EMPOWERING EVIDENCE-BASED MEDICINE
WITH SEMANTIC DATA ANALYSIS

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INTRODUCTION

B2i Healthcare is a boutique software engineering firm bootstrapped in 2005. We specialize in healthcare information standards, information exchange and analytics. Our Snow Owl® technology family is deployed in over 3,000 locations in 84+ countries worldwide.

Snow Owl MQ is a scalable Big Data platform for query and analytics of structured electronic health records.
PROBLEM

DEMOGRAPHICS
Aging population with rising demand on health services especially for chronic diseases and complex treatments.

INTEROPERABILITY
Need for better integration across wellness, health care, public health, occupational health, and social care.

INTERPRETATION
Data with interpretation will be key to tame rising healthcare cost as the availability of semantically rich electronic health records is growing.

STANDARDS
To support interoperability between stakeholders various standards emerged.

For Health Information exchange, ontologies like SNOMED CT have proven to be able to encapsulate the semantics the best.
EXAMPLE

- Patient
  - COPD
  - Rheumatoid arthritis

- TNF inhibitor
  - Biologic therapy for rheumatoid arthritis

- Methotrexate
  - First-line medication for autoimmune diseases

SELECT DIAGNOSIS CODES

Look up the group of relevant diseases by criteria.
BUILD PATIENT COHORTS

Find patients who share the same clinical characteristics as yours, but already tried the medications you are considering to prescribe.

VIEW RESULTS

Inspect results for further clues...
ANALYZE RESULTS

Calculate the relative increase of infectious pneumonia occurrences for each considered medication, compare r

CONCLUSIONS

With our Snow Owl MQ product we can retrieve the semantic knowledge that is encapsulated in the medical records.

Our queries are executed in real-time and the result can be further analyzed on our Big Data cluster.
THANK YOU

for your attention!

b2i Healthcare