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Participant Engagement Committee

August 2026

Agenda

1. Connxus in the News
2. Connxus Migration Updates
3. BioMIL Maternal Health Project
4. B4 Maternal Health Project
5. Q & A

Connxus In The News

Vidya Lakshminarayanan

News Updates

Press Releases

- Connxus CEO Eliel Oliveira Named Co-Chair of Federal ONC HITAC

Connxus FHIRedApp

- Patient-facing application that gives individuals access to their health records
- Supports secure sharing of health information across providers and care settings

Watershed

- ADT Interface Live with CommUnity Care
- Ready to connect future participants once you sign an official Scope of Work (SOW)

Connxus PEC Poll

- Connxus PEC Poll – Fill out form

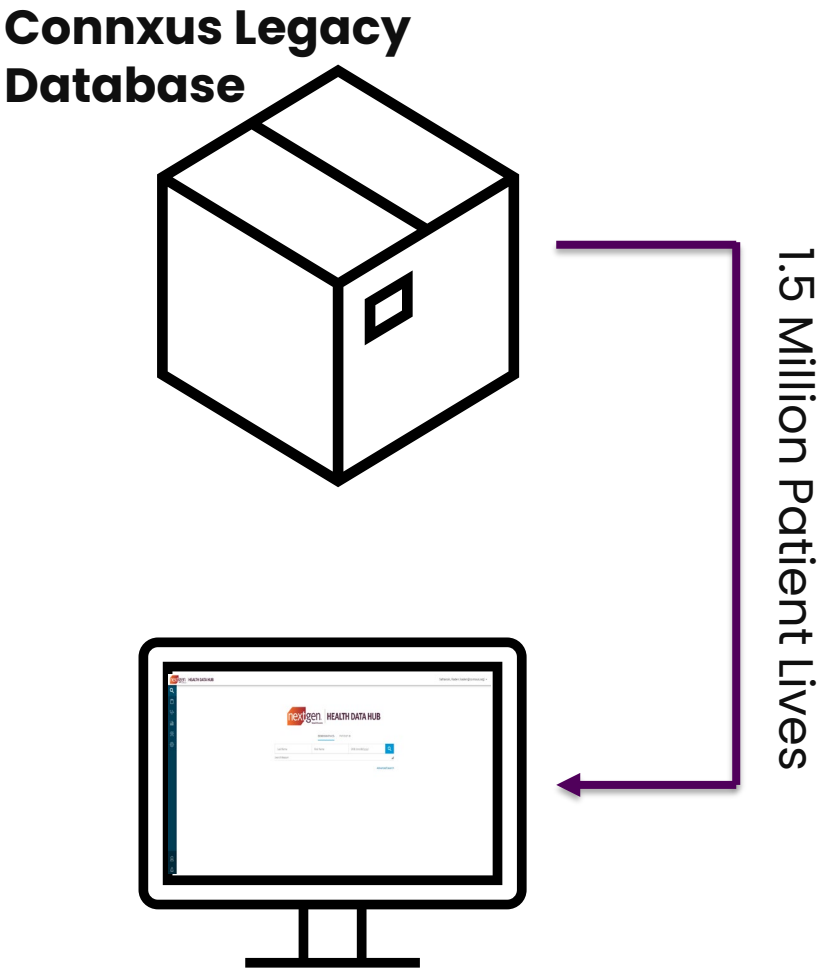
Connxus Migration Update

Kaden Safranski

Migration to HDH

Connxus Has Successfully Migrated approximately 1.5 million patient lives from our legacy database to the new Health Data Hub

- Preserves existing patient information within the new environment
- Brings new partner ADT data into the HDH
- Creates a modern foundation for more reliable and scalable data exchange
- Supports a more complete view of patient activity across participating organizations



