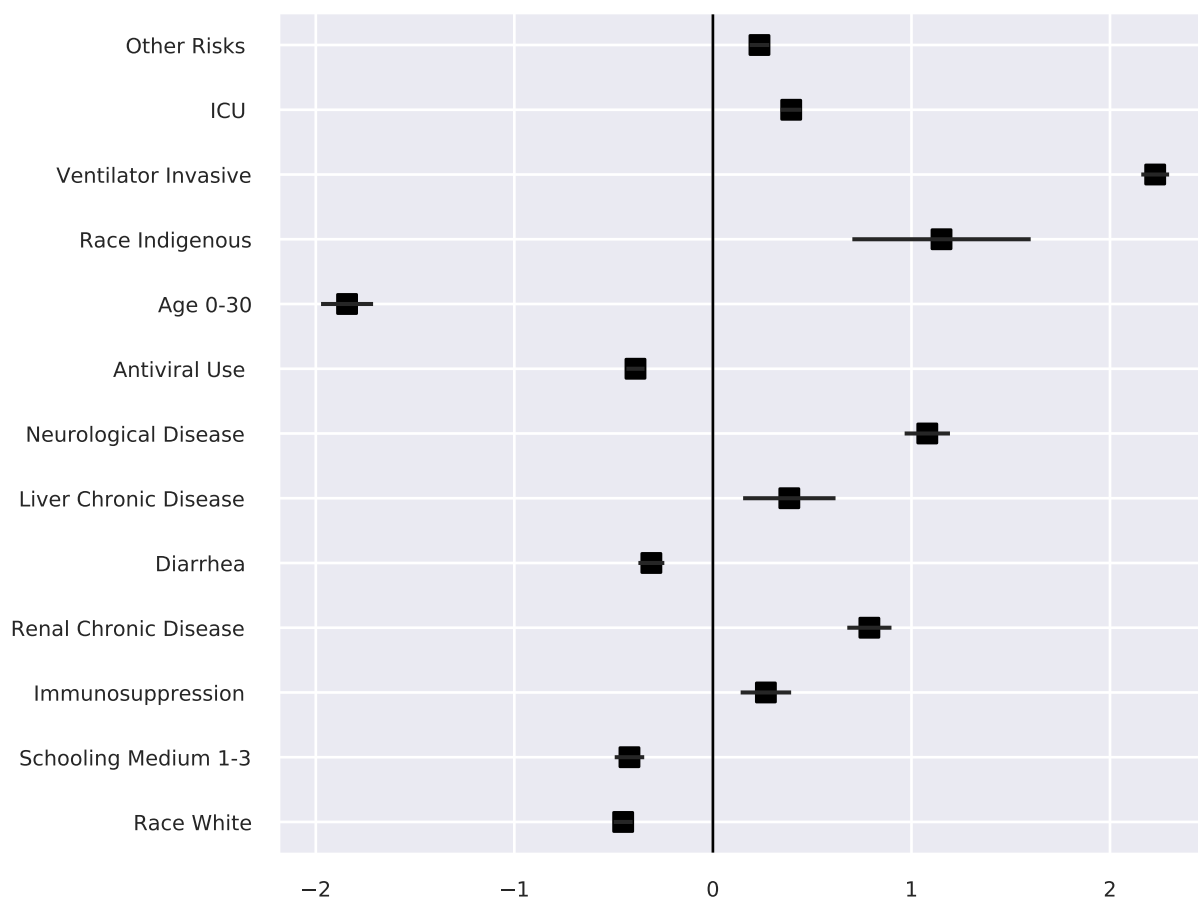
	SVM-l1	LR-l1
Ventilator Invasive	1.000	1.000
Race Indigenous	0.478	0.411
Neurological Disease	0.404	0.368
Public Hospital	0.316	0.307
ICU	0.272	0.262
Renal Chronic Disease	0.259	0.243
Liver Chronic Disease	0.250	0.238
Immunosuppression	0.185	0.179
SpO2 less 95\%	0.178	0.174
Contracted At Hospital	0.139	0.139
Other Risks	0.109	0.107
Respiratory Discomfort	0.110	0.105
Schooling Elem 1-5	0.116	0.103
Another Chronic Pneumopathy	0.106	0.101
Diabetes	0.081	0.078
Dyspnea	0.074	0.070
Cardiovascular Disease	0.065	0.064
Postpartum	0.060	0.059
Acute Respiratory Distress Syndrome	0.058	0.057
Hematologic Disease	0.058	0.053
Vomiting	-0.015	-0.013
Gender_F	-0.056	-0.055
Throat	-0.077	-0.076
Schooling Medium 1-3	-0.088	-0.088
Diarrhea	-0.104	-0.104
Contact Birds Pigs	-0.124	-0.127
Fever	-0.155	-0.148
Asthma	-0.161	-0.164
Antiviral Use	-0.199	-0.195
Race White	-0.198	-0.197
Cough	-0.251	-0.240
Other Symptoms	-0.278	-0.280
Schooling Superior	-0.266	-0.297
Age 30-50	-0.620	-0.635
Age 0-30	-0.870	-0.961



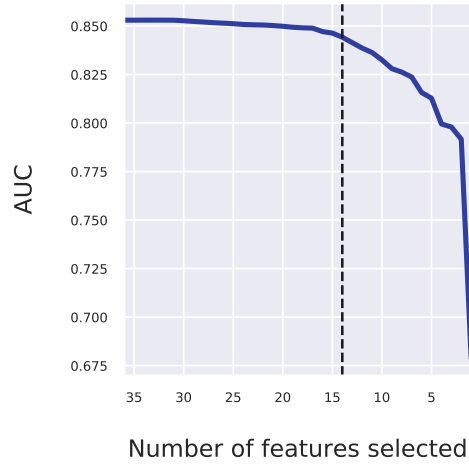
2.4 Mortality (advanced) small

Include variables: Antiviral, ICU, Ventilator

	Coef	2.5	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Ventilator Invasive	2.228	2.157	2.298	9.277	8.649	9.951	0.346	0.856	0.0	0.000
Age 0-30	-1.842	-1.974	-1.711	0.158	0.139	0.181	0.481	0.136	0.0	0.000
Race Indigenous	1.151	0.702	1.600	3.163	2.018	4.955	0.460	0.667	0.0	0.000
Neurological Disease	1.080	0.966	1.194	2.944	2.626	3.300	0.450	0.697	0.0	0.000
Renal Chronic Disease	0.788	0.677	0.899	2.199	1.968	2.458	0.450	0.695	0.0	0.000
Fever	-0.562	-0.597	-0.526	0.570	0.550	0.591	0.558	0.427	0.0	0.000
Race White	-0.452	-0.500	-0.404	0.636	0.607	0.667	0.489	0.394	0.0	0.000
Schooling Medium 1-3	-0.420	-0.495	-0.346	0.657	0.610	0.708	0.475	0.343	0.0	0.000
ICU	0.394	0.343	0.446	1.483	1.409	1.562	0.358	0.660	0.0	0.000
Antiviral Use	-0.390	-0.436	-0.344	0.677	0.647	0.709	0.474	0.437	0.0	0.000
Liver Chronic Disease	0.385	0.152	0.618	1.469	1.164	1.855	0.459	0.610	0.0	0.001
Diarrhea	-0.310	-0.375	-0.245	0.734	0.687	0.783	0.474	0.376	0.0	0.000
Immunosuppression	0.267	0.140	0.394	1.306	1.150	1.483	0.458	0.549	0.0	0.000
Other Risks	0.235	0.185	0.284	1.264	1.204	1.328	0.434	0.537	0.0	0.000



Recursive Feature Elimination:

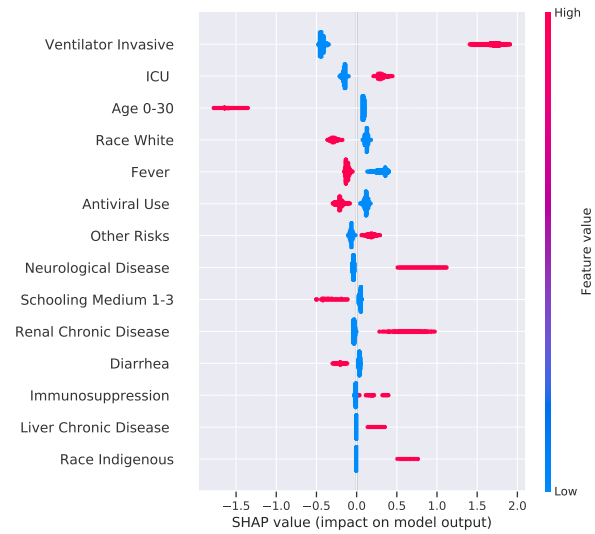
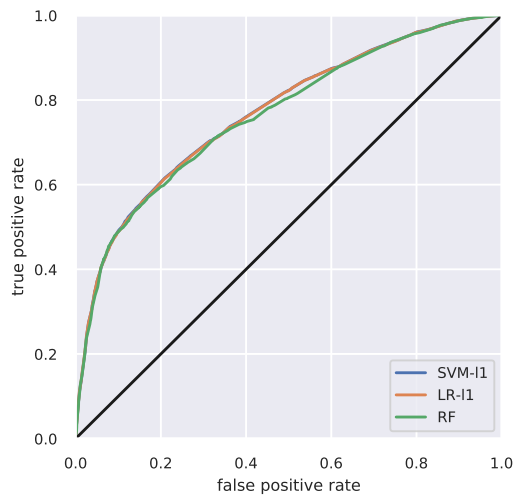


