Collective Medical

Neonatal Abstinence Syndrome

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Network Development

Our mission

Eliminate friction from care delivery

through real-time collaborative care

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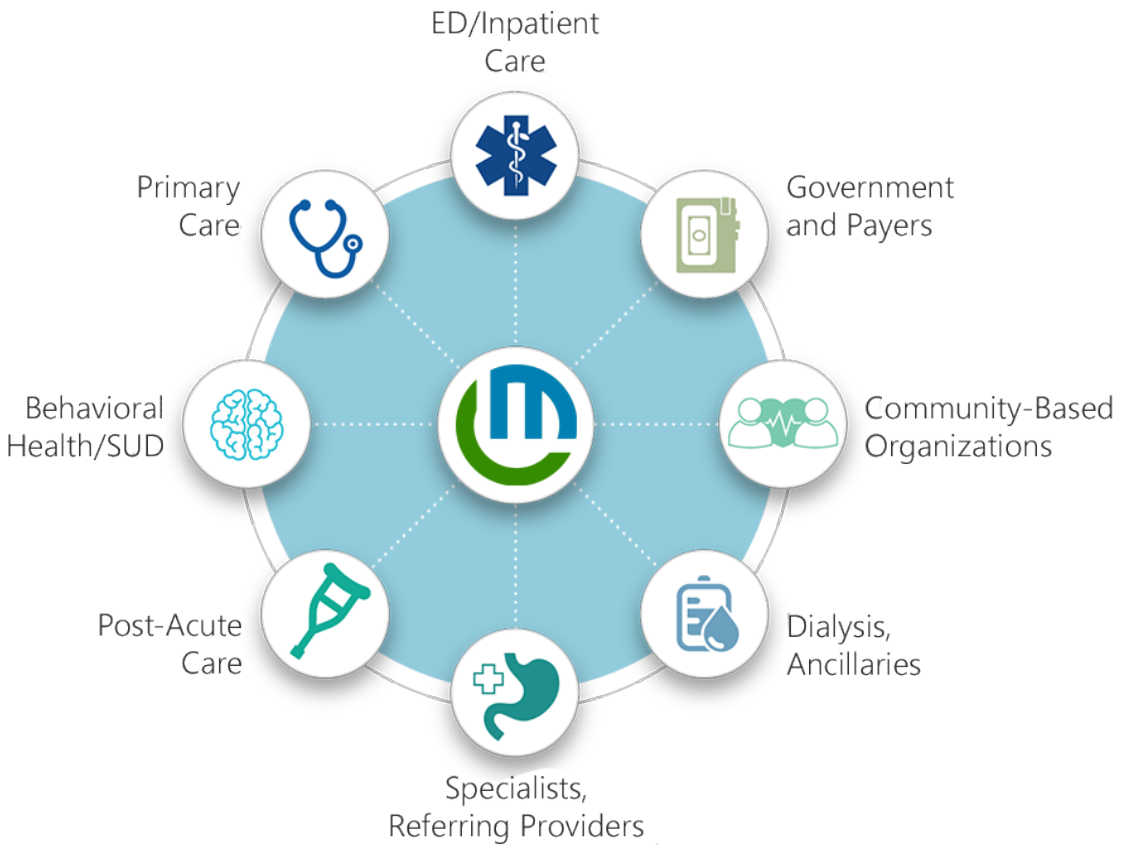
What IS Collective Medical?



- *A Network* of hospitals, emergency departments, primary care, specialists, behavioral health, post-acute care, and health plans across the United States, sharing important patient information at the time of care
- *A Platform* that intelligently connects each member of a patient's care team for seamless collaboration at the right time and thru the best medium
- *A Community* of providers sharing in the care of patients – especially those with complex medical needs – in your communities and across the country

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Collective Medical is the national leader in supporting collaborative care management efforts with a demonstrated track record

- Started by an ED social worker
- 10 years since first go-live
- Nationwide network spanning 22 states
- 3400+ ACOs, plans, hospitals, UCs, and clinics
- Thousands of providers
- More than 150 million unique visits

100% customer retention since inception

Endorsed by:

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MOLINA HEALTHCARE
New Mexico
PacificSource HEALTH PLANS
CAMBIA
Regence

