



# VINCI Data Services

An Overview

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# Overview

1. VINCI
2. Data in VINCI
3. VINCI Services
  - a. Data Needs Assessment (DNA)
  - b. Feasibilities
  - c. Patients Lists
  - d. Data/Cohort Provisioning
  - d. Cohort Consultation
  - e. Education





# What is VINCI?





# What is VINCI?

## VA Informatics and Computing Infrastructure (VINCI)

- Chart Abstraction
- Data Services
- DaVINCI
- Development
- Industry
- MVP
- Natural Language Processing
- OMOP
- Precision Medicine
- Research





# Data within VINCI





# DATA in VINCI

- 25+ Million Patients
- Over 1,400 medical centers (inpatient), outpatient clinics, nursing homes, and non-VA medical centers
- Veterans Health Information Systems and Technology Architecture (VistA) the VA electronic medical record
- DaVINCI (Dept. of Defense)
- COVID-19 Shared Data Resource
- VA Millennium (Cerner)





# DATA in VINCI

- Million Veteran Program (MVP approved studies)
- United States Veterans Eligibility Trends and Statistics (USVETS)
- VA Surgical Quality Improvement Program (VASQIP)
- Health Economics Data
- Geocoded Data
- Much more...





# What is VINCI Services







# VINCI Services

One stop shop for all your VA Data needs

- Data Needs Assessment (DNA)
- Feasibility
- Support for prospective study recruitment (Patient Lists)
- Data provisioning
- Cohort Consultation
- Education





# Data Needs Assessment (DNA)

What is a  
Data Needs  
Assessment?





# DNA

VINCI Services supports VA research by assisting customers with their Data Needs questions (DNA) relating to:

- CDW
- Millennium (Cerner)
- OMOP
- COVID-19 Shared Data Resource (CSDR)
- Many other VA data sources.



# DNA

Typical DNA questions include:

- Data availability
- Data location
- Data definitions
- Assistance with completing the DART application
- Assistance with completing DART forms including CDW-domain checklist
- Assistance with IRB protocol preparation





# DNA

[VINCI@va.gov](mailto:VINCI@va.gov)

DNA in the subject line





# Feasibility

What is a  
Feasibility?





# Feasibility

## Purpose:

- Provide aggregate counts for researchers during **the preparatory-to-research phase**.
- Useful for determining inclusion and exclusion criteria.
  - Impact of each criteria on cohort size and structure
- Power analysis – Do I even have enough patients?





# Feasibility

## Preparatory-to-research phase

- No regulatory documents are required.
- Feasibility results cannot be used for any publications.







# Feasibility

## Typical Inclusion/Exclusion criteria

- Location (nationwide vs some specific location/station)
- Visits and/or Inpatient Stays
- Time frame
- Age/Gender/BMI
- ICD Diagnosis Codes
- Procedures (CPT codes and/or ICD-PC)
- Lab test (topography, units, range)
- Medications
- Distance to Station





# Feasibility

## Break downs

- Locations
- Time periods
- Gender
- Age groups
- BMI groups
- Race
- Etc.





# Feasibility

## Attrition Table

| A  | B   | C                                | D                               | E                 | F                       | G                                  |
|----|---|----------------------------------|---------------------------------|-------------------|-------------------------|------------------------------------|
| 1  | <b>FEAS_</b>  |                                  |                                 |                   |                         |                                    |
| 2  | This is a funnel analysis. Numbers presented in column D are based on the number in the row above.  |                                  |                                 |                   |                         |                                    |
| 3  | For example, Row 8 will be less than or equal to the number in Row 7  |                                  |                                 |                   |                         |                                    |
| 4  |   |                                  |                                 |                   |                         |                                    |
| 5  | <b>Criteria Definition</b>  | <b>Care Setting</b>              | <b>Location</b>                 | <b>Time range</b> | <b>Query Definition</b> | <b>Number of distinct patients</b> |
| 6  | <b>Inclusion criteria</b>   |                                  |                                 |                   |                         |                                    |
| 7  | Number of Veterans seen outpatient, inpatient, fee basis at Salt Lake City VA (station 660) from 1/1/2018-present   | outpatient, inpatient, fee basis | Salt Lake City VA (station 660) | 1/1/2018-present  |                         |                                    |
| 8  | Number of patients from G7 seen outpatient, inpatient, fee basis with diabetes type 2 (ICD10 code) at Salt Lake City VA (station 660) from 1/1/2018-present |                                  |                                 |                   |                         |                                    |
| 9  | Number of patients from G8 had prescribed insulin/type 2 diabetes medication (list of medication) at 1/1/2018-present                                       |                                  |                                 |                   |                         |                                    |
| 10 | <b>Exclusion criteria</b>   |                                  |                                 |                   |                         |                                    |
| 11 | Number of patients with serious health conditions (ICD10 codes) at 1/1/2018-present   | outpatient, inpatient, fee basis | nationwide                      | 1/1/2018-present  |                         |                                    |





