SEMANTIC INTEROPERABILITY BETWEEN SCIENTIFIC DIGITAL REPOSITORIES IN THE ONCOLOGY FIELD: USE OF THE METADATA APPLICATION PROFILE BASED ON THE TYPES OF INFORMATION NEEDS OF PHYSICIANS AND RESEARCHERS

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Purpose of Study: Development of metadata application profile, aligned with Linked Data principles, based on the information needs of physicians and researchers for scientific digital repositories in the field of Oncology.

Problem: There are no MAPs for the oncology domain

Opportunity: Test and validate Me4MAP

Research Question: What are the types of information needs of physicians and researchers on Oncology domain?

Background
- Semantic Web /Linked Data
- Semantic Interoperability
- Metadata
- Metadata Application Profile (MAP)
- Scholarly Communication
- Digital Repositories
- Bibliography Databases
- Information Needs

Data Collection
- Design Science Research
- Bibliographical and document analysis
- Survey through questionnaire (SurveyMonkey)
- Delphi

Data Analysis
- Qualitative analysis (NVivo)
- Quantitative analysis (SPSS)
- Delphi methodology
- Zotero for bibliography organization

Design Research
- Application Domain
  - People
    - Scientists/users
    - Physicians and Researchers in Oncology field
  - Organization
    - Institutions of teaching and research
  - Technology
    - RDF/XML
- Problem
  - Exponential growth of information
    - Diversity of information systems
    - Level of information and data description
- Opportunities
  - Enhancing semantic interoperability

Findings
- Identification of the types of information needs of physicians and researchers in the field of Oncology
- Determination of MAP, schemas and metadata elements used by digital repositories
- Development of a taxonomy in Oncology based on types of information needs

Strengths of the Study
- Lack of studies related metadata in Oncology
- Development of MAP using Me4MAP
- Methodological issues well described - replicable
- Data is only collected once

Limitations of the Study
- Response rate (interviewer profile)
- Impossible to compare groups
- Qualitative data analysis without correlations (response rate)

Practical Implications
- Development of MAPs for Scientific Digital Repositories on Oncology

Future Works
- Expand researched universe
- Test the MAP on Cancer Digital Repositories

References