Coefficients:

	SVM-l1	LR-l1
Ventilator Invasive	1.000	1.000
Race Indigenous	0.563	0.509
Neurological Disease	0.520	0.490
Renal Chronic Disease	0.368	0.362
ICU	0.194	0.189
Liver Chronic Disease	0.187	0.176
Immunosuppression	0.125	0.125
Other Risks	0.117	0.119
Diarrhea	-0.127	-0.130
Antiviral Use	-0.159	-0.163
Schooling Medium 1-3	-0.169	-0.181
Race White	-0.185	-0.189
Fever	-0.208	-0.209
Age 0-30	-0.633	-0.812

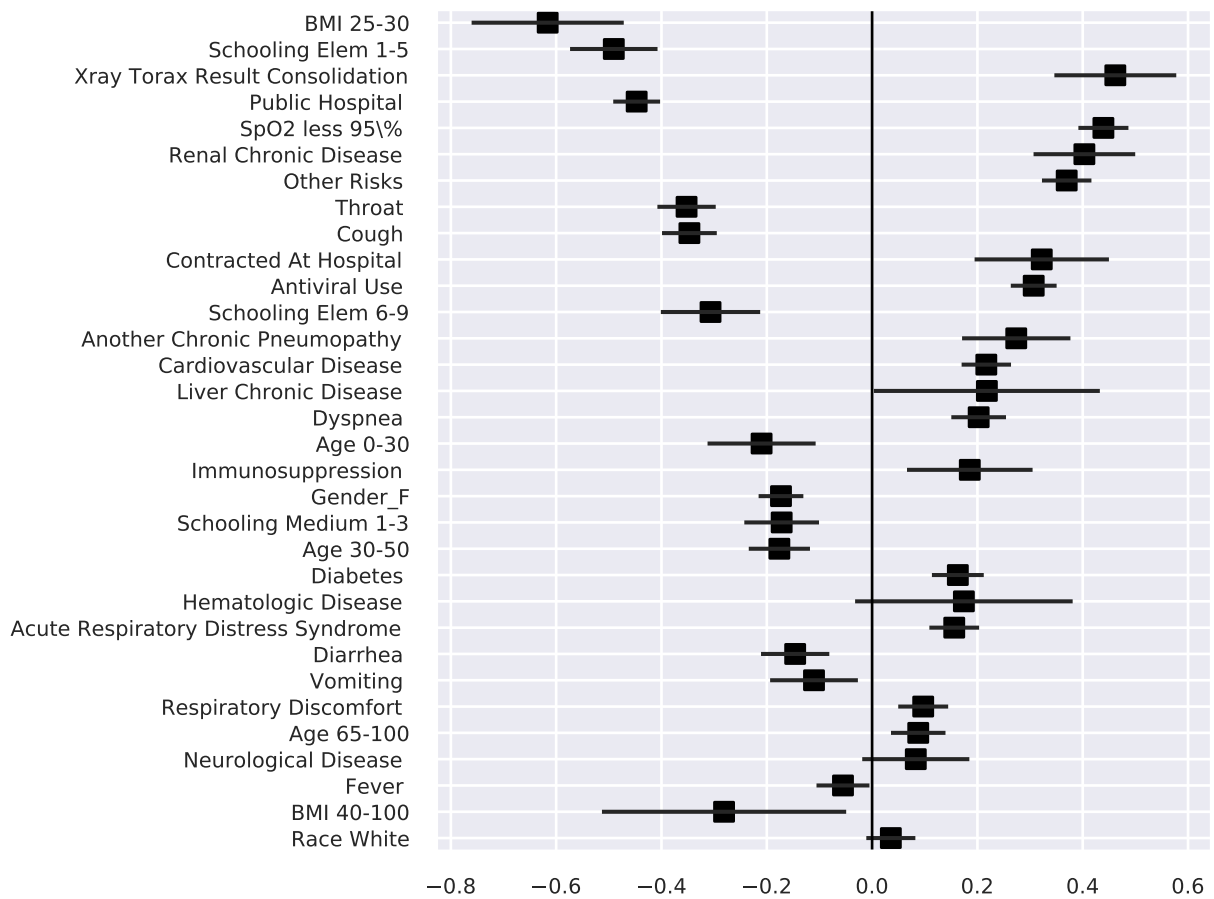
Performance:

	SVM-l1	LR-l1	RF	XGBoost
Accuracy	0.706	0.706	0.701	0.707
F1w	0.699	0.698	0.688	0.701
AUC	0.771	0.770	0.764	0.772

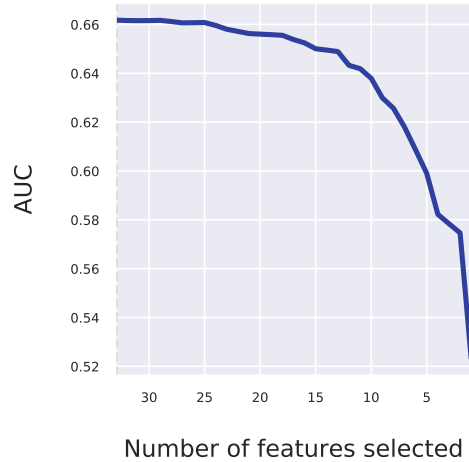


2.5 ICU

	Coef	2.5	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
BMI 25-30	-0.616	-0.761	-0.472	0.540	0.467	0.624	0.479	0.336	0.000	0.000
Schooling Elem 1-5	-0.491	-0.574	-0.408	0.612	0.563	0.665	0.346	0.275	0.000	0.000
Xray Torax Result Consolidation	0.462	0.346	0.578	1.587	1.414	1.782	0.336	0.463	0.000	0.000
Public Hospital	-0.447	-0.492	-0.403	0.639	0.612	0.669	0.369	0.292	0.000	0.000
SpO2 less 95\%	0.439	0.392	0.487	1.552	1.480	1.627	0.264	0.392	0.000	0.000
Renal Chronic Disease	0.403	0.307	0.500	1.497	1.359	1.648	0.333	0.482	0.000	0.000
Other Risks	0.370	0.323	0.417	1.447	1.381	1.517	0.312	0.420	0.000	0.000
Throat	-0.352	-0.408	-0.297	0.703	0.665	0.743	0.358	0.272	0.000	0.000
Cough	-0.347	-0.399	-0.295	0.707	0.671	0.745	0.400	0.323	0.000	0.000
Contracted At Hospital	0.322	0.195	0.450	1.380	1.215	1.568	0.337	0.450	0.000	0.000
Antiviral Use	0.307	0.263	0.350	1.359	1.301	1.420	0.313	0.388	0.000	0.000
Schooling Elem 6-9	-0.307	-0.401	-0.213	0.736	0.670	0.809	0.343	0.294	0.000	0.000
BMI 40-100	-0.281	-0.513	-0.049	0.755	0.599	0.952	0.339	0.477	0.000	0.017
Another Chronic Pneumopathy	0.274	0.171	0.377	1.315	1.186	1.457	0.335	0.463	0.000	0.000
BMI 30-40	-0.271	-0.428	-0.114	0.763	0.652	0.892	0.468	0.339	0.000	0.001
Liver Chronic Disease	0.218	0.003	0.433	1.244	1.003	1.541	0.340	0.427	0.006	0.046
Cardiovascular Disease	0.217	0.170	0.264	1.242	1.185	1.302	0.306	0.408	0.000	0.000
Age 0-30	-0.210	-0.313	-0.107	0.811	0.732	0.898	0.346	0.241	0.000	0.000
Dyspnea	0.202	0.150	0.254	1.224	1.162	1.290	0.288	0.359	0.000	0.000
Immunosuppression	0.186	0.066	0.305	1.204	1.069	1.356	0.338	0.419	0.000	0.002
Age 30-50	-0.176	-0.234	-0.118	0.839	0.791	0.889	0.364	0.278	0.000	0.000
Hematologic Disease	0.174	-0.032	0.381	1.190	0.968	1.464	0.339	0.424	0.005	0.098
Gender_F	-0.173	-0.216	-0.131	0.841	0.806	0.878	0.351	0.326	0.000	0.000
Schooling Medium 1-3	-0.172	-0.243	-0.101	0.842	0.785	0.904	0.345	0.300	0.000	0.000
Diabetes	0.163	0.114	0.212	1.177	1.120	1.236	0.318	0.407	0.000	0.000
Acute Respiratory Distress Syndrome	0.156	0.109	0.203	1.169	1.115	1.225	0.329	0.372	0.000	0.000
Diarrhea	-0.146	-0.211	-0.081	0.864	0.810	0.922	0.347	0.299	0.000	0.000
Vomiting	-0.110	-0.194	-0.027	0.896	0.824	0.973	0.344	0.295	0.000	0.009
Respiratory Discomfort	0.097	0.050	0.144	1.102	1.051	1.155	0.308	0.361	0.000	0.000
Age 65-100	0.088	0.036	0.139	1.092	1.037	1.150	0.305	0.391	0.000	0.001
Neurological Disease	0.083	-0.019	0.185	1.087	0.981	1.203	0.336	0.429	0.000	0.110
Fever	-0.055	-0.106	-0.005	0.946	0.900	0.995	0.370	0.330	0.000	0.031
Race White	0.036	-0.011	0.082	1.036	0.989	1.086	0.334	0.354	0.002	0.134

