

Improving Health Through Data:

Understanding Your Patient Needs to Maximize Impact

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Session Objectives

1. Learn how to leverage available data (NMDOH) to better understand your patient population.
2. Use data to identify key issues and identify actionable opportunities to improve your patient's health.

Center for Health Care Data (CHCD)

Our Mission

- To make health data accessible, accurate, and actionable for Texas and beyond in partnership with clinicians, researchers, policymakers, and the public

Our Vision

- We envision an informed, healthy world fueled by insight and collaboration.

<https://sph.uth.edu/research/centers/center-for-health-care-data/>

Center for Health Care Data

We provide healthcare data that is accessible, accurate, and actionable for researchers, providers, policymakers, and others. We offer access to unique data sets and analytical support through our team of qualified researchers. Together, we energize improvements in health care with the power of data to achieve an informed, healthy world through insight and collaboration.

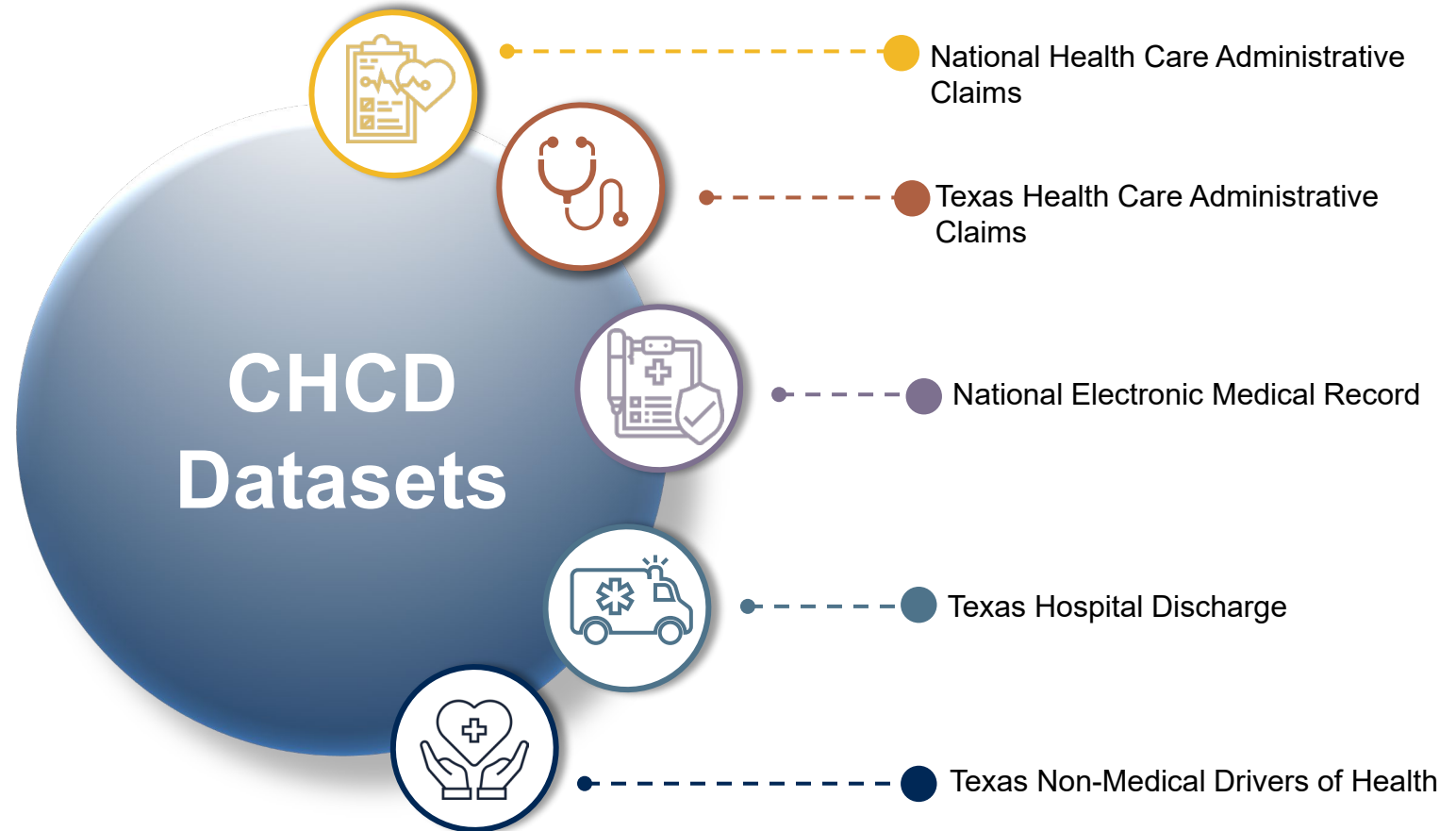
Be Data-Informed

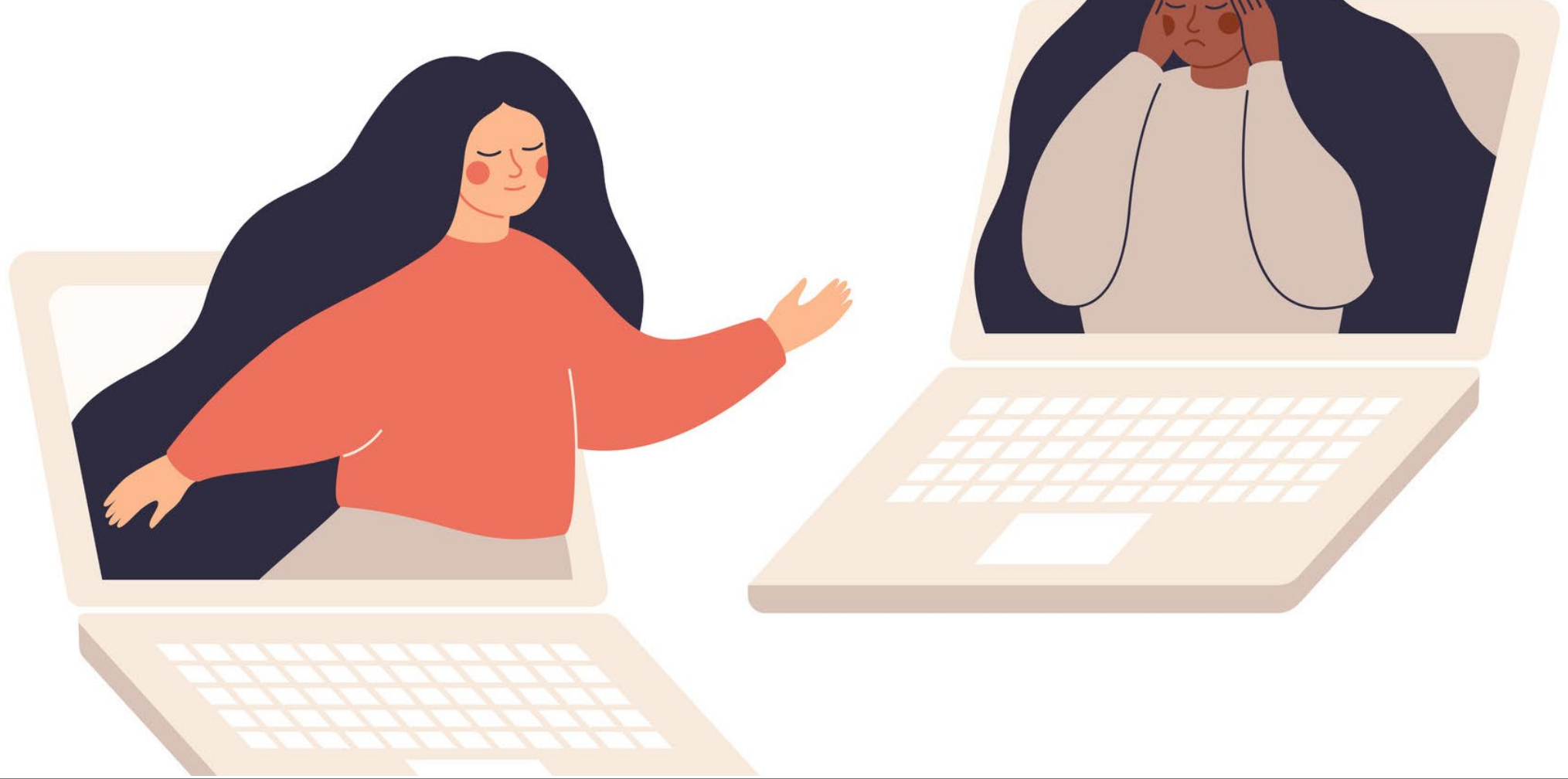
Collaborate with Us



Resources

- **Data at your Fingertips:**
Largest, research-accessible healthcare data repository in Texas
- **Meet with the Team:** we can help guide you to select the appropriate dataset for your research question, conduct data analysis & develop data visualizations (e.g., maps, slides, and dashboards)
