

# Exploring Electronic Health Records

Case - Mölnlycke Health Care

# Patient X

## Conditions

	START	STOP	DESCRIPTION
0	2011-08-09	2011-08-16	Viral sinusitis (disorder)
1	2011-11-16	2011-11-26	Acute viral pharyngitis (disorder)
2	2015-12-06	2015-12-14	Streptococcal sore throat (disorder)

## Encounters between 2010-2020

Consultation for treatment: 8

Encounter for symptom: 3

Patient encounter procedure: 3

General examination of patient (procedure): 3

## Procedures between 2010-2020

Insertion of subcutaneous contraceptive: 4

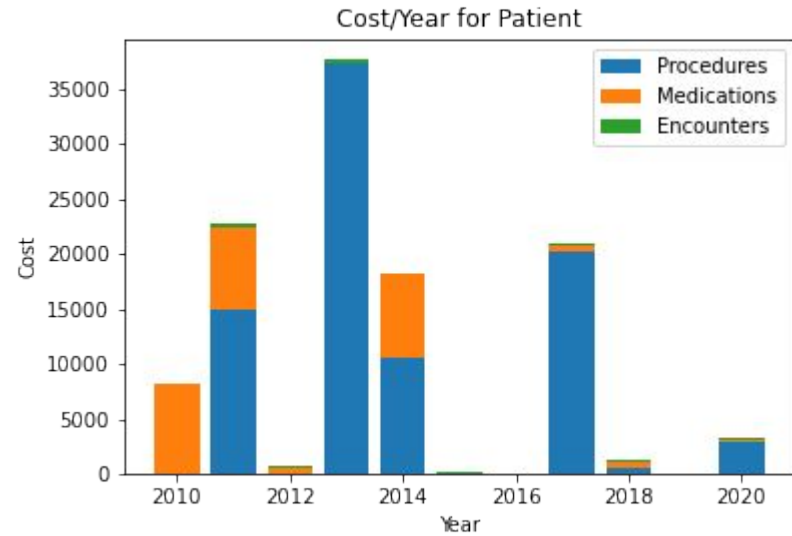
Removal of subcutaneous contraceptive: 2

Insertion of intrauterine contraceptive device: 1

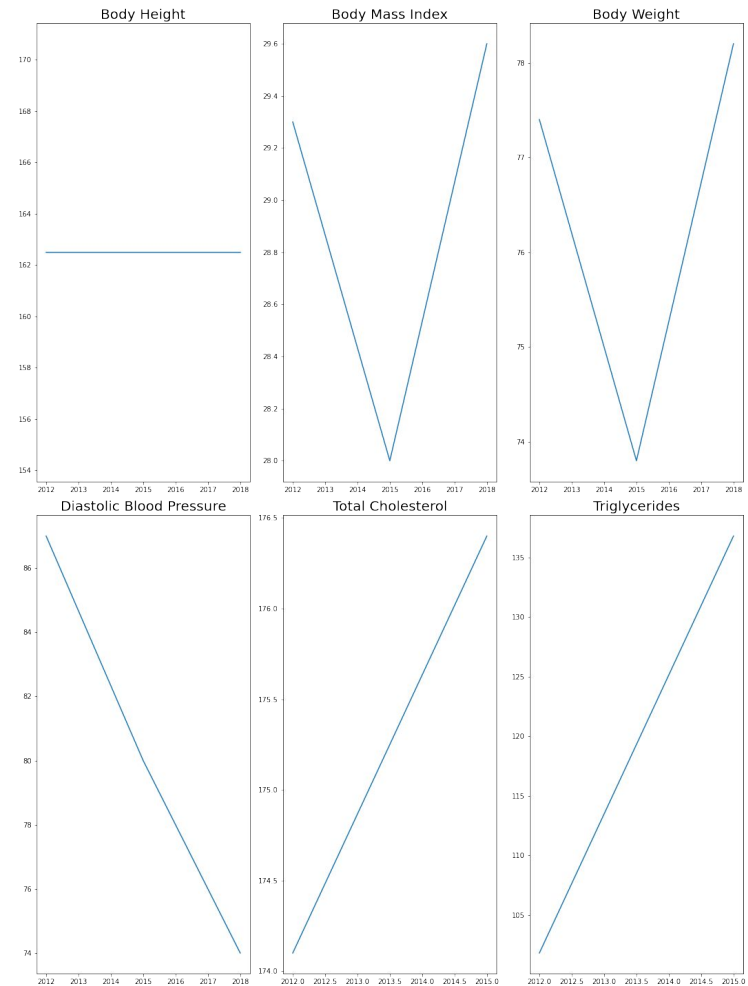
Medication Reconciliation (procedure): 1

