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# National Governors Association: High Cost/High Need Medicaid Members State of Connecticut

# Overview of Presentation

- Review NGA Project Scope and Goal
- Review Methodology to Identify Target Population
- Review Intervention Strategy
- Review Evaluation Methodology
- Review Non-NGA Cohorts of Interest

# NGA Project Scope

- The NGA High Cost/High Need Project is an opportunity for states to access technical assistance in order to impact high cost & high need Medicaid members
- The NGA offers technical assistance to states in a variety of areas, including, but not limited to the following:
  - Clinical feedback on identification of target population
  - Clinical and practical feedback on the degree of impactability of the target population
  - Intervention services and strategies
  - Evaluation Methodology

# CT NGA Project Collaboration

- The CT NGA Project is a collaboration among several state agencies, ASOs, and the NGA Technical Assistance Team:
  - OPM
  - DSS
  - DMHAS
  - DCF
  - DOC
  - CHN- Medical ASO
  - Beacon Health Options – Behavioral Health ASO
  - NGA – Technical Assistance Team (clinical, evaluation, data)

# CT NGA Project- Identification of Target Population/Cohort

- The first task was to develop a methodology to identify the high cost & high need members
- The NGA team agreed that we needed to understand the diagnoses of the following cohorts
  1. Diagnoses of highest cost members
  2. Diagnoses of highest utilizers of the Emergency Department
  3. Diagnoses of highest utilizers of inpatient hospitalization
  4. Diagnoses of top 10% from each of the first three cohorts
- The highest cost members continued to rise to the top because their cost was so significant, but these same people did not necessarily use the ED or inpatient services more than any other member.
- The team decided that very highest cost members did not meet the definition for both high cost AND high need

# Initial Findings- Initial Cohort

- For adults, the highest cost members continued to rise to the top because their cost was so significant, but these same people did not necessarily use the ED or inpatient services more than any other member.
- Examples include adults with an intellectual disability
- The team decided that very highest cost members did not meet the definition for both high cost AND high need

# Cohort Identification

- The state agencies acknowledge the data analytic teams at Community Health Network, the medical ASO and Beacon Health Options, the behavioral health ASO
- The clinical and analytic staff at CHN developed the data definitions and ran the initial cohorts to determine who would be appropriate for the NGA Project
- The initial data indicated that a high number of individuals with high cost and high need had a primary or secondary behavioral health condition so Beacon Health Options developed the second set of data runs that ultimately produced the intervention cohorts

# CHN Criteria

- Data run dates: CY 2014
- Run-out date or data run date: February 22, 2016
- Includes crossover claims
- Medicare claims excluded
- Select members with the following
  - Three ED visits within six months
  - Two inpatient admission within those same six months



# Cohort 1: High Cost - Adults

## Top Ten Diagnoses for Adults

1. Moderate Intellectual Disability
2. Mild Intellectual Disability
3. Profound Intellectual Disability
4. Severe Intellectual Disability
5. Unspecified Episodic Mood Disorder
6. Depressive Disorder Not Elsewhere Classified
7. Other Persistent Mental Disorder
8. Encounter for Antineoplastic Chemotherapy
9. Acute Respiratory Failure
10. Unspecified Psychosis

# Cohort 1: High Cost - Children

## Top Ten Diagnoses for Children

1. Mood Disorder
2. Depressive Disorder
3. Single Liveborn Hospital Delivery by C-Section
4. PTSD
5. Single Liveborn Hospital Delivery w/out C-Section
6. Extreme Fetal Immaturity
7. Unspecified Psychosis
8. Major Depression
9. Anxiety Disorder
10. Bipolar Disorder

# Cohort 2: Inpatient - Adults

## Top Ten Diagnosis for Adults

1. Alcohol Withdrawal
2. Schizophrenia
3. Major Depressive Disorder w/out Psychosis
4. Acute Pancreatitis
5. Septicemia
6. Obstructive Chronic Bronchitis
7. Asthma
8. Hb-Sickle Cell Disease with Crisis
9. Encounter for Antineoplastic Chemotherapy
10. Alcohol Withdrawal Delirium

# Cohort 2: Inpatient - Child

## Top Ten Diagnoses for Children

1. Antineoplastic Chemotherapy
2. Hb-Sickle Cell Disease with Crisis
3. Mood Disorder
4. Major Depression w/out Psychosis
5. Congenital Anomalous Pulmonary Venous Connect
6. Acute Bronchitis
7. PTSD
8. End Stage Renal Disease
9. Acute Lymphoid Leukemia
10. Other Congenital Anomaly