Routing Partner Data and Maintaining Reporting

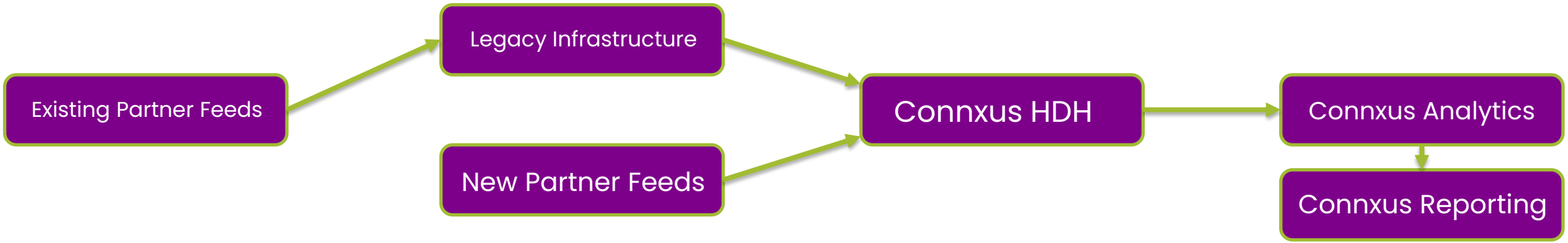
Connxus has redirected all existing partner feeds to the NextGen HDH while maintaining established reporting capabilities through the Connxus analytics environment.

Maintains the continued flow of partner information during the transition

Routes HDH data into the Connxus analytics environment to support existing reporting

Establishes the HDH as the central destination for all existing partner feeds

Moves Connxus closer to safely retiring its legacy infrastructure



Maternal Health Project Support

Vidya Lakshminarayanan

The BioMedical Informatics Lab (BioMIL)

Anjum Khurshid, MD PhD
Harvard Pilgrim Health Care Institute
Harvard Medical School

Thanks to Connxus team (Eliel, Vidya, Becky, Vishal, Kaden, Stephanie, Leah, others)
Acknowledging HPHCI team (Matti, Hao, Olesya, Brittany, Jay, others)

Goals of BioMIL

GOALS

- Explore HIE data availability for population health research
- Document the data quality and data access requirements for a specific use case of maternal health care)

Excerpts from Original Proposal

*"Build HPHCI capacity to use **HIEs as a new data source** for diverse longitudinal health records."*

*"**Establish the informatics infrastructure** needed for research using real-time, real-world HIE data"*

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Implementation Steps for BioMIL Project

1. **Design and launch a secure cloud environment (“BioMIL”)**
    - Role-based access (secure, scalable)
    - Limited infrastructure development and maintenance at HPHCI

2. **Load BioMIL with initial Limited Data Set (LDS)**
    - Initial LDS based on Dr. Hao Yu’s research on maternal health

3. **Test BioMIL’s ability to complement existing data sources for pop health**
    - Test the completeness of HIE data for maternal health studies
    - Allow researchers to access data securely within BioMIL environment at Connxus

