Research
Accelerate research and discovery

Keep patients at the center

Improve outcomes
study execution

feasibility & recruitment

evidence generation & analytics
- enrollment tracking
- e-consenting
- research scheduling
- research ordering
- AE documentation & tracking
- auto-notifications
- research charge handling
- study monitor support via Link

---

**study execution**

---

**feasibility & recruitment**

- SlicerDicer
- point of care recruitment (BPAs)
- direct to patient recruitment (via MyChart)
- patient research preference profiles (via MyChart)

---

**evidence generation & analytics**

- data capture
- patient-reported outcomes
- Clarity and Caboodle
- predictive models + machine learning
- Cosmos
feasibility & recruitment

- SlicerDicer
- point of care recruitment (BPAs)
- direct to patient recruitment (via MyChart)
- patient research preference profiles (via MyChart)
Cohort Study

Pre-Epic

1 full-time nurse
6 months
~300 patients

With Epic

1 medical student
5 days
~300 patients
Number of Patients by Legal Sex and Age in Years Range

Last 6 months

- **Female**
  - 19 years or less: 190
  - 20 years to 39 years: 132
  - 40 years to 55 years: 288
  - 56 years or more: 194
- **Male**
  - 10 or fewer: 102
  - 20 years to 39 years: 82
  - 40 years to 55 years: 194
  - 56 years or more: 194
Descriptive statistics

Average, Min, Max, Std Deviation, Count/Distinct Count
Number of Patients
Last 2 years

Age in Years 18 years to 65 years

677
### Number of Patients by Sex and Patient Race

Last 2 years

<table>
<thead>
<tr>
<th></th>
<th>Number of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>April 23, 2019 – April 22, 2021</strong></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>417</td>
</tr>
<tr>
<td>White</td>
<td>303</td>
</tr>
<tr>
<td>Black</td>
<td>52</td>
</tr>
<tr>
<td>Other</td>
<td>34</td>
</tr>
<tr>
<td>Native American</td>
<td>30</td>
</tr>
<tr>
<td>Asian</td>
<td>–</td>
</tr>
<tr>
<td>Native Hawaiian</td>
<td>–</td>
</tr>
<tr>
<td>None of the above</td>
<td>–</td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td>260</td>
</tr>
<tr>
<td>White</td>
<td>205</td>
</tr>
<tr>
<td>Black</td>
<td>38</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
</tr>
<tr>
<td>Native American</td>
<td>–</td>
</tr>
<tr>
<td>Asian</td>
<td>–</td>
</tr>
<tr>
<td>Native Hawaiian</td>
<td>–</td>
</tr>
</tbody>
</table>

Advanced Logic
### Number of Patients by Sex and Patient Race

<table>
<thead>
<tr>
<th></th>
<th>Last 2 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Apr 23, 2019 – Apr 22, 2021</td>
</tr>
<tr>
<td>Female</td>
<td>417</td>
</tr>
<tr>
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</tr>
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<td>Other</td>
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</tr>
<tr>
<td>Native American</td>
<td>–</td>
</tr>
<tr>
<td>Asian</td>
<td>30</td>
</tr>
<tr>
<td>Native Hawaiian</td>
<td>–</td>
</tr>
<tr>
<td>None of the above</td>
<td>–</td>
</tr>
<tr>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
</tr>
<tr>
<td>Native American</td>
<td>–</td>
</tr>
<tr>
<td>Asian</td>
<td>–</td>
</tr>
<tr>
<td>Native Hawaiian</td>
<td>–</td>
</tr>
</tbody>
</table>

**Reason for access**

---

**SlicerDicer PHI Warning**

Please select a reason from the list below for viewing PHI. For research-related queries, select a specific approval number. For other reasons, a comment describing purpose is required.

