

EM

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Number of clusters selected by cross validation: 2

Attribute	Cluster	
	0 (0.58)	1 (0.42)
=====		
encounter_id		
mean	60922958.2103	193586427.2794
std. dev.	47145593.2346	106611465.7751
patient_nbr		
mean	18992856.3419	64584992.3758
std. dev.	26634066.2018	37453178.9428
race		
Caucasian	247.6284	201.3716
AfricanAmerican	132.739	78.261
Other	8.1632	3.8368
Hispanic	10.9752	14.0248
Asian	3	1
[total]	402.5058	298.4942
gender		
Female	229.785	174.215
Male	169.7208	121.2792
[total]	399.5058	295.4942
age		
[10-20)	398.5058	294.4942
[total]	398.5058	294.4942
admission_type_id		
mean	1.8265	1.6763
std. dev.	1.4202	1.2098
discharge_disposition_id		
mean	2.6195	1.5153
std. dev.	5.5832	2.305
admission_source_id		
mean	5.3493	5.9648
std. dev.	3.1404	3.7403
time_in_hospital		
mean	3.0135	3.4314
std. dev.	2.4109	2.841
payer_code		
MD	374.6859	154.3141
PO	2.0362	3.9638
HM	6.4177	26.5823

UN	5.4384	9.5616
CP	1.8998	20.1002
BC	5.2648	34.7352
SP	6.5362	29.4638
CM	1.1977	1.8023
DM	2.9521	15.0479
OG	1.0038	5.9962
CH	1.0732	2.9268
[total]	408.5058	304.4942
medical_specialty		
Pediatrics	46.4626	30.5374
Pediatrics-Endocrinology	152.3038	177.6962
Family/GeneralPractice	11.8611	17.1389
Pediatrics-CriticalCare	61.9997	1.0003
Pediatrics-Pulmonology	21.2491	4.7509
InternalMedicine	28.8854	14.1146
Anesthesiology-Pediatric	18.9999	1.0001
ObstetricsandGynecology	9.39	6.61
Endocrinology	6.3746	1.6254
Psychiatry	14.0812	3.9188
Pediatrics-Hematology-Oncology	3.0318	2.9682
Emergency/Trauma	13.7959	18.2041
Psychiatry-Child/Adolescent	2.9755	1.0245
Cardiology	2	1
Pediatrics-EmergencyMedicine	4	1
Pulmonology	4.8565	1.1435
Surgery-General	2.7183	5.2817
Surgery-Pediatric	3.7793	4.2207
Pediatrics-Neurology	1	2
Pediatrics-InfectiousDiseases	1.946	1.054
Pediatrics-AllergyandImmunology	3.1414	1.8586
Psychology	2.0925	3.9075
Surgery-Neuro	1.0329	1.9671
Orthopedics-Reconstructive	1	2
Surgery-Plastic	1	2
Nephrology	1.9964	1.0036
Oncology	1.0027	2.9973
Cardiology-Pediatric	2.5292	3.4708
SurgicalSpecialty	1	5
Gynecology	1	2
Radiologist	1	2
[total]	428.5058	324.4942
num_lab_procedures		
mean	43.4799	42.5784
std. dev.	18.8062	22.6717
num_procedures		
mean	0.1377	0.604
std. dev.	0.3912	1.3086
num_medications		
mean	7.018	9.9842
std. dev.	3.9552	6.4222

number_outpatient		
mean	0.0066	0.3931
std. dev.	0.081	1.0311
number_emergency		
mean	0	0.368
std. dev.	0.0003	0.9085
number_inpatient		
mean	0.4623	0.6278
std. dev.	1.1182	1.3239
diag_1		
276.0	2.2177	5.7823
250.11	49.3078	58.6922
250.03	58.4255	2.5745
446.0	1.9257	1.0743
250.02	26.1107	5.8893
250.82	2.999	1.001
250.13	131.5318	69.4682
566.0	2.834	1.166
482.0	17.7755	5.2245
682.0	10.3424	4.6576
648.0	6.8325	10.1675
518.0	1.9857	2.0143
250.93	5.4083	1.5917
295.0	2.9999	2.0001
250.01	12.5841	13.4159
996.0	1.9937	7.0063
288.0	1.003	2.997
577.0	1.6877	4.3123
250.83	7.9684	1.0316
642.0	3.9179	4.0821
250.6	2.0084	2.9916
296.0	6.7211	9.2789
250.43	2	1
493.0	4.9653	2.0347
309.0	2.9997	1.0003
507.0	2	1
250.12	8.9667	5.0333
277.0	3.1326	4.8674
312.0	5.9999	1.0001
250.0	7.2123	3.7877
250.1	3.0537	7.9463
211.0	1	2
491.0	1.0002	1.9998
574.0	1.2944	1.7056
812.0	1.9998	1.0002
282.0	1.9841	1.0159
474.0	1.0038	1.9962
824.0	1.0825	2.9175
732.0	1	2