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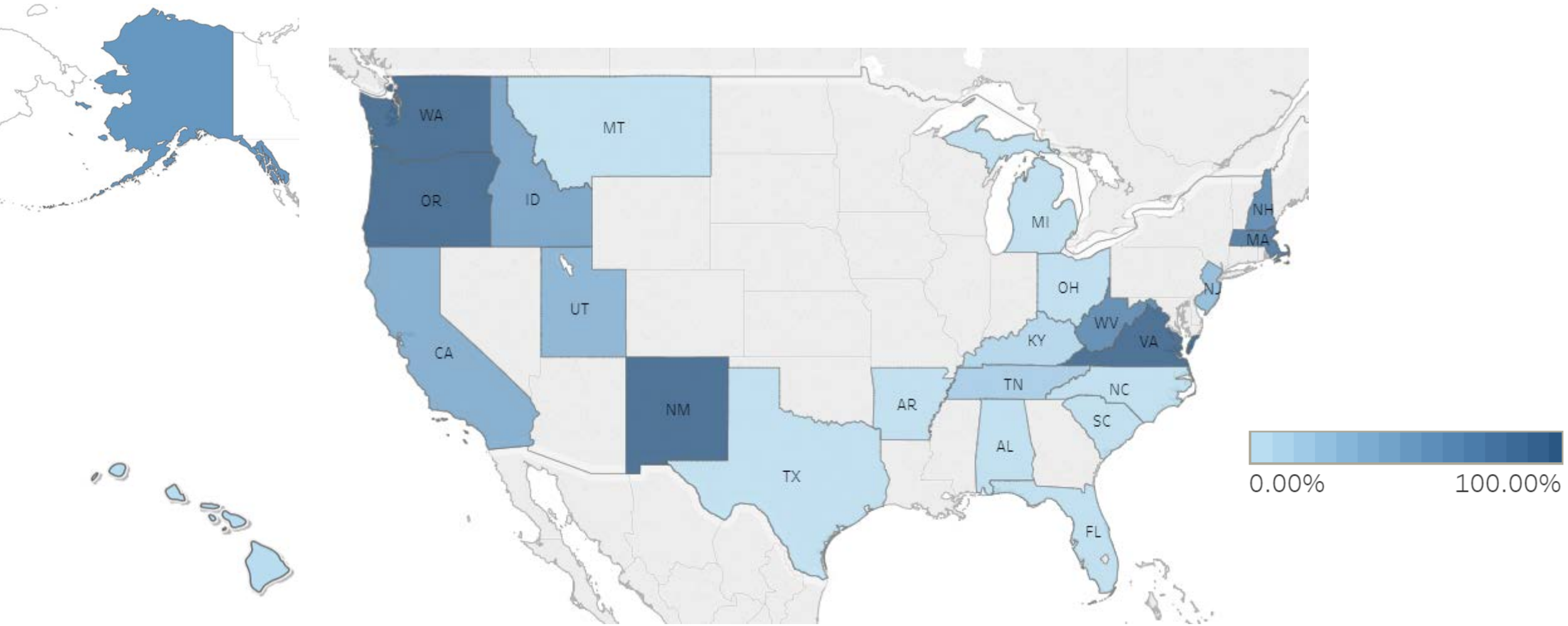
Current National Expansion



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Collaboration as a Radical Approach to the Opioid Epidemic

Collective has implemented a variety of features available nation-wide in addition to region-specific efforts designed to combat the unique needs of each state, all as a means to continue combatting the opioid epidemic. All of these efforts are about enabling and/or automating collaboration between points of care to ensure providers have the entire care continuum's knowledge at their fingertips.

Collective Platform

- Insights into both the patient's history and plans for future care
- Direct connections to state PDMPs, with automated querying and delivery of results

Regional Efforts and Prototypes

- EMS Naloxone administration tracking/reporting
- NAS identification and tracking/notification
- Prescriber notification upon patient OD
- Bridging patients with Suboxone administration in the ED to MAT facilities
- 42 CFR Part 2 consent tools to share SUD/OD information between care providers

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Insights – Collaborative Histories and Future Guidelines

Members of the patient's care team, from all points of care, add Insights (categorized historical notes and ED-targeted care guidelines) to ensure a unified approach to patient interventions, specifically when addressing Substance Use Disorder (SUD) in the ED. Guidelines include information about unique patient complexities; details about whom to collaborate with; and recommendations on when to prescribe, including attached pain contracts when they exist.

How Does it Work?