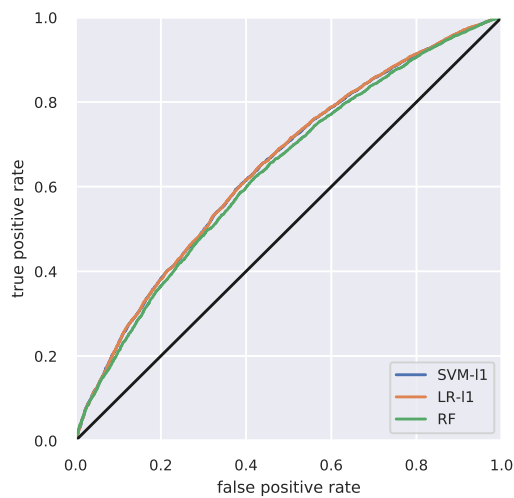


Recursive Feature Elimination:



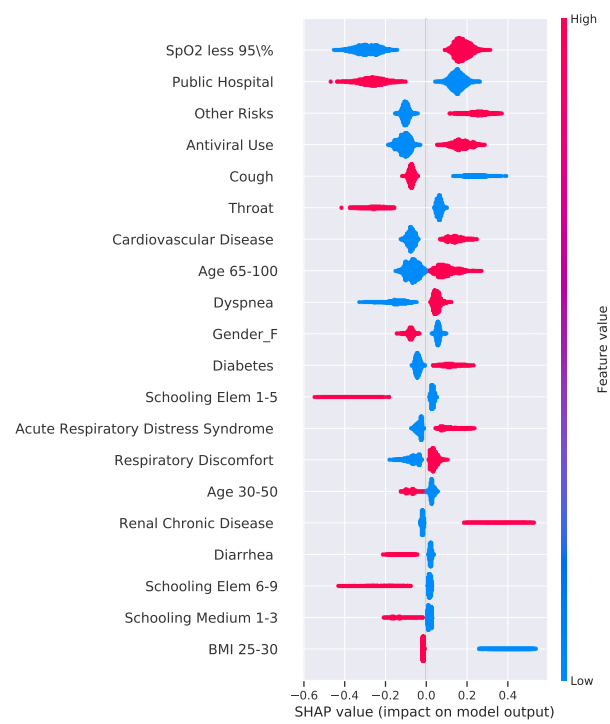
Performance:

	SVM-l1	LR-l1	RF	XGBoost
Accuracy	0.649	0.649	0.627	0.652
F1w	0.601	0.601	0.484	0.603
AUC	0.647	0.648	0.635	0.654



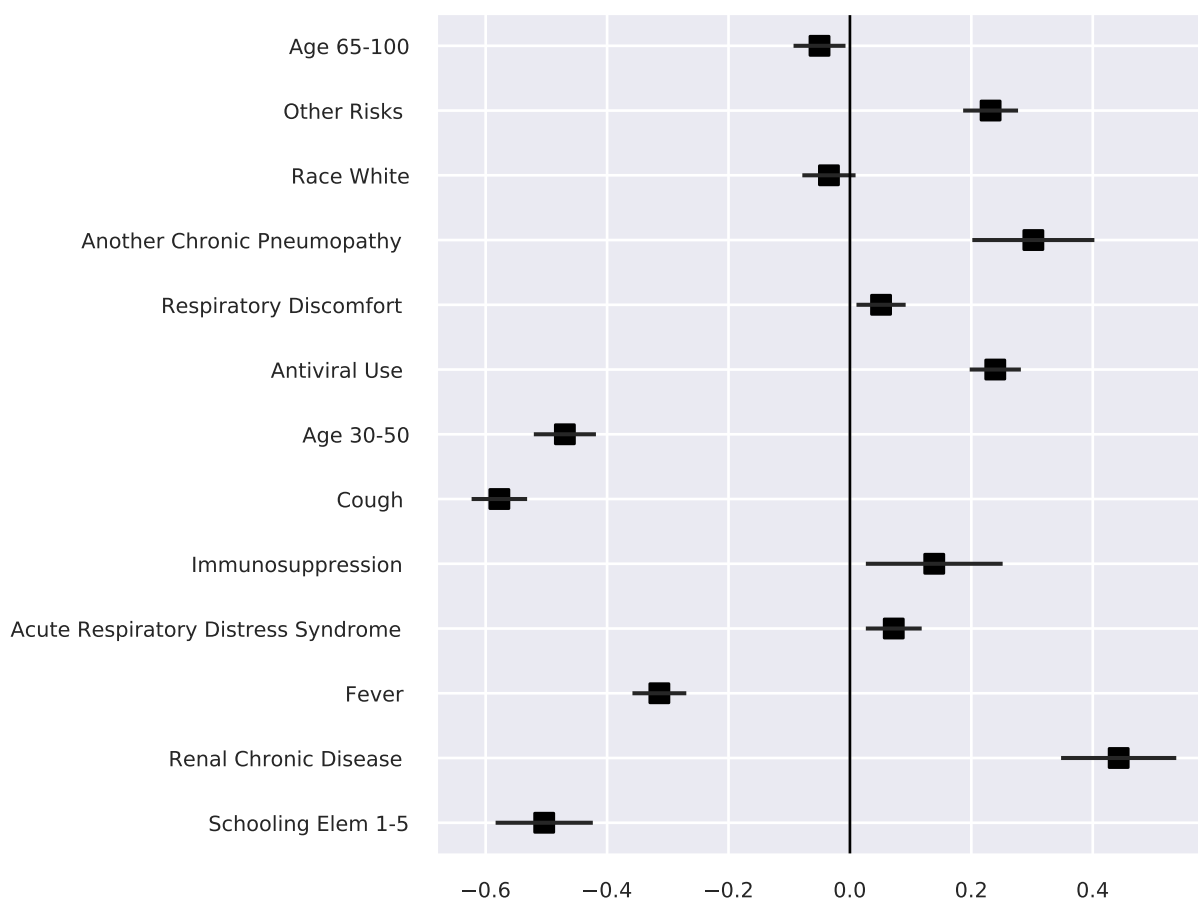
Coefficients:

	SVM-l1	LR-l1
Xray Torax Result Consolidation	0.823	0.832
SpO2 less 95\%	0.734	0.803
Renal Chronic Disease	0.742	0.732
Other Risks	0.653	0.676
Contracted At Hospital	0.581	0.583
Antiviral Use	0.520	0.558
Another Chronic Pneumopathy	0.508	0.493
Cardiovascular Disease	0.383	0.399
Liver Chronic Disease	0.375	0.377
Dyspnea	0.339	0.375
Immunosuppression	0.331	0.333
Diabetes	0.290	0.301
Hematologic Disease	0.310	0.297
Acute Respiratory Distress Syndrome	0.266	0.284
Respiratory Discomfort	0.173	0.178
Age 65-100	0.169	0.168
Neurological Disease	0.157	0.145
Race White	0.065	0.069
BMI 30-40	-0.073	-0.033
BMI 40-100	-0.129	-0.083
Fever	-0.089	-0.089
Vomiting	-0.173	-0.194
Diarrhea	-0.238	-0.261
Age 30-50	-0.258	-0.301
Schooling Medium 1-3	-0.278	-0.304
Gender_F	-0.282	-0.304
Age 0-30	-0.274	-0.359
Schooling Elem 6-9	-0.496	-0.549
Cough	-0.589	-0.616
Throat	-0.552	-0.638
Public Hospital	-0.746	-0.804
Schooling Elem 1-5	-0.798	-0.884
BMI 25-30	-1.000	-1.000