644.0	1.9964	2.0036
250.23	1.9993	1.0007
486.0	4.9349	7.0651
540.0	2.1144	2.8856
714.0	1.5373	1.4627
461.0	1	2
685.0	2.959	1.041
815.0	2	1
522.0	1	2
780.0	2.999	1.001
47.0	1.9999	1.0001
584.0	1.9964	2.0036
851.0	1.0329	1.9671
304.0	2	1
722.0	1	2
998.0	1.1336	2.8664
473.0	1	2
278.0	1	2
881.0	1	2
813.0	1	2
590.0	2.0228	4.9772
38.0	1.9981	2.0019
307.0	1.093	3.907
578.0	1.6691	1.3309
284.0	1.9888	3.0112
428.0	1.0146	1.9854
250.91	2.9455	1.0545
250.31	1.6719	1.3281
865.0	1.0213	2.9787
962.0	1.0594	1.9406
616.0	1	3
801.0	1.8161	1.1839
8.0	1.0862	1.9138
860.0	1	2
614.0	1.0635	1.9365
208.0	1	2
611.0	1.9945	1.0055
656.0	1.0031	3.9969
458.0	1.0362	1.9638
805.0	1	2
250.92	1.8019	1.1981
789.0	1.07	4.93
311.0	1.4588	1.5412
434.0	1.2643	1.7357
864.0	1	2
112.0	1	2
802.0	1.9902	1.0098
465.0	1.0012	1.9988
745.0	1	2
310.0	1.1155	1.8845
346.0	1.0235	1.9765
427.0	1.0497	1.9503
535.0	1.0003	2.9997

250.81	1.0001	2.9999
193.0	1.1901	1.8099
571.0	1	2
529.0	1	2
800.0	1.0729	1.9271
250.33	1	2
250.8	1.0047	1.9953
441.0	1	2
835.0	1	2
V57	1	2
652.0	1	2
821.0	1	2
475.0	1	2
[total]	502.5058	398.4942
diag_2		
250.01	17.1801	22.8199
V15	18.0154	3.9846
277.0	22.0486	7.9514
278.0	8.9996	1.0004
276.0	199.1798	91.8202
462.0	2	2
250.12	2	1
626.0	2	1
759.0	1.012	1.988
682.0	7.2902	6.7098
536.0	3	1
250.11	3.9568	9.0432
382.0	3	1
V65	4	1
78.0	2	1
204.0	1.0477	2.9523
287.0	2.003	3.997
790.0	1.8915	2.1085
250.03	9.8742	8.1258
787.0	3.2452	1.7548
34.0	3.03	1.97
558.0	5.2228	2.7772
648.0	5.2411	10.7589
305.0	6.9062	4.0938
250.83	2.7354	2.2646
583.0	2	1
314.0	3.2229	3.7771
250.0	9.0049	7.9951
493.0	4.0704	2.9296
465.0	3.9738	2.0262
599.0	9.5845	4.4155
784.0	2.9997	1.0003
577.0	3.9945	1.0055
482.0	1.9962	2.0038
789.0	2.0003	1.9997
250.22	1.9999	1.0001
704.0	2	1
112.0	5.0014	2.9986

244.0	3.9952	2.0048
279.0	1.9997	1.0003
250.02	2.6863	2.3137
701.0	3.008	1.992
V42	1.9841	2.0159
424.0	2	1
41.0	2.6233	2.3767
401.0	2.5129	4.4871
752.0	2	1
780.0	1.9986	3.0014
V12	2	1
478.0	1.0038	1.9962
520.0	2	1
794.0	2	1
737.0	1	2
486.0	1.1733	2.8267
311.0	4.2757	2.7243
242.0	2	1
288.0	1.5131	2.4869
250.93	2	1
719.0	1.5373	1.4627
259.0	2	1
301.0	1.9997	1.0003
466.0	2.9285	1.0715
V18	2.0001	1.9999
362.0	2	1
816.0	2	1
616.0	1.9999	1.0001
483.0	1.9995	1.0005
250.33	1.9523	2.0477
573.0	1.9984	2.0016
54.0	1.1931	1.8069
578.0	2	1
881.0	1	3
496.0	1	2
481.0	1.9981	1.0019
564.0	1.0695	1.9305
296.0	1.093	3.907
300.0	1.0014	2.9986
8.0	2	1
250.51	1	2
250.81	1.0029	2.9971
574.0	1	2
250.6	1.0679	1.9321
584.0	2.0025	2.9975
70.0	1.9887	2.0113
425.0	1.0146	1.9854
285.0	1.9945	3.0055
805.0	1.0121	1.9879
E950	1.0594	1.9406
410.0	1	2
812.0	1	2
373.0	1	2