- **Reason:**
  - Select a reason
  - Research
  - Quality Improvement
  - Other

---

**Population**

- **Base:** All Patients
- **Age:**
  - 18 years or more and 65 years or less
  - Smoking Status: Never Smoker
  - Rx Medications: Inhaled Steroid, Medications: Leukotriene Modulator
  - Patient on Registry: Asthma

---

**Slices**

- Top 2 Slices by Sex
- Top 6 Slices by Patient Race

---

**Measures**

- Number of Patients
- Inhaled Steroid
- Leukotriene Modulator

---

**Dates**

- Start Date: Apr 23, 2019
- End Date: Apr 22, 2021
- Slice By: None

---

**Visual Options**

- Section Color: Top 2 Slices by Sex
- Last Stored Data

---

Advanced Logic
Select from my approval numbers (RSH)
<table>
<thead>
<tr>
<th>Date Range</th>
<th>Number of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr 23, 2019 – Apr 22, 2021</td>
<td>677</td>
</tr>
</tbody>
</table>

**Female**

<table>
<thead>
<tr>
<th>Race</th>
<th>Number of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>303</td>
</tr>
<tr>
<td>Black</td>
<td>52</td>
</tr>
<tr>
<td>Other</td>
<td>34</td>
</tr>
<tr>
<td>Native American</td>
<td>30</td>
</tr>
</tbody>
</table>

**Native American**

<table>
<thead>
<tr>
<th>MRN</th>
<th>Patient Name</th>
<th>Age</th>
<th>Sex</th>
<th>Ethnic Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z90000006</td>
<td>Meyer, Fern</td>
<td>38 years</td>
<td>Female</td>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Z90000124</td>
<td>Decker, Jaclyn</td>
<td>24 years</td>
<td>Female</td>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Z90000132</td>
<td>Flowers, Myrtle</td>
<td>48 years</td>
<td>Female</td>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Z90000172</td>
<td>Delaney, Emma</td>
<td>43 years</td>
<td>Female</td>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Z90000176</td>
<td>Griffith, Lula</td>
<td>57 years</td>
<td>Female</td>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Z90000348</td>
<td>Berger, Keni</td>
<td>57 years</td>
<td>Female</td>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Z90000352</td>
<td>Pennington, Jillian</td>
<td>42 years</td>
<td>Female</td>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Z90000498</td>
<td>Alvarez, Katie</td>
<td>33 years</td>
<td>Female</td>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Z90000528</td>
<td>Whitney, Cherie</td>
<td>55 years</td>
<td>Female</td>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Z90000824</td>
<td>Kirby, Kim</td>
<td>63 years</td>
<td>Female</td>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Z90001414</td>
<td>Bowers, Lou</td>
<td>56 years</td>
<td>Female</td>
<td>Non-Hispanic</td>
</tr>
<tr>
<td>Z90001670</td>
<td>Baird, Selma</td>
<td>20 years</td>
<td>Female</td>
<td>Non-Hispanic</td>
</tr>
</tbody>
</table>
### Number of Patients by Sex and Patient Race
**Last 2 years**

<table>
<thead>
<tr>
<th>MRN</th>
<th>Patient Name</th>
<th>Age in Years</th>
<th>Legal Sex</th>
<th>Patient Ethnic Group</th>
<th>Number of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr 23, 2019 – Apr 22, 2021</td>
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<td></td>
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<tr>
<td>Native American</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34</td>
</tr>
</tbody>
</table>

**Dates**
- **Start Date:** Apr 23, 2019
- **End Date:** Apr 22, 2021
- **Slice By:** None

**Visual Options**
- **Section Color:** Top 2 Slices by Sex
- **Patient on Registry:** None
- **Asthma:** None
- **Inhaled Steroid:** None
- **Leukotriene Modulator:** None
- **Medications:** None
- **Medications:** None
- **Smoking Status:** Never Smoker
- **Non Smoker:** No
- **Less Than 18 years:** No
- **18 to 65 years:** Yes
- **65 or More years:** No

30 results loaded, more results available
View SQL
Research Studies

Participation Preferences

May we contact you about opportunities to participate in research studies?

You can choose how to be contacted in Notifications.

- OK to contact
- Do not contact
- Undecided

Create a profile to let us know the types of research you may be interested in.

- Create profile

Your Studies

You are not enrolled in any research studies or your research studies are not visible in MyChart.

