CHIA center for health information

and analysis

Application for Massachusetts All-Payer Claims Data (Non-Government) [Exhibit A – Data Application]

. INSTRUCTIONS

This form is required for all Applicants, Agencies, or Organizations, hereinafter referred to as "Organization", except Government Agencies as defined in <u>957 CMR 5.02</u>, requesting protected health information. All Organizations must also complete the <u>Data Management Plan</u>, and attach it to this Application. The Application and the Data Management Plan must be signed by an authorized signatory. This Application and the Data Management Plan will be used by CHIA to determine whether the request meets the criteria for data release, pursuant to 957 CMR 5.00. Please complete the Application documents fully and accurately. Prior to receiving CHIA Data, the Organization must execute CHIA's <u>Data</u> <u>Use Agreement</u>. Organiations may wish to review that document prior to submitting this Application.

Before completing this Application, please review the data request information on CHIA's website:

- Data Availability
- Fee Schedule
- Data Request Process

After reviewing the information on the website and this Application, please contact CHIA at <u>apcd.data@state.ma.us</u> if you have additional questions about how to complete this form.

The Appliciaton and all attachments must be uploaded to IRBNet. All Application documents can be found on the <u>CHIA</u> <u>website</u>.

Information submitted as part of the Application may be subject to verification during the review process or during any audit review conducted at CHIA's discretion.

<u>Applications will not be reviewed until the Application and all supporting documents are complete and the required application fee is received.</u>

A <u>Fee Remittance Form</u> with instructions for submitting the application fee is available on the CHIA website. If you are requesting a fee waiver, a copy of the Fee Remittance Form and any supporting documentation must be uploaded to IRBNet. Please be aware that if your research is funded and under that funding you are required to release raw data to the funding source, you may not receive CHIA Data.

II. FEE INFORMATION

1. Consult the most current Fee Schedule for All-Payer Claims Database data.

2. After reviewing the Fee Schedule, if you have any questions about the application or data fees, contact apcd.data@state.ma.us.

3. If you believe that you qualify for a fee waiver, complete and submit the <u>Fee Remittance Form</u> and attach it and all required supporting documentation with your application. Refer to the <u>Fee Schedule</u> (effective Feb 1, 2017) for fee waiver criteria.

4. Applications will not be reviewed until the application fee is received.

5. Data for approved Applications will not be released until the payment for the Data is received.

III. ORGANIZATION & INVESTIGATOR INFORMATION

| Project Title: | Analyzing outcomes related to transitions in care |
|--|---|
| IRBNet Number: | |
| Organization Requesting Data (Recipient): | Beth Israel Deaconess Medical Center |
| Organization Website: | www.bidmc.org |
| Authorized Signatory for Organization: | Tiffany Chan |
| Title: | Research Contract Associate, SPC |
| E-Mail Address: | resadmin@bidmc.harvard.edu |
| Telephone Number: | 617-667-1803 |
| Address, City/Town, State, Zip Code: | 330 Brookline Avenue, Boston, MA 02215 |
| Data Custodian: (individual responsible for organizing, storing, and archiving Data) | Jennifer P. Stevens, MD, MS |
| Title: | Director, Center for Healthcare Delivery Science, |
| E-Mail Address: | BIDMC.jpsteven@bidmc.harvard.edu |
| Telephone Number: | 617-667-7165 |
| Address, City/Town, State, Zip Code: | 330 Brookline Avenue, Boston, MA 02215 |
| Primary Investigator (Applicant): (individual responsible for the research team using the Data) | Jennifer P. Stevens, MD, MS |
| Title: | Director, Ctr for Healthcare Delivery Science, BIDMC |
| E-Mail Address: | jpsteven@bidmc.harvard.edu |
| Telephone Number: | 617-667-7165 |
| Address, City/Town, State, Zip Code: | 330 Brookline Avenue, Boston, MA 02215 |
| Names of Co-Investigators: | Mayles Amat, Timothy Anderson, Kelly Graham, Shoshana |
| E-Mail Addresses of Co-Investigators: | Herzig, Rose Molina, Ashley O'Donoghue, Chloe Zera <u>mamat@bidmc.harvard.edu, tsander1@bidmc.harvard.edu,</u> <u>kgraham@bidmc.harvard.edu,sherzig@bidmc.harvard.edu,</u> <u>rmolina@bidmc.harvard.edu,aodonogh@bidme.harvard.edu</u> <u>czera@bidmc.harvard.edu</u> |