349.0	1.2412	1.7588
V58	2.1499	14.8501
V63	1.0635	1.9365
284.0	1	2
480.0	1.9979	1.0021
996.0	1	2
490.0	1.4084	1.5916
507.0	1.0213	1.9787
426.0	1.035	1.965
256.0	1.0674	1.9326
579.0	1.9992	1.0008
823.0	1	2
799.0	1.0012	1.9988
V45	1.0067	1.9933
461.0	1.0235	1.9765
405.0	1.9975	1.0025
250.13	1	6
E968	1.0729	1.9271
491.0	1	2
991.0	1	2
680.0	1	2
788.0	1.0047	2.9953
681.0	1	2
567.0	1	2
79.0	1.0003	2.9997
442.0	1	2
850.0	1	2
593.0	1	2
299.0	1	2
272.0	1	3
782.0	1	2
38.0	1	2
649.0	1	2
275.0	1	2
V17	1	2
571.0	1	2
813.0	1	2
338.0	1	2
474.0	1	2
309.0	1	2
586.0	1	2
[total]	529.5058	425.4942
diag_3		
255.0	1.0479	2.9521
V70	2	1
250.0	9.9572	17.0428
788.0	3.9998	1.0002
278.0	12.7114	4.2886
V15	14.0635	9.9365
473.0	1.012	1.988
250.03	9.4576	4.5424
250.23	2	1
465.0	2.9977	3.0023

315.0	2	1
658.0	2	2
244.0	2.04	2.96
288.0	3.0006	3.9994
75.0	2	1
311.0	6.9883	4.0117
250.01	13.39	8.61
996.0	1.0256	3.9744
112.0	7.9312	2.0688
704.0	2	1
518.0	1.013	3.987
276.0	199.726	81.274
780.0	5.7725	1.2275
380.0	2	2
752.0	2	1
446.0	1.9894	1.0106
787.0	8.4836	3.5164
337.0	2	1
558.0	4.0009	2.9991
789.0	4.6866	1.3134
786.0	2.1663	2.8337
313.0	3.4588	2.5412
379.0	1.8814	1.1186
511.0	2	1
79.0	3	1
519.0	1.9471	1.0529
785.0	3.0198	3.9802
791.0	2.4216	1.5784
305.0	5.4194	10.5806
493.0	6.5906	4.4094
494.0	3.986	1.014
482.0	2.9999	2.0001
245.0	2	1
611.0	2	1
343.0	1.1369	2.8631
790.0	2.997	2.003
296.0	3.9555	5.0445
701.0	3.9997	1.0003
314.0	2	2
250.81	1	2
277.0	3.4192	2.5808
599.0	3.0001	1.9999
34.0	2.9999	1.0001
427.0	1.093	2.907
8.0	1.9895	3.0105
E885	1.9998	1.0002
V45	2.0005	1.9995
416.0	1.0038	1.9962
623.0	2	1
V18	3.9992	2.0008
536.0	1.1879	3.8121
648.0	2.3167	2.6833
285.0	2	1

577.0	1.2541	2.7459
742.0	3	1
783.0	2.0047	1.9953
560.0	1	2
405.0	1.9989	1.0011
472.0	1.9996	1.0004
796.0	1.9995	1.0005
709.0	2	1
369.0	2	1
462.0	1.9285	3.0715
382.0	1.9725	3.0275
V22	2	1
466.0	2.7501	1.2499
41.0	3.8822	2.1178
746.0	1.9984	1.0016
346.0	2	1
348.0	1.0329	1.9671
250.91	2	1
250.02	2	3
533.0	1.999	1.001
309.0	2.0146	1.9854
584.0	1.9523	4.0477
243.0	2	1
250.6	2.9996	1.0004
272.0	1	5
250.11	1	2
807.0	1	2
110.0	1.9999	1.0001
303.0	1	2
250.13	1.9981	1.0019
573.0	1.001	1.999
275.0	1.2115	1.7885
362.0	1	2
695.0	1.8006	1.1994
V58	7.9548	28.0452
292.0	1	2
299.0	1.0146	1.9854
425.0	1	2
682.0	1.6719	1.3281
401.0	2.0112	3.9888
300.0	1.0594	1.9406
250.1	1	2
253.0	1	2
289.0	1.1131	1.8869
42.0	1.0635	1.9365
522.0	1.0035	1.9965
571.0	1.0104	1.9896
593.0	1.0905	1.9095
784.0	1	2
694.0	1.0099	1.9901
V17	1.0322	1.9678
646.0	1.3127	1.6873
334.0	1	4