- All members of the care team—regardless of setting—are able to access and contribute to histories and guidelines in the Collective Platform at any time, before, during, or after encounters with the patient
- Care team members add history bullets and care guidelines in advance of acute encounters in the ED, indicating the patient's unique needs and factors that contribute to SUD/OUD
- Notifications, which include care team details, Insights, PDMP histories, and historical encounter date, are delivered to the ED when the patient presents, directly within existing provide workflows
- The Collective Platform tracks when Insights are entered/updated and reports on when patients may require changes to keep information current; also identifies and presents patients who may need Insights added

Care team members all approach interventions with
a unified course of action and an informed perspective

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Insights – Collaborative Histories and Future Guidelines

Care History Example – Collaborative, Aggregate Background

Medical / Surgical History

Diagnoses (last updated 8/3/2017) (EDIE instances only)
- Opioid Use Disorder – Severe
- On Buprenorphine in Office Based Treatment program at Virginia Life Center
- Multiple past rehabilitation in and out patient

Alcohol Abuse

Tobacco Abuse

Schizophrenia
- Past treatment with Quetiapine, Haldol
- Currently prescribed Olanzapine; patient endorses non-adherence
- Recommended treatment of Valproic acid adjunct with Olanzapine
- Former treatment with Universal Mental Health Services (until 2/6/2015)

Pregnancy, Subsequent
- G3P2
- Ob/Gyn: Dr. James Edward Jones, Phone (276) 228-0200

Carpal Tunnel, recurrent
- Surgery evaluation w Dr. Raghavan 5/7/2017, patient No Show

Migraine, recurrent
- Treatment currently limited to Ibuprofen; patient endorses Sumatriptan allergy, undocumented.

Chronic Back Pain
- Multiple negative CTs, last documented at IAH 12/2016, no known trauma

Infection / Chronic History

New Diagnosis, Chronic Back Pain

Behavioral History

New Diagnosis, Schizophrenia

Social History

Housing/Food
- Homeless
- Last extended stay at St. Anthony's (May 2017), removed for suspicion of drug use
- Chronic food insecurity
- Seeks secondary gains such as money, food and shelter

Family/Social Network
- 2 Children in Foster care (contact Virginia Department of Social Services (804) 726-7000, Main Agency); patient has restricted access.
- Sister has been past point of contact, Anne Taggarts, cell (804) 775 2756.

Transportation
- Patient lost driver's license in 2016
- Given municipal bus pass April 2017

Demo Patient: Sally Croxton

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Insights – Collaborative Histories and Future Guidelines

Care Guidelines Examples – Multiple Facilities, Same Patient

Virginia Family Clinic

Care Recommendation:

Patient is Pregnant, expected due date 2018-12-09.
Patient has a Substance Use Disorder, Opioid, and is currently under treatment with Buprenorphine treatment with Virginia Life Center; has exhibited past drug-seeking behavior.

Patient is under psychiatric care, with a diagnosis of Schizophrenia and anxiety. Patient is at risk for self-harm related to feelings of helplessness, loneliness, or hopelessness secondary to psychiatric disorder. Recommend the following treatment cascade:

Medications: Valproic Acid 250 mg PO then Olanzapine, 10 mg IM

Other Information:

1. Patient has LAMA in the past to see children; two children are currently in foster care.
2. Homeless; was removed from St. Mary's Shelter d/t concern for opioid abuse. Application pending at Housing Works as 8/12/17.
3. Patient is known to be physically aggressive and combative.

Patient is under care at the Mount Virginia Behavioral Health for Psychiatry and Case Management, (276) 625-3300 and Fax is (276) 625-3311.

Innova Regional Hospital

Pain Management:

Patient was on office-based Buprenorphine treatment; no recent visits. Patient should not receive opioids as part of care; recommend NSAIDs and supportive therapy for complaints of pain.

Pain contract available in system.