# Feasibility

## Attrition Table with Cohort Size Changes

FEAS\_  
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 For example, Row 8 will be less than or equal to the number in Row 7

| Criteria Definition   | Care Setting                     | Location                        | Time range       | Query Definition  | Number of distinct patients |
|---|----------------------------------|---------------------------------|------------------|---|-----------------------------|
| <b>Inclusion criteria</b>   |                                  |                                 |                  |   |                             |
| Number of Veterans seen outpatient, inpatient, fee basis at Salt Lake City VA (station 660) from 1/1/2018-present   | outpatient, inpatient, fee basis | Salt Lake City VA (station 660) | 1/1/2018-present | Distinct patients seen outpatient, inpatient, fee basis at Salt Lake City VA (station 660) from 1/1/2018-present                                      | 533,748                     |
| Number of patients from G7 seen outpatient, inpatient, fee basis with diabetes type 2 (ICD10 code) at Salt Lake City VA (station 660) from 1/1/2018-present |                                  |                                 |                  | Distinct patients from G7 seen outpatient, inpatient, fee basis for diabetes type 2 at SLC from 1/1/2018 to present                                   | 14,320                      |
| Number of patients from G8 had prescribed insulin/type 2 diabetes medication (list of medication) at 1/1/2018-present                                       |                                  |                                 |                  | Distinct patients from G8 with outpatient, inpatient, fee basis insulin and/or type 2 diabetes medications from any location from 1/1/2018 to present | 10,717                      |
| <b>Exclusion criteria</b>   |                                  |                                 |                  |   |                             |
| Number of patients with serious health conditions (ICD10 codes) at 1/1/2018-present   | outpatient, inpatient, fee basis | nationwide                      | 1/1/2018-present | Distinct patients from G9 without serious health conditions diagnosed inpatient or outpatient at any location from 1/1/2018 to present                | 5,827                       |



# Feasibility Flowchart

Request to VINCI@va.gov

Researcher

VINCI Services

Attrition table  
(time, location, criteria,  
codes, medications, labs  
range/units)

Researcher

VINCI Services

Create, run, review code  
Fill out attrition table  
Review code, result

VINCI Services

Deliver Result  
Review result/Questions

Researcher



# Patient Lists

## What is a Patient List?





# Patient Lists

- A list of potential research study participants
- Supplements **traditional patient recruiting** methods by leveraging patient data stored in the VA EMR





# Patient Lists

IRB approved prospective projects:

- Clinical trials (intervention: drugs, devices, tests, contact, etc.)
- Cohort studies
  - observational study
  - survey study

**DART application for the research project is required**







# Patients List

## Typical Inclusion/Exclusion criteria

- Location (nationwide vs some specific location/station)
- Visits and/or Inpatient Stays
- Time frame
- Age/Gender/BMI
- ICD Diagnosis Codes
- Procedures (CPT codes and/or ICD-PC)
- Lab test (topography, units, range)
- Medications
- Distance to Station





# Patients List

## **List of Deliverable Variables:**

Patient name

DOB

SSN/Last 4

Address

Phone

Date/location of upcoming/most recent appointment

Presence of diagnosis, prescriptions (Y/N)

Lab results (i.e. most recent)