IV. PROJECT INFORMATION

IMPORTANT NOTE: Organization represents that the statements made below as well as in any study or research protocol or project plan, or other documents submitted to CHIA in support of the Data Application are complete and accurate and represent the total use of the CHIA Data requested. Any and all CHIA Data released to the Organization under an approved application may ONLY be used for the express purposes identified in this section by the Organization, and for <u>no</u> other purposes. Use of CHIA Data for other purposes requires a separate Data Application to CHIA **or** written request to CHIA, with approval being subject to CHIA's regulatory restrictions and approval process. Unauthorized use is a material violation of your organization's Data Use Agreement with CHIA.

| 1. What will be the use of the CHIA Dat | a requested? [Check all | that apply] |
|---|-------------------------|-------------|
|---|-------------------------|-------------|

| Epidemiological | □ Health planning/resource allocation | \Box Cost trends |
|--------------------------|---------------------------------------|---|
| □ Longitudinal Research | □ Quality of care assessment | □ Rate setting |
| □ Reference tool | 🛛 Research studies | \Box Severity index tool (or other derived input) |
| □ Surveillance | □ Student research | □ Utilization review of resources |
| □ Inclusion in a product | \Box Other (describe in box below) | |
| | | |

2. Provide an abstract or brief summary of the specific purpose and objectives of your Project. This description should include the research questions and/or hypotheses the project will attempt to address, or describe the intended productor report that will be derived from the requested data and how this product will be used. Include a brief summary of the pertinent literature with citations, if applicable.

Transitions in care during healthcare delivery can pose a variety of risks that could lead to bad outcomes.

Racial Disparities: Transitions in care during health care delivery can pose risks to patients. Racial disparities in healthcare delivery are a particular concern. Minority patients are underdiagnosed and undertreated for a wide variety of illnesses (including ADHD, depression, and other psychiatric diagnoses and substance use disorder diagnoses) in outpatient and ED settings.

Transitions after acute hospitalization: Safe transitions home after acute hospitalization typically require close follow up with primary care and/or specialist clinicians. Many hospitalizations also prompt the initiation of evidence-based medications in the outpatient setting (e.g. statins and antihypertensives after a MI hospitalization, anticoagulation after an atrial fibrillation hospitalization, proton-pump inhibitor therapy after an upper GI bleed hospitalization).

Transitions in care after birth: The postpartum period, often defined as the first six weeks after birth, is a critical window for physical recovery, mental health, and the social transition to parenthood. Due to the stresses in the postpartum period, nearly half of postpartum individuals do not attend routine postpartum appointments with their pregnancy providers. Individuals with co-morbidities, as well as those with pregnancy complications that signal increased risk for cardiovascular disease, require ongoing management by primary care physicians (PCPs). However, many individuals fall through the cracks and are unable to establish care with a PCP within the first 3-6 months after birth. With recent federal opportunities for states to extend Medicaid to one year after birth, patients are more likely that in the past to have insurance coverage for continued or new primary care after birth. Yet, variation in successful linkage to primary care requires further exploration, especially for marginalized communities that experience delays in postpartum care, accessing services to navigate barriers to care, and finding a PCP.

Transitions in care for patients treated by resident physicians: Patients cared for by resident physicians are particularly affected by transitions in care due to frequent transitions between physicians at the time of residency graduation. In prior single-center work, we've shown that patients cared for by resident physicians are more socioeconomically vulnerable, have higher rates of severe mental illness, and are significantly less likely to be retained in primary care after residents' transition with 60% of patients being lost to follow-up 2 years later.

