Influence of Domain Knowledge on Data Quality

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Contents and introduction

• Importance of data quality
  - Syntactic component
  - Semantic component
• Critical data
  - Different quality levels
  - Critical decisions
  - Domain knowledge
• Data policy
  - Responsibility for the data quality
Data Quality

- Data quality - Information quality
- Different
  - definitions
  - indicators
- Fit for the uses in any system
  - Free of defects
  - Posses desired features
  - Enable correct decisions

Data Quality

- Maintaining of data quality
  - Process related
    • Entering data
      - Business process
      - Understanding and meaning
  - Human related
    • Entering data
      - Speed and quality
      - Change of expectation
  - Technology related
    • Entering data
      - Architecture
Domain Knowledge

- Domain
  - Medical environment
    - Business part (reuse)
    - Medical part (domain knowledge facts)
      - Sensitive (fatal consequences)
- Domain and quality
  - Separate responsibility
    - Management level
    - Medical level
  - Understanding of needs and data
  - Additional checking (semantic data quality)

Data Policy

- Plan, course of actions, set of rules
- Influence and determine decisions, actions
- Assigning the responsibility for data quality
  - Data creating
  - Specific domain
- Data policy structure
  - Better understanding of the domain knowledge and derived data
Data Policy

• Introduction
  – Purpose, audience, definitions, related work, basic approach, responsibility
• Data Policy
  – Purpose, needs, conditions
• Structure
  – Objectives, domain knowledge, domain rules, dimensions of data quality
• Policy management
  – Reviewing, schedules issuance, revision dates

Conclusion

• Users expectations and needs
  – Responsibility
• Structure of data
  – Syntax and semantic
• Domain knowledge
• Domain policy
  – Appropriate policy structure