## **Limitations (will not be delivered)**

Problem list

Current medications list





# Patients List

## Attrition table

A B C D E F G

1 FEAS\_  
 2 This is a funnel analysis. Numbers presented in column D are based on the number in the row above.  
 3 For example, Row 8 will be less than or equal to the number in Row7  
 4

| Criteria Definition   | Care Setting                     | Location                        | Time range       | Query Definition | Number of distinct patients |
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| <b>Exclusion criteria</b>   |                                  |                                 |                  |                  |                             |
| Number of patients with serious health conditions (ICD10 codes) at 1/1/2018-present   | outpatient, inpatient, fee basis | nationwide                      | 1/1/2018-present |                  |                             |

| A         | B          | C   | D      | E      | F       | G    | H     | I   | J                      | K                     | L     | M    | N           | O    | P     | Q    |
|-----------|------------|-----|--------|--------|---------|------|-------|-----|------------------------|-----------------------|-------|------|-------------|------|-------|------|
| Last name | First name | DOB | gender | last 4 | Address | City | State | ZIP | Distance to local VAMC | Diabetes type 2 (Y/N) | LDL-C |      | Cholesterol |      | eGFR  |      |
|           |            |     |        |        |         |      |       |     |                        |                       | value | date | value       | date | value | date |
|           |            |     |        |        |         |      |       |     |                        |                       |       |      |             |      |       |      |
|           |            |     |        |        |         |      |       |     |                        |                       |       |      |             |      |       |      |
|           |            |     |        |        |         |      |       |     |                        |                       |       |      |             |      |       |      |
|           |            |     |        |        |         |      |       |     |                        |                       |       |      |             |      |       |      |
|           |            |     |        |        |         |      |       |     |                        |                       |       |      |             |      |       |      |
|           |            |     |        |        |         |      |       |     |                        |                       |       |      |             |      |       |      |
|           |            |     |        |        |         |      |       |     |                        |                       |       |      |             |      |       |      |
|           |            |     |        |        |         |      |       |     |                        |                       |       |      |             |      |       |      |
|           |            |     |        |        |         |      |       |     |                        |                       |       |      |             |      |       |      |





# Patients List - Results

- Excel file saved in project research folder in VINCI (DART approval)
- Instructions to access folder in VINCI
- Instructions to download file to local secure server (need DART approval)



## Occurrence:

- One time
- On regular base (monthly, quarterly, etc.)
- By Demand





# Patient List - Results

## Multicenter projects

*Central study coordinator*

Request/DART (1 DART per project)



