Introduction to DEDUCE for Duke BD2K Group

Stephanie Brinson
Information Architect
Enterprise Information Management
WHAT IS DEDUCE?

Duke Enterprise Data Unified Content Explorer

Web based data query tool for clinical research, administrative, and quality improvement projects

DSR

supported by the Decision Support Repository (DSR)
DECISION SUPPORT REPOSITORY (DSR)

- Retrospective
  - Know about events from two days ago and before
  - Inpatient’s data incomplete until discharge

- Enterprise-wide
  - All three hospitals included
  - All clinics included as they come on board Maestro Care

- Copy of the source
  - Garbage in, garbage out
  - Don’t know the right answer, so we can’t clean the data

- Some data from billing systems
  - No cost or revenue data
  - Diagnosis and procedures from billing perspective
DEDUCE Tools

- Cohort Manager
  - Flexible filtering for sophisticated cohorts
  - Build custom data exports
  - On-line chart review
  - DISCERN

- Export Manager
  - Pick up data extracts and re-use templates

- Text Reports
  - Text analytics search of radiology and pathology reports

- DEDUCE Geo
  - Plot patient residential addresses on a map
WHO USES DEDUCE?

- Clinicians
- Researchers
- Clinical Research Coordinators
- Data Analysts
- Quality Improvement (QI) team members

Anyone with chart review access in Maestro Care can apply for access to DEDUCE

You must have chart review access in Maestro Care access to use DEDUCE
SOME WAYS TO USE DEDUCE

- Preparing for research
  - How many patients meet my criteria?
  - What are the gender/race breakdowns?

- Recruiting patients for clinical trials
  - Who are they?
  - Where have they been seen?

- Extract data from DSR for analysis
  - Already have an approved IRB protocol in place
  - On-going QI work
METHODOLOGY

Divide your question into two parts

- Who am I looking for?
  - Filter within Cohort Manager and/or Text Reports, or use Online Chart Review to define your population
  - Upload your patient list

- What do I want to know about them?
  - Patient or Encounter based?
  - Filter within Export to define your output
DATA ORGANIZED INTO SUBJECT AREAS

- Demographics
- Encounters
- Diagnoses
- Procedures
- Medications
- Discrete Lab Results
- CPOE Orders
- Culture Results
- Radiation Oncology
- Vitals
DATA ORGANIZED INTO SUBJECT AREAS

- Social History
- Problem Lists
- Allergies
- Nursing Documentation
- Geography
DEMOGRAPHICS DATA ELEMENTS

- Dates of birth and death
- Vital status
- Gender
- Race and Hispanic/Latino ethnicity
- Current Marital status
- Religion
- Tumor and Chronic disease registries membership
- Medical record numbers (MRNs)
- Current Primary Care Physician (PCP)
- Full name
- Telephone number
GEOGRAPHY

- Street Address Line 1
- Street Address Line 2
- City
- State
- Postal Code
- US ZIPcode + 4
- First three digits of postal code
- Full address (raw, not standardized)
- FIPS codes for Census Block, Census Blockgroup, CBSA, County, MCD, MSA, PMSA, State, and Census Tract
Culture Test [Culture Bacteria Urine]
Organism Name [E Coli]
Organism Description [Escherichia coli]
Organism Category [Enteric]
Organism Subcategory [Escheric]
Result [Pos]
Specimen Source Name [Urine, Clean Catch]
Specimen Source Category [Urine]
Specimen Collection Date [2-18-2011]
Drug Sensitivity Flag [Y]
First Result Indicator [N]
MEDICATIONS

- DUH Inpatient Pharmacy Orders
  - Contains MedManager legacy data
  - Each record is a single order for a med

- Outpatient Medication Reconciliation (from eBrowser)
  - Overlaps Patient Medications from 7/1/2012 to 6/2/2013
  - Each record is a report that a patient is taking or has stopped a med or a clinician prescribed a med

- Patient Medications (from Maestro Care)
  - Contains legacy OMR data loaded into Maestro Care
  - Each record is a patient/med pair with start/stop dates
CONTACT INFORMATION

- DEDUCE.duhs.duke.edu
  - URL for DEDUCE home page

- DHTS-DWG-DEDUCE@duke.edu
  - Email for general questions

- stephanie.brinson@duke.edu

- 919 668 3266