Transitions in care and use of specialists: In our pilot data using 2018-2019 Medicare claims, we found 3-fold variation in cardiology use between the highest and lowest quartiles of specialist use.

In this project, we will explore variation patient outcomes related to transitions in care in all these areas, as specified in the aims detailed below.

ED to inpatient

Aim: Identify rates and disparities in resource utilization, admission and ED length of stay.

We will calculate rates of resource utilization (imaging, labs, and procedures), admission rates (overall, ICU vs. non ICU, psych vs. non-psych, and admissions for potentially preventable conditions), and ED length of stay (for admitted patients) within- and between-hospitals. We will quantify disparities in these measures by patient race and ethnicity. We hypothesize that minority patients with have higher rates of admission, due to presentation at the ED later than White patients, but lower resource utilization and higher ED length of stay, due to lower triage scores.

Aim: Identify disparities in hospitalization and healthcare utilization following a psychiatric ED visit.

Using a Bayesian threshold test, we will measure disparities in diagnosis, hospitalization, and healthcare utilization (measured as outpatient visits and prescription fills) following a psychiatric ED visit. This Bayesian analysis will allow us to account for reduced access and utilization of outpatient psychiatric care, increased dependence on EDs for healthcare services, and potential linguistic and cultural barriers to receiving mental health care among minority

Exhibit A: CHIA Non-Government All-Payer Claims Data Application

populations. We hypothesize that ED physicians unconsciously apply a higher threshold to minority patients for the diagnosis and treatment of psychiatric conditions.

Discharge to home

Aim: To identify rates and disparities in evidence-based medication initiation and follow up with primary care and specialist clinicians after acute hospitalization.

We will characterize rates of timely follow up and medication initiation overall and across exemplar reasons for hospitalization. We will then assess for disparities in follow up and medication use across payers, patient demographics, and health systems.

Provider to provider

Aim: Identify patterns of transitions between pregnancy and primary care.

Aim: Identify patterns of care variation between attending and resident physicians.

We will expand this preliminary work referenced above regarding resident physician care to quantify variation in evidence based care practices (e.g. routine cancer screenings, vaccinations, chronic disease monitoring) between resident and attending physicians and describe impact of transitions between attending and resident PCPs across Massachusetts.

Aim. Identify patterns of specialty use variation across primary care physicians.

We will quantify between- and within-physician variation in specialty use overall and in common specialties. We will identify clinical outcomes and healthcare resource use of patients cared for by high- versus low-specialist-using PCPs, *thereby developing and operationalizing a definition of value in use of specialty care*. We further hypothesize that specialty use will vary by financial model and insurer.

3. Has an Institutional Review Board (IRB) reviewed your Project?

Yes [*If yes, a copy of the approval letter and protocol <u>must</u> be included with the Application package on IRBNet.*] No, this Project is not human subject research and does not require IRB review.

4. <u>Research Methodology</u>: Applications must include either the IRB protocol or a written description of the Project methodology (typically 1-2 pages), which should state the Project objectives and/or identify relevant research questions. This document must be included with the Application package on IRBNet and must provide sufficient detail to allow CHIA to understand how the Data will be used to meet objectives or address research questions.

V. PUBLIC INTEREST

1. Briefly explain why completing this Project is in the public interest. Use quantitative indicators of public health importance where possible, for example, numbers of deaths or incident cases; age-adjusted, age-specific, or crude rates; or years of potential life lost. Uses that serve the public interest under CHIA regulations include, but are not limited to: health cost and utilization analysis to formulate public policy; studies that promote improvement in population health, health care quality or access; and health planning tied to evaluation or improvement of Massachusetts state government initiatives.

Completing this project is in the public interest because as its findings are likely to identify areas that can be targeted to promote health care quality, which CHIA regulations define as a use that serves the public interest.