Other Information:

1. Patient has LAMA in the past to see children; two children are currently in foster care.
2. The patient has a history of manic behavior, illicit drug abuse, multiple suicide attempts, and self-harm.
3. Homeless; was removed from St. Mary's Shelter d/t concern for opioid abuse. Application pending at Housing Works

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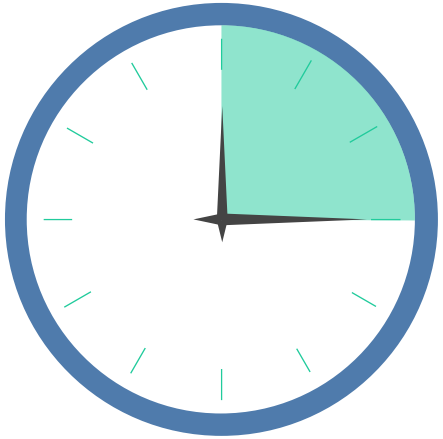
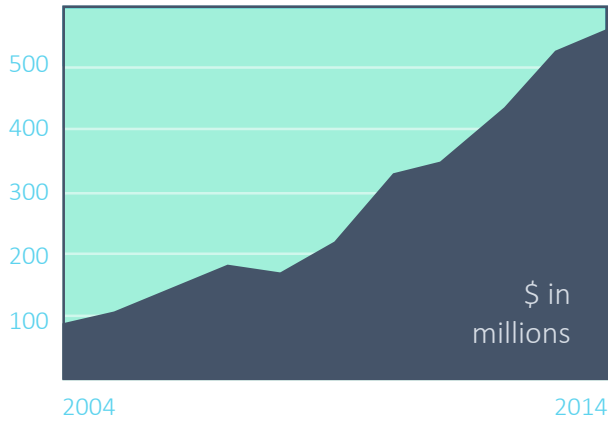
Incidence and costs of neo-natal abstinence syndrome are rising



Every 15 minutes

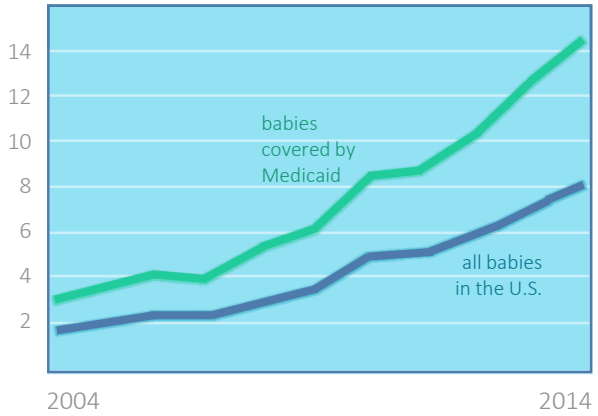
a baby is born with NAS

Hospital Costs for NAS



Hospital costs for NAS have grown more than **6x since 2004**

Incidence of NAS per 1000 live births



NAS resulted in approximately **$2 billion** in excess costs among Medicaid financed deliveries

Infants with Medicaid are disproportionately affected

Infants with NAS **covered by Medicaid** Are more likely to

- be transferred to another hospital for care
- have longer lengths of hospital stays

Moms need resources and compassionate care

Prevention and treatment of substance use disorders are vital for women **before, during, and after pregnancy**

Source: Winkelman, T.N., Villapiano, N., Kozhimannil, K.B., Davis, M.M., Patric, S.W., Incidence & Costs of Neonatal Abstinence Syndrome among Infants with Medicaid: 2004 – 2014, Pediatrics published online: March 23, 2018

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GAPS IN CARE

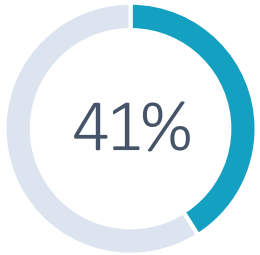
FOR CHILDREN BORN WITH NAS IN MA

Neonatal Abstinence Syndrome (NAS) is a withdrawal syndrome infants go through if they experienced substance exposure in utero.

Children with NAS often have…

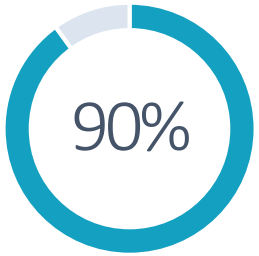
- vision and hearing issues
- fine and gross motor delays
- sensory processing problems (*commonly misreported as behavioral issues*)
- executive functioning problems

which can persist beyond and despite EI



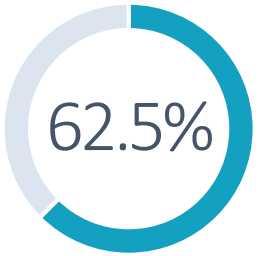
Roughly 41% of children with NAS are discharged to a non-parental caregiver (relative, foster, adoptive).

*Perinatal Quality Improvement Network, 2018



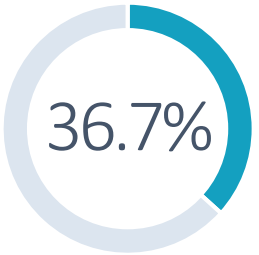
90% of families report that they didn't feel they got the support or training they needed from the Department of Child and Families to Care of rtheir child who was born opiate dependent.

*To The Moon And Back Inc, 2019



62.5% of children with NAS were referred to Early Intervention (EI) from the hospital.

*MA Department of Public Health, 2015



After one year, only 36.8% of these families were still engaged in EI services.

*MA Department of Public Health, 2019

3 – 5 Year-Olds with NAS

are at a particular risk. This is when Early Intervention ends and the school system can provide services for children. NAS families report that school systems frequently find their children ineligible for services because the schools are not well educated in the long-term needs of children with NAS.

School Systems Report

a stark increase in the number of children with "behavioral issues" and Individualized Education Plans (IEPs) in the elementary school setting. They believe that many of these children are have NAS and feel they need further education on how to best care for children who were born with NAS.

How to Close These Gaps!

Similar childhood disorders such as Fetal Alcohol Spectrum Disorder (FASD) and Autism Spectrum Disorder (ASD) have specialized care coordination. Children with NAS need this same seamless coordination for our children to meet their true, full potential.

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Neonatal Abstinence Syndrome Identification and Notification

NAS Post-Discharge Concerns

- Withdrawal at home is can be dangerous for the baby—dehydration from poor feeding, vomiting, or diarrhea can occur in just a few hours, and neurologic irritability can result in seizures
- Infants with NAS are *twice as likely* as uncomplicated term infants to be readmitted to the hospital within 30 days of discharge
- Families who seek medical attention for the baby after discharge often fail to disclose a history of substance use during pregnancy, and symptoms may not be recognized as NAS
- Caregivers seeking medical attention post-discharge often don't return to the original hospital
- Reported cases validate the recommendation to observe these infants in the hospital for 4 – 7 days, even if there are no symptoms of NAS
- Parents of infants with NAS often use their child's medications instead of administering them

Neonatal Abstinence Syndrome Identification and Notification

Early Objectives

- Shared Safe Plans of Care, histories and recommendations
- Improved hand-off to pediatricians
- Bi-directional communication for case management
- Improved follow-up compliance
- Developmental tracking beyond infancy
- Support network and protection plan coordination
- Postpartum support

Steps to Add NAS patients to Collective Network

- Supplemental File that identifies patients with NAS can be uploaded via STFP
- Patients identified on file will be added to the “Groups” section of the Collective EDie portal
- Patient page will have a “Tag” to identify them as part of the NAS group associated with your hospital
    - “Tag” can only be viewed on the patient page by your facility

Member ID	First Name	Last Name	Admit Date	Visit Type	Visit Facility	Diagnoses
			11/4/18 21:10	Emergency	Highlands Regional Medical Center	Cough
			12/4/18 4:14	Observation	Cabell Huntington Hospital	Z8249:Family history of ischemic heart disease and other diseases of the circulatory system; Z813:Family history of other psychoactive substance abuse and dependence; R0603:Acute respiratory distress; Z825:Family history of
			16/11/2018 15:07:00	Emergency	Cabell Huntington Hospital	
			16/11/2018 21:58:00	Observation	Cabell Huntington Hospital	B348:Other viral infections of unspecified site; Z79899:Other long term (current) drug therapy; J219:Acute bronchiolitis, unspecified; J069:Acute upper respiratory infection, unspecified; J45901:Unspecified asthma with (acute)
			19/12/2018 13:36:00	Multiple Services	Cabell Huntington Hospital	Z7722:Contact with and (suspected) exposure to environmental tobacco smoke (acute) (chronic); R05:Cough; F1920:Other psychoactive substance dependence, uncomplicated; R0602:Shortness of breath; H9209:Otalgia, unspec
			29/08/2018 16:03:43	Emergency	Highlands Regional Medical Center	R0600:Dyspnea, unspecified
			29/08/2018 20:13:13	Outpatient	Cabell Huntington Hospital	
			29/08/2018 22:26:00	Medical Surgical	Cabell Huntington Hospital	R000:Tachycardia, unspecified; R6511:Systemic inflammatory response syndrome (SIRS) of non-infectious origin with acute organ dysfunction; J9600:Acute respiratory failure, unspecified whether with hypoxia or hypercapnia;
			30/11/2018 13:22:00	Emergency	Cabell Huntington Hospital	J219:Acute bronchiolitis, unspecified; R0600:Dyspnea, unspecified