- **Supporting Research, Education, and Public Service** to improve the health of our communities





But first, Tell Us About you Poll

Zoom Poll

To what extent do you currently use NMDOH data to better understand your patient population?

- 1. Quite often: my organization/team performs complex data analyses to better understand our patient population and needs**
- 2. Sometimes: my organization/team uses data for a high-level overview to describe our patient population**
- 3. Do not use data currently, but am interested in learning strategies to incorporate it**

Zoom Poll

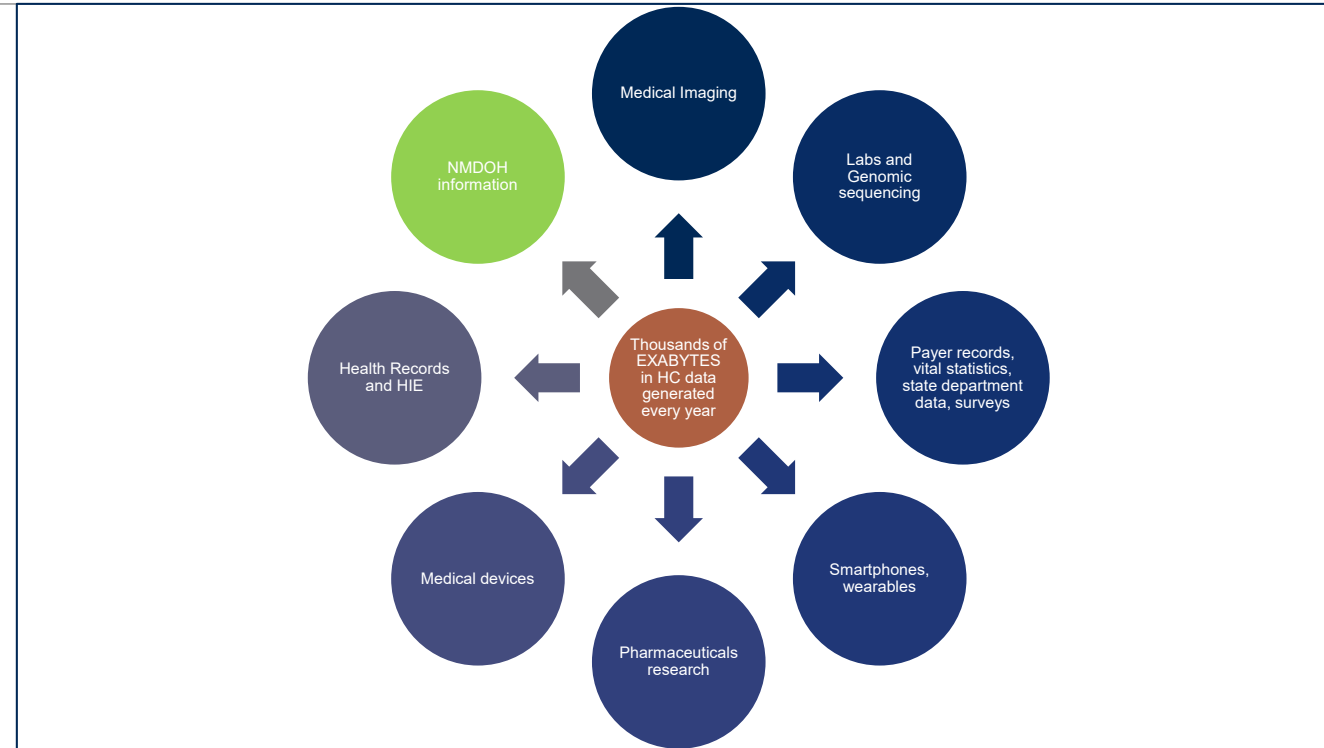
How do you currently use NMDOH data to better understand your patient population?

