Commentary on SemanticHealth: Towards a semantic interoperability roadmap for Public Health and Secondary Uses

Christopher G Chute MD DrPH
Professor and Chair, Biomedical Informatics
Mayo Clinic College of Medicine

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Kudos

• Commend SemanticHealth team
• Acknowledge the coherent vision of “capturing the date once and using it many times…”
• Concur with overarching notion of aggregation across patient data for surveillance and QA
• Intrigued by practical suggestion of use cases
  • Diabetes, Obesity, Depression
• Welcome results of “Key Informant Survey”
On the Nature of Public Health
Reductionism: Counting Things

• Regardless of goal
  • Core indicators: Morbidity, Mortality, Interventions
  • Impact, Effectiveness, Quality measures

• Inferences made from tabulations of counts
  • Trends, Outbreaks, Disease Burden,
  • Care availability, Care efficacy

• Focus is ultimately on countable things
  • Begs nature of enumerable objects
  • “registry system for interoperable objects” p19
Validity, Reliability, Comparability, ...
Definitions of “interoperable objects”

• “common agreed conceptual model and standardization ... agreed framework”
  • “shared data types, shared terminologies, and shared codings”
  • “Aggregation ... shared guidelines and procedures”

• Emphasis on aggregable
  • “probabilistic management of inheritance and functional relationships”

• Scientific consensus of clinical phenotype
  • Procedures, interventions, functioning
Tragedy of the Commons
Public Health Resources

• Resources, Investments “for the public good”
  • Value public health disasters that *don’t* happen

• Historically underfinanced by all societies
  • Some more than others

• Tension of Intellectual Property
  • Global, Societal “return on investment”
  • Palpable return to investors, nations, citizens

• Semantic interoperability is capital intensive
  • How to engage citizens, communities, nations
  • How to sustain investment, demonstrate value