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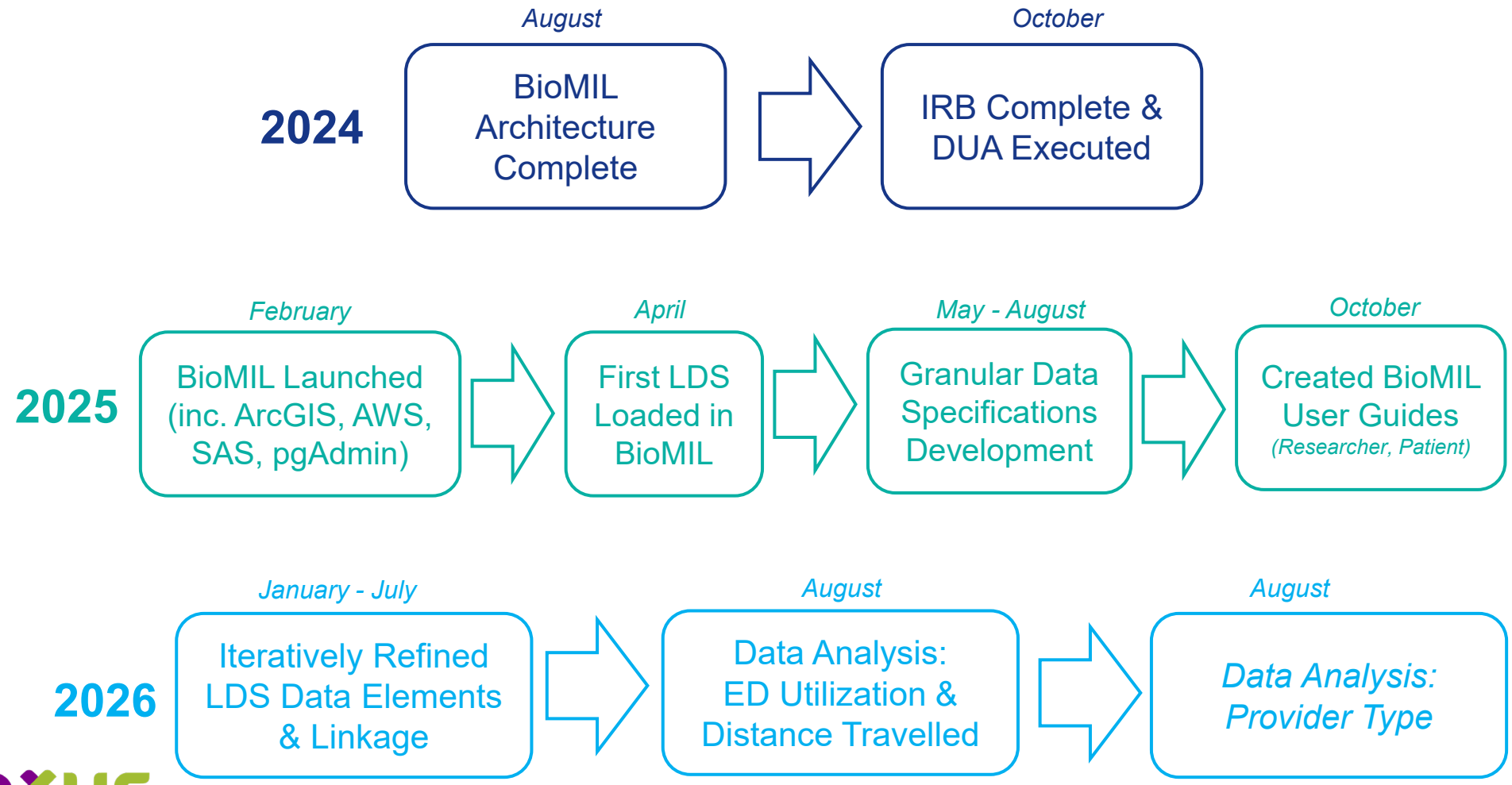
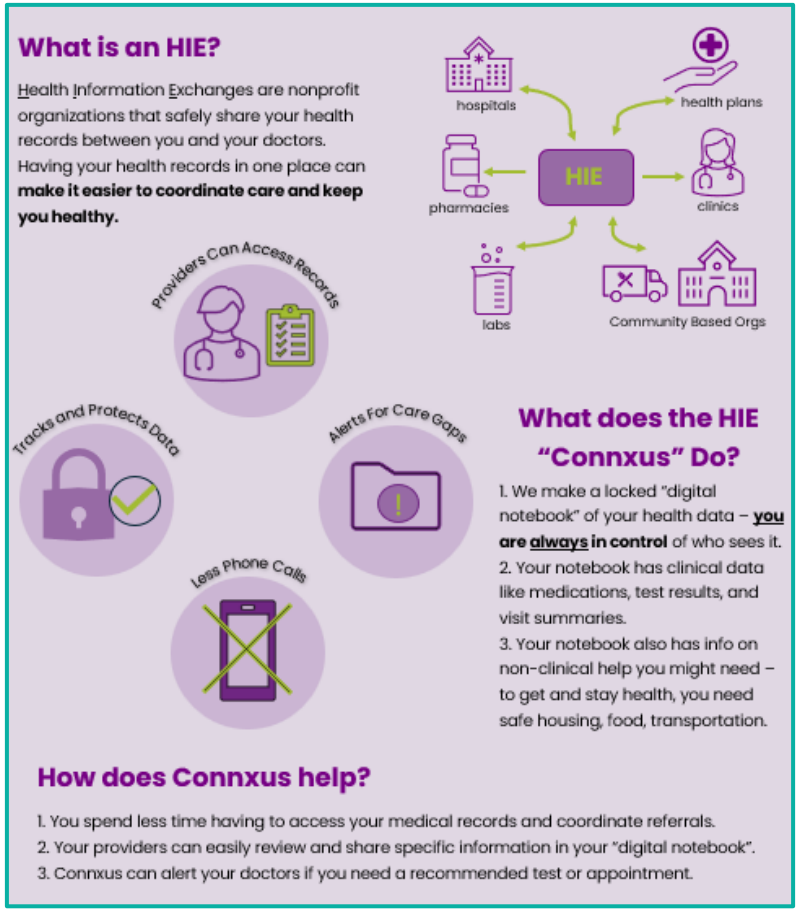
BioMIL Project: Key Milestones