- 1. To describe patient demographics**
- 2. Learn what geographic areas our patients are from**
- 3. Identify gaps (e.g. service, care, utilization, etc)**
- 4. Measure the impact of services**
- 5. Evaluate interventions**
- 6. Currently do not analyze data**

The volume of data is growing fast and furious

- The volume of big data is projected to increase faster in health care over the next seven years than in any other field.
- Between 2020 and 2025, the total amount of global healthcare data is projected to increase from 2,300 to 10,800 **exabytes**.

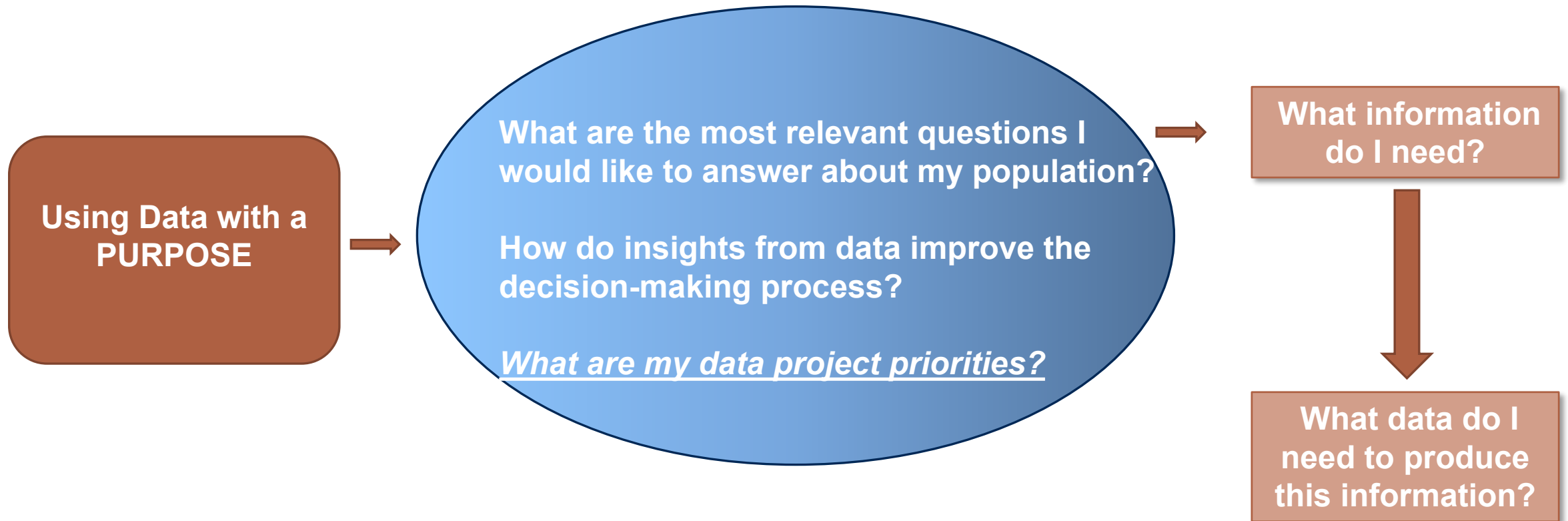
← 1 Exabyte =
1 billion Gigabytes



This can be daunting, but it presents an opportunity to refine or develop comprehensive data strategies to create more value for patients and communities.