- Back to the home page

Participatory

OK TO CONTACT?
### Number of Patients

**Last 6 months**

<table>
<thead>
<tr>
<th>Population</th>
<th>All Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base: All Patients</td>
<td>Base: All Patients</td>
</tr>
</tbody>
</table>

#### Add Criteria

- **Search for criteria**

<table>
<thead>
<tr>
<th>Lab Components</th>
<th>Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registry (Current)</td>
<td>Research Contact Preference (Current)</td>
</tr>
<tr>
<td>Therapy Plan Type</td>
<td>Treatment Plan Type</td>
</tr>
</tbody>
</table>

#### Measures

- Number of Patients

#### Visual Options

- **Bar Height:** Number of Patients
- **Bar Color:** None
- **Y-Axis Range:** Automatic

---

*Advanced Options*
Use Datalink to drive recruitment from database queries

*Related action options:
- Automatically send out MyChart recruitment requests to all patients in the subset (40020)
- Link patients to a research study with a specific status (40000)
Datalink Actions

- Create a Chronicles subset
- Add/remove patients to/from a patient list
- Add/remove patient health maintenance modifiers
- Add patients to a registry
- Link patients to a research study with a specific status (40000)
- Automatically send out MyChart recruitment requests to all patients in the subset (40020)
This Datalink action takes the result set from a database query run in our analytics environment of patients who may be eligible to participate in the Asthma Control and Treatment Efficacy Study. This Datalink action will set the patient-study association for this study to “Identified” so that the study team can pursue recruitment. If a patient is already associated to the study (any status) this action will not overwrite that.
Clarity Console setup
(whether or not data coming from Clarity)
Direct to patient recruitment notification sent from Reporting Workbench

Asthma Patients Identified for Recruitment [9353862] as of Tue 4/9/2019 5:48 PM

<table>
<thead>
<tr>
<th>Status</th>
<th>Patient Name</th>
<th>ID</th>
<th>DOB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identified</td>
<td>Brian Elwood (29 y o)</td>
<td>24487</td>
<td>07/29/1989</td>
</tr>
<tr>
<td>Identified</td>
<td>Jeff Jacobsen (18 y o)</td>
<td>24485</td>
<td>03/04/2001</td>
</tr>
<tr>
<td>Identified</td>
<td>Lisa Stone (51 y o)</td>
<td>24941</td>
<td>02/19/1969</td>
</tr>
<tr>
<td>Identified</td>
<td>Molly Matthews (25 y o)</td>
<td>24770</td>
<td>06/18/1993</td>
</tr>
<tr>
<td>Identified</td>
<td>Robert Pardo (83 y o)</td>
<td>25283</td>
<td>03/01/1936</td>
</tr>
<tr>
<td>Identified</td>
<td>Stacey Quincy (67 y o)</td>
<td>24485</td>
<td>03/04/1952</td>
</tr>
</tbody>
</table>

Send Recruitment Requests

Research Study
Asthma Control and Treatment Efficacy

Patient Facing Study Name
Asthma Control and Treatment Efficacy

Patient Facing Study Description

The Epic Medical Center is currently looking for people with chronic asthma who might be interested in participating in a study of asthma control strategies. The study is being conducted by Dr. Terry Clemmer, an internationally recognized expert in asthma control. The study involves completion of a monthly questionnaire, as well as 4 visits to our office over the course of a year to assess your lung function. Study participants will be compensated for their time.

If you are interested in learning more about the study, please click “I’m Interested”. This will send a message to the study coordinator who will contact you with more information, at which time you can decide whether you would like to participate.

Accept  Cancel
Research Studies

Participation Preferences
Available Studies

Based on your medical record, you have been identified as potentially eligible for these studies. Click "I’m Interested" to notify the research team that you may want to participate in the study.

Asthma Control and Treatment Efficacy

Research Recruitment Status

- Research Study: Asthma Control and Treatment Efficacy
- Pre-Consent Status:
  - Identified: 5
  - Identified - Waiting for Patient Response: 1
  - Interested: 2
  - Waiting for consent: 1

Information, at which time you can decide whether you would like to participate

Links
- Brief Description for Patients
- Epic Medical Center Research Institute
OPERATIONAL WORKFLOW

DASHBOARDs and RW Reports
Cogito

ENTERPRISE DATA & ANALYTICS

Chronicles
Real-time processing

Cognitive Computing
Cloud-based machine learning

Caboodle
Enterprise data management

Dictionary
Ontologies, definitions, and lineage

Metrics
700 industry definitions and builder

Catalog
One-stop shopping for analytics

Algorithms
Library of machine learning models

Registries
Cohort and pop stratification builder

Identity
MDM for providers and patients

Radar
SQL + real-time dashboards

SlicerDicer
Fast, flexible self-service

Workbench
Real-time actionable worklists

BestPractice
Real-time prescriptive analytics

Metric Alert
Email and text notifications

Canto
iOS dashboards
Data warehouse

Clarity
Operational data store (staging data)