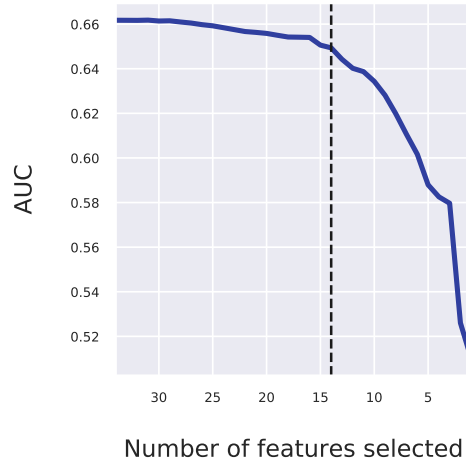


2.6 ICU small

	Coef	2.5	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Cough	-0.577	-0.623	-0.532	0.561	0.536	0.588	0.399	0.325	0.000	0.000
Schooling Elem 1-5	-0.504	-0.584	-0.424	0.604	0.558	0.655	0.346	0.280	0.000	0.000
Age 30-50	-0.470	-0.521	-0.418	0.625	0.594	0.658	0.366	0.272	0.000	0.000
Renal Chronic Disease	0.443	0.348	0.538	1.557	1.416	1.712	0.334	0.497	0.000	0.000
Fever	-0.314	-0.358	-0.270	0.731	0.699	0.764	0.372	0.331	0.000	0.000
Another Chronic Pneumopathy	0.302	0.202	0.403	1.353	1.223	1.496	0.336	0.461	0.000	0.000
Antiviral Use	0.239	0.197	0.282	1.271	1.218	1.325	0.315	0.386	0.000	0.000
Other Risks	0.232	0.187	0.277	1.261	1.205	1.319	0.314	0.418	0.000	0.000
Diabetes	0.174	0.128	0.220	1.190	1.136	1.246	0.318	0.409	0.000	0.000
Immunosuppression	0.139	0.026	0.252	1.149	1.027	1.286	0.338	0.424	0.000	0.016
Acute Respiratory Distress Syndrome	0.072	0.026	0.118	1.075	1.027	1.125	0.332	0.368	0.000	0.002
Respiratory Discomfort	0.051	0.011	0.092	1.053	1.011	1.096	0.311	0.360	0.000	0.013
Age 65-100	-0.050	-0.093	-0.007	0.951	0.911	0.993	0.302	0.396	0.000	0.022
Race White	-0.035	-0.078	0.009	0.966	0.925	1.009	0.336	0.353	0.009	0.122

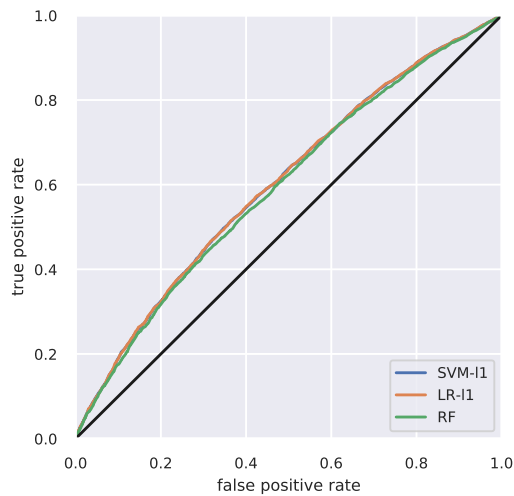


Recursive Feature Elimination:



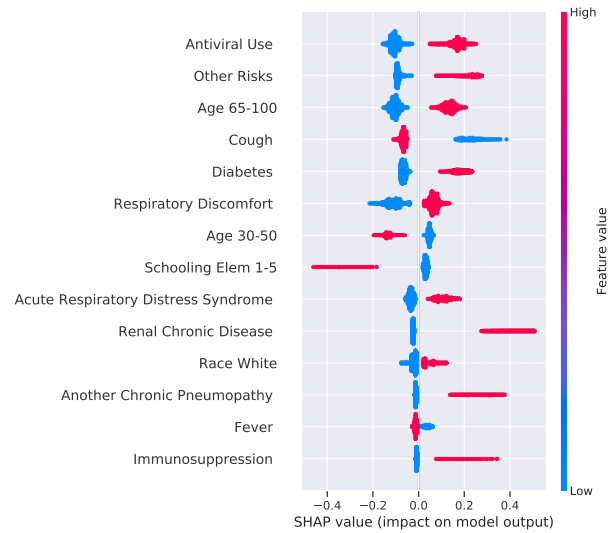
Performance:

	SVM-l1	LR-l1	RF	XGBoost
Accuracy	0.635	0.634	0.630	0.636
F1w	0.557	0.556	0.490	0.545
AUC	0.603	0.603	0.594	0.605



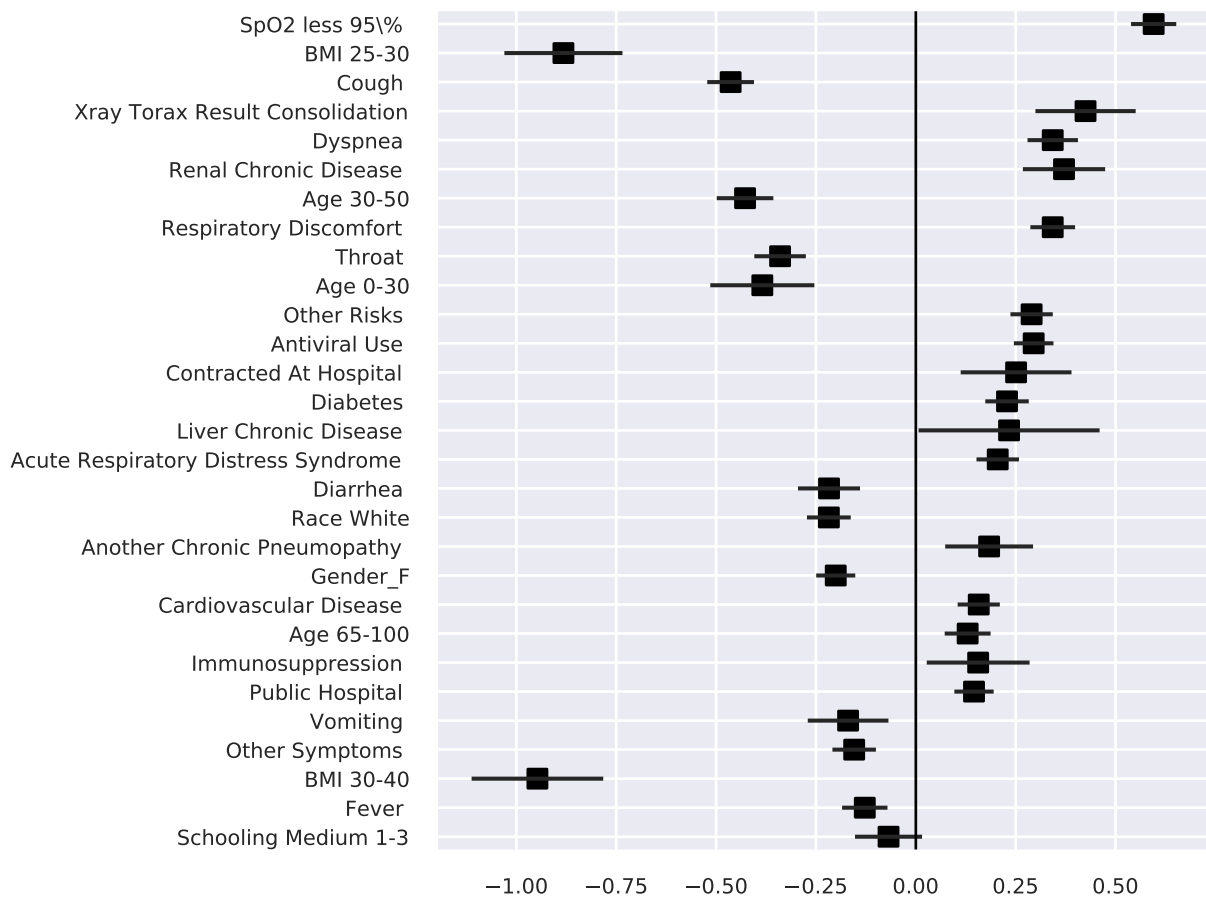
Coefficients:

	SVM-l1	LR-l1
Renal Chronic Disease	1.000	1.000
Other Risks	0.640	0.671
Another Chronic Pneumopathy	0.653	0.654
Antiviral Use	0.550	0.591
Diabetes	0.488	0.510
Immunosuppression	0.434	0.447
Age 65-100	0.426	0.446
Respiratory Discomfort	0.376	0.411
Acute Respiratory Distress Syndrome	0.281	0.302
Race White	0.136	0.146
Fever	-0.132	-0.140
Age 30-50	-0.318	-0.375
Cough	-0.583	-0.619
Schooling Elem 1-5	-0.814	-0.905

