Social Determinants of Health: Identifying Life Stressors and Protective Factors in Child Death Review

Elizabeth C Tilson, MD, MPH
State Health Director, Chief Medical Officer
NCDHHS

Abby Collier, MS
Director, National Center for Fatality Review and Prevention

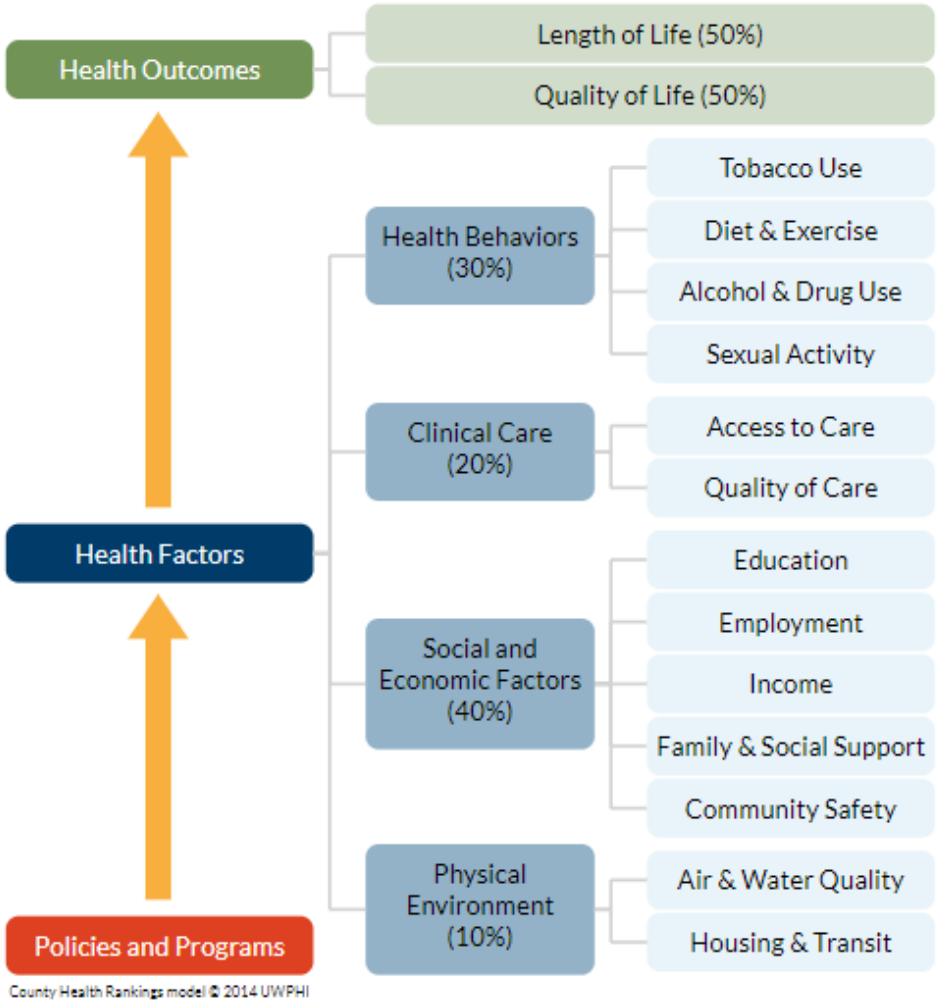
Addressing the Social Drivers of Health

Elizabeth C Tilson, MD, MPH
State Health Director, Chief Medical Officer
North Carolina Department of Health and Human Services