Chronicles
Real-time operational database

Interactive operational workflows
Epic data normalized in RDBMS
Star schema-modeled data
## Caboodle Healthcare Data Model

### Clinical
- Providers
- Departments
- Outpatient visits
- Hospital admissions
- Medication orders/components
- Procedure orders
- Procedures performed
- Clinical episodes
- Allergies
- Immunizations
- Lab results
- Problems/diagnoses
- Flowsheets
- Hospital mortality
- Clinical notes
- BestPractice Advisories
- Sepsis Outcomes
- Genetic variance
- Wounds

### Departmental
- Surgeries
- Surgical supplies
- Emergency visits
- Imaging studies/text
- Patient throughput
- Laboratory results
- Births and pregnancies
- ICU stays
- Medication management
- Specialty pharmacy
- Anesthesia records
- Nursing workload acuity
- Required documentation
- MAR alerts
- Blood administrations
- Cancer staging

### Population Management
- Patient-provider attribution
- Care teams
- Referrals
- Readmissions
- Pharmacy claims
- Medical claims
- DRGs
- Population health registries
- Patient satisfaction surveys
- Patient questionnaires
- HEDIS quality measures
- HCC risk scoring
- Case Management

### Revenue Cycle
- Transactions
- Accounts
- Coding
- Cost
- Patient insurance eligibility
- Charge variation analysis
- Social care financials

### Research
- Research studies
- Patient research study associations
- Extend the data model / join with non-Epic data
- Interrogate with SlicerDicer
- Interrogate with ODBC-compliant statistical tools (e.g., SAS, R)
- Extract to other data platforms
- Create data sets for researchers
Clarity
Operational data store (staging data)

OMOP CDM
Observational Medical Outcomes Partnership

Local data set provisioning by research data support group
Data warehouse
Clarity
Operational data store (staging data)

OMOP CDM
Observational Medical Outcomes Partnership

RDW
Legacy EHR only

Local data set provisioning by research data support group

i2b2
pcornet®
Common Data Model

All of Us
The Precision Medicine Initiative
Epic
Extracts are already in place from RDW?

Lots of “plumbing” already in place related to existing RDW?
Current state at organization:
Research Data Warehouse

Non-existent: Simple replication of EHR data; limited usage; limited researcher access

Basic: Multiple data sources, supporting a variety of extracts to other models, mature processes for access and usage

Robust: Multiple data sources, supporting a variety of extracts to other models, mature processes for access and usage
Current state at organization: Research Data Warehouse
Your RDW Current State?

Legacy EHR only

Basic:
Simple replication of EHR data; limited usage; limited researcher access
Your RDW Current State?

- Clarity
  - Operational data store (staging data)

RDW
- Legacy EHR only

Local data set provisioning by research data support group

- Research registry A
- Research registry B

OMOP CDM
- Observational
- Medical
- Outcomes
- Partnership

Basic:
- Simple replication of EHR data; limited usage; limited researcher access

- Epic
- Caboodle
- Data warehouse
Your RDW Current State?

Extracts are already in place from RDW?

OMOP CDM
Observational Medical Outcomes Partnership

Research registry A
Research registry B

Lots of “plumbing” already in place related to existing RDW?

Clarity
Operational data store (staging data)

RDW

Data warehouse

Caboodle
Current state at organization: Research Data Warehouse

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2815452/
Data warehouse

Clarity
Operational data store (staging data)

Chronicles
Real-time operational database

- Reporting Workbench file extract framework
- WebServices (e.g., FHIR)

- Data marts, views, stored procedures, scheduled runs
- SQL queries for extracts
- KIT for Caboodle

Caboodle
Data warehouse
Fostering the Use of Epic for Clinical Research

Epic XGM 2018

Diana Gumas, Senior Director of Clinical Research Informatics
Bonnie Woods, Senior Manager, Center for Clinical Data Analysis
Clinical Research Informatics Service Offerings

Informatics Core Services

- Clinical Research Management
- Center for Clinical Data Analysis (CCDA)
- Research Databases
- Program to Accelerate Clinical Research Using Epic (PACE)
- Biospecimen Tracking