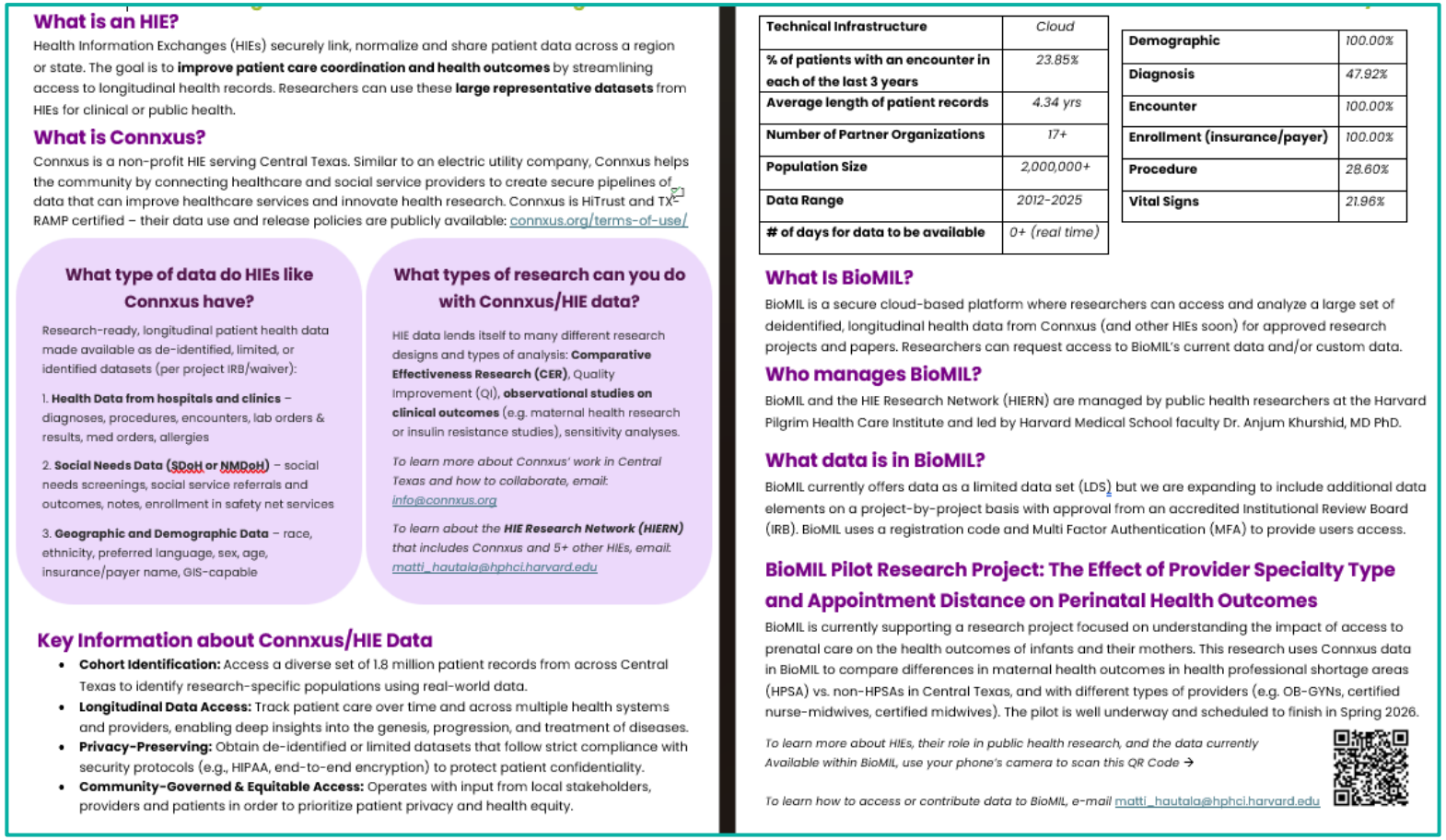


BioMIL Guides for Patients



Patient Guide: simpler explanation of HIE services and research to engage and inform patients

BioMIL Guides for Researchers



What is an HIE?