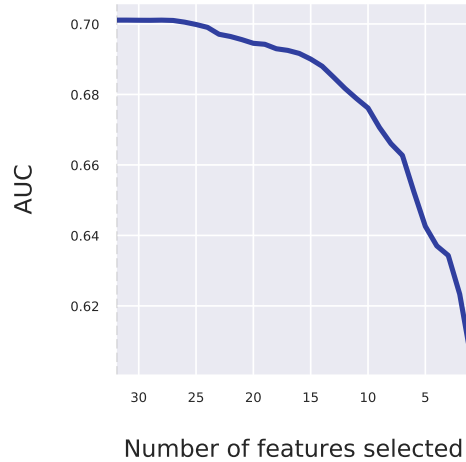


2.7 Ventilator

	Coef	2.5	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
BMI 40-100	-0.988	-1.242	-0.735	0.372	0.289	0.480	0.222	0.325	0.001	0.000
BMI 30-40	-0.947	-1.112	-0.783	0.388	0.329	0.457	0.291	0.222	0.022	0.000
BMI 25-30	-0.882	-1.030	-0.734	0.414	0.357	0.480	0.335	0.219	0.000	0.000
SpO2 less 95\%	0.595	0.539	0.652	1.814	1.714	1.919	0.133	0.284	0.000	0.000
Cough	-0.464	-0.522	-0.405	0.629	0.593	0.667	0.273	0.208	0.000	0.000
Age 30-50	-0.427	-0.498	-0.357	0.652	0.608	0.700	0.252	0.142	0.000	0.000
Xray Torax Result Consolidation	0.425	0.299	0.550	1.529	1.349	1.734	0.220	0.318	0.000	0.000
Age 0-30	-0.384	-0.515	-0.254	0.681	0.598	0.776	0.228	0.128	0.000	0.000
Renal Chronic Disease	0.371	0.268	0.474	1.449	1.307	1.606	0.216	0.350	0.000	0.000
Dyspnea	0.343	0.280	0.406	1.409	1.323	1.501	0.145	0.251	0.000	0.000
Respiratory Discomfort	0.343	0.287	0.399	1.409	1.332	1.490	0.159	0.263	0.000	0.000
Throat	-0.340	-0.404	-0.275	0.712	0.667	0.759	0.234	0.178	0.000	0.000
Antiviral Use	0.295	0.245	0.345	1.343	1.278	1.411	0.199	0.264	0.000	0.000
Other Risks	0.290	0.237	0.343	1.336	1.267	1.409	0.202	0.281	0.000	0.000
Contracted At Hospital	0.251	0.112	0.390	1.285	1.119	1.477	0.220	0.308	0.000	0.000
Liver Chronic Disease	0.233	0.007	0.460	1.263	1.007	1.584	0.222	0.312	0.003	0.044
Diabetes	0.228	0.174	0.283	1.256	1.190	1.327	0.198	0.295	0.000	0.000
Race White	-0.218	-0.272	-0.163	0.804	0.761	0.850	0.231	0.203	0.000	0.000
Diarrhea	-0.217	-0.295	-0.140	0.805	0.745	0.870	0.229	0.178	0.000	0.000
Acute Respiratory Distress Syndrome	0.205	0.152	0.258	1.228	1.164	1.295	0.210	0.260	0.000	0.000
Gender_F	-0.200	-0.249	-0.152	0.818	0.779	0.859	0.232	0.210	0.000	0.000
Another Chronic Pneumopathy	0.183	0.074	0.293	1.201	1.076	1.341	0.218	0.321	0.000	0.001
Vomiting	-0.170	-0.271	-0.069	0.844	0.763	0.934	0.226	0.178	0.000	0.001
Cardiovascular Disease	0.157	0.105	0.210	1.171	1.110	1.234	0.193	0.281	0.000	0.000
Immunosuppression	0.156	0.027	0.285	1.169	1.028	1.329	0.221	0.277	0.000	0.018
Other Symptoms	-0.154	-0.209	-0.100	0.857	0.812	0.905	0.235	0.193	0.000	0.000
Public Hospital	0.146	0.096	0.195	1.157	1.101	1.215	0.203	0.255	0.000	0.000
Age 65-100	0.130	0.072	0.187	1.139	1.075	1.206	0.181	0.280	0.000	0.000
Fever	-0.128	-0.185	-0.071	0.880	0.831	0.931	0.250	0.213	0.000	0.000
Schooling Medium 1-3	-0.068	-0.152	0.016	0.934	0.859	1.016	0.227	0.185	0.000	0.110
Schooling Superior	-0.068	-0.185	0.048	0.934	0.831	1.050	0.226	0.167	0.000	0.252
Neurological Disease	-0.060	-0.175	0.056	0.942	0.840	1.057	0.221	0.268	0.001	0.310

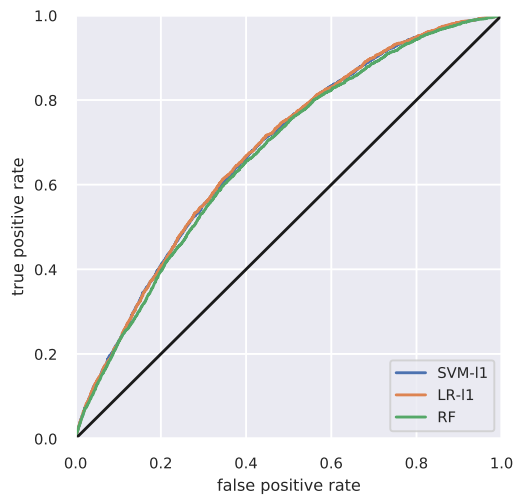


Recursive Feature Elimination:



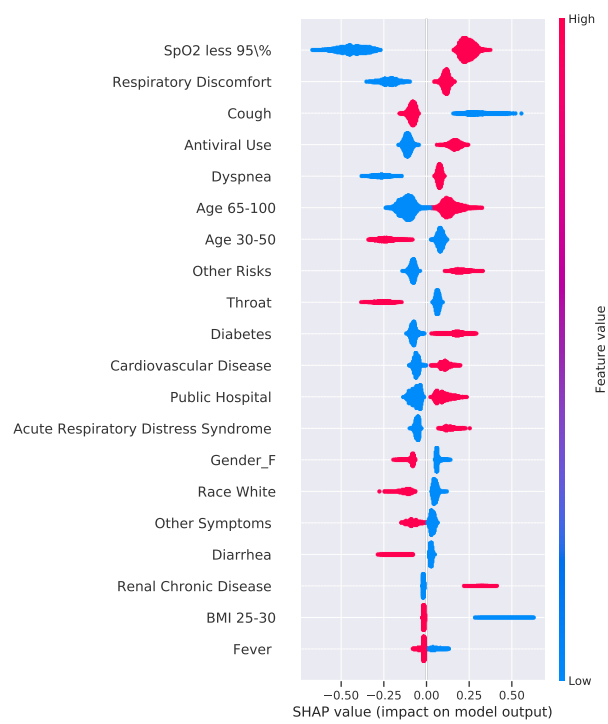
Performance:

	SVM-l1	LR-l1	RF	XGBoost
Accuracy	0.740	0.741	0.738	0.742
F1w	0.661	0.661	0.627	0.654
AUC	0.680	0.681	0.671	0.686



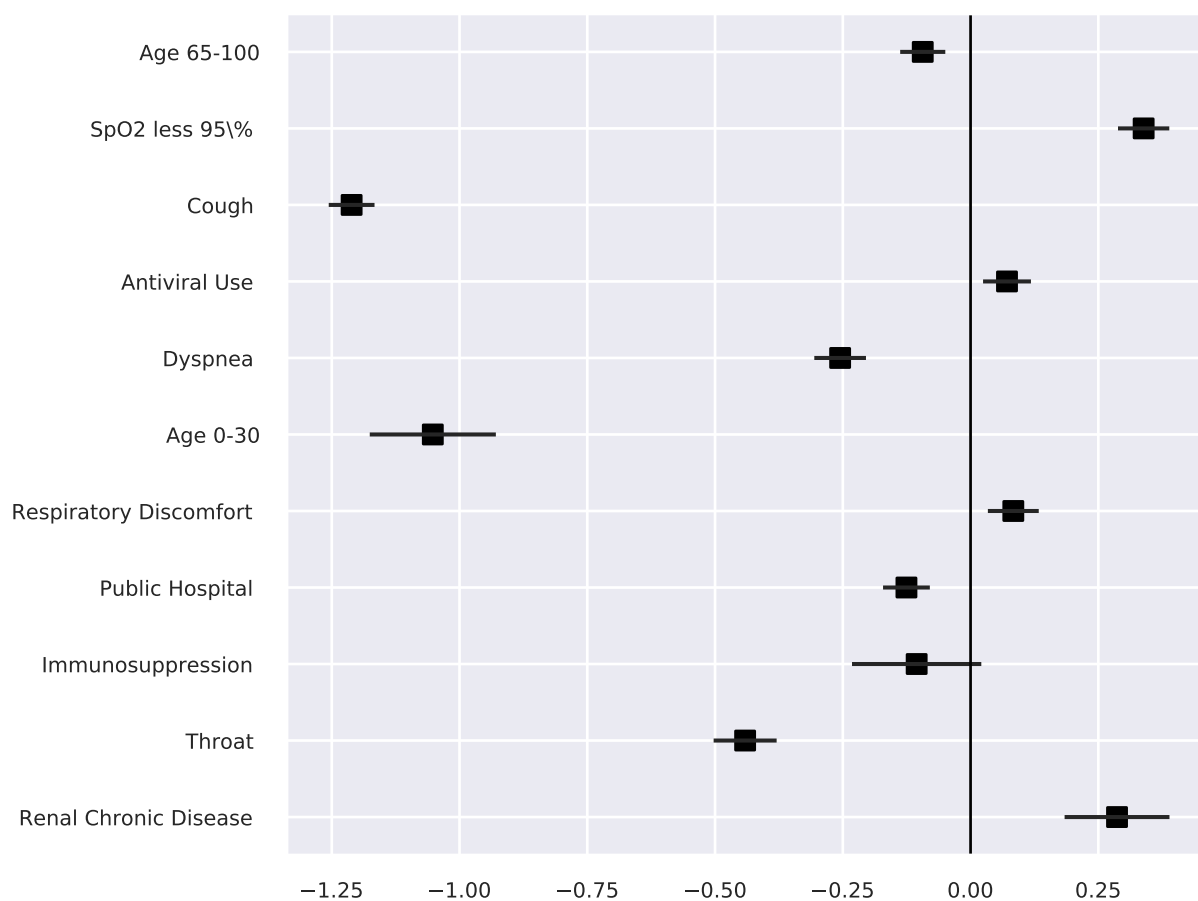
Coefficients:

	SVM-l1	LR-l1
SpO2 less 95\%	0.827	1.000
Xray Torax Result Consolidation	0.689	0.681
Dyspnea	0.493	0.613
Renal Chronic Disease	0.667	0.610
Respiratory Discomfort	0.524	0.570
Other Risks	0.462	0.491
Antiviral Use	0.436	0.486
Contracted At Hospital	0.449	0.430
Diabetes	0.391	0.393
Liver Chronic Disease	0.404	0.377
Acute Respiratory Distress Syndrome	0.316	0.342
Another Chronic Pneumopathy	0.329	0.289
Cardiovascular Disease	0.258	0.279
Age 65-100	0.258	0.265
Immunosuppression	0.244	0.263
Public Hospital	0.227	0.257
BMI 30-40	0.222	0.191
BMI 40-100	-0.076	-0.014
Schooling Superior	-0.036	-0.075
Schooling Medium 1-3	-0.067	-0.083
Neurological Disease	-0.116	-0.101
Fever	-0.160	-0.152
Other Symptoms	-0.173	-0.204
Vomiting	-0.222	-0.252
Gender.F	-0.249	-0.284
Race White	-0.276	-0.319
Diarrhea	-0.289	-0.339
Age 0-30	-0.329	-0.514
Throat	-0.462	-0.544
Age 30-50	-0.436	-0.592
Cough	-0.653	-0.690
BMI 25-30	-1.000	-0.966

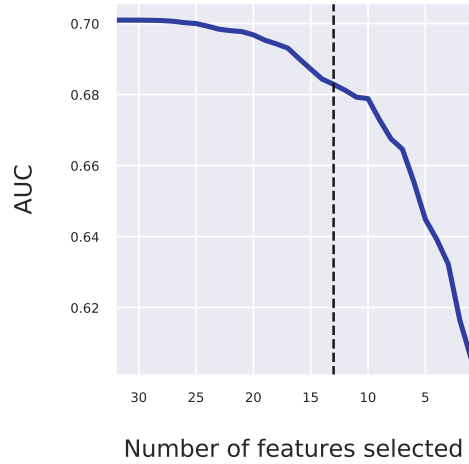


2.8 Ventilator small

	Coef	2.5	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Cough	-1.211	-1.256	-1.166	0.298	0.285	0.312	0.276	0.209	0.000	0.000
Age 0-30	-1.052	-1.176	-0.929	0.349	0.309	0.395	0.230	0.126	0.000	0.000
Throat	-0.441	-0.503	-0.379	0.643	0.605	0.684	0.236	0.178	0.000	0.000
SpO2 less 95\%	0.339	0.288	0.389	1.403	1.334	1.475	0.134	0.286	0.000	0.000
Renal Chronic Disease	0.287	0.184	0.389	1.332	1.202	1.476	0.218	0.349	0.000	0.000
Dyspnea	-0.255	-0.306	-0.205	0.775	0.737	0.815	0.146	0.252	0.000	0.000
Public Hospital	-0.125	-0.171	-0.080	0.882	0.843	0.923	0.205	0.254	0.000	0.000
Immunosuppression	-0.105	-0.232	0.021	0.900	0.793	1.021	0.222	0.276	0.001	0.102
Age 65-100	-0.094	-0.138	-0.049	0.911	0.871	0.952	0.180	0.284	0.000	0.000
Respiratory Discomfort	0.084	0.034	0.133	1.087	1.034	1.143	0.158	0.266	0.000	0.001
Antiviral Use	0.071	0.024	0.118	1.074	1.025	1.125	0.201	0.262	0.000	0.003
Contracted At Hospital	-0.038	-0.177	0.102	0.963	0.838	1.108	0.221	0.311	0.000	0.598
Other Risks	-0.027	-0.077	0.023	0.973	0.926	1.023	0.204	0.278	0.000	0.289

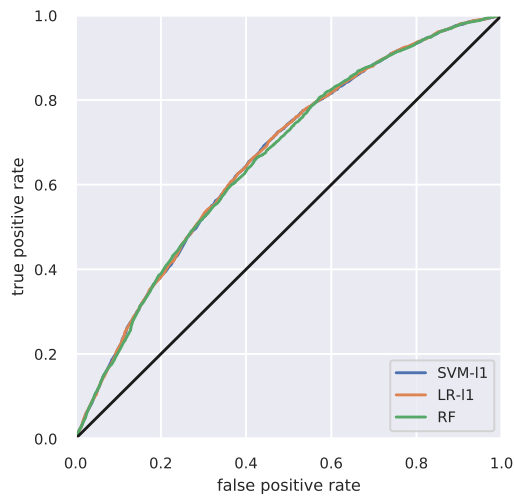


Recursive Feature Elimination:



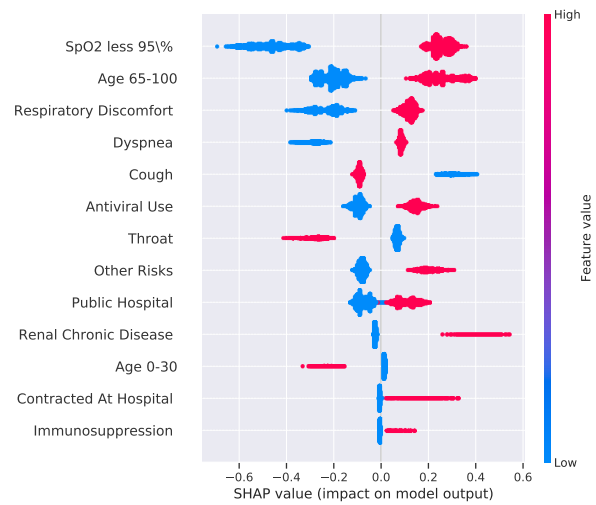
Performance:

	SVM-l1	LR-l1	RF	XGBoost
Accuracy	0.739	0.739	0.741	0.740
F1w	0.650	0.649	0.631	0.644
AUC	0.665	0.665	0.662	0.670



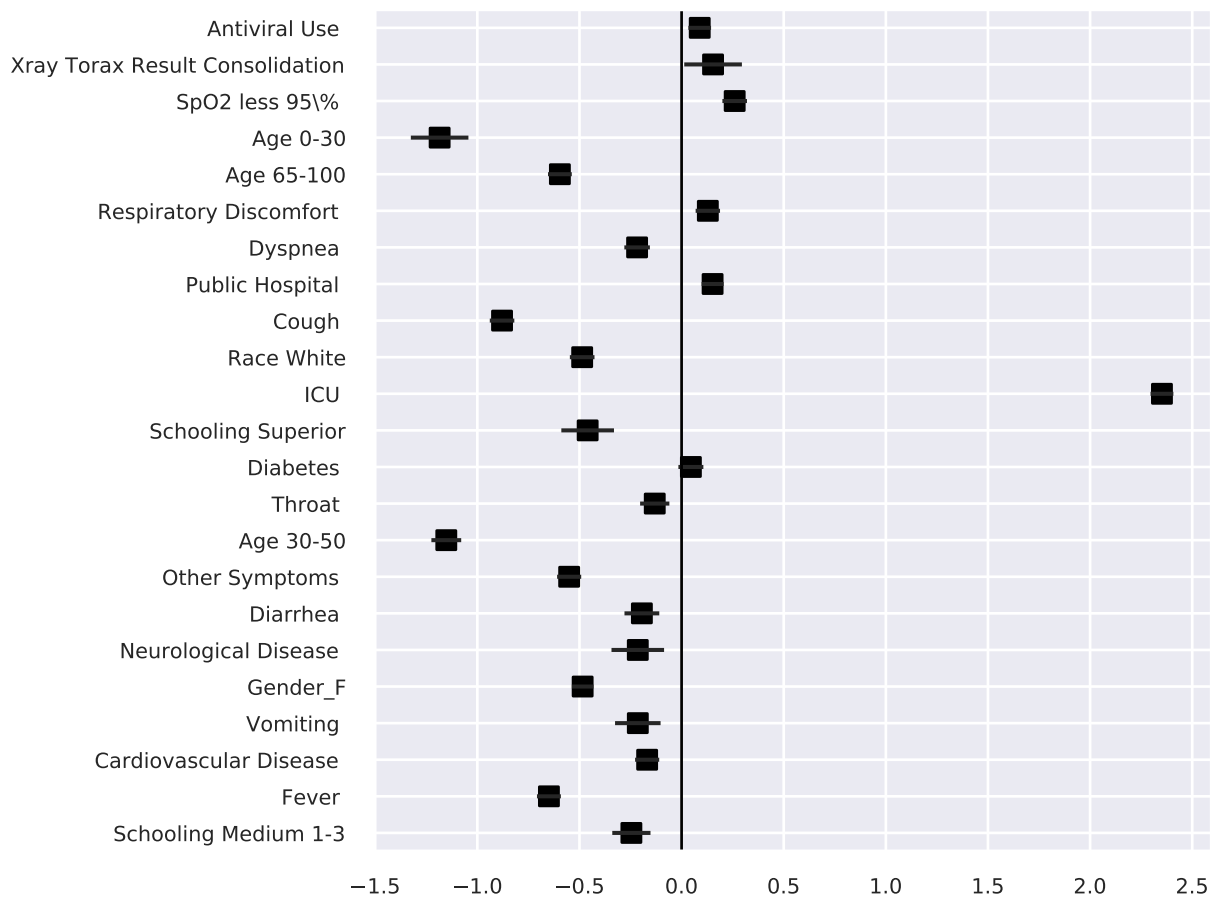
Coefficients:

