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| **Objectives and Action Items** | **Fiscal Year 2012** | | | | | | | | | | |
| **Start Date: 8/2011** | **December** | **January** | **February** | **March** | **April** | **May** | **June** | **July** | **August** | **September** | **October** |
| **A. Update MRSA Ontology** |  | | | | | | | | | | |
| 1. Review retired concepts and determine which terms belong in the ontology (Susana Martins and Ted Hong) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Review Machine Learning terms and add to the ontology (Susana Martins and Ted Hong) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Clarify Rubin and Horan noun phrases and add to ontology (Samson Tu and Ted Hong) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Incorporate BSI and UTI terms into ontology (Samson Tu and Ted Hong) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Review ontology to check that all concepts have literature references and documentation of decisions (Samson Tu, Susana Martins, and Ted Hong) |  |  |  |  |  |  |  |  |  |  |  |
| **B. Procure and Prepare data** |  | | | | | | | | | | |
| 1. Determine specifications of clinical algorithms for inference goals. (Samson Tu and Ted Hong |  |  |  |  |  |  |  |  |  |  |  |
| 1. Determine structured data required for inferencing use case. (Samson Tu and Ted Hong) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Obtain patient cases labeled as no MRSA, MRSA colonization, MRSA BSI infection, MRSA UTI |  |  |  |  |  |  |  |  |  |  |  |
| 1. Run NLP on gold standard documents and procure output (Pradeep Mutalik, Samson Tu, and Ted Hong) |  |  |  |  |  |  | **Contingent on B.2** | | |  |  |
| 1. Establish training and test data sets. (Samson Tu, Susana Martins, and Ted Hong) |  |  |  |  |  |  | **Contingent on B.2** | | |  |  |
| **C. Develop and run inferencing rules** | **Part C of project contingent on B.2 and C.1** | | | | | | | | | | |
| 1. Define inference experiments and protocols for experiments and get approval of MRSA leadership |  |  |  |  |  |  |  |  |  |  |  |
| 1. Define rule language and inference method for each inference experiment (Samson Tu) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Encode Horan and Rubin criteria (Samson Tu and Ted Hong) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Run NLP on training set of labeled cases. (Pradeep Mutalik) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Run Inference method on training dataset (Samson Tu) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Fine tune inference method (Samson Tu and Susana Martins) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Run NLP on test set of labeled cases (Pradeep Mutalik) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Run inference methods on Test set of labeled cases. (Palo Alto Team) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Measure sensitivity and specificity of inference method (Samson Tu, Susana Martins, and Ted Hong) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Compare results with Machine Learning inference results (if Steve Luther’s team pursues ML inference methods) (Palo Alto and Tampa group) |  |  |  |  |  |  |  |  |  |  |  |
| **D. Disseminate** | **Part D of project** **contingent on Part C** | | | | | | | | | | |
| 1. Prepare for CHIR Cyberseminar presentation. (Samson Tu, Susana Martins, and Ted Hong) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Determine journal for submission. (Samson Tu, Susana Martins, and Ted Hong) |  |  |  |  |  |  |  |  |  |  |  |
| 1. Determine conference for poster submissions. (Samson Tu, Susana Martins, and Ted Hong) |  |  |  |  |  |  |  |  |  |  |  |