# Cohort 3: ED Visits - Adults

## Top Ten Diagnoses for Adults

1. Abdominal Pain
2. Chest Pain
3. Lumbago
4. Nondependent Alcohol Abuse
5. Mood Disorder
6. Opioid Dependence
7. Migraine
8. Unspecified Disorder Teeth
9. Headache
10. Alcohol Dependence

# Cohort 3: ED Visits- Children

## Top Ten Diagnoses for Children

1. Mood Disorder
2. Asthma
3. Acute Uris of Unspecified Site
4. Abdominal Pain
5. Urinary Tract Infection
6. PTSD
7. Other Convulsions
8. Anxiety State
9. Fever
10. Adjustment Reaction

# Cohort 4: Top 10% from 1,2,3 Adult

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## Top Ten Diagnoses for Adults

1. Mild Intellectual Disability
2. Abdominal Pain
3. Alcohol Withdrawal
4. Moderate Intellectual Disability
5. Profound Intellectual Disability
6. Severe Intellectual Disability
7. Chest Pain
8. Schizophrenia
9. Lumbago
10. Alcohol Abuse

# Cohort 4: Top 10% from 1, 2, 3 Children

## Top 10 Diagnoses for Children

1. Mood Disorder
2. Depressive Disorder
3. PTSD
4. Major Depression
5. Hb-Sickle Cell Disease
6. Antineoplastic Chemotherapy
7. Single Liveborn Hospital Delivery with C-Section
8. Anxiety State
9. Psychosis
10. Single Liveborn Hospital Delivery w/out C-Section





# CHN data

Members in Cohort 4: Top 10% of cohort 1, 2, and 3					
Adult			Child		
DX Code Desc	Members	Paid \$	DX Code Desc	Members	Paid \$
MILD INTELLECTUAL DISABILITIES	127	\$32,364,560.36	UNSPECIFIED EPISODIC MOOD DISORDER	64	\$19,216,220.44
ABDOMINAL PAIN, UNSPECIFIED SITE	127	\$4,299,354.48	DEPRESSIVE DISORDER NOT ELSEWHERE CLASSIFIED	19	\$6,546,286.97
ALCOHOL WITHDRAWAL	112	\$7,769,964.58	POSTTRAUMATIC STRESS DISORDER	16	\$4,226,486.41
MODERATE INTELLECTUAL DISABILITIES	111	\$31,960,235.41	MAJ DPRSV D/O RECUR EPIS SEV W/O PSYCHOT BHV	15	\$5,027,250.86
PROFOUND INTELLECTUAL DISABILITIES	105	\$32,197,166.86	HB-SS DISEASE WITH CRISIS	14	\$2,186,406.45
SEVERE INTELLECTUAL DISABILITIES	94	\$28,229,964.33	ENCOUNTER FOR ANTINEOPLASTIC CHEMOTHERAPY	13	\$2,305,651.55

# “Impactability”

- Based on feedback from the NGA technical assistance team, the state agency team was encouraged to think about a target population that we were likely to successfully impact through an intervention
- Some High Cost High Need members may not be able to change their need based on their medical conditions (e.g. late stage cancer, intellectual disability, etc.)
- The state NGA team decided to combine the NGA Project and a more refined and better defined target population for the behavioral health intensive care managers at Beacon Health Options
- The Beacon Health Options intensive care managers are going to focus on the NGA intervention cohort

# Beacon Health Options Work

- Most recently, our focus has been on intervening with High Frequency ED Visitors and Adults undergoing a Medical Detox
- Outcomes have measured changes in rates of Frequent Visitors to the ED by Hospital and changes in rates of Readmission to Hospital
- New NGA project will focus on a static list of individuals who have high needs and costs
  - Member-centric intervention as opposed to hospital-centric
  - Outcomes related to whether members had decreased use of inpatient and ED as well as decreased costs