Child Fatality Prevention System Summit
March 30, 2023

We want all people to have an equitable Opportunity for Health

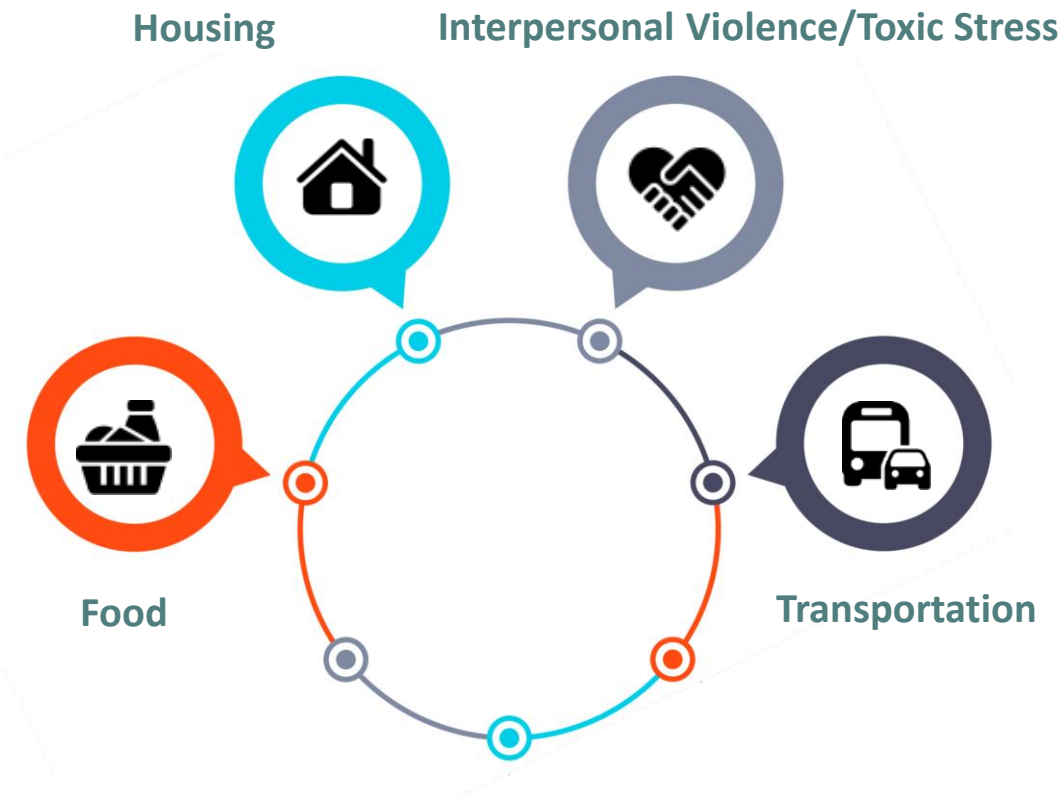
The Factors that Influence Health – Robert Wood Johnson Foundation



https://www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/county-health-rankings-model

Taking Steps to Ensure All North Carolinians have the Opportunity for Health

- Address the "Other 80%"
- Improve whole-person health, safety and well-being of all North Carolinians while being good stewards of resources
- Intentionally, strategically, and pragmatically use health care dollars to "Buy Health"



- Worsened during the pandemic
- Drivers of health inequities
- Risk factors for chronic diseases and increase health care costs
- Addressing can improve health and lower health care costs

Food insecurity, Child and Family Well-being

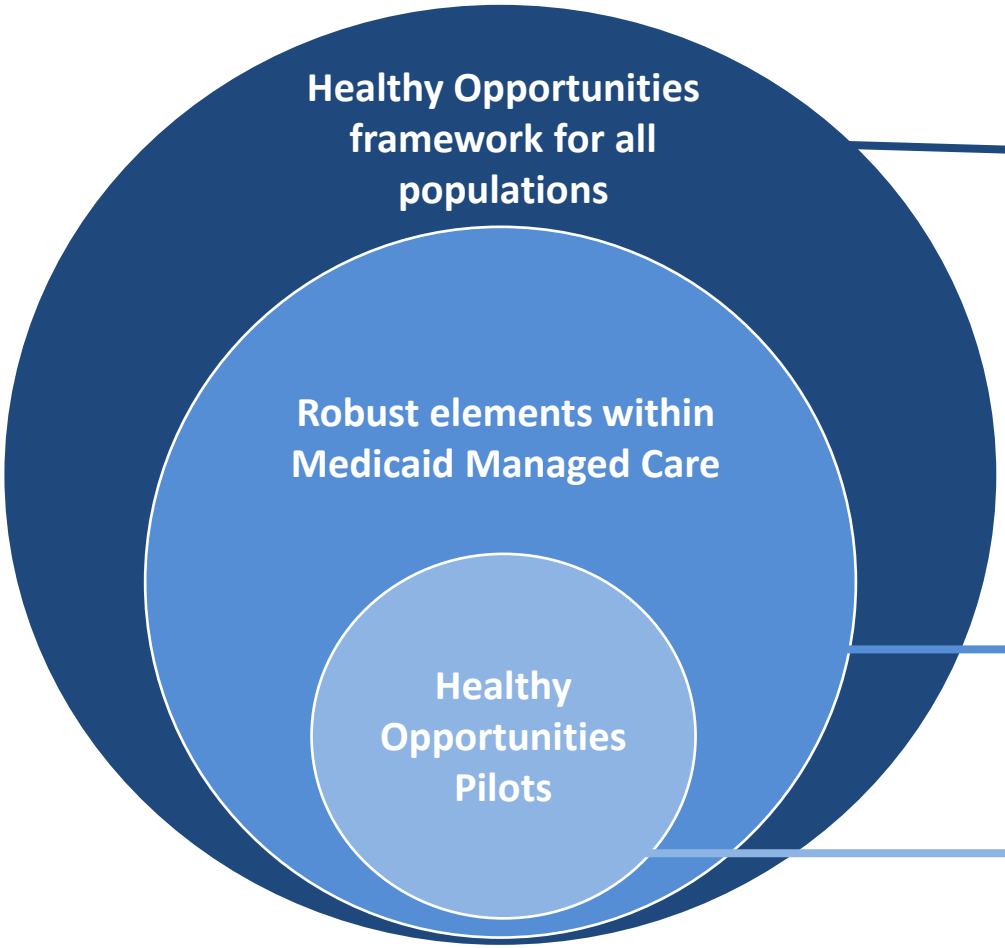
- Decreased overall health and increased hospitalizations;
- Developmental delays, cognitive impairment, impaired school function, reduced academic achievement, dysregulated behavior, emotional distress, suicidal ideation.
- Effects persist beyond early life into adulthood – increased adult diabetes, hyperlipidemia, cardiovascular disease, depression, anxiety.
- Food-insecure families had 20 percent greater total health care expenditures than food-secure families, for an annual difference of $2,456.
- Overall, the effects of food insecurity on the physical, mental, and emotional health of children and families are additive to the effects of low income alone.
- Addressing food insecurity through strategies like state expansion of SNAP eligibility associated with decreases in rates of CPS-investigated reports.