Intramuscular injection: 1

# Treatment cost

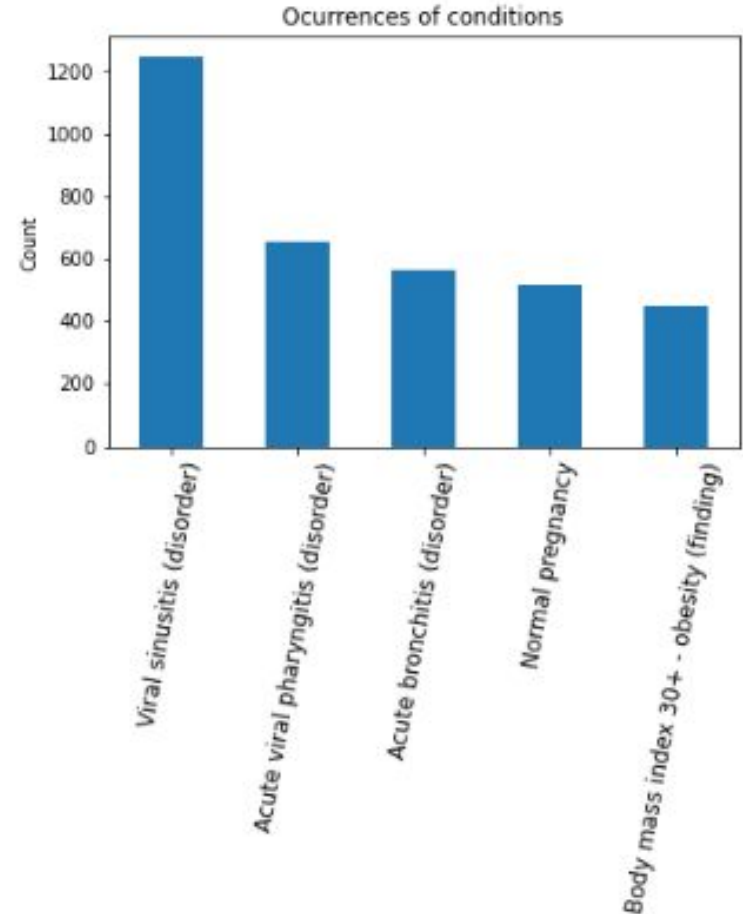


# Observations



# Common conditions

- Three most common conditions:
  - Viral sinusitis: 1248
  - Acute viral pharyngitis: 653
  - Acute bronchitis: 563



# Treatment

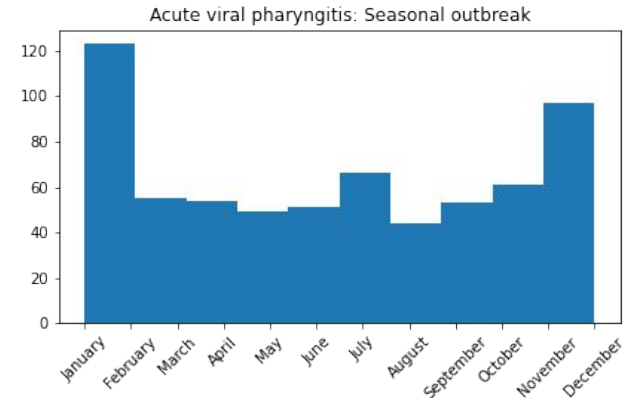
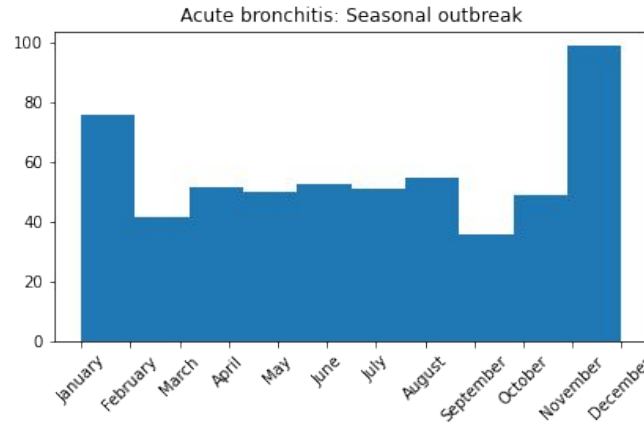
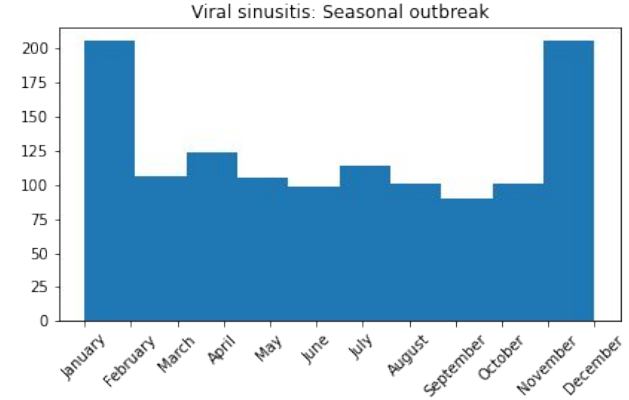
- Careplan
  - Acute bronchitis: Respiratory therapy
- Encounter class: Ambulatory

REASONDESCRIPTION	Acute bronchitis (disorder)	Acute viral pharyngitis (disorder)	Viral sinusitis (disorder)
DESCRIPTION			
Encounter for symptom	690	691	1378

REASONDESCRIPTION	Acute bronchitis (disorder)	Acute viral pharyngitis (disorder)	Viral sinusitis (disorder)
DESCRIPTION			
Acetaminophen 21.7 MG/ML / Dextromethorphan Hydrobromide 1 MG/ML / doxylamine succinate 0.417 MG/ML Oral Solution	126	0	0
Acetaminophen 325 MG Oral Tablet	440	0	0
Amoxicillin 250 MG / Clavulanate 125 MG Oral Tablet	0	0	247
Penicillin V Potassium 250 MG Oral Tablet	0	9	0

# Characteristics among conditions

- Average recovery time
  - Viral sinusitis: 14 days
  - Acute viral pharyngitis: 9 days
  - Acute bronchitis: 10 days



# Applying machine learning

- Synthetic data to train pretrain models
  - Transfer learning
- Predict future health outcomes
  - Identify patients at risk
- Personalized treatment
  - Tailor to the needs of the patient



Thank you!