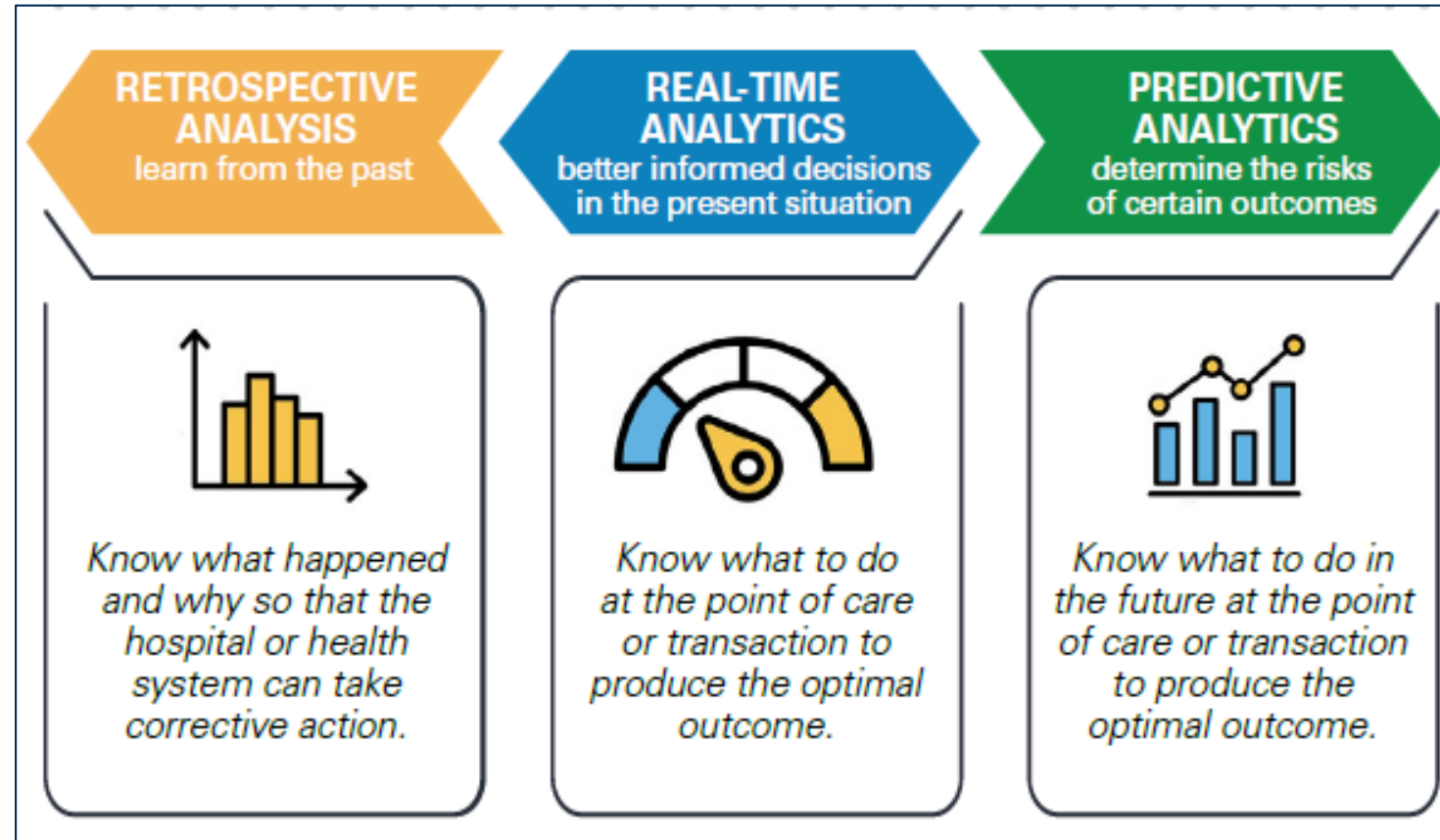
Leveraging Data to Improve Health

The data and the opportunities to innovate are extensive, but resources are not.