Hilary K. Seligman & Dean Schillinger, Hunger and Socioeconomic Disparities in Chronic Disease, 363 New Eng. J. Med. 1, 7 (2010); Food Res. & Action Ctr., Food Hardship in America 2012 (Feb. 2013), http://frac.org/pdf/food_hardship_2012.pdf; White Paper: Health Impact Assessment of Proposed Changes to the Supplemental Nutrition Assistance Program, Health Impact Project 18 (July 2013), http://www.healthimpactproject.org/resources/body/Health-ImpactProject-Farm-Bill-SNAP-white-paper-07-30-13.pdf. ; American Academy of Pediatrics, Policy Statement, Pediatrics, November 2015, VOLUME 136 / ISSUE 5; Palakshappa, et al Health Affairs 2023 https://doi.org/10.1377/hlthaff.2022.00414; Austin, A JAMA Peds 2023 doi:10.1001/jamapediatrics.2022.5348

Building Statewide Multi-components Shared Infrastructure

https://www.ncdhhs.gov/about/department-initiatives/healthy-opportunities

NC DHHS has built shared assets that can be used across populations, as well as targeted initiatives to build the evidence base, to bridge health care and human services across diverse populations & geographies at scale.



Shared assets and infrastructure across all populations:

- Healthy North Carolina 2030/State Health Improvement Plan
- Healthy Opportunities "Hot Spot" Map
- Standardized social needs screening questions
- NCCARE360
- Workforce development – Community Health Workers
- Integration, data linkages, and tailored outreach to increase enrollments in SNAP, WIC, etc

Embed shared assets and infrastructure in Medicaid as a base for other payers:

- Care management:
  - Standardized screening questions, NCCARE360, workforce
- Quality strategy
- Value-based payment
- Value added services and in-lieu-of-services
- Community Investments
- Integration with Department partners (DSS, LHDs, SNAP, WIC, etc.)

Targeted initiative to develop systems, financing, and evidence base to drive future policy changes: Healthy Opportunities Pilots

Screening Questions

Health Screening

We believe everyone should have the opportunity for health. Some things like not having enough food or reliable transportation or a safe place to live can make it hard to be healthy. Please answer the following questions to help us better understand you and your current situation. We may not be able to find resources for all of your needs, but we will try and help as much as we can.

	Yes	No
Food		
1. Within the past 12 months, did you worry that your food would run out before you got money to buy more?		
2. Within the past 12 months, did the food you bought just not last and you didn't have money to get more?		
Housing/ Utilities		
3. Within the past 12 months, have you ever stayed: outside, in a car, in a tent, in an overnight shelter, or temporarily in someone else's home (i.e. couch-surfing)?		
4. Are you worried about losing your housing?		
5. Within the past 12 months, have you been unable to get utilities (heat, electricity) when it was really needed?		
Transportation		
6. Within the past 12 months, has a lack of transportation kept you from medical appointments or from doing things needed for daily living?		
Interpersonal Safety		
7. Do you feel physically or emotionally unsafe where you currently live?		
8. Within the past 12 months, have you been hit, slapped, kicked or otherwise physically hurt by anyone?		
9. Within the past 12 months, have you been humiliated or emotionally abused by anyone?		
Optional: Immediate Need		
10. Are any of your needs urgent? For example, you don't have food for tonight, you don't have a place to sleep tonight, you are afraid you will get hurt if you go home today.		
11. Would you like help with any of the needs that you have identified?		