VI. DATASETS REQUESTED

The Massachusetts All-Payer Claims Database is comprised of medical, pharmacy, and dental claims and information from the member eligibility, provider, and product files that are collected from health insurance payers licensed to operate in the Commonwealth of Massachusetts. This information encompasses public and private payers as well as data from fully-insured and self-insured plans. APCD data are refreshed and updated annually and made available to approved data users in Release Versions that contain five calendar years of data and three months of run-out. For more information about APCD Release Versions, including available years of data and a full list of elements in the release please refer to release layouts, data dictionaries and similar

Data requests are typically fulfilled on a one time basis, however; certain Projects may require future years of data that will become available in a subsequent release. Projects that anticipate a need for future years of data may request to be considered for a subscription. Approved subscriptions will receive, upon request, the <u>same data files and data elements</u> included in the initial Release annually or as available. Please note that approved subscription requests are subject to the Data Use Agreement, will require payment of fees for additional Data for Non-Government Entities, and subject to the limitation that the Data can be used only in support of the approved Project.

1. Please indicate below whether this is a one-time request, or if the described Project will require a subscription.

X One-Time Request **OR** \Box Subscription

2. Select Release Version and years of data requested (Release Versions and years not listed may not be available).

| ANNUAL RELEASE 2020 | ANNUAL RELEASE 2021 |
|---------------------|---------------------|
| □ 2016 | X 2017 |
| \Box 2017 | X 2018 |
| \Box 2018 | X 2019 |
| □ 2019 | X 2020 |
| \Box 2020 | X 2021 |

3. Specify below the data files requested for this Project, and provide your justification for requesting <u>each</u> file.

X Medical Claims

Describe how your research objectives require Medical Claims data:

We will need medical claims data to analyze outcomes related to transitions in care. We will need medical claims related to inpatient, outpatient, emergency department medical claims, including claims related to behavioral health claims, including psychiatry and substance use disorder-related claims.

X Pharmacy Claims

Describe how your research objectives require Pharmacy Claims data:

We will need to pharmacy claims data to analyze outpatient healthcare utilization and drug outcomes related to transitions in care.

Dental Claims

Describe how your research objectives require Dental Claims data:

N/A; we will not be requesting access to dental claims.

X Member Eligibility

Describe how your research objectives require Member Eligibility data:

We will need member eligibility data to analyze any outcome variation related to transitions that could be connected the types of services plan members are eligible for.

X Provider

Describe how your research objectives require Provider data:

We will need provider data to show outcomes related to care by type of provider, including residents and specialists, including OBGYN providers.

X Product

Describe how your research objectives require Product data:

We will need product data to analyze any outcome variation related to transitions that could be connected to type of product members are enrolled in.

VII. DATA ENHANCEMENTS REQUESTED

State and federal privacy laws limit the release and use of CHIA Data to the minimum amount of data needed to accomplish a specific Project objective.

All-Payer Claims Database data is released in Limited Data Sets (LDS). All Organizations receive the "Core" LDS, but may also request the data enhancements listed below for inclusion in their analyses. Requests for enhancements will be reviewed by CHIA to determine whether each represents the minimum data necessary to complete the specific Project objective.

For a full list of elements in the release (i.e., the core elements and additional elements), please refer to <u>release</u> <u>layouts</u>, <u>data dictionaries</u> and similar documentation included on CHIA's website.

1. Specify below which enhancements you are requesting in addition to the "Core" LDS, provide your justification for requesting <u>each</u> enhancement.

a. Geographic Subdivisions

ZIP code and state geographic subdivisions are available for Massachusetts residents and providers only. Small population ZIP codes are combined with larger population ZIP codes. One ZIP Code per person (MEID) per year has been assigned based on the ZIP code/state reported in the member eligibility record's earliest submission year month. If the record does not have an MEID, assignment is based on distinct OrgID/Carrier Specific Unique Member ID.

Non-Massachusetts ZIP codes and sate codes except for CT, MA, ME, NH, NY, RI, and VT are suppressed.