Health Information Exchanges (HIEs) securely link, normalize and share patient data across a region or state. The goal is to **improve patient care coordination and health outcomes** by streamlining access to longitudinal health records. Researchers can use these **large representative datasets** from HIEs for clinical or public health.

What is Connxus?

Connxus is a non-profit HIE serving Central Texas. Similar to an electric utility company, Connxus helps the community by connecting healthcare and social service providers to create secure pipelines of data that can improve healthcare services and innovate health research. Connxus is HiTrust and TX-RAMP certified – their data use and release policies are publicly available: connxus.org/terms-of-use/

What type of data do HIEs like Connxus have?

Research-ready, longitudinal patient health data made available as de-identified, limited, or identified datasets (per project IRB/waiver):

1. **Health Data from hospitals and clinics** – diagnoses, procedures, encounters, lab orders & results, med orders, allergies
2. **Social Needs Data (SDoH or NMDoH)** – social needs screenings, social service referrals and outcomes, notes, enrollment in safety net services
3. **Geographic and Demographic Data** – race, ethnicity, preferred language, sex, age, insurance/payer name, GIS-capable

What types of research can you do with Connxus/HIE data?

HIE data lends itself to many different research designs and types of analysis: **Comparative Effectiveness Research (CER)**, Quality Improvement (QI), **observational studies on clinical outcomes** (e.g. maternal health research or insulin resistance studies), sensitivity analyses.

To learn more about Connxus' work in Central Texas and how to collaborate, email: info@connxus.org

*To learn about the **HIE Research Network (HIERN)** that includes Connxus and 5+ other HIEs, email: matti_hautala@hphci.harvard.edu*

Key Information about Connxus/HIE Data

- **Cohort Identification:** Access a diverse set of 1.8 million patient records from across Central Texas to identify research-specific populations using real-world data.
- **Longitudinal Data Access:** Track patient care over time and across multiple health systems and providers, enabling deep insights into the genesis, progression, and treatment of diseases.
- **Privacy-Preserving:** Obtain de-identified or limited datasets that follow strict compliance with security protocols (e.g., HIPAA, end-to-end encryption) to protect patient confidentiality.
- **Community-Governed & Equitable Access:** Operates with input from local stakeholders, providers and patients in order to prioritize patient privacy and health equity.

Technical Infrastructure	*Cloud*
% of patients with an encounter in each of the last 3 years	*23.85%*
Average length of patient records	*4.34 yrs*
Number of Partner Organizations	*17+*
Population Size	*2,000,000+*
Data Range	*2012-2025*
# of days for data to be available	*0+ (real time)*

Demographic	*100.00%*
Diagnosis	*47.92%*
Encounter	*100.00%*
Enrollment (insurance/payer)	*100.00%*
Procedure	*28.60%*
Vital Signs	*21.96%*

What Is BioMIL?

BioMIL is a secure cloud-based platform where researchers can access and analyze a large set of deidentified, longitudinal health data from Connxus (and other HIEs soon) for approved research projects and papers. Researchers can request access to BioMIL's current data and/or custom data.

Who manages BioMIL?

BioMIL and the HIE Research Network (HIERN) are managed by public health researchers at the Harvard Pilgrim Health Care Institute and led by Harvard Medical School faculty Dr. Anjum Khurshid, MD PhD.

What data is in BioMIL?

BioMIL currently offers data as a limited data set (LDS) but we are expanding to include additional data elements on a project-by-project basis with approval from an accredited Institutional Review Board (IRB). BioMIL uses a registration code and Multi Factor Authentication (MFA) to provide users access.

BioMIL Pilot Research Project: The Effect of Provider Specialty Type and Appointment Distance on Perinatal Health Outcomes

BioMIL is currently supporting a research project focused on understanding the impact of access to prenatal care on the health outcomes of infants and their mothers. This research uses Connxus data in BioMIL to compare differences in maternal health outcomes in health professional shortage areas (HPSA) vs. non-HPSAs in Central Texas, and with different types of providers (e.g. OB-GYNs, certified nurse-midwives, certified midwives). The pilot is well underway and scheduled to finish in Spring 2026.