	SVM-l1	LR-l1
SpO2 less 95\%	1.000	1.000
Renal Chronic Disease	0.917	0.718
Dyspnea	0.598	0.626
Age 65-100	0.662	0.598
Respiratory Discomfort	0.623	0.583
Contracted At Hospital	0.588	0.481
Other Risks	0.485	0.428
Antiviral Use	0.441	0.407
Public Hospital	0.284	0.267
Immunosuppression	0.191	0.167
Age 0-30	-0.397	-0.505
Throat	-0.588	-0.572
Cough	-0.760	-0.663

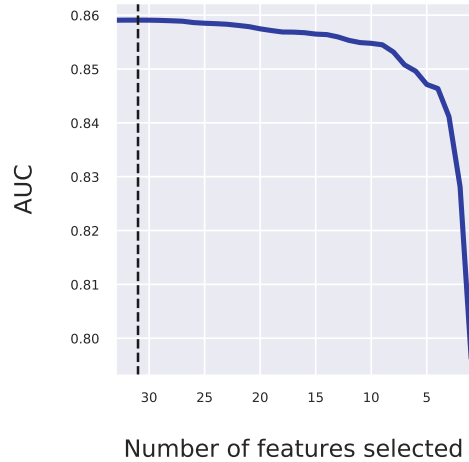


2.9 Ventilator with ICU

	Coef	2.5	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
ICU	2.352	2.296	2.408	10.504	9.932	11.109	0.068	0.527	0.000	0.000
Age 0-30	-1.185	-1.326	-1.044	0.306	0.266	0.352	0.231	0.131	0.000	0.000
Age 30-50	-1.152	-1.225	-1.079	0.316	0.294	0.340	0.255	0.143	0.000	0.000
Cough	-0.879	-0.939	-0.819	0.415	0.391	0.441	0.279	0.209	0.000	0.000
Fever	-0.650	-0.708	-0.591	0.522	0.493	0.554	0.256	0.214	0.000	0.000
Age 65-100	-0.596	-0.654	-0.538	0.551	0.520	0.584	0.183	0.284	0.000	0.000
Other Symptoms	-0.550	-0.609	-0.491	0.577	0.544	0.612	0.237	0.197	0.000	0.000
Race White	-0.487	-0.547	-0.426	0.615	0.579	0.653	0.233	0.206	0.000	0.000
Gender_F	-0.484	-0.537	-0.432	0.616	0.584	0.649	0.234	0.212	0.000	0.000
Schooling Superior	-0.460	-0.589	-0.331	0.631	0.555	0.718	0.228	0.169	0.000	0.000
SpO2 less 95\%	0.260	0.200	0.320	1.297	1.221	1.377	0.135	0.287	0.000	0.000
Schooling Medium 1-3	-0.246	-0.339	-0.152	0.782	0.712	0.859	0.230	0.184	0.000	0.000
Dyspnea	-0.218	-0.280	-0.155	0.804	0.756	0.856	0.147	0.253	0.000	0.000
Neurological Disease	-0.214	-0.343	-0.086	0.807	0.710	0.918	0.223	0.261	0.015	0.001
Vomiting	-0.214	-0.326	-0.103	0.807	0.722	0.902	0.228	0.184	0.000	0.000
Diarrhea	-0.194	-0.280	-0.109	0.823	0.756	0.896	0.231	0.186	0.000	0.000
Cardiovascular Disease	-0.169	-0.228	-0.110	0.845	0.796	0.896	0.197	0.279	0.000	0.000
Xray Torax Result Consolidation	0.154	0.013	0.295	1.167	1.013	1.343	0.222	0.316	0.000	0.032
Public Hospital	0.152	0.098	0.206	1.164	1.103	1.228	0.204	0.259	0.000	0.000
Throat	-0.131	-0.203	-0.060	0.877	0.816	0.942	0.237	0.177	0.000	0.000
Respiratory Discomfort	0.128	0.069	0.188	1.137	1.071	1.207	0.162	0.264	0.000	0.000
Another Chronic Pneumopathy	0.095	-0.031	0.220	1.100	0.970	1.247	0.220	0.331	0.000	0.138
Contracted At Hospital	-0.094	-0.253	0.064	0.910	0.776	1.066	0.222	0.324	0.000	0.243
Antiviral Use	0.089	0.033	0.144	1.093	1.034	1.155	0.201	0.267	0.000	0.002
Renal Chronic Disease	0.078	-0.039	0.195	1.081	0.961	1.215	0.219	0.346	0.000	0.194
Hematologic Disease	0.054	-0.197	0.305	1.055	0.821	1.357	0.224	0.305	0.007	0.673
Immunosuppression	-0.053	-0.200	0.093	0.948	0.818	1.098	0.223	0.274	0.002	0.476
Diabetes	0.046	-0.016	0.107	1.047	0.985	1.113	0.201	0.295	0.000	0.144
Liver Chronic Disease	-0.036	-0.285	0.212	0.964	0.752	1.236	0.224	0.318	0.001	0.774
Other Risks	-0.035	-0.094	0.024	0.966	0.910	1.025	0.204	0.284	0.000	0.249
Acute Respiratory Distress Syndrome	-0.013	-0.073	0.046	0.987	0.930	1.047	0.212	0.263	0.000	0.659

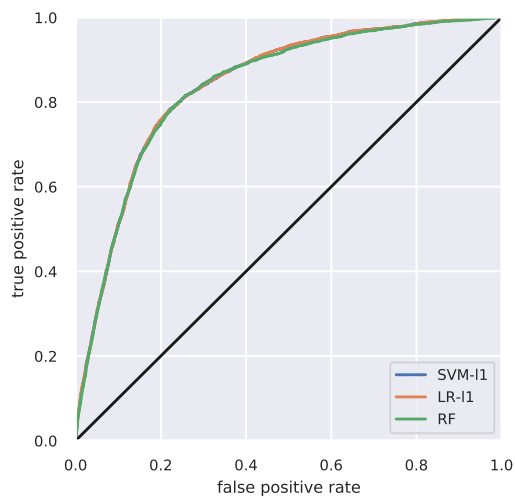


Recursive Feature Elimination:



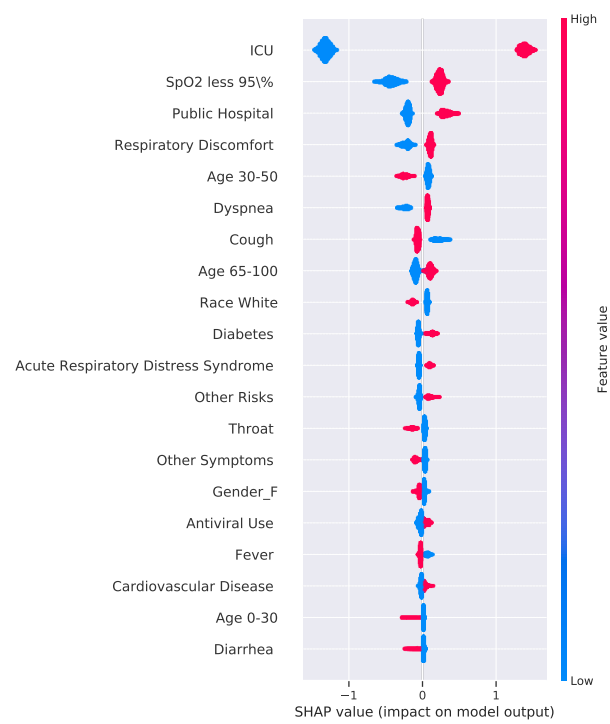
Performance:

	SVM-l1	LR-l1	RF	XGBoost
Accuracy	0.804	0.802	0.750	0.805
F1w	0.801	0.799	0.643	0.802
AUC	0.841	0.841	0.838	0.843