Select <u>one of the following options.</u>

| □ 3-Digit Zip Codes (standard) | X 5-Digit Zip Codes*** | |
|---|------------------------|--|
| ***If requested, provide justification for requesting 5-Digit Zip Code. Refer to specifics in your methodology: | | |
| 5 digit zip codes are necessary to adequately quantify disparities by geographic region and including in our | | |
| models the area deprivation index (ADI) measures. | | |

b. Date Resolution

Select <u>one</u> option from the following options.

| ☐ Year (YYYY) (Standard) | □ Month (YYYYMM) *** | |
|--|---|-------------------------------------|
| | | X Day (YYYYMMDD) *** [<u>for</u> |
| | | selected data elements only] |
| *** If requested, provide justification for requesting Month or Day. Refer to specifics in your methodology: | | |
| In order to adequately quantify trans | itions in care, we will require time me | easures more granular than monthly. |
| For example, post-discharge, we will want to measure both 14-day and 30-day follow-up with primary care. | | |
| This is necessitate daily data. | | · · · · · |

c. National Provider Identifier (NPI)

Select <u>one</u> of the following options.

| X Encrypted National Provider Identifiers (standard) | Decrypted National Provider Identifiers*** |
|--|---|
| *** If requested, provide justification for requesting decrypted | National Provider Identifier(s). Refer to specifics in your |
| methodology: | |

We will need NPIs to link providers to day of visit prescriptions.

VIII. MEDICAID (MASSHEALTH) DATA

1. Please indicate whether you are seeking Medicaid Data:

X Yes

🗆 No

2. Federal law (42 USC 1396a(a)7) restricts the use of individually identifiable data of Medicaid recipients to uses that are <u>directly connected to the administration of the Medicaid program</u>. If you are requesting MassHealth Data, please describe, in the space below, why your use of the Data meets this requirement. *Your* 3. \description should focus on how the results of your project could be used by the Executive Office of Health and Human Services in connection with the administering the MassHealth program. Requests for identifiable MassHealth Data will be forwarded to MassHealth for a determination as to whether the proposed use of the Data is directly connected to the administration of the MassHealth program. CHIA cannot release MassHealth Data without approval from MassHealth. This may introduce significant delays in the receipt of MassHealth Data.

Researchers must provide the following information for MassHealth to determire how the disclosure of indentifiable MassHeath claims data is directly related to the administration of the MassHealth program:

- How does the project relate directly to the administration of the Medicaid program? This project will analyze data related to transitions in care. Such analysis could identify areas where MassHealth could implement interventions to increase quality of care administered under the program generally and reduced racial disparities in particular.
- What specific Medicaid program, policy, rule or law will be affected or changed based on the outcome of this project? Our findings could identify areas needing improvement in the overall MassHealth programs to improve quality of care for all MassHealth members. Specifically, our findings may help identify gaps in policies related to reducing racial disparities, improving mental health services provided by the Massachusetts Behavioral Health Partnership, and improving post-partum care.
- How will MassHealth's objectives be helped or impaired by approving this project? While this research could identify areas where MassHealth programs could improve in the general area of transitions in care, it also has the potential to show potential areas for improvement around behavior health reform and the MassHealth Health Equity Initiative in particular.
- Will the results of the research have the potential for:
 - reducing cost of the Medicaid program,
 - o improving access for recipients, and/or
 - increasing quality of care to recipients?

This research could identify areas of increase cost around transitions in care, thus helping to identify areas where costs could be targeted. It could also identify areas where transitions in care are related to lower quality care, thus identifying target areas for interventions.

• Please describe the project deliverables the researchers will provide to MassHealth

Researchers will provide results via publication in peer-reviewed journals.

• Please describe how MassHealth can use the project deliverables in administration of the MassHealth program. Project deliverables would likely be most helpful in identifying target areas for quality improvement.

4. Organizations approved to receive Medicaid Data will be required to execute a <u>Medicaid Aknowlegment of</u> <u>Conditions</u> MassHealth may impose additional requirements on applicants for Medicaid Data as necessary to ensure compliance with federal laws and regulations regarding Medicaid.

IX. DATA LINKAGE

Data linkage involves combining CHIA Data with other data to create a more extensive database for analysis. Data linkage is typically used to link multiple events or characteristics within one database that refer to a single person within CHIA Data.