NCCARE360 functions, it's more than a technology platform

FOUNDATION FOR HEALTH LEADERSHIP & INNOVATION
MOVING PEOPLE AND IDEAS INTO ACTION

NCDHHS

- **First statewide network** that unites health care and human services organizations
- A **robust statewide resource directory**
- A **closed loop referral platform** that enables providers to assess for and identify unmet social needs, send and receive secure electronic referrals, securely share client information and track outcomes together
- A **team of dedicated navigators**
- A **community engagement team** working with community-based organizations, social service agencies, health systems, independent providers, and more to create a statewide, coordinated care network
- A **coordinated network** of providers and community-based organizations
- **Enhanced Healthy Opportunity Pilot functionalities** that will allow referral for pilot specific services, enhanced data, invoicing mechanism.

United Way
United Way of North Carolina

2·1·1
North Carolina

UNITE US

42,330 users

120, 878 people

342,947 referrals

March 2019 – Mar 19, 2023

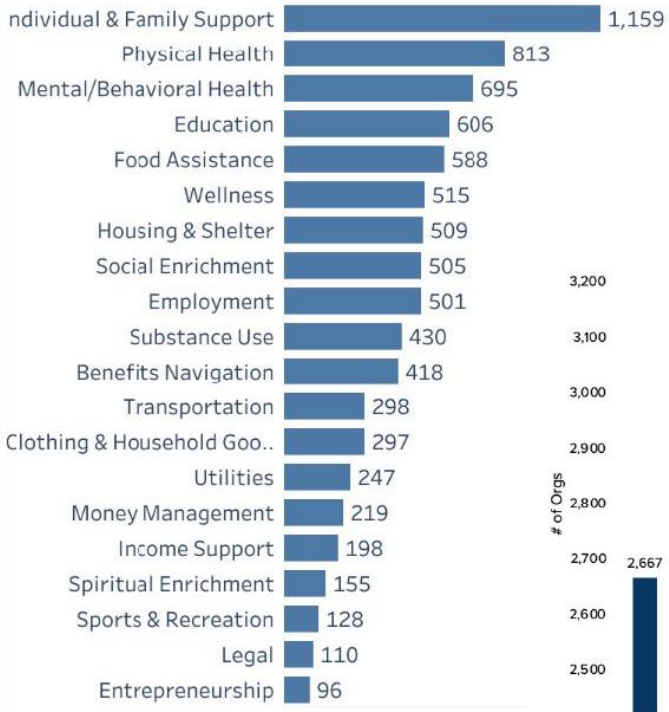
via Tableau Insights

NCCARE360

Unite North Carolina At A Glance

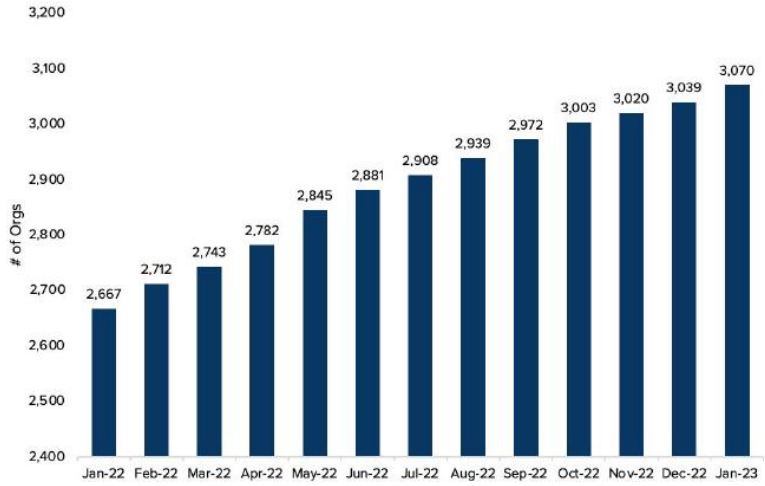
January 2023

of Network Partners by Service Type



This Month:	**3,070** network partners	**4,214** partner locations	**8,000** active programs
Change from Last Month:	▲ 31	▲ 28	▲ 182

Network Growth Over Time



The number of network partners in NCCARE360 has grown by 12% since January 2022.

