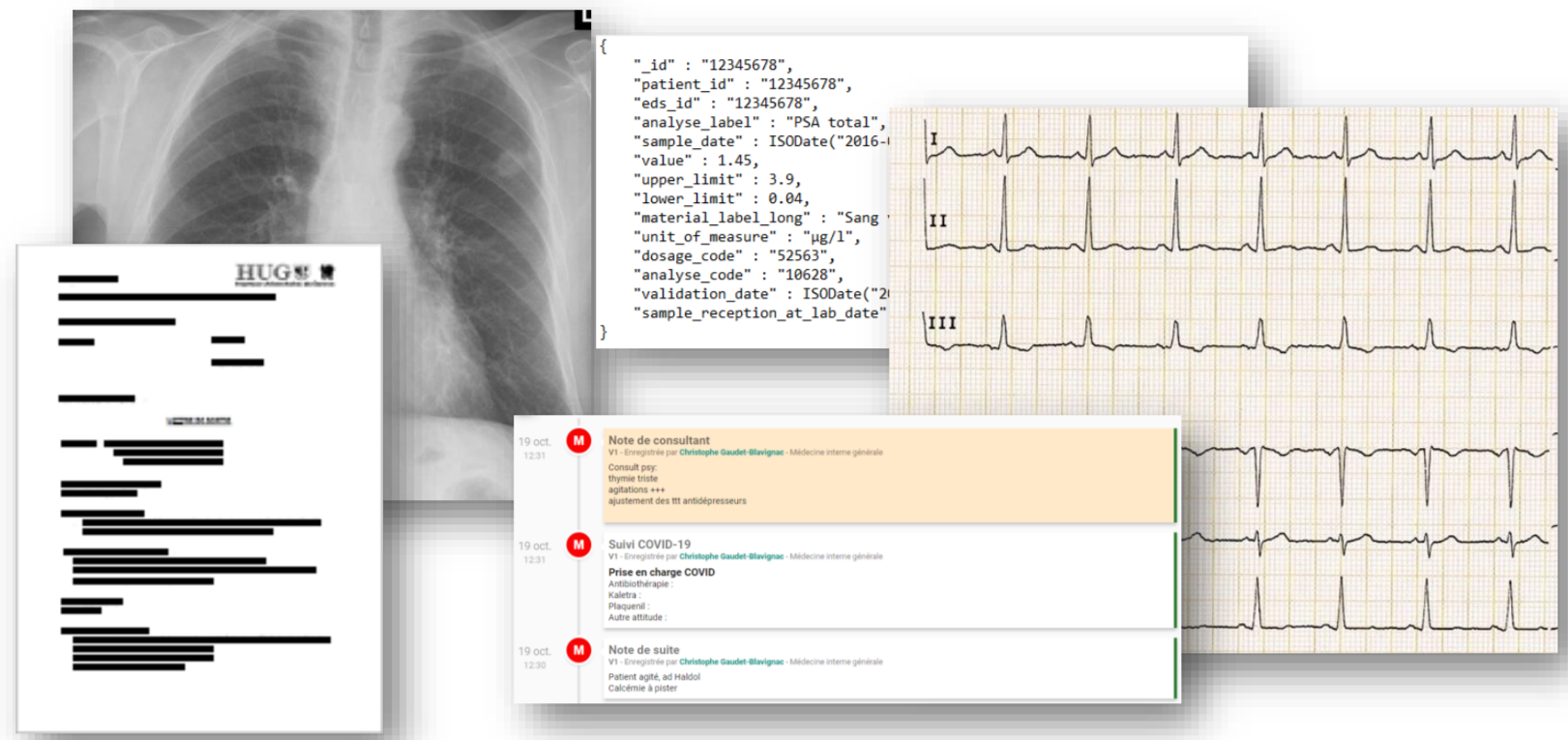


CoviDB: Deep SNOMED CT Enabled Clinical Database About COVID-19

Christophe Gaudet-Blavignac, Julien Ehram, Cyrille Duret, Christian Lovis

COMPLEX DATABASES

- The quantity of COVID-19 data generated in hospitals is enormous.
- Current hospital databases are designed for operational purposes.
- They are not adapted for exploration by non-experts.
- They don't represent efficiently the meaning of the data.



INTUITIVE INTERFACE

A paradigm shift is necessary to solve those new challenges.