- 1. Do you intend to link or merge CHIA Data to other data? X Yes
 - \Box No linkage or merger with any other data will occur
- 2. If yes, please indicate below the types of data to which CHIA Data will be linked. [Check all that apply] □ Individual Patient Level Data (e.g. disease registries, death data)
 - X Individual Provider Level Data (e.g., American Medical Association Physician Masterfile)
 - Individual Facility Level Data (e.g., American Hospital Association data)
 - X Aggregate Data (e.g., Census data)
 - \Box Other (please describe):

3. If yes, describe the dataset(s) to which the CHIA Data will be linked, indicate which CHIA Data elements will be linked and the purpose for each linkage.

We plan to link CHIA provider data to the CMS Doctors and Clinicians national downloadable file, which is a public file with characteristics about clinicians and their practices.

4. If yes, for each proposed linkage above, please describe your method or selected algorithm (e.g., deterministic or probabilistic) for linking each dataset. If you intend to develop a unique algorithm, please describe how it will link each dataset.

We will link CMS files by NPI and link area deprivation index by 5 digit zip codes.

5. If yes, attach or provide below a complete listing of the variables from <u>all sources</u> to be included in the final linked analytic file.

Please see attached data application methods document.

6. If yes, please identify the specific steps you will take to prevent the identification of individual patients in the linked dataset.

The principal investigator has exclusive use of a high performance computing cluster at the medical center which is rated for clinical care. It is rated for PHI and housed in the clinical data center with high speed network connections to the other clinical servers. As the cluster is used for machine learning algorithm inference for algorithms already deployed for clinical care, the cluster itself is considered by the institution to be a clinical server, with multiple redundant networking, power, storage, and disaster recovery, as well as AAA service rating.

This cluster houses 208 CPU cores, 1.5 TB of memory, 8x A100 GPU's with 640gb of GPU memory, and dedicated high-speed on-cluster storage. Scheduling and workload management on this cluster is managed using SLURM and is connected by a dedicated high-speed Infiniband network.

This research cluster is considered to be a clinical server by the hospital (highest level of security) and has the same security policies, continuous security audits, and AAA rating as any other server used for clinical care at the institution.

Data will be archived according to our institutional policies for clinical data. Our enterprise backup policy for clinical data includes duplication at an off-site data center facility and regular backups via our backup agent.

The PI will be responsible for the security of the dataset.

X. PUBLICATION / DISSEMINATION / RE-RELEASE

1. Do you anticipate that the results of your analysis will be published or made publically available? If so, how do you intend to disseminate the results of the study (e.g.; publication in professional journal, poster presentation, newsletter, web page, seminar, conference, statistical tabulation)? Any and all publication of CHIA Data must comply with CHIA's cell size suppression policy, as set forth in the Data Use Agreement. Please explain how you will ensure that any publications *will not disclose a cell less than 11*, and percentages or other mathematical formulas that result in the display of a cell less than 11.

We plan to disseminate our research results through publication in peer-reviewed journals and/or presentations at national conferences. Any cell sizes under 11 will be censored in any publication.

2. Describe your plans to use or otherwise disclose CHIA Data, or any Data derived or extracted from such Data, in any paper, report, website, statistical tabulation, seminar, or other setting that is not disseminated to the public.

We do not anticipate disclosing CHIA data or data derived or extracted. We will only disclose and disseminate results of the study publicly through publications and/or conferences, as noted above.

What will be the lowest geographical level of analysis of data you expect to present for publication or presentation (e.g., state level, city/town level, zip code level, etc.)? Will maps be presented? If so, what methods will be used to ensure that individuals cannot be identified?

Will you be using CHIA Data for consulting purposes?

 \Box Yes

X No

We anticipate using zip code level data for tables and graphs included in dissemination of our research findings, which may include maps. The N for the population of patients receiving care transitions will be large enough to ensure that individuals cannot be identified. Any zip codes with < 11 patients in our sample of interest will be censored on any tables and figures.