To learn more about HIEs, their role in public health research, and the data currently Available within BioMIL, use your phone's camera to scan this QR Code →

To learn how to access or contribute data to BioMIL, e-mail matti_hautala@hphci.harvard.edu

Researcher Guide: high-level characteristics of the data currently available in BioMIL.

Results: What Variables are Available in BioMIL?

Dataset Type	Number of Obs (2018-2025)	Variables
Patients	100,382	Race (99.76%), Ethnicity (85.08%), Language Spoken (99.55%), Date of Birth, Geographic Details (Street Address, City, State, ZIP, County)
Diagnoses	5,966,495	ICD9/ICD10 diagnosis codes
Procedures	3,484,614	Date, Procedure Codes, Geographic Data (city, state, ZIP, county)
Encounters	1,496,754	Provider Information, Type of Visit, Visit Date, Geographic Data (Street Address, City, State, ZIP, County) Visit Types: Ancillary Services, Emergency Room, Inpatient, Outpatient/Clinic/Office Visit, EMS 911, Telehealth visit, Telephone contact, Dental, etc.
Providers	6,734	Used to Determine Specialty Type

Results: Initial Data Analysis *(In Progress)*

49,761 Unique Birthing People in LDS (2018-2025)

** Used the Alliance for Innovation on Maternal Health (AIM) - identifies births and delivery hospitalizations using ICD-10 diagnosis and procedure codes*

Characteristics (2018-2025)	Number of Births	%
Delivery Hospitalizations	**70,684**	100%
Year		
2018	8,877	12.56%
2019	9,643	13.64%
2020	9,025	12.77%
2021	10,131	14.33%
2022	9,731	13.74%
2023	9,294	13.15%
2024	8,225	11.64%
2025	5,776	8.17%
Maternal Age (2018-2025)		
15-19 years	6,434	9.10%
20-29 years	38,747	54.82%
30-34 years	15,146	21.43%
35+ years	10,357	14.65%

Results: Initial Data Analysis *(In Progress)*

Characteristics (2018-2025)	Number of Births	%
Spoken Language	**18,439**	29.09%
English	47,019	66.52%
Spanish	22,621	32.00%
Other	1,044	1.48%
SDOH Assessment Prevalent in HIE		
No	66,737	94.42%
Yes	**3,947**	5.58%
Health Metric		
Cesarean Birth	18,439	29.09%
Severe Maternal Morbidity with blood transfusion	625	0.88%
Severe Maternal Morbidity without blood transfusion	430	0.61%

Note: In future analyses, we plan to explore additional variables, including outcomes by distance and provider type, insurance payer/enrollment, and social determinants of health (SDoH).

Looking forward . . .

- Established infrastructure to access longitudinal community data for meaningful research, without export of data or exposing PHI
- Developed educational briefs to engage researchers, patients, and other stakeholders
- Continue study of maternal health outcomes by using novel data variables such as impact of provider specialty type, distance travelled on maternal health outcomes
- Using BioMIL for other funded research projects to study important community health issues
    - *NIH grants -- impact of non-medical drivers of health on Alzheimer's Disease and Maternal Health Outcomes*
    - *PCORI grant -- implement continuous data quality assurance and improvement*
- Continue to develop joint funding opportunities with Connxus to investigate strategies to improve population health and health/social services

Better Black and Brown Births (B4): Community Needs Assessment

Improving The State of Maternal Health Care in TX: Building a Collaborative Perinatal Assessment to Strengthen Systems of Care

Cherelle VanBrakle

Meet the Team

Community-rooted maternal health organization leading the assessment and convening partners.

A Black-woman-led boutique consulting firm dedicated to amplifying community voices through equitable research, engagement, and education.

A regional data and interoperability organization supporting secure data sharing across healthcare, public health, and social services to enable coordinated, person-centered care.

The Department of Population Medicine (DPM) at the Harvard Pilgrim Health Care Institute conducts research across a range of health topics, including maternal and child health, health disparities, and public health.

Background

Black and Brown birthing people continue to experience disproportionately poor maternal and infant health outcomes due to systemic barriers, fragmented care, and underinvestment in community-based solutions.

Clinical data alone does not tell the full story. This assessment builds on MSVW's earlier community research efforts (2015) and responds to the urgent need for updated, community-driven insights that reflect today's realities.

The findings will help inform systems change, resource alignment, policy advocacy, and future investments in perinatal care.