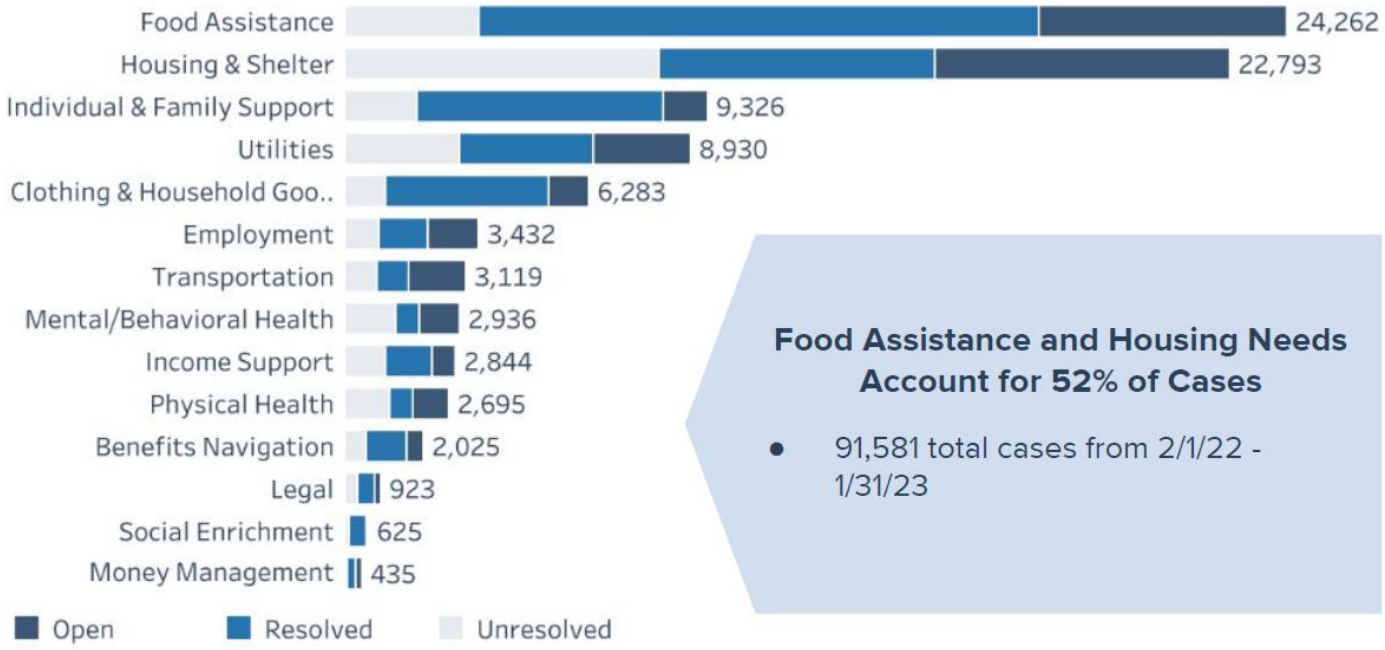
The NCCARE360 team has been focused on onboarding organizations who have existing relationships with current network partners, to encourage efficient adoption of the platform.

NCCARE360

Network Needs Overview

January 2023

Cases by Service Type (2/1/22 - 1/31/23)