Leveraging NMDOH Data to Improve Health

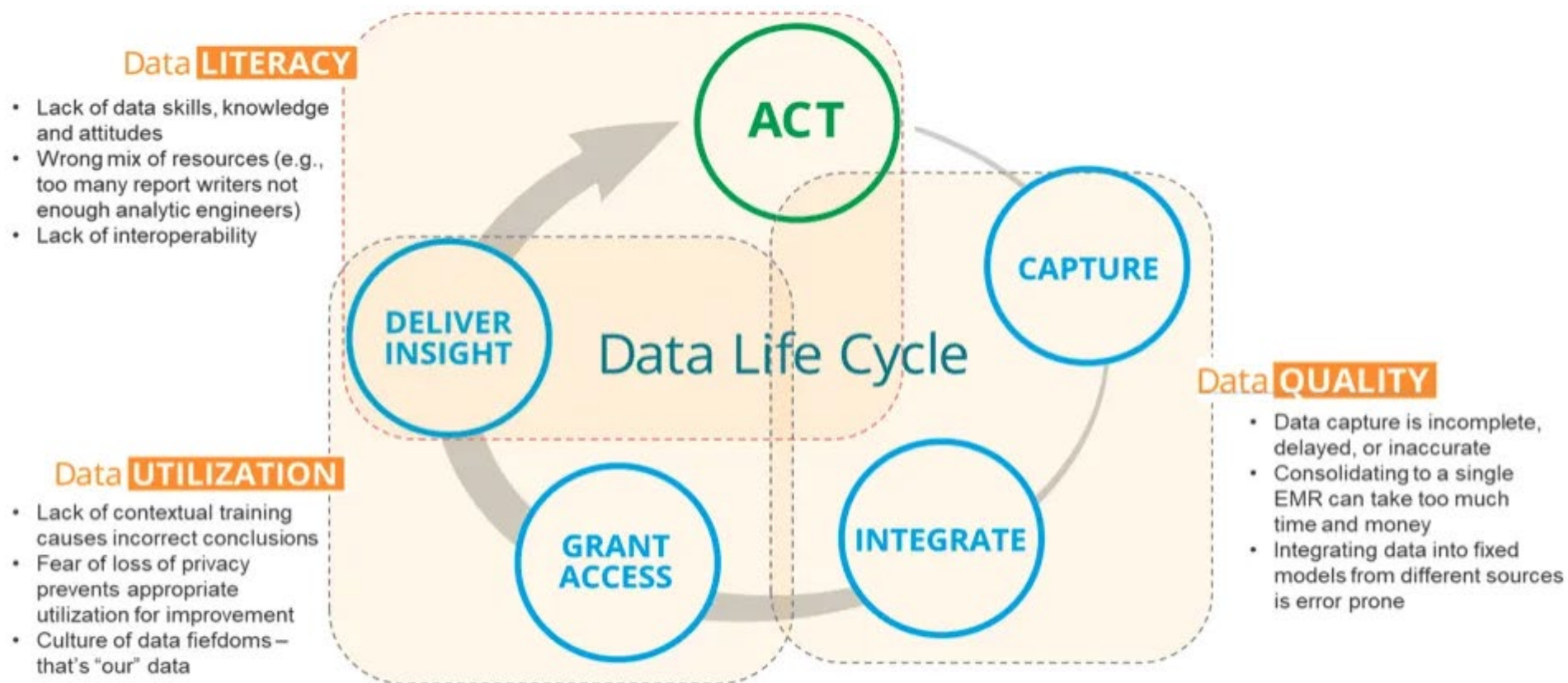
- Identify your question.
- Identify your population.
- Identify the data elements you need to answer the question.
 - Additional data elements that can influence the decision-making process.
- Define your timeframe: Learn from the past to make better decisions in the present and determine risks for the future.



AHA Center for Health Innovation: https://www.aha.org/system/files/media/file/2021/01/MI_Leveraging_Data_Report.pdf

Leveraging Data to improve the health of Patients & Communities

Collecting and analyzing data does not, by itself, improve anything. It needs to be part of a strategy and system.



NMDOH data

The conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life.

- Identifying primary needs of your community/patient population (prioritize population/prioritize need)
- Establishing supportive systems of referrals or specific interventions (response)
- Evaluate Effects
- Reassess the needs of your community/patient population

Practical advice on how to leverage existing data on NMDOH

- There is already a trove of information on your patient population (even from appointment scheduling and check-in):
 - Some demographics
 - Address
 - Insurance/type
- Combining your information with publicly available data can enrich what you know about your community/patient population and help you plan and design your Data Project Strategy

Next set of slides: some examples





Non-Medical Drivers of Health Database

Non-Medical Drivers of Health

Texas Data Snapshot Tables

Data Snapshot Tables

Select Geographic Detail and Year for Snapshot Download

Geography	Year
ZIP	2020
County	
ZIP	

Click for Download



The "Texas Data Snapshot Tables" contain a portion of the data contained in the Non-Medical Drivers of Health Data Library. Each data file contains about 30 pre-selected variables that cover topics in education, social, economic, healthcare access, and environmental factors. Files can be viewed by zip code or county for years 2016 through - 2020 and will continue to be updated.

