**eMERGE Network Proposal for Analysis**

Project/Manuscript Concept Sheet

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| **Reference Number** | NT268 |
| **Submission Date** | 01/21/2018 |
| **Project Title** | **OMOP Information Model for eMERGE Phenotyping** |
| **Tentative Lead Investigator (first author)** | George Hripcsak |
| **Tentative Senior Author (last author)** | TBD |
| **All other authors**  | All sites participating in the effort. Chunhua Weng, Ning Shang. |
| **Sites Involved** | We propose a network-wide study (all sites invited to participate). The analyses will be led by Columbia University. |
| **Background / Significance** | Phenotyping is one of the bottlenecks of eMERGE research, with a large amount of effort spent translating phenotypes to each sites’ data model. By agreeing upon the OMOP common data model, we hope to reduce implementation time and increase collaboration and knowledge reuse when generating phenotypes. And we wish to assess if there is a tradeoff between implementation efficiency and phenotype accuracy. |
| **Outline of Project** | 1. Collect baseline information about how selected phase 1 and 2 phenotypes were implemented (time to complete, etc.)
2. Implement OMOP across the network
3. Run test queries and compare to pre-OMOP versions
4. Characterize the phenotyping process, challenges, and outcomes
5. Manuscript preparation and submission
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| **Desired****Variables (essential for analysis****indicated by \*)** | Variables required to carry out test phenotypes. |
| **Desired data** | * Time to implement phenotype (may require time motion study to detect time spent working versus other delays)
* Phenotype accuracy
* Challenges encountered when implementing phenotypes
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| **Planned Statistical Analyses** | Characterization of time required to implement phenotypes, phenotype accuracy, comparison of phenoptying before and after OMOP. |
| **Ethical considerations** | None |
| **Target Journal** | TBD |
| **Milestones\*\*** | Total Duration of the study: 1.5 years Completion of study design/approvals: Jan 2018Implementation of phenotyping algorithms: July 2018Data collection complete: September 2018Draft of manuscript to authors: November 2018 (with a possible earlier design paper)First submission: Jan 2019 |

**\*\*** This section should include: Timeline for completion of project, including approval, project duration, first and second draft of the paper and submission.

References: