Application for Massachusetts Case Mix and Charge Data (Non-Government)
[Exhibit A – Data Application]

I. INSTRUCTIONS

This form is required for all Applicants, Agencies, or Organizations, hereinafter referred to as "Organization", except Government Agencies as defined in 957 CMR 5.02, requesting protected health information. All Organizations must also complete the Data Management Plan, 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 Data Use Agreement. 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 casemix.data@state.ma.us 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 CHIA website.

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.

==*Applications will not be reviewed until the Application and all supporting documents are complete and the required application fee is received.*==

*A **Fee Remittance Form** 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 Case Mix and Charge Data.

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

3. If you believe that you qualify for a fee waiver, complete and submit the Fee Remittance Form and attach it and all required supporting documentation with your application. Refer to the Fee Schedule (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:	Identifying trends, assessing unmet healthcare needs in communities and changes in CT Hospitals market share to aid policy decisionmaking.
IRBNet Number:	Click here to enter text.
Organization Requesting Data (Recipient):	CT Office of Health Strategy
Organization Website:	https://portal.ct.gov/OHS
Authorized Signatory for Organization:	Victoria Veltri, JD, LLM
Title:	Executive Director
E-Mail Address:	Victoria.Veltri@ct.gov
Telephone Number:	860 418 7008
Address, City/Town, State, Zip Code:	450 Capitol Ave, MS#51OHS, P.O. Box 340308, Hartford, CT 06134-0308
Data Custodian: (individual responsible for organizing, storing, and archiving Data)	Joseph Rus
Title:	Information Technologist Analyst II
E-Mail Address:	Joseph.Rus@ct.gov
Telephone Number:	860 418 7083
Address, City/Town, State, Zip Code:	450 Capitol Ave, MS#51OHS, P.O. Box 340308, Hartford, CT 06134-0308
Primary Investigator (Applicant): (individual responsible for the research team using the Data)	Olga Armah, M. Phil
Title:	Research Analyst Supervisor
E-Mail Address:	Olga.Armah@ct.gov
Telephone Number:	860 418 7070
Address, City/Town, State, Zip Code:	450 Capitol Ave, MS#51OHS, P.O. Box 340308, Hartford, CT 06134-0308
Names of Co-Investigators:	Gloria Sancho, Alla Veyberman; Hanna Nagy
E-Mail Addresses of Co-Investigators:	Gloria.Sancho@ct.gov; Alla.Veyberman@ct.gov; Hanna.Nagy@ct.gov

IV.   PROJECT INFORMATION

1. What will be the use of the CHIA Data requested? [Check all that apply]

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

The data will support Office of Health Strategy (OHS) analyses of hospital utilization patterns, certificate of need application review, healthcare program evaluation, and policy development and decisionmaking. The data will also enhance OHS analyses of avoidable hospital utilizations, unnecessary healthcare, patient outmigration patterns, charge comparsions, and hospital casemix index and market share trends. This data will form the basis of comparisons for CT peer hospitals, health systems, providers, towns, payers and poulations and to provide context..

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 product or 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.

> The data will support Office of Health Strategy (OHS) analyses of hospital utilization patterns, certificate of need application review, healthcare program evaluation, and policy development and decisionmaking. The data will also enhance OHS analyses of avoidable hospital utilizations, unnecessary healthcare, patient outmigration patterns, charge comparsions, and hospital casemix index and market share trends.
> This data will also enhance OHS' to identify gaps in services, unmet need, compare cost/price, and project and plan future health care service needs for Connecticut residents.
> Questions OHS hopes to answer include, but are not limited to:
> -What are the patterns of inpatient, outpatient and ED utilization in the MA market and how do those trends vary by geography, type of payer and service compared to CT? Do the patterns vary over time?
> -Outmigration patterns for CT residents utilizing MA hospitals, type of services accessed, cost comparisons and the impact on the overall cost of healthcare for Connecticut residents.

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

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

4. **Research Methodology**: 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.*

> The mission of Connecticut's Office of Health Strategy is to implement comprehensive, data driven strategies that promote equal access to high quality health care, control costs and ensure better health for the people of Connecticut. Understanding health care utilization in our market as well as across the state will help OHS to develop
> health policy that improves health outcomes and limits health care cost growth across all sectors, whether private or public, including hospitals, physicians and clinical services, and prescription drugs.

VI.   DATASETS REQUESTED

The Massachusetts Case Mix ("Case Mix") are comprised of Hospital Inpatient Discharge, Emergency Department and Outpatient Hospital Observation Stay Data collected from Massachusetts' acute care hospitals, and satellite emergency facilities. Case Mix Data are updated each fiscal year (October 1 – September 30) and made available to approved data users. For more information about Case Mix Data, including a full list of available elements in the datasets please refer to release layouts, data dictionaries and similar documentation included on CHIA's website.

Data requests are typically fulfilled on a one time basis, however; certain Projects may require years of data not yet available. Applicants who 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 request will be subject to the Data Use Agreement, will require payment of fees for additional Data, 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.

☐ One-Time Request   **OR**   ☒ Subscription

2. Specify below the dataset(s) and year(s) of data requested for this Project, and your justification for requesting *each* dataset. Data prior to 2004 <u>is not</u> available.

☒ **Hospital Inpatient Discharge Data**
☐2004 ☐2005 ☐2006 ☐2007 ☐2008 ☐2009 ☐2010 ☐2011 ☐2012 ☐2013 ☒2014 ☒2015 ☒ 2016 ☒ 2017 ☒2018 ☒2019
Describe how your research objectives require Inpatient Discharge data: The inpatient discharge data will allow OHS to understand the market dynamics and trends in inpatient utilization allowing us to plan for and authorize provision of healthcare services our communities need. Additionally, we would like to analysis our potentially avoidable inpatient visits and length of stay as compares to neighboring states.
☒ **Outpatient Hospital Observation Stay Data**
☐2004 ☐2005 ☐2006 ☐2007 ☐2008 ☐2009 ☐2010 ☐2011 ☐2012 ☐2013 ☒2014 ☒2015 ☒ 2016 ☒ 2017 ☒2018 ☒2019
Describe how your research objectives require Outpatient Hospital Observation Stay data: Like our need for inpatient data, it will help OHS to analyze the needs of CT patients in the right care setting which include inpatient, observation stays, and ED. Without hospital outpatient observation stay data we will not have a complete picture of hospital services utilization and guage the needs of obsrervation stay beds..
☒ **Emergency Department Data**
☐2004 ☐2005 ☐2006 ☐2007 ☐2008 ☐2009 ☐2010 ☐2011 ☐2012 ☐2013 ☒2014 ☒2015 ☒ 2016 ☒ 2017 ☒2018 ☒2019
Describe how your research objectives require Emergency Department data: Like our need for inpatient and outpatient data, it will help OHS to analyze the needs of CT patients in the right care setting which include inpatient, hospital outpatient, and ED. Without hospital ED data we will not have a complete picture of hospital services utilization.

VII.   DATA ENHANCEMENTS REQUESTED

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

Case Mix Data are released in Limited Data Sets (LDS). All applicants 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 enhancements), please refer to release layouts, data dictionaries and similar documentation included on CHIA's website.

Please note that CHIA Case Mix Data contain reports produced using proprietary computer software created, owned, and licensed by the 3M Company. All Copyrights in and to the 3M APR^{TM} Software, and to the 3M APR^{TM} DRG classification system(s) (including the selection, coordination and arrangement of all codes) are owned by 3M. All rights reserved.

1. Specify below which enhancements you are requesting in addition to the "Core" LDS. CHIA will use this information to determine what Level of data is needed for pre-FY 2015 data requests.

Geographic Subdivisions
State, five-digit zip code, and 3-digit code are available for patients residing in CT, MA, ME, NH, RI, VT, and NY. City or Town of residence is available for residents of MA only. States outside of this region will be coded as XX ("Other").

Select *one* of the following options:

☐ 3-Digit Zip Code (Standard)	☐ 3-Digit Zip Code & City/Town ***	☒ 5-Digit Zip Code ***	☐ 5-Digit Zip Code & City/Town ***
***If requested, provide justification for requesting 5-Digit Zip Code or City/Town. Refer to specifics in your methodology: With zip code & city/town data we plan to study the changes in utilization including out-migration patterns for CT residents, migration, physician referral patters and compare length of stays for specific services stratified by geography. Additionally, it is essential to have data at the zip code level so we can determine the specific details such as utilization, diagnosis, service line, and charges for multiple purposes including Certificate of Need applications review, cost estimator and cost-to-charge ratio trends analyses. Having the zip code with city and town will allow us to calculate distance /travel time for CT residence using medical facilities across the state line.			

Demographic Data
Selcect *one* of the following options:

☐ Not Requested (Standard)	☒ Race & Ethnicity***
** If requested, provide justification for requesting Race and Ethnicity. Refer to specifics in your methodology: Like zip code we plan to study the changes in utilization including patient migration and physician referral patterns and compare lengths of stay for specific services stratified by race and ethnicity. Additionally, we want to study if there are any patterns for CT residents to seek specific service across the state line based on race and ethnicity.	

Date Resolution
Select *one* of the following options for dates of admissions, discharges, and significant procedures.

☐ Year (YYYY)(Standard)	☐ Month (YYYYMM) ***	☒ Day (YYYYMMDD)***
***If requested, provide justification for requesting Month or Day. Refer to specifics in your methodology: OHS plans to analyze utilization trends including patient migration, physician referral and patterns for specific services to see if there are seasonal trends or variances in utilization during different months and days of the week.		

Practioner Identifiers (UPN)
Select *one* of the following options.

☐ Not Requested (Standard)	☒ Hashed ID ***	☐ Board of Registration in Medicine Number (BORIM) ***
***If requested, provide justification for requesting Hashed ID or BORIM Number. Refer to specifics in your methodology: The information will be used to track physician practice patterns to compare with peer physicians in CT. CT statutes prohibit public reporting of physician level information, however information that could be glean regarding physician practice e.g cardiac and joint replacement surgeries will guide health systems planning and policy making activities. There will be no matching by physician ID, the focus will be on physician specialty, volumes, multi-site privileges and patient discharge and transfer patterns.		

Unique Health Information Number (UHIN)
Select *one* of the following options.

☐ Not Requested (Standard)	☒ UHIN Requested ***
*** If requested, provide justification for requesting UHIN. Refer to specifics in your methodology: These data will be used to identify post-discharge readmissions, ED and observation stay patterns and cost trends to compare to those observed for peer CT providers to aid policy decision making.	

Hashed Mother's Social Security Number
Select *one* of the following options:

☐ Not Requested (Standard)	☒ Hashed Mother's SSN Requested ***
*** If requested, provide justification for requesting Hashed Mother's SSN. Refer to specifics in your methodology: These data will be used to track mother/child conditions cost trends such as neonatal abstinence syndrome, low-weight births etc to aid policy decisionmaking	

VIII.   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?
    ☒ Yes
    ☐ 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)
    ☒ Individual Provider Level Data (e.g., American Medical Association Physician Masterfile)
    ☐ Individual Facility Level Data (e.g., American Hospital Association data)
    ☒ Aggregate Data (e.g., Census data)
    ☐ 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.

> CHIA data will be compared with CT hospitals' data to discern patterns and trends over time.
> The patient's and hospital's zip codes will be used for mapping purposes to better understand patterns for similar demographic characteristics to aid policy decision making.

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.

> The data will be linked to census socio-demographic data at zip code level and physician specialty from the CT Department of Public Health provider licensure database
> (https://www.elicense.ct.gov/Lookup/GenerateRoster.aspx) to facilitate peer comparisons.

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

> The list of variables from the CT Department of Public Health provider licensure database
> (https://www.elicense.ct.gov/Lookup/GenerateRoster.aspx) are:
> For hospitals - The: facility name, city, zip
> For practitioners – The list of variables are : practioner license type, UpinSpecCode, state speciality, primary practice city, primary practice zip code
> US Census Bureau zip code data from
> https://www2.census.gov/geo/docs/reference/2020addresscountlist/25_Massachusetts_AddressBlockCountList_012020.txt : state, county, tract, county, block, block_geoid, total residential, total group quarters and socioeconomic data from https://www.census.gov/data/tables.html to compare peer cities/towns

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

> Only the analysts included in this application will have access to the CHIA data. The analysts have been trained in HIPAA privacy rules. Only aggregate results for any analyses may be publicly available. Data aggregations and analyses will be used internally for OHS strategic planning, CON decisionmaking, health care policy

initiatives, cost and market share analyses. All reports utilizing these aggregations will be peer reviewed by one of the other analyst to ensure cell sizes under 11 are masked in adherence to both CHIA and CT statutes and regulations regarding confidentiality of patient data.

IX.   PUBLICATION / DISSEMINATION / RE-RELEASE

1. Do you anticipate that the results of your analysis will be published or made publicly 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.

Results of these analyses may be used in reports or briefs that may be web published. But most results will be used internally for strategic planning, health care policy initiatives, cost and market share analysis. All reports utilizing these aggregations will be peer reviewed by at least one of the other authorized analysts as well as the primary investigator to ensure cell sizes under 11, percentages or other mathematical calculations utilized cell sizes under 11 are combined with other cell sizes, excluded or masked in adherence to both CHIA and CT statutes and regulations regarding confidentiality of patient data.

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.

No disclosure or publication of data will occur that exposes individual identifiable data. If requested, to disclose the results of any analysis to state or federal authorities, only aggregated, de-identified, and cell-suppressed data will be used. All analyses and publications will be peer reviewed by other authorized analysts as will as the primary investigator OHS to ensure adherence to state and federal mandates.

3. 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?

Analysis and associated maps may be based on 5-digit zip code level data for those with 20,000+ residents. If the of number of low cell sizes are significantly high, zip codes will be aggregated to town or county level. Cell suppression and statistical significance rules will also apply.

4. Will you be using CHIA Data for consulting purposes?
  ☒ Yes
  ☐ No

5. Will you be selling standard report products using CHIA Data?
  ☐ Yes

☒ No

6. Will you be selling a software product using CHIA Data?
  ☐ Yes
  ☒ No

7. 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
  ☒ No

8. Will you be reselling CHIA Data in any format not noted above?
  ☐ Yes
  ☒ No

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

N/A

9. 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.

N/A

10. 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?

N/A

X.   APPLICANT QUALIFICATIONS

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

OHS' Health System Planning unit (formerly the Office of Health Care Access) has CT hospital data for FY 1991 – 2019. The primary investigator has had primary responsibility for receiving, performing data validation and analyzing the CT data for 20 years. She analyzed and oversaw the analyses of the CT data to identify preventable hospitalizations and ED visits, 30-day readmissions, to identify gaps in services for the state's 2012, 2014, 2016 and 2018 Statewide Healthcare Facilities and Services Plans, and for Certificate of Need program decision making..
Gloria, Alla and Hanna (the co-investigators) have also been involved in these data validations and analyses for 2-25 years.

2. **Resumes/CVs**: 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.)

XI.   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 **all** agents and contractors who will have access to the CHIA Data. [*Add agents or contractors as needed.]*

N/A

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 Code:	Click here to enter text.
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.

N/A

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.

N/A

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?

☐ Yes
☒ No

4. If yes, a separate Data Management Plan **must** be completed by the agent or contractor.

AGENT/CONTRACTOR #2 INFORMATION	
Company Name:	**N/A**
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 Code:	Click here to enter text.
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.

N/A

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.

N/A

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?

☐ Yes
☒ No

4. If yes, a separate Data Management Plan **must** be completed by the agent or contractor.
N/A

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

XII.   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)	Drag signature image here or delete and physically sign
Printed Name:	**VICTORIA VELTRI, JD, LLM**
Title:	EXECUTIVE DIRECTOR
Date:	Click here to enter text.

Attachments:
A completed Application must have the following documents attached to the Application or uploaded separately to IRBNet:
☒ 1. IRB approval letter and protocol (if applicable), or research methodology (if protocol is not attached)
☒ 2. 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);
☒ 3. CVs of Investigators (upload to IRBNet)

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

Attachment: Research Methodology

OHS will be carrying out multiple data aggregations and analyses for decisionmaking including but not limited to Certificate of Need (CON), strategic planning, healthcare policy initiatives, cost and market share trends, and healthcare facilities and services planning analyses. This will involve processing MA and CT patient data utilizing the same methodology, parameters and years of data to minimize external confounding factors, such as mismatched comparisons, that hamper the development, implementation or evaluation of appropriate effective healthcare policy.

The data among other analyses, will be used to assess the quality of care provided by hospitals, health systems and practitioners in comparison to their peers in and out of state before and after a hospital merger or acquitions. For instance:

1. OHS will process MA and CT inpatient discharge data through the Agency for Healthcare Research and Quality (AHRQ) quality indicator application provider at https://www.qualityindicators.ahrq.gov/ to develop provider and area level quality indicators such as in-hospital measures of surgical procedures underuse, overuse amd misuse, community access to primary care and outpatient care, thirty-day readmissions, disparities in access among communities and subpopulations, quality of community care for acute and chronic conditions before and after hospital acquisitions by another hospital or health system.

2. OHS will also apply the NYU algorithm at https://wagner.nyu.edu/faculty/billings/nyued-background to help classify ED utilization to examine avoidable ED use in CT and hospital primary service areas vis-a-vis MA and peer hospital primary service areas and evaluate benefits of an acquisitions to residents of areas of underservice. Or to utilize the information gleaned to facilitate CON application reviews and develop conditions for inclusion in CON final decision orders and/or agreed settlements.

3. The quality measures will also enable OHS to assess the appropriateness or adequacy of hospital community health needs assessments and improvement plans, and use of community benefit resources to alleviate underservice for acute and chronic conditions, racial/ethnic disparities in outcomes, or SDOH related needs.

4. Other analyses are to compare the charges for similar inpatient services to determine if the variations among CT hospitals are excessive, lower than or comparable to their MA peers; attempt to identify the causes of such variations and similarities and dissimilarities to shape decisionmarking; and what happens to charges when there is further consolidation of hospitals and health systems.

5. OHS will utilize the MA data to identfy gaps in CT data if any, for assessing availability/sufficiency of intensive resource use services such as percutaneous coronary intervention (PCI) and joint replacement procedures at inpatient and/or outpatient sites. OHS will utilize ICD 9/10 codes to identify the procedures.

   The above represent a few of the methodologies OHS will utilize to facilitate decisionmaking and policy development, implementation and evaluation.