*VINCI Services*

Create patient list - research folder in VINCI



*Central study coordinator*

Local secure server for central site - SharePoint



*Local sites study coordinators*

site<sub>1</sub>

site<sub>2</sub>

site<sub>n</sub>



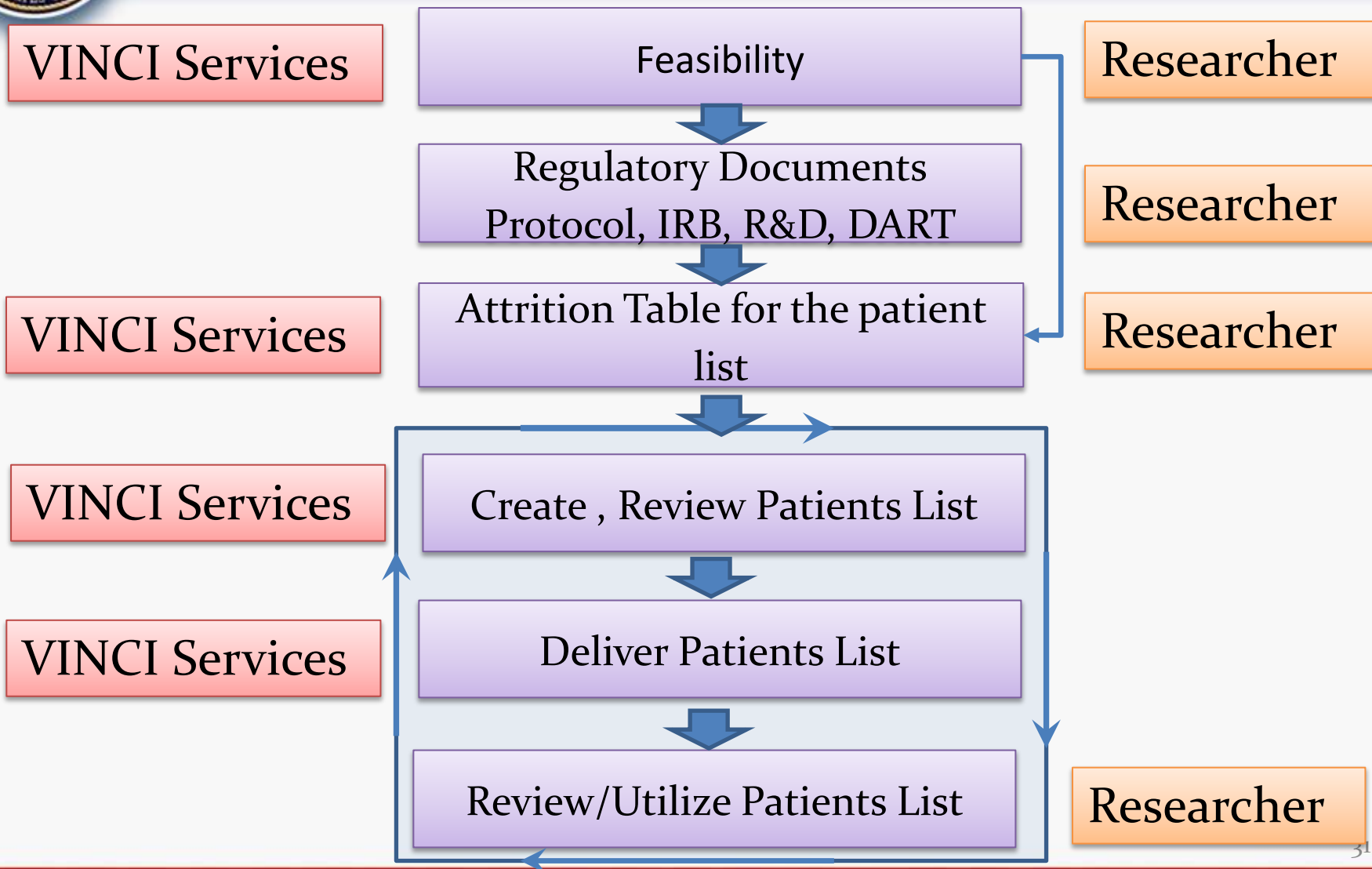


# Patient List



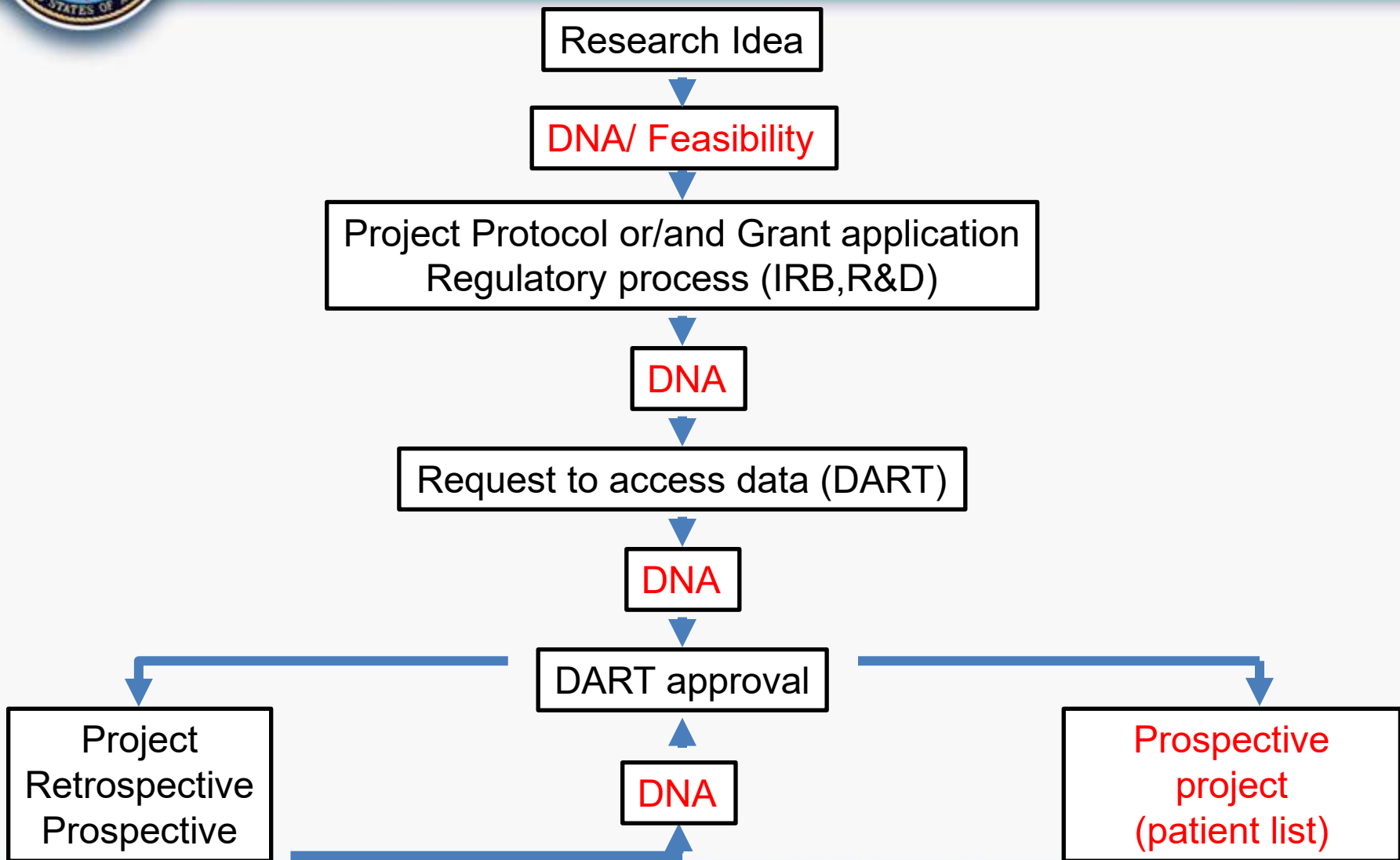


# Patient List Flowchart





# Research Project Life Cycle







# Data Provisioning

What is  
Data/Cohort  
Provisioning?





# Data Provisioning

## Data/Cohort Provisioning:

- A cohort is provided to you
  - Inclusion criteria
  - Exclusion criteria
- The **researcher** uses SQL to query the data
- Data domain access
  - Patient level data
  - Cohort based
  - Data access to any domain of interest
- Must have DART approval for provisioned data





# Data Provisioning

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# Data Provisioning

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# Data Provisioning



## Data Provisioning:

- Like a feasibility and patient list: attrition table provided
- No patient list provided
- Purely providing access to data based on a cohort





# Cohort Consultation

What is a  
Cohort Consultation?