Epic Faculty Scholars Program
CCDA Service Catalog

Intake
- Requirements
- Data security and management consultation
- Honest Broker

Data De-identification
- Anonymized counts
- Image and data obfuscation for HIPAA compliance

Data Extraction for Recruitment
- MyChart
- SlicerDicer
- Geocoding
- Multi-site clinical trials (PCORI, ACT, TriNetX)

Data Extraction for Retrospective Analysis
- SlicerDicer
- Epic and legacy EMR integration
- Tableau for data visualization

Natural Language Processing
- Information extraction – project-specific or enterprise
- Sentiment analysis

Secure Analytic Environments (SAFE Virtual Desktop)
- Statistical software
- Secure NAS for storage and sharing of PHI
CCDA Intake Workflow

Researcher submits request

Schedule intake call to determine requirements

Specification document, IRB protocol review, cost estimate

Database extraction, code review, internal quality testing

Review data with research team

Final data delivery and approval

Invoice for services, send survey

* Workflow also applies to NLP, data de-identification, and feasibility counts
## Yale Evolution:
Vision/ Strategy, Leadership/Governance, Structure, Prioritization,

<table>
<thead>
<tr>
<th>During Go-Live</th>
<th>Post Go-Live</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yale set #1 research goal:</strong></td>
<td><strong>Vision/ Strategy</strong></td>
</tr>
<tr>
<td>Link Epic and OnCore CTMS to support billing</td>
<td>Yale collectively will use Epic to enable innovative research.</td>
</tr>
<tr>
<td><strong>Major Mistake:</strong></td>
<td><strong>Leadership/Governance</strong></td>
</tr>
<tr>
<td>Without an investigator-centric formal leadership structure or vision, the IRB and compliance made the decisions about how to use the EHR</td>
<td>Faculty, research leaders, and IT Executive leadership will make decisions and drive policy; not compliance and the IRB.</td>
</tr>
</tbody>
</table>

**Structure**
- IT Oversight committee was formed (leader: Brian Smith, MD)
  - YNHHS and YSM leadership appointed a very senior committee to make decisions on behalf of the organization, including Chief Medical Officer, Chairs, CIO, CMIO, etc.
- Dedicated research resources were added to support the vision
  - Decision was made to restructure all reporting resources under the CMIO
  - Dedicated staff were added to support research

**Prioritization**
- We cannot do everything at once, priorities had to be set.
Operational Governance (at initial go live)

- System Operations Committee (SOC)

  - Formulary Integration Committee
  - Clinical Leadership Council

- Medicine
- Ambulatory
- Inpatient Optimization
- Surgery
- OBGYN
- Smilow Oncology
- Pediatrics
- ED (ASAP)
- Nursing
- Anesthesia & OpTime
- MD Communication
- Primary Care

- CLC Review and Approve Protocols/Standing orders that do NOT contain medications
- FIC Review and Approve Protocols/Standing orders that DO contain medications
- Order Set Subcommittee prioritize, prepare and maintain order sets related to Protocols/Standing orders and those for Menu Driven Convenience
Operational Governance 2.0

System Operations Committee (SOC)

Clinical Research Prioritization Committee

Research Steering Committee

Formulary Integration Committee

Clinical Leadership Council

Order Set Subcommittee

Medicine

Ambulatory

Radiology

Inpatient Optimization

Surgery

OBGYN

Smilow Oncology

Pediatrics

ED (ASAP)

Nursing

Anesthesia & OpTime

MD Communication

Primary Care

CLC Review and Approve
Protocols/Standing orders that
do NOT contain medications

FIC Review and Approve
Protocols/Standing orders that
DO contain medications

Order Set Subcommittee

prioritize, prepare and maintain
order sets related to

Protocols/Standing orders and
those for Menu Driven
Convenience
Clinical Research Prioritization Committee

- Meets monthly, more often if needed
- Led by YCCI manager and Physician Informatician
  - Broad representation of investigators chosen by Steering
- Started initially prioritizing only reporting requests
- Now also reviews build, BPA, and other research-related requests
- Committee uses modified prioritization tool originated by Multicare
  - Research impact, reusability, EHR performance impact, grant support, technical resources needed to implement
- Reports to Clinical Research Steering Committee
YCCI/JDAT Request Lifecycle