Member ID	First Name	Last Name	Admit Date	Visit Type	Visit Facility	Diagnoses
			13/08/2018 00:47:00	Newborn	Highlands Regional Medical Center	Z3801:Single liveborn infant, delivered by cesarean
			17/08/2018 22:56:40	Outpatient	Cabell Huntington Hospital	
			18/08/2018 00:04:00	Medical Surgical	Cabell Huntington Hospital	P961:Neonatal withdrawal symptoms from maternal use of drugs of addiction; P049:Newborn affected by maternal noxious substance, unspecified;

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Identifying NAS population in your EDie Portal Via File

A	B	C	D	E	F	G
Maximum Characters - 255	Maximum Characters - 45	Maximum Characters - 45	Maximum Characters - 255	Maximum Characters - 10	Recommended Characters - 1	Maximum Cha
Required	Required	Optional	Required	Required	Required	Requi
MRN/Patient ID	**First Name**	**Middle Name**	**Last Name**	**Date of Birth**	**Gender**	**SSN**
8392758	Elizabeth	J	McCarthy	1939-01-01	F	XXX-XX-XXXX
9387223	Nancy		Abelian	1943-01-01	F	XXX-XX-XXXX
3090992	Joyce	p	Harry	1954-09-01	O	XXX-XX-XXXX
18JON092376	Kim	q	Eung	07/11/2011	M	XXX-XX-XXXX
34TAY111388	John	Ralph	Abraham	7/11/2011	M	XXX-XX-XXXX
22BRO030100	Randolph	s	Short	7/21/2011	Male	XXXXXXXXX
1617	Patricia	t	McCarty	1921/07/11	Female	XXXXXXXXX
1819	Cheryl	Lynn	LaPlante	01041959	Female	XXXXXXXXX
2020	Mark	R	Peach	12251985	Other	XXXXXXXXX
The patient's MRN or primary identifier; ID must be unique.	No middle initials in first name, The patient's first name only.	The patient's middle name or middle initial.	The patient's last name only.	The patient's date of birth, with a 4 digit year. NO time stamp on the DOB. All Dates w/in file need to be the same format, we can receive various formats but again need a four digit year.	The patient's gender M, F, or O for Other.	When at all poss social security nu recommended). W patient matching c accuracy, to up to 83 other data eleme

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Targeted Content Creation for Care Collaboration/ Tracking

- NAS population File will “Tag” the patient’s page and autogenerate list under groups in your portal for easy access to patient population

- Insights via Care Recommendations and Care History can be generated for real time push notifications to ANY emergency department on the Collective Network
  - Example: *A Plan of Safe Care can specify the agencies that provide specific services, outline communication procedures among the family and provider team and guide the coordination of services across various agencies with the family.*

- Insights created by your hospital can be tracked on the groups page to ensure easy management of any content you share on the platform

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Insights – Collaborative Histories and Future Guidelines

Medical / Surgical History

Diagnoses

- **NAS –NICU 12/18/18-12/21/18**

Pregnancy- pre term vaginal delivery

- No prenatal care per mother
- Mother reports plan to engage in SUD treatment- post delivery
- Father is not involved, Mother has no biological family in the area

Referrals at the time of Discharge (see Care Teams for contacts)

- Pediatrician- Dr. South
- Family Practice/ OBGYN- Dr. Fran
- SNAP/ WIC- Sanrda Lo Intake
- Pharmacy- Safeway SE Baseline RD (444)444-44444
- Grace's House for temporary shelter (444)555-555 (*mother's sobriety mandatory for continued placement
- West Virginia Department of Child Welfare- Eric Castillo- CM (444)666-666
- Municipal transit voucher provided good through 1/30/2019

Social History

Housing/Food (mother)

- Homeless
- Last extended stay at St. Anthony's Shelter, removed for suspicion of drug use
- Chronic food insecurity
- Seeks secondary gains from such as money, food and shelter

Family/Social Network

- 2 Children in Foster care (contact Virginia Department of Social Services (000) 726-7000, Main ; patient has restricted access.
- Sister has been past point of contact, Anne Taggarts, cell (804) 775 2756.

Transportation

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Demo Patient: Sally Croxton

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THANK YOU