A Graphical Tool for the Interpretation of Medical Data

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- Procedure
- 2 Hospitalization Dataset
- 3 Clan Decomposition Method
- 4 Hospitalization Clan Decomposition
- Conclusions





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Procedure

Dataset



Gaifman Graph (several variations)



Clan Decomposition Method





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Hospitalization Dataset

428.0	INSUFICIENCIA CARDIACA CONGESTIVA IN 427.31	FIBRIL.LACIO AURICULAR	276.1	HIPOSMOLARITAT I/O HIPONATREMIA
381.10	OTITIS MITJANA SEROSA CRONICA, SIMPLE			
784.3	AFASIA 401.9	HIPERTENSIO ESSENCIAL INESPECIFICAD	519.8	ALTRES MALALTIES D'APARELL RESPIRA
599.0	INFECCIO VIES URINARIES,LOCALITZACIO N 041.9	INFECCIO BACTERIANA INESPECIFICADA	873.42	FERIDA OBERTA DE FRONT, NO COMPL
584.9	FALLIDA RENAL AGUDA NO ESPECIFICADA 564.00	RESTRENYIMENT, INESPECIFICAT	724.2	LUMBAGO; DOLOR LUMBAR; SINDROM
041.6	INFECCIO PER PROTEUS (MIRABILIS) (MORC 041.49	ALTRES INFECCIONS PER ESCHERICHIA C	041.85	INFECCIO BACTERIANA PER ALTRES OR
511.9	EMBASSAMENT PLEURAL INESP.; EMBASSA 414.8	ALTRES FORMES ESPECIF.DE CARDIOP.IS	427.31	FIBRIL.LACIO AURICULAR
569.89	ALTR.TRAST.INTESTINALS ESPECIF.;ENTERC 285.9	ANEMIA INESPECIFICADA; ANEMIA: NO:	403.90	NEFROPATIA HIPERTENSIVA INESP. S/I
518.84	FALLIDA RESPIRATORIA AGUDA I CRONICA 276.2	ACIDOSI; ACIDOSI: NOS, LACTICA, META	401.9	HIPERTENSIO ESSENCIAL INESPECIFICA
519.8	ALTRES MALALTIES D'APARELL RESPIRATOR			
V45.71	ABSENCIA ADQUIRIDA DE MAMA I MUGRO 305.1	TRASTORN PER US DE TABAC; DEPENDEN	305.02	ABUS D'ALCOHOL, SENSE DEPENDENCI
276.0	HIPEROSMOLARITAT I/O HIPERNATREMIA; 780.39	ALTRES CONVULSIONS	580.89	GLOMERULONEFRITIS AG.AMB ALTRES
584.9	FALLIDA RENAL AGUDA NO ESPECIFICADA 458.9	HIPOTENSIO INESPECIFICADA; HIPOTEN	427.31	FIBRIL.LACIO AURICULAR
276.7	HIPERPOTASSEMIA; HIPERKALEMIA; POTAS 276.8	HIPOPOTASSEMIA; DEFICIT POTASSI [K];		
414.01	ATEROSCLEROSI D'ARTERIA CORONARIA N. 584.9	FALLIDA RENAL AGUDA NO ESPECIFICAD	998.59	ALTRA INFECCIO POSTOPERATORIA
403.90	NEFROPATIA HIPERTENSIVA INESP. S/MEN 496	OBSTRUCCIO CRONICA VIES AERIES, NCC	585.9	INSUFICIENCIA RENAL CRONICA NO ES
751.3	MAL.DE HIRSCHPRUNG I ALTR.TRAST.FUNC 999.82	EXTRAVASACIO D'UN ALTRE AGENT VESI		
782.3	EDEMA; ANASARCA; HIDROPESIA; EDEMA 356.2	NEUROPATIA SENSORIAL HEREDITARIA	719.7	DIFICULTAT DE CAMINAR



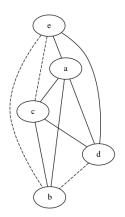


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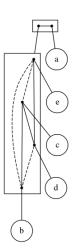
Clan Decomposition Method





Patients

p1: a b c p2: a d e p3: a c d





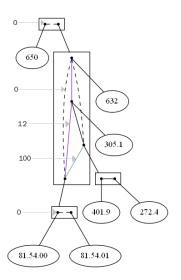


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Hospitalization Graph Decomposition



- 650 Normal delivery.
- 632 Missed abortion.
- 305.1 Tobacco use disorder.
- 401.9 Unspecified essential hypertension.
- 272.4 Other and unspecified hyperlipidemia.





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Conclusions

Purpose

To be an exploratory tool from data.

After the analysis...

- To have a general view about co-occurring diagnostics.
- To complement statistical approaches.





THANK YOU!