Data Library

Non-Medical Driver Domains and Sources

Select a data source to view description and variables

Orange datasets contain one or more variables included in the downloadable snapshots above

Demographic	Demographic	American Community Survey: Demographics and Housing Estimates
Economic	Businesses	County Business Patterns American Community Survey: Economic Characteristics
	Employment	Bureau of Labor Statistics County Business Patterns
Food		Feeding America: Map the Meal Gap Feeding America: State of Senior Hunger in America 2019 USDA Food Environment Atlas
	Home Security	American Community Survey: Selected Housing Characteristics
Income		American Community Survey: Economic Characteristics American Community Survey: Income in the Past 12 Months
	Poverty	American Community Survey: Poverty Status in the Past 12 Months Small Area Income and Poverty Estimates
Socioeconomic	Wages	Area Deprivation Index (ADI) County Business Patterns
	Education	American Community Survey: Educational Attainment Texas Education Agency
Healthcare Access	Enrollment	American Community Survey: Educational Attainment Area Health Resource Files
	Access	CDC Interactive Atlas of Heart Disease and Stroke Mapping Medicare Disparities Tool Texas Department of State Health Services (DSHS)
Neighborhood and Built Environment	Exercise	CDC Social Vulnerability Index
	Insurance	American Community Survey: Selected Social Characteristics Small Area Health Insurance Estimates
Outcomes		County Health Rankings
	Air Pollution	CDC WONDER Environmental Public Health Tracking Network
Exercise		USDA Food Environment Atlas
	Food	USDA Food Environment Atlas
Housing		American Community Survey: Selected Social Characteristics

Use the filters below to view all variables available in the NMDoH Data Library. Datasets that are **orange** contain one or more variables included in the downloadable snapshots above. For variables not in the snapshots, please send inquiries to The Center for Health Care Data at CHCD.NMDH@uth.tmc.edu

Select Domain

- (All)
- Demographic
- Economic
- Education
- Healthcare Access
- Neighborhood and Built Environment
- Social

Geographic Detail

- (All)
- ZIP/ZCTA
- County
- Census Block
- Other Geography

Keyword Search

Non-Medical Driver Domains and Sources

Select a data source to view description and variables

[Orange datasets](#) contain one or more variables included in the downloadable snapshots above

Demographic	Demographic	American Community Survey: Demographics and Housing Estimates	
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Neighborhood and Built Environment	Air Pollution	County Health Rankings	
		CDC WONDER	
	Environmental Public Health Tracking Network		
	Exercise	USDA Food Environment Atlas	
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	Housing	American Community Survey: Selected Social Characteristics	
Environmental Public Health Tracking Network			
Internet	American Community Survey: Selected Social Characteristics		
Social	Transportation	American Community Survey: Selected Social Characteristics	
	Behaviors	Fatality Analysis Reporting System	
	Household	American Community Survey: Selected Social Characteristics	
	Population	CDC WONDER	
	Voting	American Community Survey: Selected Social Characteristics	

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Keyword Search

Bureau of Labor Statistics

The Bureau of Labor Statistics is a unit of the United States Department of Labor. It is the principal fact-finding agency for the U.S. government in the broad field of labor economics and statistics and serves as a principal agency of the U.S. Federal Statistical System. <https://www.bls.gov/data/>

Variable	Variable Included in Data Snapshot	2018	2019	2020	2021
Employment	Yes	●	●	●	●
Labor Force	No	●	●	●	●
Unemployment	Yes	●	●	●	●
Unemployment rate	No	●	●	●	●

Data Library

Non-Medical Driver Domains and Sources

Select a data source to view description and variables

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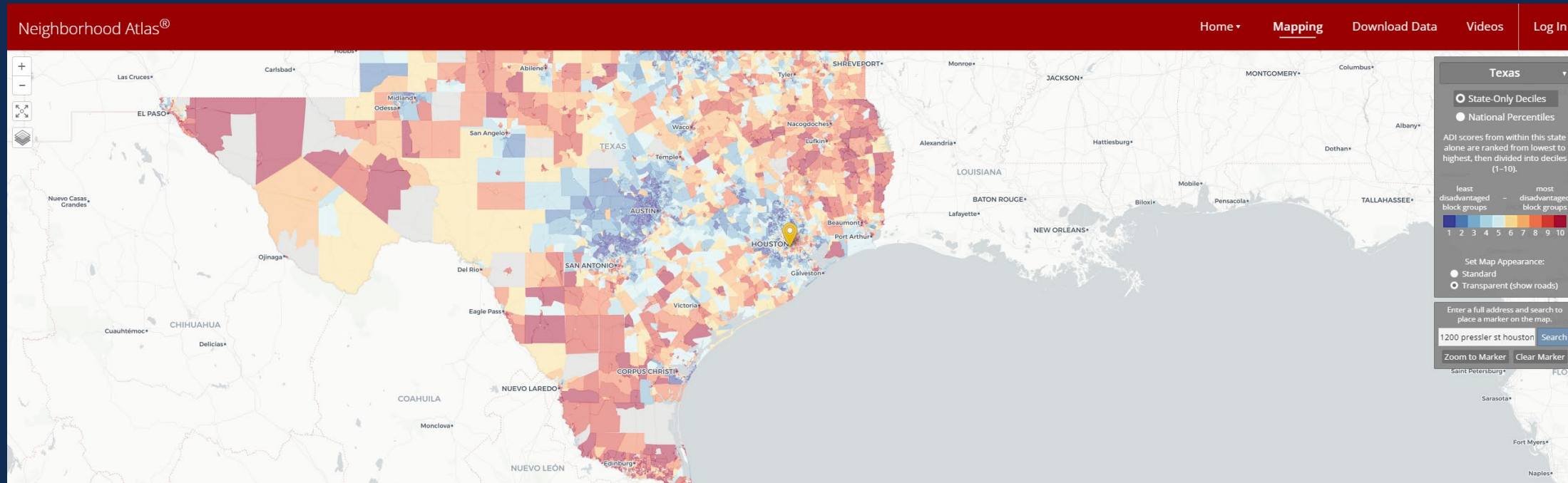
Select Domain	Geographic Detail
<input checked="" type="checkbox"/> (All)	<input checked="" type="checkbox"/> (All)
<input checked="" type="checkbox"/> Demographic	<input checked="" type="checkbox"/> ZIP/ZCTA
<input checked="" type="checkbox"/> Economic	<input checked="" type="checkbox"/> County
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<input checked="" type="checkbox"/> Healthcare Access	<input checked="" type="checkbox"/> Other Geography
<input checked="" type="checkbox"/> Neighborhood and Built Environment	
<input checked="" type="checkbox"/> Social	

Keyword Search

Area Deprivation Index (ADI) Contains ADI rankings based on socioeconomic disadvantage
<https://www.neighborhoodatlas.medicine.wisc.edu/>

Variable	Variable Included in Data Snapshot	Geographic Detail	
		<input checked="" type="checkbox"/> ZIP/ZCTA	<input checked="" type="checkbox"/> Census Block
		2015	2019
National ADI Rank	No	<input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> X
State ADI Rank	No	<input checked="" type="checkbox"/> X	<input checked="" type="checkbox"/> X

Area Deprivation Index by address



<https://www.neighborhoodatlas.medicine.wisc.edu/mapping>

Practical advice on how to leverage existing data on NMDOH

- For example:
 - Aggregate your patient populations by zip code and identify what proportion (or who and how many) come from vulnerable areas.
 - How many pregnant women do I see coming from zip codes with limited transportation?
 - How many pediatric patients do I see that come from food-insecure neighborhoods?
 - How many diabetic patients do I treat that live in a predominantly Hispanic area?

- Key NMDOH issues among my pop → How can these affect my decision-making/my interventions?
- What should I be screening for at the patient level?
- What should be my next priority data project?

Non-Medical Drivers of Health

- Leveraging Healthcare data and related data (NMDOH) is complex and requires strategic planning and significant investment in time and resources.
- However, its relevance in day-to-day practice, individuals' and population's health (as well as revenue cycles) will only grow.



Thank You

Email us at CHCD@uth.tmc.edu for additional information
or visit go.uth.edu/CHCD.