821.0	1	2
170.0	1.0027	1.9973
284.0	1	2
802.0	1.9902	1.0098
528.0	1.0012	1.9988
54.0	1	2
132.0	1.9269	1.0731
131.0	1.0021	2.9979
733.0	1.0497	1.9503
991.0	1	2
301.0	1	3
38.0	1	2
918.0	1.03	1.97
873.0	1.0729	1.9271
681.0	1	2
557.0	1	2
V61	1.0003	1.9997
664.0	1	2
998.0	1	2
659.0	1	2
530.0	1	2
V14	1	2
995.0	1	2
649.0	1	2
576.0	1	2
591.0	1	2
958.0	1	2
711.0	1	2
E849	1	2
[total]	542.5058	438.4942
number_diagnoses		
mean	3.1307	5.0547
std. dev.	1.7438	2.4112
max_glu_serum		
None	392.7168	285.2832
>300	6.4555	7.5445
>200	1.3335	2.6665
Norm	1	2
[total]	401.5058	297.4942
A1Cresult		
None	149.9917	193.0083
>8	211.3898	70.6102
>7	14.0814	1.9186
Norm	26.0428	31.9572
[total]	401.5058	297.4942
metformin		
No	370.6297	276.3703
Steady	26.1062	15.8938
Up	3.7698	3.2302
Down	1	2
[total]	401.5058	297.4942
repaglinide		

No	397.5516	294.4484
Up	1.9542	1.0458
[total]	399.5058	295.4942
nateglinide		
No	398.5058	293.4942
Steady	1	2
[total]	399.5058	295.4942
chlorpropamide		
No	398.5058	294.4942
[total]	398.5058	294.4942
glimepiride		
No	397.4978	293.5022
Steady	2.008	1.992
[total]	399.5058	295.4942
acetoexamide		
No	398.5058	294.4942
[total]	398.5058	294.4942
glipizide		
No	396.5064	293.4936
Steady	2.9994	2.0006
[total]	399.5058	295.4942
glyburide		
No	397.4581	292.5419
Steady	2.0477	2.9523
[total]	399.5058	295.4942
tolbutamide		
No	398.5058	294.4942
[total]	398.5058	294.4942
pioglitazone		
No	397.5058	293.4942
Steady	2	2
[total]	399.5058	295.4942
rosiglitazone		
No	397.2415	292.7585
Up	2	1
Steady	1.2643	2.7357
[total]	400.5058	296.4942
acarbose		
No	398.5058	294.4942
[total]	398.5058	294.4942
miglitol		
No	398.5058	294.4942
[total]	398.5058	294.4942
troglitazone		
No	398.5058	294.4942
[total]	398.5058	294.4942
tolazamide		
No	398.5058	294.4942
[total]	398.5058	294.4942
examide		
No	398.5058	294.4942
[total]	398.5058	294.4942
citoglipton		

No	398.5058	294.4942
[total]	398.5058	294.4942
insulin		
Up	28.7328	111.2672
Steady	275.8587	55.1413
No	50.3052	61.6948
Down	46.6091	69.3909
[total]	401.5058	297.4942
glyburide-metformin		
No	398.5058	294.4942
[total]	398.5058	294.4942
glipizide-metformin		
No	398.5058	294.4942
[total]	398.5058	294.4942
glimepiride-pioglitazone		
No	398.5058	294.4942
[total]	398.5058	294.4942
metformin-rosiglitazone		
No	398.5058	294.4942
[total]	398.5058	294.4942
metformin-pioglitazone		
No	398.5058	294.4942
[total]	398.5058	294.4942
change		
Ch	98.0361	183.9639
No	301.4696	111.5304
[total]	399.5058	295.4942
diabetesMed		
Yes	358.4521	243.5479
No	41.0537	51.9463
[total]	399.5058	295.4942
readmitted		
>30	126.9303	99.0697
NO	251.167	177.833
<30	22.4085	19.5915
[total]	400.5058	296.4942

=== Clustering stats for training data ===

Clustered Instances

0 500 (72%)

1 191 (28%)

Log likelihood: -73.84676