Food Assistance and Housing Needs Account for 52% of Cases

- 91,581 total cases from 2/1/22 - 1/31/23

Top Network Needs by Service Type

28% Food Assistance

24% Housing & Shelter

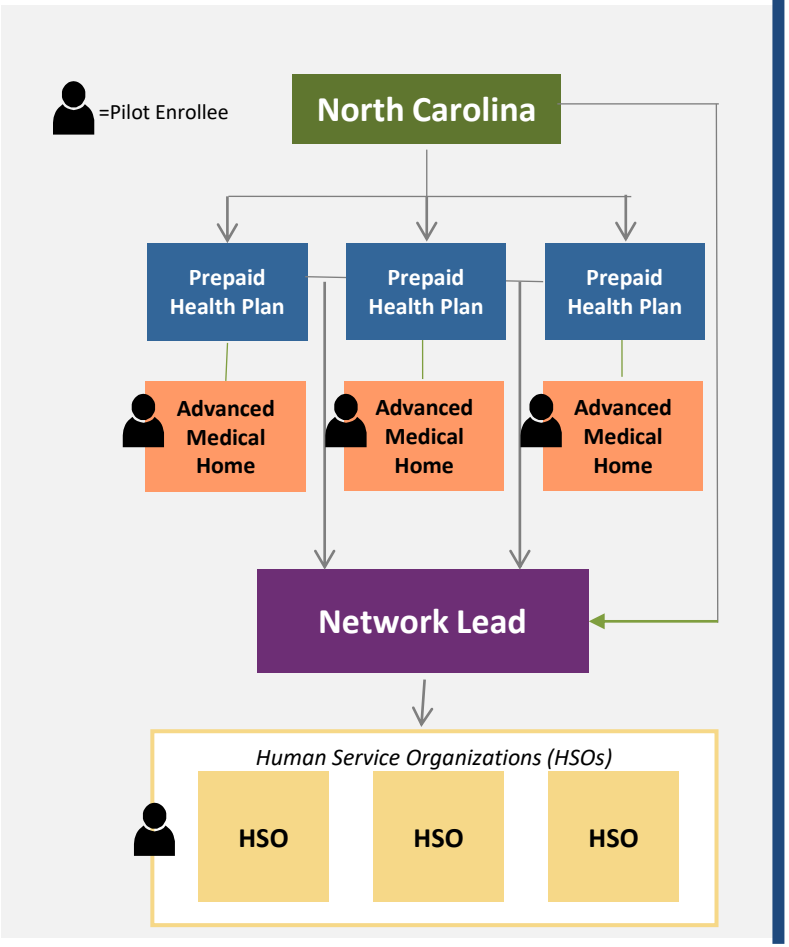
11% Individual & Family Support

NCCARE360

Healthy Opportunities Pilot – North Carolina

Healthy Opportunities Pilots: Overview

Sample Regional Pilot



Healthy Opportunities Pilot Overview

- **NC's 1115 Medicaid transformation waiver** authorizes **up to $650M** in state and federal Medicaid funding for the Healthy Opportunities Pilots
- **Pilot funds are used to:**
  - Pay for 29 **evidence-based, federally-approved, non-medical services** defined and priced in NC DHHS' Pilot fee schedule
  - **Build capacity of local community organizations** and **establish infrastructure** to bridge health and human service providers[1]
- **Pilot Vision and Goals:**
  - Integrate evidence-based, non-medical services into Medicaid to:
    - **Improve health outcomes** for Medicaid members
    - **Promote health equity** in the communities served by the Pilots
    - **Reduce costs** in North Carolina's Medicaid program
  - **Evaluation:**
    - CMS-approved SMART design (randomized trial) to provide rapid-cycle feedback, concluding in a summative evaluation
    - Rates of screening and connection to non-medical services; improvement in social risk factors; community impact
    - Which services are highest value & impact for which populations
    - Impacts to sectors outside of health care (e.g. enrollment in SNAP and WIC, school attendance)
  - Create **accountable infrastructure**, **sustainable partnerships** and **payment vehicles** that support integrating highest value non-medical services into the Medicaid program sustainably **at scale**

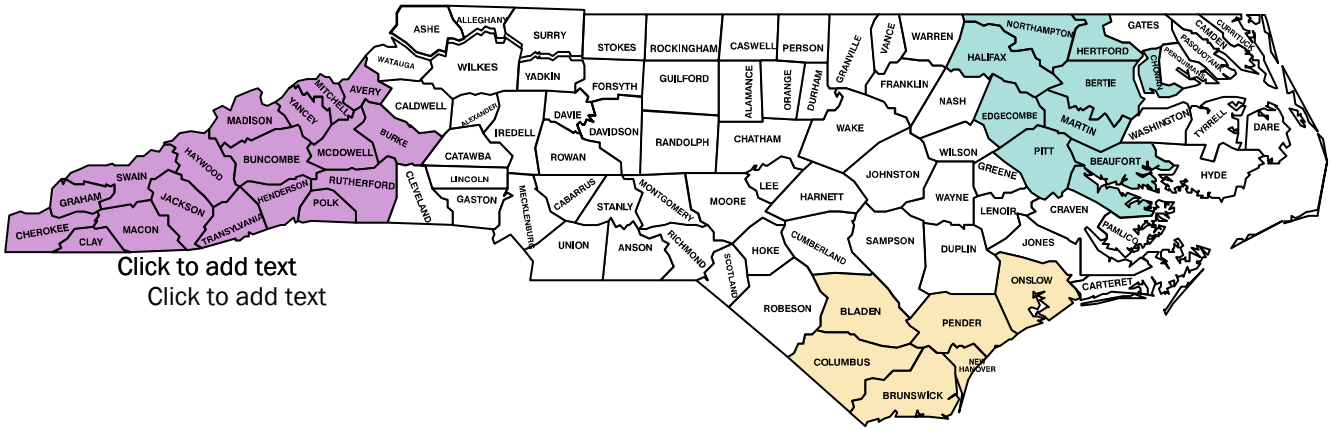
[1] Administrative, care management, and value-based payments are also being made to support and incentivize Pilot entities to perform optimally

Healthy Opportunities Pilots Regions

Network Leads, Health Plans, and Human Services Organizations will work with communities in three geographic areas of the state to implement the Pilots.

Highlights

- DHHS awarded **three Network Lead contracts** in May 2021 (one per Pilot region).
- Pilot regions cover 33 (of North Carolina's 100) counties. All 3 regions consist of predominantly **rural areas** and have varying levels of **racial/ethnic diversity**.
- Once fully operational, the Pilots will serve an estimated 13,000-20,000 individuals per month (4-6% of Medicaid enrollees in Pilot regions)



Click to add text

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5 Prepaid Health Plans
3 Network Leads
23 Care Management Organizations
101 Health Service Organizations
877 Health Service Organizations Programs

Healthy Opportunities Pilots: Eligibility

To qualify for pilot services, Medicaid managed care enrollees must live in a Pilot Region and have:

At least one Physical/Behavioral Health Criteria:
(varies by population)*

- **Adults** (e.g., having two or more qualifying chronic conditions)
- **Pregnant Women** (e.g., history of poor birth outcomes such as low birth weight)
- **Children, ages 0-3** (e.g., neonatal intensive care unit graduate)
- **Children 0-20** (e.g., experiencing three or more categories of adverse childhood experiences)

+

At least one Social Risk Factor:
(based on federal and NC criteria)*

- Homeless and/or housing insecure
- Food insecure
- Transportation insecure
- At risk of, witnessing or experiencing interpersonal violence

Meet service specific eligibility criteria, as needed.

* Additional information in Appendix and located here: https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/nc/nc-medicaid-reform-ca.pdf

Healthy Opportunities Pilots: Services and Reimbursement Rates

NC DHHS has defined and priced 29 services that can be covered by the Pilot. These services will be reimbursed via fee-for-service (FFS), per-member per-month (PMPM) payments, or cost-based reimbursement up to a cap and include:

Housing

- Housing navigation, support and sustaining services
- Inspection for housing safety and quality
- Housing move-in support
- Essential utility set-up
- Home remediation services
- Home accessibility and safety modifications
- Healthy home goods
- One-time payment for security deposit and first month's rent
- Short-term post hospitalization housing

Food

- Food and nutrition access case management
- Evidence-based group nutrition class
- Diabetes Prevention Program
- Fruit and vegetable prescription
- Healthy food box (pick-up or delivered)
- Healthy meal (pick-up or delivered)
- Medically Tailored Home Delivered Meal

Transportation

- Reimbursement for health-related public or private transportation
- Transportation case management

Interpersonal Safety

- Interpersonal safety case management*
- Violence intervention services*
- Evidence-based parenting curriculum
- Home visiting services
- Dyadic therapy*

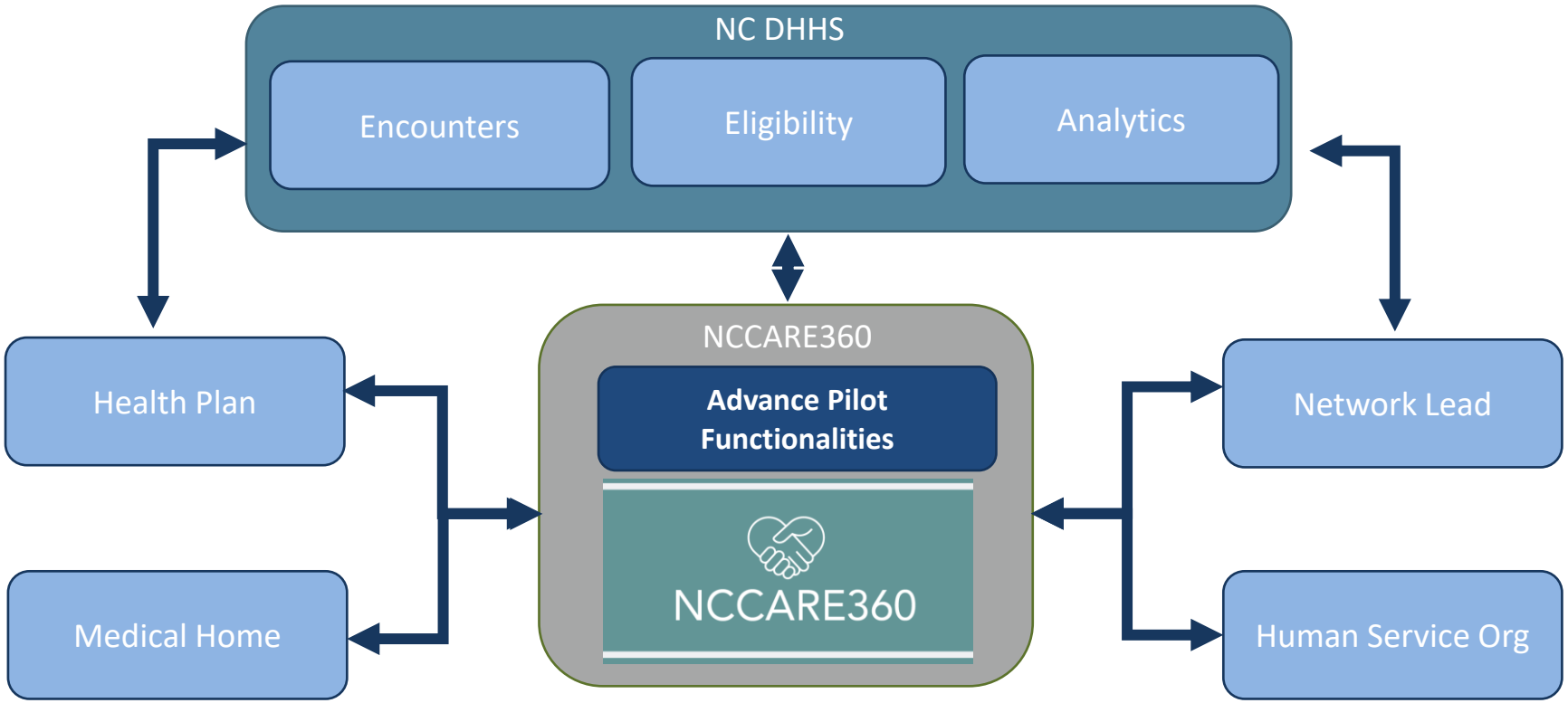
Cross-Domain

- Holistic high-intensity enhanced case management*
- Medical respite
- Linkages to health-related legal supports*