3. Will you be selling standard report products using CHIA Data?

 \Box Yes

X No

4. Will you be selling a software product using CHIA Data?

□ Yes X No

5. Will you be using CHIA Data as in input to develop a product (i.e., severity index took, risk adjustment tool, reference tool, etc.)

□ Yes X No

6. Will you be reselling CHIA Data in any format not noted above?

Exhibit A: CHIA Non-Government All-Payer Claims Data Application

□ Yes X No

If yes, in what format will you be reselling CHIA Data?

Click here to enter text.

7. If you have answered "yes" to questions 5, 6, 7 or 8, please provide the name and a description of the products, software, services, or tools.

Click here to enter text.

8. If you have answered "yes" to questions 5, 6, 7 or 8, what is the fee you will charge for such products, software, services or tools?

Click here to enter text.

XI. APPLICANT QUALIFICATIONS

1. Describe your previous experience using claims data. This question should be answered by the primary investigator and any co-investigators who will be using the Data.

Research team members have extensive experience in working with large clinical and administrative databases. Below are some examples of clinical innovations research team members have led:

- A model to predict hospitalizations across the Beth Israel Leahy Health (BILH) network related to COVID-19, which outperformed all national models for predicting hospitalizations.
- A machine learning research core for BIDMC, a computational infrastructure that can process protected health information for high-scale, large data investigations (funded by the *Massachusetts Life Sciences Center*).
- A "business risk index," using anonymized cell phone data and use of different types of businesses to show when patients in the service area were showing indications of relaxing precautions against COVID transmission.
- A critical care patient-specific checklist aimed at eliminating checklist fatigue by presenting only that data relevant to each specific critical care patient.
- A computerized clinical decision support tool to improve the appropriateness of acid-suppressive medication prescribing in the hospital setting. This tool significantly reduced inappropriate prescribing of acid-suppressive medication in a sustained fashion.
- A gap analysis and asset map of community based organizations focused on maternal health and racial equity in the Greater Boston area.
- Adaption, implementation, and scaling of the WHO Safe Childbirth Checklist as part of transformative quality improvement initiatives in Mexico (with BetterBirth team at Ariadne Labs).
- A physician shift model to support nursing triage at the point of care.
- A pre-visit multidisciplinary team huddle practice in the resident continuity clinic at BIDMC, which aims to improve clinic flow, team skills and clinic experience, and close care gaps in the resident primary care panel.
- Implementation of the Medicare Transitional Care Management Pathway at Health Care Associates, aimed at reducing mortality and readmissions among post-discharge patients.
- A patient transition process for graduating residents at BIDMC, to reduce patient loss and improve the empanelment process at the internal medicine resident ambulatory practice. This process reduced patient loss by 10 percent.
- An electronic written sign-out tool for handing off inpatients on the teaching services at BIDMC, which better informs cross-covering physicians about the patients they care for while the primary team is off for the evening, and as a training module for residents in their first postgraduate year of training.
- Integration of race, ethnicity, payer and preferred language data into the quality assurance case review process for the Department of Obstetrics and Gynecology at BIDMC.
- Best practices for the care of pregnant people with opioid and other substance use disorders.
- An assessment of race, ethnicity, and language data needed to effectively implement interventions to reduce disparities and promote equity in the delivery of care. This process included recommending certain measures of inclusion in an equity dashboard.

Exhibit A: CHIA Non-Government All-Payer Claims Data Application

2. <u>Resumes/CVs</u>: When submitting your Application package on IRBNet, include résumés or curricula vitae of the principal investigator and co-investigators. (These attachments will not be posted on the internet.)