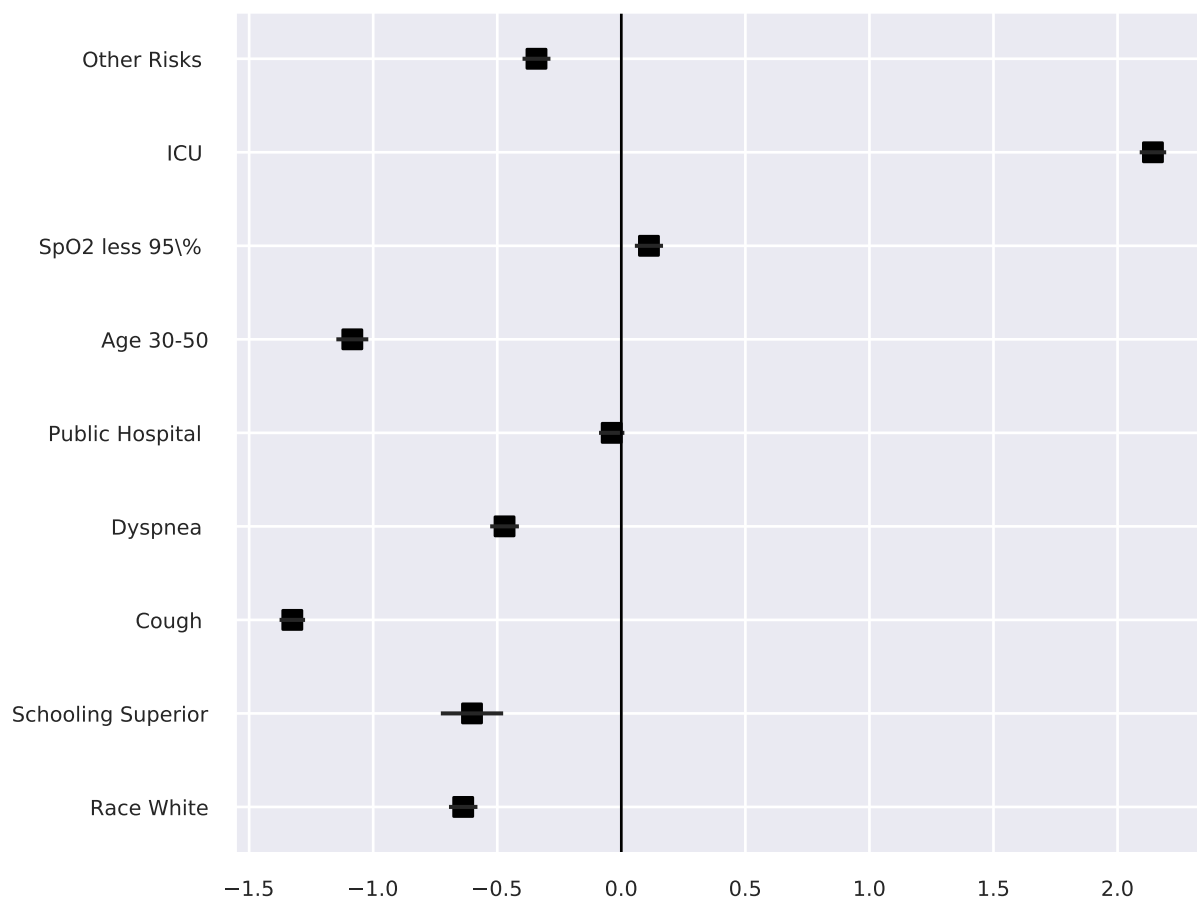
Coefficients:

	SVM-l1	LR-l1
ICU	1.000	1.000
Public Hospital	0.188	0.218
SpO2 less 95\%	0.168	0.198
Respiratory Discomfort	0.131	0.137
Dyspnea	0.121	0.134
Xray Torax Result Consolidation	0.087	0.089
Diabetes	0.068	0.075
Renal Chronic Disease	0.068	0.067
Acute Respiratory Distress Syndrome	0.054	0.063
Other Risks	0.060	0.061
Liver Chronic Disease	0.054	0.060
Contracted At Hospital	0.068	0.058
Age 65-100	0.044	0.055
Antiviral Use	0.051	0.049
Another Chronic Pneumopathy	0.052	0.049
Hematologic Disease	0.046	0.037
Immunosuppression	0.024	0.022
Cardiovascular Disease	0.010	0.008
Schooling Medium 1-3	-0.016	-0.026
Fever	-0.037	-0.037
Vomiting	-0.037	-0.042
Gender_F	-0.038	-0.043
Diarrhea	-0.045	-0.051
Other Symptoms	-0.051	-0.053
Throat	-0.051	-0.061
Neurological Disease	-0.071	-0.065
Schooling Superior	-0.092	-0.083
Race White	-0.078	-0.089
Cough	-0.112	-0.116
Age 0-30	-0.092	-0.119
Age 30-50	-0.124	-0.142

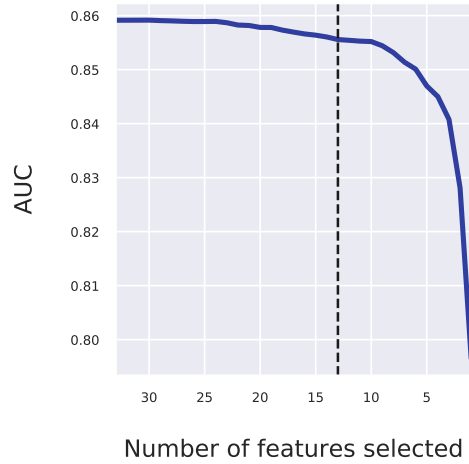


2.10 Ventilator with ICU small

	Coef	2.5	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
ICU	2.143	2.089	2.196	8.522	8.079	8.989	0.067	0.526	0.0	0.000
Cough	-1.326	-1.377	-1.275	0.266	0.252	0.280	0.275	0.209	0.0	0.000
Age 30-50	-1.084	-1.149	-1.020	0.338	0.317	0.361	0.253	0.142	0.0	0.000
Race White	-0.637	-0.695	-0.580	0.529	0.499	0.560	0.230	0.208	0.0	0.000
Schooling Superior	-0.602	-0.727	-0.476	0.548	0.483	0.621	0.227	0.165	0.0	0.000
Dyspnea	-0.471	-0.529	-0.413	0.625	0.589	0.662	0.145	0.252	0.0	0.000
Cardiovascular Disease	-0.356	-0.409	-0.303	0.700	0.664	0.739	0.196	0.280	0.0	0.000
Other Risks	-0.342	-0.398	-0.286	0.710	0.672	0.751	0.205	0.277	0.0	0.000
SpO2 less 95\%	0.111	0.055	0.168	1.118	1.056	1.183	0.132	0.286	0.0	0.000
Xray Torax Result Consolidation	0.104	-0.038	0.247	1.110	0.962	1.280	0.221	0.318	0.0	0.152
Public Hospital	-0.039	-0.090	0.012	0.962	0.914	1.012	0.203	0.258	0.0	0.137
Antiviral Use	-0.034	-0.087	0.019	0.967	0.917	1.019	0.200	0.265	0.0	0.212
Respiratory Discomfort	-0.009	-0.065	0.047	0.991	0.937	1.048	0.159	0.265	0.0	0.744

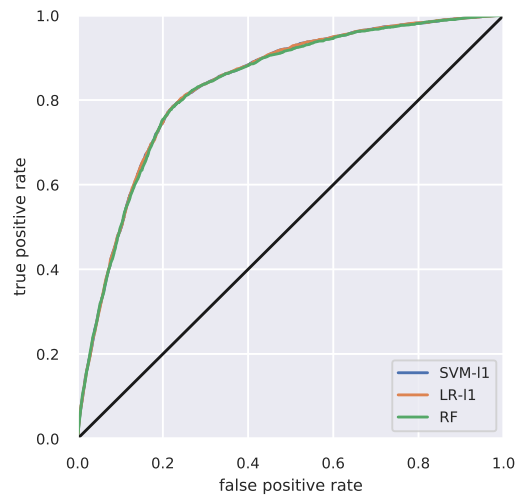


Recursive Feature Elimination:



Performance:

	SVM-l1	LR-l1	RF	XGBoost
Accuracy	0.801	0.800	0.785	0.801
F1w	0.797	0.795	0.750	0.796
AUC	0.836	0.836	0.834	0.838



Coefficients:

	SVM-l1	LR-l1
ICU	1.000	1.000
Public Hospital	0.188	0.218
SpO2 less 95\%	0.166	0.199
Dyspnea	0.129	0.143
Respiratory Discomfort	0.130	0.139
Xray Torax Result Consolidation	0.103	0.103
Other Risks	0.051	0.054
Cardiovascular Disease	0.045	0.047
Antiviral Use	0.043	0.042
Race White	-0.072	-0.086
Schooling Superior	-0.116	-0.100
Cough	-0.124	-0.129
Age 30-50	-0.155	-0.183

