Semantic Infrastructure Domain User Story 4

Semantic Infrastructure Services

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Semantic Infrastructure Domain User Story 4:
Support patient to trial matching through the use of computable eligibility criteria

Domain Description

A metadata specialist works with the principle investigator of a trial to define the eligibility criteria for a study in enough detail so that eligibility can be computed from patient data. The metadata specialist defines each eligibility question as a common data element (CDE) with a description, an mathematical operator, and a data operand (what the data gets compared to). For example, the principle investigator tells the metadata specialist that all patients must be at least 21 years old. The metadata specialist defines a CDE annotated with the concept "age", the operator "greater-than or equal", and the operand "21". These steps are performed for each of the 32 eligibility criteria. The principle investigator now works with a clinical informaticist to perform a search using these computable eligibility criteria on patient data at the cancer center to see if anyone is eligible. Furthermore, prospective patients themselves can type their data into the trial matching system to compute eligibility for all known trials to determine if there are any trials for their cancer.

Technical Description

The metadata specialist defines CDEs with operator and operand annotations. These are stored in the local metadata repository, which is used by the trial matching software. When computing eligibility, data for semantically equivalent data element are computed against the eligbility metadata to determine eligibility. "Fuzzy" eligibility can be computed when data is missing or does not match.

Cross Reference

Related Services