



TCHMB PERINATAL DATA SYSTEM UPDATE

JULY 27, 2022

PERINATAL ADVISORY COUNCIL MEETING

Texas Collaborative for Healthy Mothers and Babies

The Perinatal Quality Collaborative for Texas



TEXAS COLLABORATIVE FOR HEALTHY MOTHERS AND BABIES (TCHMB)



- TCHMB is the Texas Perinatal Quality Collaborative
- Collaboration of over 150 healthcare providers, scientists, hospitals, state agencies, advocates and insurers whose goal is to design projects, collect research data, develop strategies, and evaluation plans to improve birth outcomes in Texas
- Mission is to advance health care quality, equity and patient safety for all Texas mothers and babies through the collaboration of health and community stakeholders as informed by the voices of the patients

TEXAS COLLABORATIVE FOR HEALTHY MOTHERS AND BABIES (TCHMB)



- **Goals:**

Reducing preterm birth

- Reducing morbidity and mortality for mothers and babies
- Eliminating health outcome disparities and inequities for mothers and babies, especially those associated with race and ethnicity
- Improving the health outcomes of mothers and babies using the life course approach
- Strengthening the involvement of partners/families with maternal and child health
- Improving the health environment for mothers and babies

TCHMB/TEXAS PERINATAL DATA NEEDS



- Large need to assess impact of state-level perinatal efforts on maternal and neonatal outcomes:
 - TCHMB/RAC PCR Alliance Quality Improvement Initiatives*
 - Neonatal/Maternal Designation*
 - MMRC Recommendations*
 - Other*
- Current state relies on aggregate administrative data with inherent limitations
- Development of a state-wide perinatal data system is needed to identify perinatal state-wide health trends and support continuous perinatal quality improvement

TCHMB DATA SYSTEM SCOPE

Development of a state-wide perinatal data system containing various data sources, including integration of hospital contributed data and administrative data. The data will be collated and analyzed to identify state-wide health trends and support continuous perinatal quality improvement.

DESIGN PRINCIPLES FOR DATA SYSTEM

- Provide an intuitive and easy-to-navigate interface
- Align QI measures with measures used for performance reporting with standardized measure specifications
- Leverage existing data sources to minimize hospital reporting burden
- Provide rapid-cycle metrics to hospitals
- Provide exceptional customer support by providing highly responsive Help Desk staffing
- Continual enhancement of system based on hospital recommendations

TCHMB DATA SYSTEM GOALS

- 1) To allow collection and entry of multi-level data (including patient-level and aggregate data), including those related to maternal and neonatal processes, structures, outcome and balancing measures, etc. and allow measurement of patient outcomes after specific interventions*
- 2) To identify opportunities for potential interventions to improve outcomes for different populations*
- 3) To create robust perinatal and neonatal data infrastructure to inform not only the needs of the TCHMB but also other state and quality improvement programs.**