# Cohort Consultation

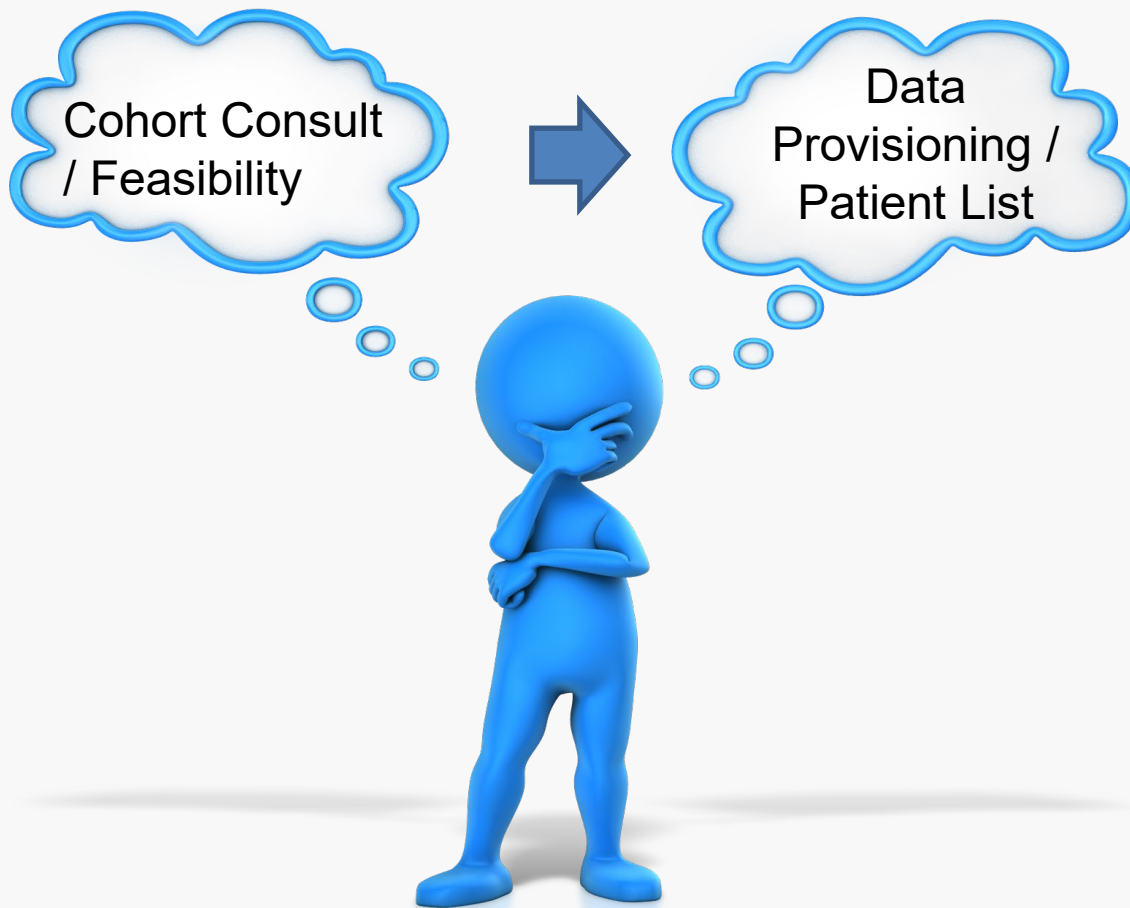
## Cohort Consultations:

- Like a DNA, but:
  - Meeting (Microsoft Teams) to discuss cohort needs
    - Inclusion criteria
    - Exclusion criteria
    - What data is accessible to the researcher
    - VISTA vs Millenium... maybe both?
    - DART help
- Prior to Data Provisioning or Patient List development
- Usually results in Feasibility





# Provisioning and Consultations







# Education

VINCI provides  
Education?





# Education

**YES WE DO!**





# Education

## VINCI Educational Opportunities:

- VINCI Office Hour
  - 3PM Eastern, every Wednesday (except 3<sup>rd</sup> Wed. of month)
  - Answer questions about VA data (how/where to find)
  - Answer SQL questions about how to query VA data
  - SQL code review
  - Tips and tricks
- VINCI Training Hour
  - 3PM Eastern, every 3<sup>rd</sup> Wednesday of the month
  - Presentations on various VA data and data domains
- SQL Boot Camp – by reservation
- [https://vincicentral.vinci.med.va.gov/SitePages/VINCI\\_University-VINCI\\_Training\\_&\\_Office\\_Hour.aspx](https://vincicentral.vinci.med.va.gov/SitePages/VINCI_University-VINCI_Training_&_Office_Hour.aspx)





# Contact VINCI

email: [VINCI@va.gov](mailto:VINCI@va.gov)

(i.e. Subject Line: DNA Question)

Web page: [VINCI Central - Home \(va.gov\)](#)

Education/Training: [VINCI University \(va.gov\)](#)





**QUESTIONS?**



**THANK YOU!**