Research Questions:

- What are the perinatal support options available to Black and Brown birthing people and their families?
- How are agencies and resources available aligned to support perinatal families?
- What are the holistic needs and desires of birthing people?
- What types of support networks are needed?
- What are the factors that families need to trust support networks?
- What steps are needed to strengthen systems of care and improve maternal health outcomes?
- What are the factors that providers need to provide holistic care to Black and Brown families to improve maternal health outcomes?
- What barriers prevent providers from providing quality care?

Research Methods

- Community-based survey
- 1:1 Interviews
- Health Information Exchange (HIE) data from local healthcare providers
- Publicly available healthcare data

Opportunities to Contribute Your Voice:

Community Listening Sessions

Community listening sessions will be hosted to convene Black and Brown birthing people and supporters of birthing people in Central Texas.

We plan to facilitate the conversations in English and Spanish, following a descriptive discussion guide to learn of the needs, desires, and support systems available for birthing people.

One-on-One Interviews

Individual interviews will be facilitated in English and Spanish to learn of birthing people's and supporters of birthing people's lived experiences which contribute to their current needs, and desires during the perinatal period.

Survey

The survey will be available in English and Spanish to capture the experiences of birthing people in Central Texas. We aim to reach various community members with varied experiences to contribute to the data collected.

Where Are We Now?

