i2b2: Frequently Asked Questions

- **What is i2b2?**
  - i2b2 is a Self-service, self-directed web based "drag-and-drop" query/analysis research tool designed to assist the UAB research community at no cost. It allows the researcher to determine if there is a cohort of patients in our clinical data repository that meets a specific criteria of interest.
  - i2b2 is a Self-service tool to download or request research datasets for analysis, recruitment, or feasibility assessment
  - i2b2 is supported by the UAB School of Medicine's Informatics Institute and the UAB Center for Clinical and Translational Science. i2b2 is an acronym that stands for "Informatics for Integrating Biology and the Bedside."
  - Scalable, customized open-source informatics framework and architecture that receives data directly from the UAB data warehouse enterprise (Power Insight) and indirectly from the Cerner Electronic Health Record (EHR**).**

- **Background**
  - i2b2 is used for cohort identification and hypothesis generation at many large research and academic medical centers around the world.
  - i2b2 is an NIH-funded National Center for Biomedical Computing (NCBC) based at Partners HealthCare System in Boston, MA developed to leverage existing data for research cohort discovery.
  - UAB School Medicine instance of the i2b2 is a customization of the open-source tool.
  - All types of clinical, biomedical and translational research are supported by the i2b2 system.

- **What data elements are contained in i2b2 which can be utilized in the search criteria?**
  - Patient demographics: age, gender, race, state, city, zip code, religious affiliation, marital status,
  - Clinical visits details: admission source code, discharge disposition, inpatient/outpatient code, and length of stay.
  - Allergies (drugs, no-drugs)
  - Medications (RxNorm): name, routes, dosage frequency.
  - Lab test/values (LOINC Ontology): all units of measures.
  - Diagnoses (ICD-9, ICD-10 codes).
  - Procedures (ICD-9, ICD-10 PCS codes, CPT codes).
  - Vitals: Height, weight, waist measurement, BMI.
  - Other information is being added and UAB can prioritize the inclusion any data that is of value

- **What ae the benefits of using i2b2?**
  - Assist the researcher in developing research hypotheses.
  - Assist the researcher in identifying potential cohorts that maybe recruited for clinical trials.
  - Provides the research with the ability to formulate queries using a simple user interface and a set of well-defined patient characteristics.
  - Reduce the time spent in the discovery of research cohorts, study feasibility and recruitment of subjects.

- **What are the limitations of i2b2?**
  - Contains a limited de-identified data set.
  - Non-discrete data is currently unavailable:
    - Clinical notes (admission H&P, discharge summaries, progress notes).
    - Narrative reports (e.g. radiology, surgical pathology, operative reports).
    - Images (e.g. digital x-rays, EKGs, scanned documents).

- Family history and medical history
- Genomic data

- Incapable of running time-based queries (e.g., number of admissions in a month).
- Unable to perform tasks such as clinical trials, sample tracking, study administration or provided real-time alerts.
- PHI information is only available through a special request process that requires prior IRB approval to access.

- **Who is allowed to access the i2b2 system?**
  - All members of the UAB research community with current HIPAA, IRB Human Subjects Protection training and who have completed the acknowledgement of restrictions on the "Use of Limited Data Sets." In the UAB Facultly and Staff
  - Supervisor approval is required for non-faculty employees.

- **Where can I get i2b2 training?**
  - The **User Guide** can be accessed from the following link: http://www.uab.edu/ccts/researchcommons/research-data-requests.
  - Our website is very helpful for both new and advance users of the i2b2 system.
  - HELP icon located in the upper right-hand corner of the search page offers additional assistance navigating through the system.

- **Do I need IRB approval prior to using i2b2?**
  - **No**. This tool is designed to be used without IRB approval. i2b2 helps to determine if a relative amount of patients exist prior to beginning a study; however, it does not include any identifiable (PHI) information.

- **Getting Started:**
  - Before beginning use of the i2b2 system, permission has to be granted. Access the site at the URL: https://i2b2-uab.hs.uab.edu,
  - Complete the application process and submit for review. If you are not a Principal Investigator??? Your supervisor will have to authorize use of the system.
  - The CCTS staff will activate your access within 48 hours of receiving your request if all applicable requirements have been satisfied.

- **What is the process for obtaining a full data set for the cohort disclosed by the i2b2 system?**
  - Request the data by making a request to the Center for Clinical and Translational Science: http://www.uab.edu/ccts/component/rsform/form/6-detailed-clinical-data-request

- **What if I need more help or have more questions?**
  - Through the CCTS Research Commons we can connect you to a breadth of expertise in pre-and post-award administration as well as research implementation.
  - CCTS Research Commons**:**

    - Physical Address**:**
      - Pittman Center for Advanced Medical Studies (PCAMS Bldg.)
      - 1924 7th Avenue South, Birmingham, Alabama 35233
    - **E:** ccts@uab.edu
    - **P:** 205.934.7442 **F:** 205.934.3749