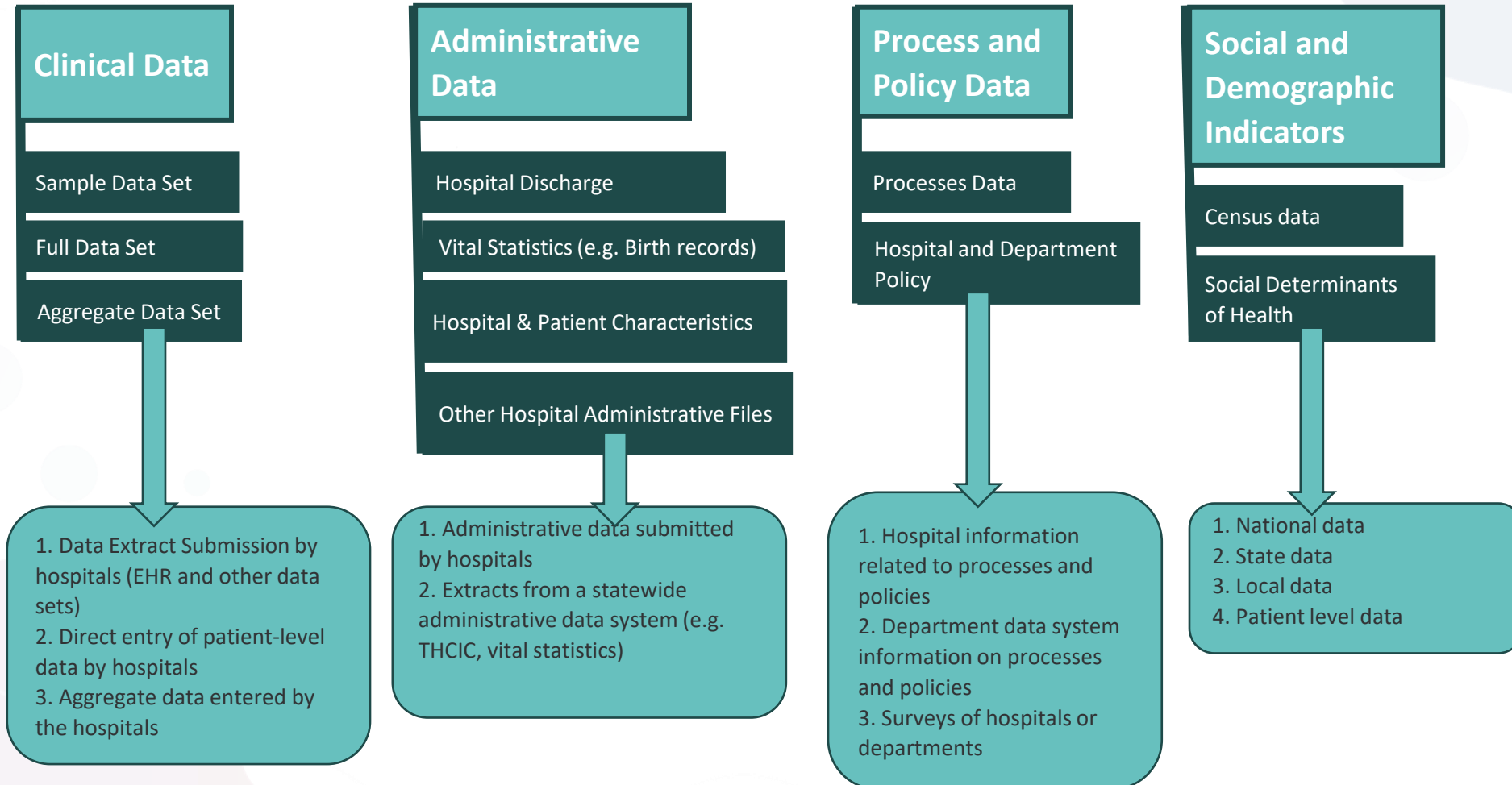
*will include incorporating priority measures identified by the Perinatal Advisory Council, the Maternal Mortality and Morbidity Taskforce, and others

**Texas Perinatal Advisory Council, Maternal Morbidity and Mortality Committee

DATA SYSTEM REQUIREMENTS

DATA COLLECTION REQUIREMENTS

Example of Data Sets



DATA COLLECTION REQUIREMENTS



- 1) System will host multiple data sets, both aggregate and patient-level*. Examples of data sets listed in previous slide.
- 2) System will need to ingest various data sets at least quarterly, and potentially monthly, depending on the data set.
- 3) System will need to ingest data sets associated with quality improvement projects; 2-3 new projects start every 2 years. System must expand to accommodate the new data fields or sources.
- 4) For each QI project whose data is collected, system should accommodate the provision of direct data entry for manual data submission*. Ideally system would allow for easy development of an online tool for data entry by hospitals, where required.
- 5) System should allow participating hospitals to easily resubmit updated data sets when errors in data are identified.
- 6) System should track history of data submissions.
- 7) System should send alerts to users when data is due with follow up emails at a set cadence when past due.
- 8) System should allow the TCHMB Administrative members to see a dashboard of late reports listing hospitals who have not yet submitted data.

* Note: data sources, detail level and method of submission will be determined by each project workgroup and committee defined standard measures

DATA ACCESS

- 1) System must allow for concurrent usage of up to 1000 users.
- 2) System should allow identified staff from participating hospitals to see data associated with their hospital; this may include information from various departments.
- 3) System should allow staff from participating hospitals, participating in identified QI projects, to see the data and reports associated with the QI project they are participating in.
- 4) System should allow participating hospitals to see data and reports associated with standard measures.
- 5) System should allow for participating hospitals to be grouped into their associated RAC.
- 6) Identified RAC members should be able to see aggregated data sets from hospitals associated with their RAC.
- 7) Identified TCHMB Administrative staff should have secure access to all data to enable querying / analysis of data within the environment.
- 8) System should restrict data access based on role, entity the user is associated with, and participation in specific projects.
- 9) System should track users' logins and access to system resources.
- 10) System should have an audit trail of all downloaded data.