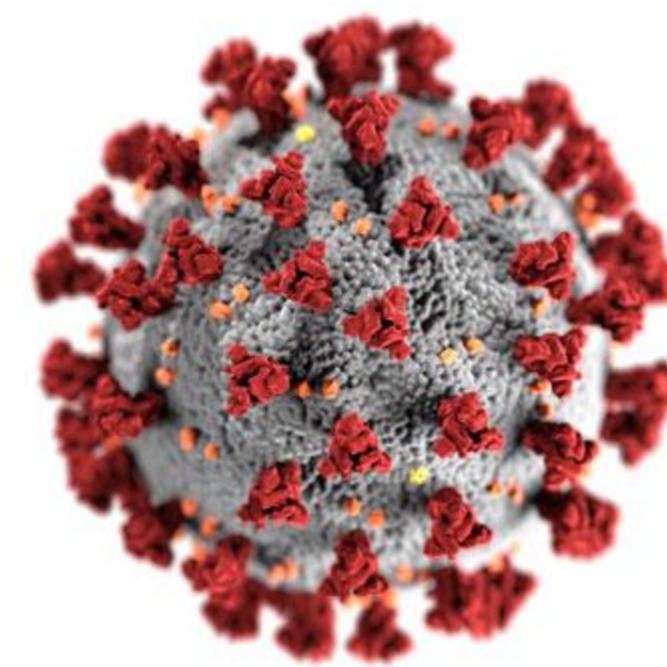
→ The meaning must be at the core of the databases.

→ They must allow meaningful exploration of the data to answer questions not yet asked.

SOLUTION


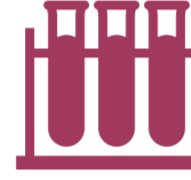

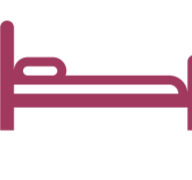


A focus on the epidemic

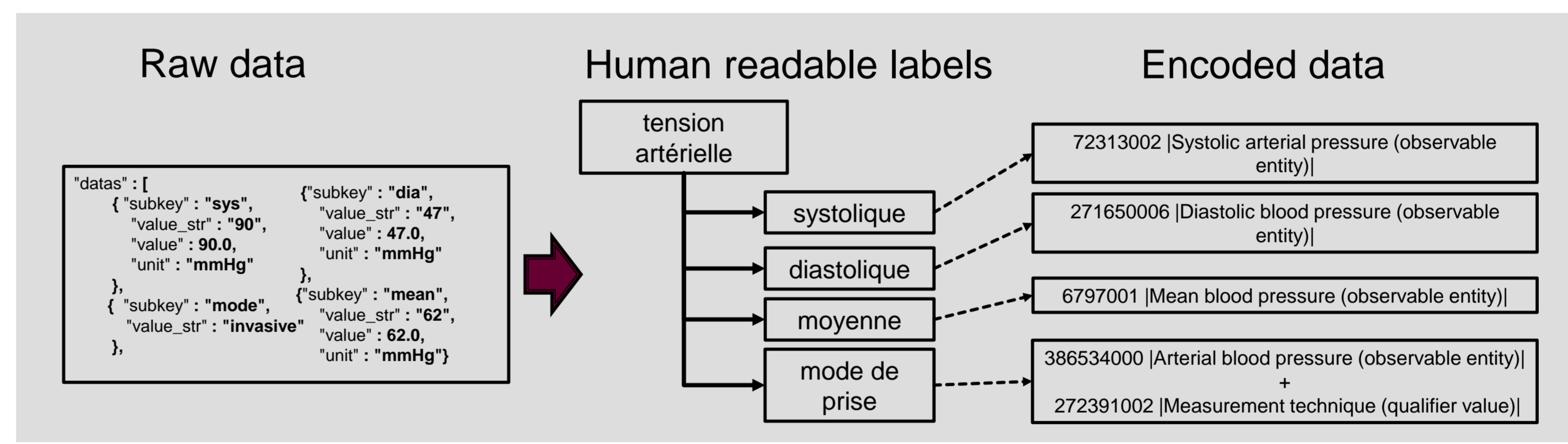
- CoviDB contains data of every COVID-19 related patient in the HUG.
- Daily update of the data.
- Data is extracted with a 2-year history of the patient.



From data to meaning

- Data is manually encoded into adapted international classifications and standards.
- Data is translated into human readable label to allow non-experts to understand it.

 191'000 patients	 30'000'000 lab analysis	 4'700'000 diagnostics
 890'000 inpatient stays	 227'000'000 observations	 2'800'000 drug order



USE CASE

Feasibility study tool

Goal:

- Allow feasibility studies to be made directly by researcher.

Features:

- Web interface
- Semantic-based search for concepts
- User adaptation
- Intuitive interface to combine inclusion and exclusion criteria