XII. USE OF AGENTS AND/OR CONTRACTORS

By signing this Application, the Organization assumes all responsibility for the use, security and maintenance of the CHIA Data by its agents, including but not limited to contractors. The Organization must have a written agreement with the agent of contractor limiting the use of CHIA Data to the use approved under this Application as well as the privacy and security standards set forth in the Data Use Agreement. CHIA Data may not be shared with any third party without prior written consent from CHIA, or an amendment to this Application. CHIA may audit any entity with access to CHIA Data. Provide the following information for <u>all</u> agents and contractors who will have access to the CHIA Data. [Add agents or contractors as needed.]

| AGENT/CONTRACTOR #1 INFORMATION | |
|---------------------------------|---------------------------|
| Company Name: | Click here to enter text. |
| Company Website | Click here to enter text. |
| Contact Person: | Click here to enter text. |
| Title: | Click here to enter text. |
| E-mail Address: | Click here to enter text. |
| Address, City/Town, State, Zip | Click here to enter text. |
| Code: | |
| Telephone Number: | Click here to enter text. |
| Term of Contract: | Click here to enter text. |

1. Describe the tasks and products assigned to the agent or contractor for this Project and their qualifications for completing the tasks.

Click here to enter text.

2. Describe the Organization's oversight and monitoring of the activities and actions of the agent or contractor for this Project, including how the Organization will ensure the security of the CHIA Data to which the agent or contractor has access.

Click here to enter text.

3. Will the agent or contractor have access to and store the CHIA Data at a location other than the Organization's location, off-site server and/or database?

- \Box Yes
- \Box No

4. If yes, a separate Data Management Plan <u>must</u> be completed by the agent or contractor.

| AGENT/CONTRACTOR #1 INFORMATION | |
|---------------------------------|---------------------------|
| Company Name: | Click here to enter text. |
| Company Website | Click here to enter text. |
| Contact Person: | Click here to enter text. |
| Title: | Click here to enter text. |
| E-mail Address: | Click here to enter text. |
| Address, City/Town, State, Zip | Click here to enter text. |
| Code: | |
| Telephone Number: | Click here to enter text. |

1. Describe the tasks and products assigned to the agent or contractor for this Project and their qualifications for completing the tasks.

Click here to enter text.

2. Describe the Organization's oversight and monitoring of the activities and actions of the agent or contractor for this Project, including how the Organization will ensure the security of the CHIA Data to which the agent or contractor has access.

Click here to enter text.

3. Will the agent or contractor have access to or store the CHIA Data at a location other than the Organization's location, off-site server and/or database?

 \Box Yes \Box No

4. If yes, a separate Data Management Plan <u>must</u> be completed by the agent or contractor.

[INSERT A NEW SECTION FOR ADDITIONAL AGENTS/CONTRACTORS AS NEEDED]

XIII. ATTESTATION

By submitting this Application, the Organization attests that it is aware of its data use, privacy and security obligations imposed by state and federal law *and* confirms that it is compliant with such use, privacy and security standards. The Organization further agrees and understands that it is solely responsible for any breaches or unauthorized access, disclosure or use of CHIA Data, including, but not limited to, any breach or unauthorized access, disclosure or use by any third party to which it grants access.

Organizations approved to receive CHIA Data will be provided with Data following the payment of applicable fees and upon the execution of a Data Use Agreement requiring the Organization to adhere to processes and procedures designed to prevent unauthorized access, disclosure or use of data.

By my signature below, I attest: (1) to the accuracy of the information provided herein; (2) this research is not funded by a source requiring the release of raw data to that source; (3) that the requested Data is the minimum necessary to accomplish the purposes described herein; (4) that the Organization will meet the data privacy and security requirements described in this Application and supporting documents, and will ensure that any third party with access to the Data meets the data use, privacy and security requirements; and (5) to my authority to bind the Organization.

| Signature: (Authorized Signatory for Organization) | |
|---|---|
| Printed Name: | Tiffany Chan |
| Title: | Research Contract Associate, Sponsored Programs Contracting |
| Date: | September 8, 2023 |

Attachments:

A completed Application must have the following documents attached to the Application or uploaded separately to IRBNet:

X1. IRB approval letter and protocol (if applicable), or research methodology (if protocol is not attached)X2. Data Management Plan (including one for each agent or contractor that will have access to or store the CHIA Data at a location other than the Organization's location, off-site server and/or database);X3. CVs of Investigators (upload to IRBNet)

APPLICATIONS WILL NOT BE REVIEWED UNTIL THEY ARE COMPLETE, INCLUDING ALL ATTACHMENTS.