

Challenges

- Finding emerging pieces of knowledge and relevant information efficiently from large volumes dynamic text-based data
- Extracting meaning from metadata associated with i.e. x-rays, images, and tissue samples
- Highly complex and inconsistent classifications
- Claim codes may not be granular or specific enough

Healthcare Benefits

- Identify suspicious patterns to detect fraud
- Help healthcare providers deliver more meaningful data/results quickly for patients
- Personalization of mobile and PC portals for healthcare providers and patients

Life Sciences Benefits

- Determine what medical conditions correlate with other medical symptoms and treatments
- Identify the impact of the creation of a subpopulation of subjects and how that changes the correlations to medical conditions

Medical records are voluminous, full of industry jargon and terminology, consisting mainly of text-based notes. Finding relevant content in the overwhelming volume of medical data is no simple task. As a healthcare organization, it is important to have a solution to help unlock unstructured clinical documentation to extract relevant data and new insights previously not seen. With these new insights, your healthcare organization may leverage additional meaningful data that can be used for clinical decision making, leading to improved patient care and a reduction in overall healthcare costs.

Challenges with Unstructured Data in Healthcare Organizations

Natural language processing (NLP) techniques add meaning to clinical narrative, so that clinicians' spoken words are not simply transformed into text, but can be used to create meaningful clinical data to be inserted into an electronic health record (EHR) or other data repository.

The challenge with state of the art NLP-based solutions is that they:

- apply existing ontologies and semantic rules;
- pre-define rule-based identifications of positive/negative sentiments and associations; and are
- unresponsive to real-time information and trends that may be emerging in medical documents and literature.

The xPatterns Difference

Traditional NLP approaches are manually intensive and expensive to create and maintain. What differentiates xPatterns from traditional NLP solutions is its ability to deliver high data relevance from seemingly disconnected data without the formal development of ontologies or taxonomies.

xPatterns' unique technology finds previously unseen, yet relevant correlations between data entities through the self-discovery of patterns and concepts in unstructured data, minimizing the creation and maintenance cost often incurred by traditional NLP text analytics methods.

Why xPatterns

xPatterns Enhances:

- Pharmacovigilance and Risk Management
- Signal Detection and Management
- External AE Data Sources
- Collection Tools
- Cross-Functional
- Metadata and Model Authoring
- Query, Reporting & Analytical Services
- Data Mining and Visualization
- Aggregate
- Clinical Development
- Data Management & Analysis
- Study Design and Planning
- Discovery and Exploration tools

Healthcare organizations have large volumes of unstructured data both internal and external to their organization:

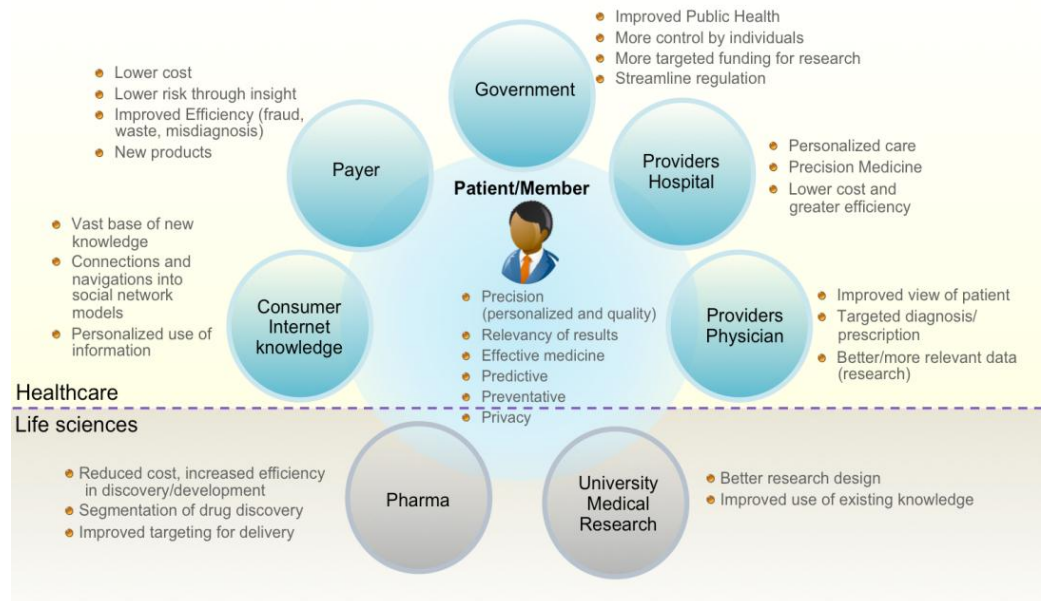


By combining unstructured data with structured data (patient records, coded data, CRO & Pharma records and drug interaction data), xPatterns can enable the discovery of complex and indirect associations between entities which are not explicitly reflected in a formal ontology.

Implementing an xPatterns solution in your healthcare organization can facilitate potential benefits across your organization:

xPatterns Difference

- **Self-discover** patterns and concepts in unstructured data
- **Find indirect relationships** between concepts
- Identify patterns and concepts to **drive action in near real-time**
- **Dynamically refine** relevance through interaction



**START HARNESSING THE WEALTH
IN YOUR DATA TODAY**

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