atomian
Healthcare
Medical Records

The current situation.
The rapid growth of information in the Health System.

Information is increasing at an exponential rate. Every five years, the amount of recorded health information doubles. Electronical Medical Records (EMR) and the sudden appearance of the "Internet of Things" (IoT) will have an irreversible impact on this growth.

Invisible data.

80% of health data is unstructured and mainly based on medical records taken by health workers.

The problem.
IT systems are not adapted to the profile of a healthcare professional.

The information systems available are currently designed for business managers rather than healthcare professionals. They are not made for daily use, and only process structured data.

Acquiring information is not an easy process, and requires an understanding of the methods, applications and technology needed to filter and transform data in transaction systems and unstructured information.

The target.
Healthcare professionals require access to their records.

Medical staff record a large volume of information every day but have limited access to these details at later stages.

Can we improve the quality of healthcare in hospitals by using recorded information more effectively?

What are the benefits of structured and unstructured data processing?

The solution.
Atomian Healthcare Medical Records.

An Atomian product that enables the use of structured and unstructured data in Medical Records, through natural language.

We can improve healthcare quality and reduce hospital costs.

How? Increasing quality ratios with higher standards of care for the patient and therefore reduced hospital costs.

How does Atomian work?

Analytics — Discharge reports — Record — Reports — Hospitals systems — ETL — Atomian — User

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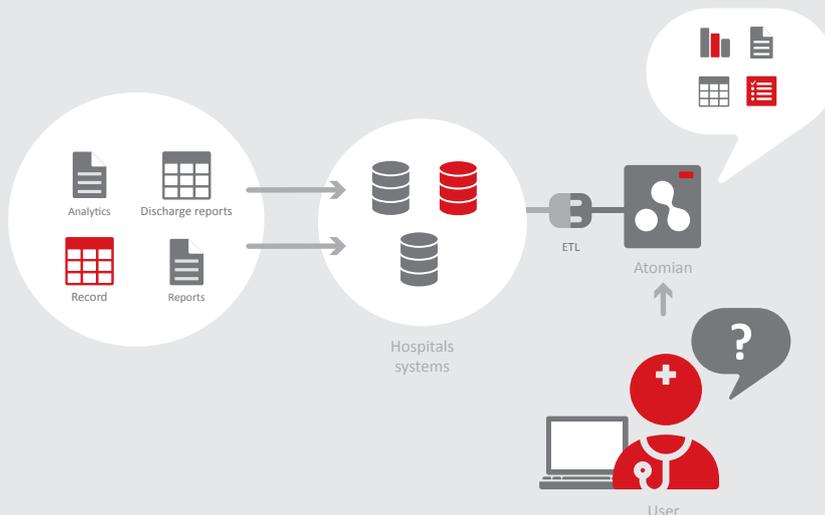
What does Atomian offer to healthcare professionals?

A straightforward browsing system through natural language. You don't need to manage complex systems based on set questions. We all know how to ask for information.

A specific and informed answer within seconds. There are no approximate answers based on probabilities or combined responses. Atomian provides the answer.

A more complete understanding of the data registered in Medical Records. An intuitive methods to explore the information recorded by healthcare professionals.

A cognitive computing system with authoritative answer.

A digital brain. The Atomian cognitive memory is based on a symbolic representation of reality, composed of recorded data.

Previous training is not required for use.

All of the information required to understand natural language, and its relation with the data taken from the hospital system, is already uploaded at the time of installation.

System configuration.
Atomian Medical Records runs a set-up application before use.

The software is set up according to an ETL data process (Extract, Transform, Load) that connects the hospital database to the Atomian cognitive memory.

This process is independent of the hospital system, and the result is uploaded on the Atomian server with no interference from hospital procedures at any stage.

In natural language.

All of the information in discharge reports is assimilated in the Atomian cognitive memory and made available in natural language to healthcare professionals and managers.

How can the quality of healthcare be improved?

Medical staff are provided access to new information in key areas of healthcare management, with the option to request details on patients, healthcare professionals, treatment, analysis and diagnostics.

Healthcare professionals can ask Atomian for specific and updated information in order to:

- **Work with a more detailed understanding of patient records and enhance the quality of healthcare provided, with access to a shared database for all similar cases.**
- **Identify key information on patients for clinical trials.**
- **Detect unexplained cases and access specific details to understand the situation.**

Can efficiency be improved in hospital procedures?

A higher standard of patient care should directly reduce risks for the patient while in hospital, and eventually lower the readmission rate.

Other potential benefits from a new understanding of diagnostics and treatments include.

- **Lower pharmaceutical costs**
- **Reduced variation in medical practice, with less errors and limited pharmaceutical expenditure.**
- **Improved care for patients who are chronically ill or have comorbidity.**

A new and complex understanding of the relevant details can offer greater scope for action while significantly improving the efficiency of hospital procedures.