USER PORTAL

- 1) System should provide a portal where users from participating hospitals and associated departments can securely submit/enter data for standard measures and those projects they are participating in
- 2) The portal should allow users to easily see where data is due / outstanding
- 3) The portal should allow users to easily navigate to interactive dashboards/reports that show their own performance against state-wide hospitals and similar cohorts for standard measures and specific projects
- 4) For each project, approximately 20 interactive report template/pages would need to be developed around the specific measures being collected.*
- 5) The system must accommodate the display of other interactive templates/pages looking at more general trends from submitted data.
- 6) Access to and visibility of reports should be based on user role, entity the user is associated with, and participation in specific projects. Different audiences will have different views of the information. For example, it is expected there will be a view for RAC members, TCHMB Administrative members, Hospital leadership, Hospital Teams participating in QI projects.
- 7) System response times should not negatively impact user experience.

DATA RETENTION AND ARCHIVING

- 1) System will need to continue to support data submission and retention for prior projects until archived.
- 2) System should allow for the archiving* and/or deletion of closed data sets.
- 3) System should allow for the secure extraction of archived data.

* Note: archiving schedule will be determined by the TCHMB EC

SYSTEM ENVIRONMENT

- 1) A cloud-based, secure environment is needed to collect and aggregate data from multiple sources, including state data sources, hospitals and departments within those hospitals.
- 2) A development, test and production environment will be required.
- 3) Environment provided should include data analysis and visualization tools (such as Tableau/PowerBI, SAS, and Stata) to allow 3-4 TCHMB Administrative staff to analyze data within the environment.
- 4) Nightly data backups, at a minimum, are required

USER MANAGEMENT

- 1) Overall system administrator should be able to ‘enroll’ hospitals in QI projects, providing access to the hospital administrator.
- 2) Overall system administrator should be able to add hospital users and identify their level of access, including identifying the hospital administrator from a user management perspective.
- 3) System should allow hospitals to have one or more identified hospital administrators for any participating departments; This administrator would be responsible for adding/removing users for their hospital department and identifying level of access for their hospital, within available options.
- 4) System should support at least 2 users per hospital with data upload permissions
- 5) System should support at least 10 users per hospital with view only access to portal dashboards

SECURITY REQUIREMENT

System must have the proper physical, administrative and technical safeguards in place to keep stored PHI secure and maintain compliance with the HIPAA Security Rule.

VENDOR REQUIREMENT

- 1) Must work with TCHMB data and other committees to identify required data sets and definitions
- 2) Must work with TCHMB Data Committee to develop the data architecture required to meet reporting requirements as defined by the TCHMB
- 3) Must work with TCHMB Data Committee to develop measures based on submitted data
- 4) Must review submitted data sets for quality prior to upload into master data tables
- 5) Must work with participating hospitals to ensure data quality is maintained, for example, generating random sample data
- 6) Must work with participating hospitals to resolve data quality issues
- 7) Must provide technical support for approximately 1000 users
- 8) Will participate in user group meetings (multiple committees) to discuss system usability, data quality issues and scope out change requests
- 9) Will work with TCHMB Data Committee to create wireframes and data architecture for portals prior to developing sites

PROCESS FOR TCHMB DATA SYSTEM



- Data Workgroup developed understanding of data system infrastructure needs and TCHMB Team developed data system requirement proforma
- Reviewed data system requirement proforma with the Executive Committee (3/2/22)
- Incorporated input from EC on system requirements collected via survey (send by 3/8/2022 and due to TCHMB by 3/22/22)
- Finalized requirements/Approved at EC Quarterly meeting (4/6/22)
- Finalized requirements used for a request to identify estimated cost for the data system
- Refine the scope, roadmap and cost for the TCHMB Data System
- Develop and submit interim legislative charges that includes scope and cost

THANK YOU

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Save the Date for the
2023 TCHMB Summit:

February 15-17