# Revised NGA Cohort Criteria

- Revised Selection Criteria:
  - Selection Criteria: Identify members with a minimum of three (3) ED Visits AND two (2) Inpatient Admissions within six (6) months
    - From Cohorts #2 and #3 (High Inpatient, High ED utilization)
    - Any orientation (place of service)
    - Data will be arranged by Expanded Diagnosis Clusters (EDC)
    - Both Adult and Child members will be included in the intervention grouping
      - CHN used ages 0-20 to identify youth and 21+ to identify adults.
  - Member lists will be compared, analyzed and possibly combined
- After members that meet the ED and IP counts were identified, ALL costs were pulled in to get the total cost for that member.
- Primary diagnoses (detail of BH vs Medical by diagnosis) of the claims determined the diagnostic category in the report.
- Output was a listing of members (w/member information), # of admissions with totals and the members' risk score
- After talking thru more specifics regarding the methodology used to pull the most recent CHN High Cost/High Need list, we realized that it would not be possible for Beacon to pull a list of just the High Cost/High Need BH members. The current methodology for the project is to 1) identify individuals with at least 3 ED visits AND 2 Inpatient stays, 2) then to pull in their costs, and 3) then to look at whether the costs were more associated with care with a primary BH diagnosis or with a primary Medical Diagnosis.
- As the determination of BH or Medical is done as a last step, Beacon cannot identify BH members without replicating the initial phases of the methodology.

# NGA Intervention Cohort

- To fall into the BH NGA cohort, the diagnosis associated with the individual's highest claims costs was a BH (Mental Health or Substance Abuse) diagnosis
- Total of 1236 Adults met these criteria
- Total costs of the cohort
  - Hospital costs (62.1%)
  - Community-based services costs (28.3%)
  - Pharmacy Costs (9.6%)
- Many of the individuals included in the cohort have significant co-morbid medical conditions

# NGA Hospital Utilization

- Identification of 5 highest volume hospitals based on the total count of ED visits & IP stays of members in the NGA cohort:
  - Yale New Haven Hospital: 2373
  - Bridgeport Hospital: 607
  - Hartford Hospital: 601
  - St. Francis Hospital Medical Center: 450
  - Hospital of Central CT: 430
- Highest costs of individuals were not always associated with hospitals

# NGA Intervention Cohort

## Unique Individuals in NGA Intervention Cohort

Bridgeport Hospital:	79
Hartford Hospital:	112
St. Francis Hospital:	82
Hospital of Central CT:	49
Yale New Haven Hospital:	242

57% (322/565) with Alcohol or Other Substance-Related Disorder

43% (243/565) with Mental Health Disorders (Psychoses & Mood Disorders)





# Peer/ICM Intervention

## Peer/ICM Referral Process

- List of members included in the NGA cohort provided to ICM/Peer teams
  - Members will be flagged in Beacon CONNECT system
  - Clinical Care Managers will monitor daily census for inpatient admissions
  - Hospitals will be provided a list of NGA members attributed to their facility
- Peer/ICM team outreach to member
  - Settings for initial meeting: Community, Shelter, ED, Observation, Hospital (medical or behavioral health unit), etc.

# Peer/ICM Engagement Process

- Initial meeting with member consists of the following:
  - Introduction to the Initiative
  - Description of Peer and ICM roles
  - Member agreement to participate/“opt-in”
  - Completion of SF12 (functional assessment tool)
  - Explanation and signing Releases of Information (ROI)
  - Development of a member-driven follow-up plan

## Peer/ICM Activities

- Peer/ICM activities to assist members in connecting to community providers and supports:
  - Develop a person-centered WRAP(Wellness Recovery Action Plan)
  - Provide telephonic and in-person support using Motivational Interviewing (MI) techniques
  - Meet with providers/supports/member to develop short and long-term recovery plans
  - Complete functional assessments (SF12 and Acuity assessment) to monitor progress
  - Contact collaterals to ensure aftercare plans are understood and followed

## Peer/ICM roles

### ICM (Intensive Care Manager)

- Licensed Behavioral Health Clinician
- Research member-specific clinical history and outcomes
- Assess clinical needs based on history and member-driven follow-up plan
- Complete Acuity Assessment
- Coordinate care with identified providers and supports

# Peer/ICM roles

## Peer Specialist

- An individual with lived experience in the area of MH and/or SA
- Provide telephonic and/or face to face support to member
- Complete SF12 monthly
- Encourage self-reliance and self-confidence using MI techniques
- Coordinate with providers and recovery supports as needed

## Peer/ICM Tiered Approach

- Tier III- Intensive Care Management Acute
  - Multiple contacts per week by Peer and ICM
  - Engagement, assessment, education, care plan, monitoring, coordination and reassessment
- Tier II- Intensive Care Management Moderate
  - Weekly or bi-weekly contact
  - Ongoing care management and peer support when acute care goals are met
- Tier I- Intensive Care Management Low
  - One to three contacts per month
  - Assessment for stability and transition to community supports