- Single online form for all data/research requests
- Daily triage 8:30a
- Quick wins
- Cancer Hospital
- ED
- Clinical Redesign
- Research
- Financial
- Ambulatory
- Managers "run the list" and assign to analyst
- Customer gets email of status & online portal
- Analyst reviews request, IRB approval, begins project
  - Weekly tracking of analyst "billing" & workload
- Reviews with customer
- Helix brand (for reports)
- Managers close projects
- Web based survey automatically emailed when projects marked complete
- Searchable wiki of all reports for customers
- Wiki of common queries for analysts for future use
Creating an Effective & Efficient Research Data Request Process

Bryan “Buck” Rogers: Epic Research Manager, Analytics & Billing
Melissa L. Habrat: Director, EHR Research Operations & Integrations
A member of the BMIC Data team meets with the Data Requester and helps to determine exactly what is wanted/needed. During this consultation, a Data Request intake form is completed and submitted electronically.
The Process

Intake

Please complete the section below to provide us with some information regarding your study and the purpose of your data request.

Please select the purpose of your data request.
☐ Feasibility (Please note: a feasibility request is a request for de-identified, aggregate counts only).
☐ Preparatory to Research requiring identifiers
☐ Chart review
☐ Recruitment
☐ Other

Please describe the purpose of your data request. pre-screening

Have you submitted an IRB application for this study?
☐ Yes
☐ No

What is your IRB protocol number? 00056172

Has your study received approval from the IRB?
☐ Yes
☐ No

Which category of IRB review did your protocol undergo?
☐ Exempt
☐ Expedited
☐ Full Board
☐ Not Human Subjects Research designation

In addition to your originally approved protocol, have you submitted any amendments that are applicable to this data request?
☐ Yes
☐ No

Is this a one time request? (If “yes”, you are indicating that you do not anticipate this specific report being provided on a regular basis)
☐ Yes
☐ No

How frequently would you like to receive data?
☐ Hourly
☐ Daily
☐ Weekly
☐ Monthly
☐ Other

Please indicate the frequency at which you would like to receive the data. Ability to run on demand

Please complete the section below to provide us with the specific details of your data request.

Please provide a date range for the requested data. 09/16/2016-12/31/2018

Please provide the patient age range criteria. 18+

Please list inclusion criteria for the data query (include any available ICD9/ICD10/CPT codes and specify visit type [inpatient/outpatient/ED] if applicable).

C18
C19
C20
C21

(This is the criteria that will be used to identify patients for the data pull.)

If applicable, please provide any exclusion criteria.

Not enrolled in a therapeutic treatment trial
Not English speaking

Please list the variables/information you would like returned on the patients (eg. name, MRN, DOB, lab values, date of admission/discharge/surgery).

MRN, ICD10, Treating Cancer MD if able, Next scheduled visit date (All requested data points need to have been included in your approved IRB application.)

Feel free to add any additional notes or comments here.

As this is my first request, I welcome any feedback to make this Epic Recruitment Report more useful.
The Process

Data Review Committee

Reviews the uploaded request document and compares it to the IRB approved study protocol.

1 of the 5 members must agree the Chart Review request is appropriate to be approved.
2 of the 5 members must agree the Recruitment request is appropriate to be approved.

Average time for review and decision: 2 business days.
The Process

Team Lead Review

Once a week the team leads for the RDW and the Epic Teams meet and review the DRC approved research data requests.

They determine which team and which data source is most appropriate to pull the data from.

Considerations:
- Date Range
- Complexity of required logic
- Type of request
- Expected number of results
- Data Sources
The Process

Data Source Determination

Determination of Best Data Source

Research Data Warehouse (RDW)
Epic Clarity
Epic Reporting Workbench
Caboodle

Operations Fulfilled by MUSC Health Analytics
Research Fulfilled by MUSC Biomedical Information Center (BMIC)
Consultation
Data Request Intake Form
Honest Broker Release of Data
Audit

Epic Clarity
Caboodle
Epic Reporting Workbench

MUSC.edu
Changing What’s Possible
The Process

Build, Testing & Validation

Data Analyst Build

Honest Broker Release of Data

Operations Fulfilled by MUSC Health Analytics
Research Fulfilled by MUSC Biomedical Informatics Center (BMIC)

Determination of Best Data Source

Research Data Warehouse (RDW)
EpicClarity
Epic Reporting Workbench

Customer Connection}

Audits
Questions?