Encountered 50+ potential participants

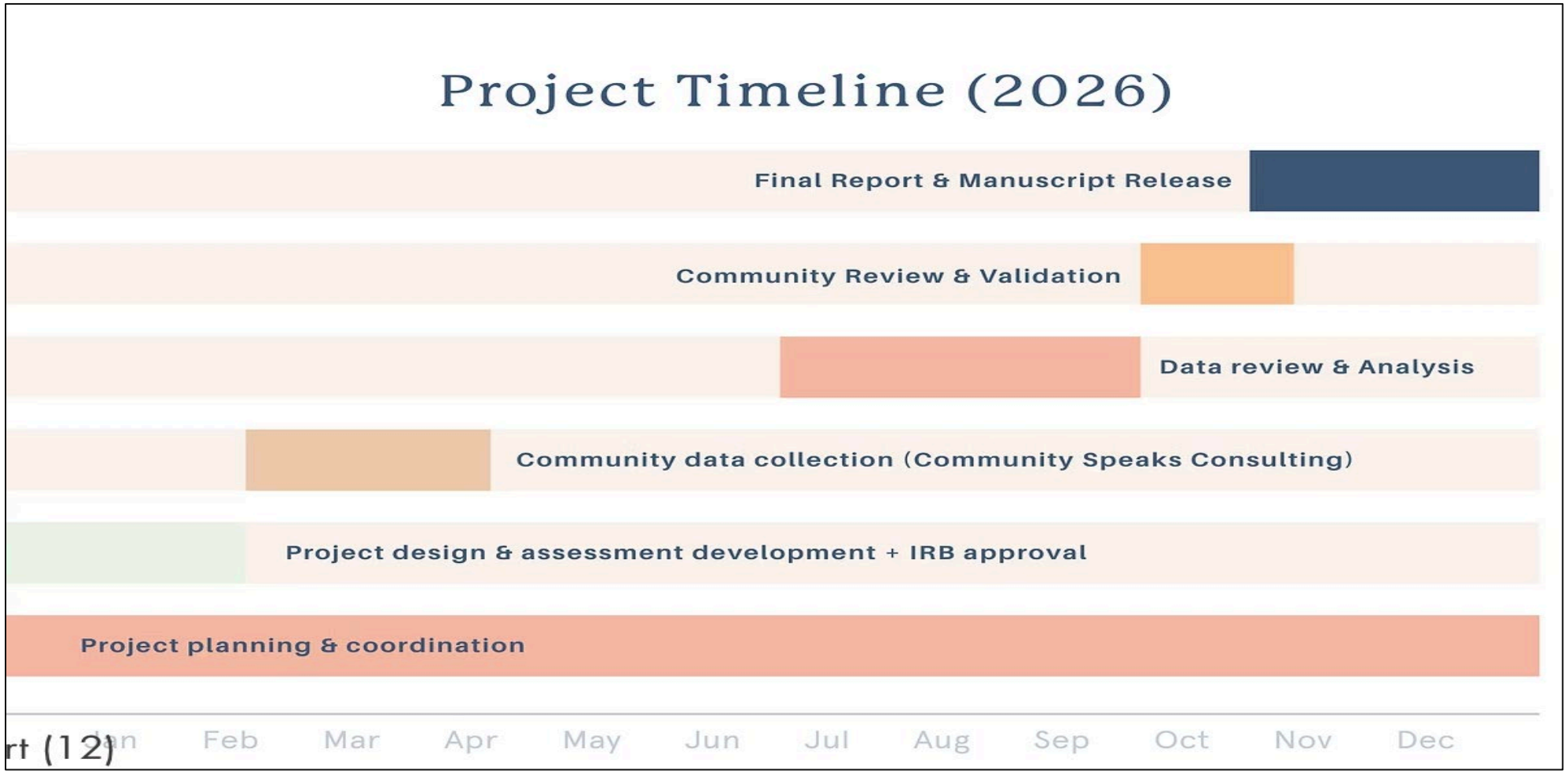
Conducted 4 interviews

Received 15 survey responses

Scheduled 2 community gatherings

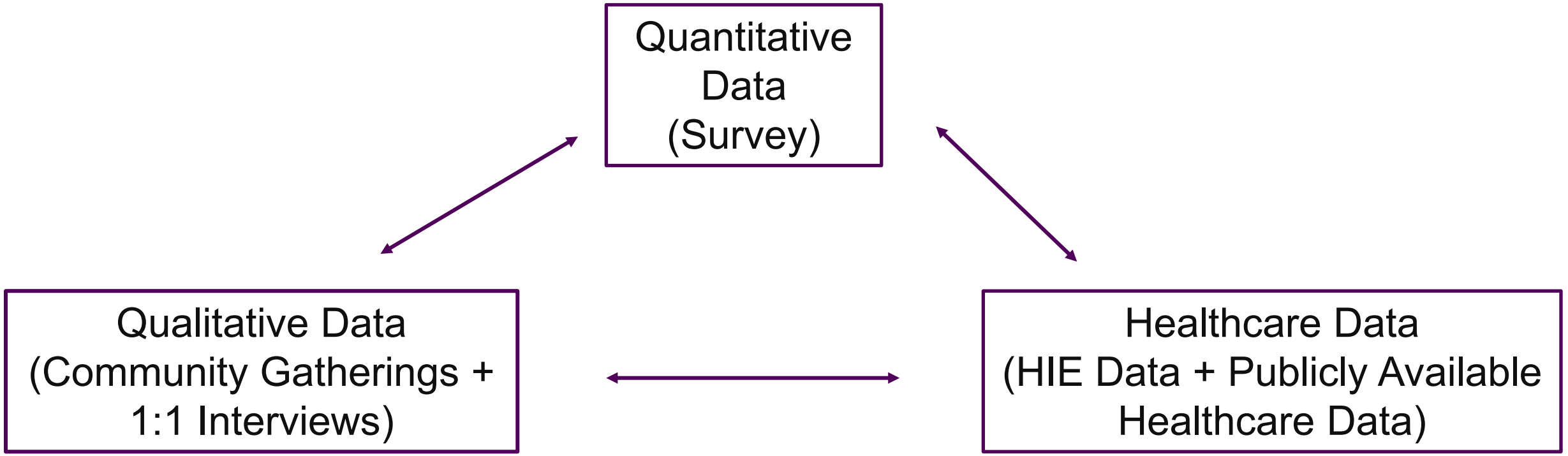
Attended 4 community events

Timeline


Project Timeline (2026)
Final Report & Manuscript Release
Community Review & Validation
Data review & Analysis
Community data collection (Community Speaks Consulting)
Project design & assessment development + IRB approval
Project planning & coordination
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

Analysis

Our analysis method utilizes data triangulation. By cross-examining findings across 3 distinct data sources, we will uncover a more comprehensive understanding of the needs among birthing people in Central Texas.



Dissemination

1. Final report disseminated to all maternal and child health stakeholders within Central Texas.
2. A comprehensive presentation of our methods, data findings and recommendations.

Better Black and Brown Births (B4) is a collaborative effort to ensure every family, especially Black and Brown families, can experience safe, connected, and thriving perinatal care in Central Texas.

QUESTIONS?

Thank You