# Evaluation Methodology

- The NGA BH Cohort (N=1236) was divided into two sub-groups; one eligible for the ICM/Peer intervention and the other not eligible for the intervention (quasi-control group)
- The quasi-control group is defined as those members who meet the NGA cohort criteria, but do not receive the intervention
- Propensity score matching will be used to evaluate the intervention group compared to the quasi-control group
- Beacon will run baseline data on the NGA BH Intervention cohort and the quasi-control group cohort comparison population(s) for the 6 month period prior to the intervention start date. The intervention start date will be member-specific.



# Evaluation Methodology Cont.'

- The timeframe of the Post-intervention data will also be member specific and be based on members having completed at least two months of the intervention. Measures will again be collected at 4 months, and 6 months for those members who remain in the intervention for longer periods of time in order to assess the impact of the length of the intervention.
- The number of members who will be eligible for the assessment of the intervention will be limited by the need to build in a claims lag timeframe of at least 4 months and to allow for delivery of the final report by December 31, 2017.

# Propensity Score Matching

- Propensity Score Matching is a statistical analysis methodology used to compare two subjects with similar patterns of use
- The Propensity Score allows the design and analysis of an Observational (non-randomized) study so that it mimics characteristics of a Randomized Control Trial
- The method entails forming matched sets of treated and untreated subjects who share a similar value of the propensity score and allows there to be an estimate of Average Treatment Effect
- The hypothesis is that the individuals who receive the intervention will have better outcomes when compared to the individuals in the quasi-control group who did not receive the intervention

# Evaluation Continued

The performance of the members within each of the comparison groups displayed in the workflow above will be compared on the measures below:

- Demographics including gender, age, and race/ethnicity
- Diagnoses
- Rate of ED visits (per 1,000 members) for the NGA Opt-In Cohort and the propensity matched Quasi-control group. This data will be also displayed and stratified by CCS diagnostic category, age, gender, race/ethnicity
- Rate of ED Re-admission, 7 and 30 days, (per 1,000 members) for the NGA Opt-In Cohort and the Quasi-control group.
- Rate of Hospital Admission (per 1,000 members) for the NGA Opt-In Cohort and the Quasi-control-group.
- Rate of Hospital Re-admission, 7 and 30 days, (per 1,000 members)
- Rate of all-cause re-admission rate, 7 and 30 days Report Rate of residential detox admission (per 1,000 members)
- Rate of residential detox re-admission, 7 and 30 days, (per 1,000 members)

# Evaluation Methodology Cont.'

Intervention cohort will be stratified in the following manner:

- Intervention cohort (elected to participate)
- Intervention cohort (opted-out)
- Intervention cohort (unable to find)
- Intervention cohort (limited contact)

# Non-NGA Cohorts of Interest

- Based on the data provided by CHN and Beacon Health Options, the state agencies identified two additional cohorts of interest
- These cohorts are not part of the formal NGA Project
- The State agencies believe that outcomes related to these cohorts can and should improve
- The following are the Non-NGA cohorts of interest:
  - High cost infants based on poor delivery outcomes
  - Emerging Adults

# Non-NGA Cohort #1

- Neonatal Analysis- high cost infants
  - The intent of this study is threefold:
  - Identify a set of maternal risk factors associated with poor birth outcomes;
  - Identify the patterns of pre-natal care that reduce the risk of poor birth outcomes;
  - Suggest program interventions aimed at reducing the incidence of poor birth outcomes.

The ultimate goal is a reduction in the incidence of, and costs associated with, neonates with poor birth outcomes.

# Non-NGA Cohort #2

## Emerging Adults

- Defined as individuals between the ages of 18 and 26 who are transitioning between the use of Youth and Adult BH services
- The first goal is to work collaboratively with DCF and DMHAS to establish improved identification of this vulnerable population. Work collaboratively with DCF and DMHAS to assess and consider revisions in the existing report so that it is meaningfully identifying high risk/high need DCF youth who are appropriate for the Young Adult Services (YAS) program.
- The second goal is to expand the scope of the identification of high risk/high need emerging adults, beyond the subset that meet the criteria for the YAS programs, to include DCF-Involved and non-DCF-Involved emerging adults

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Questions?