*Sensitive services will be phased in

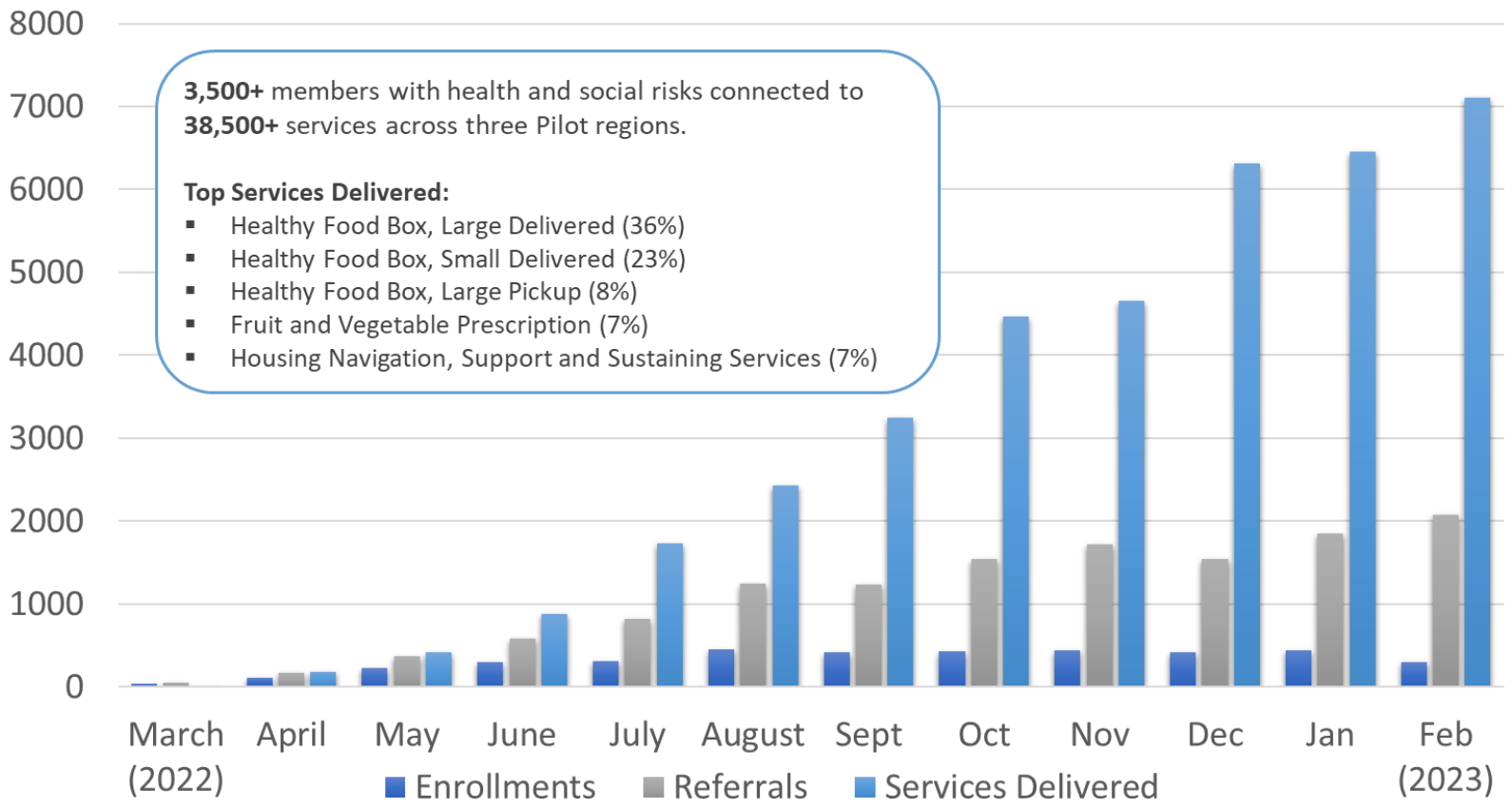
Building on NCCARE360 for the Pilots

- Prioritized having one shared technology system for all Pilot Entities to use that would integrate with Health Plans, Providers, and State Systems.
- Built additional functionality into NCCARE360 to support eligibility documentation, enrollment, service authorization, and invoicing processes for the Pilots



Healthy Opportunities Pilots: Key Indicators by Month

Through February 25, 2023

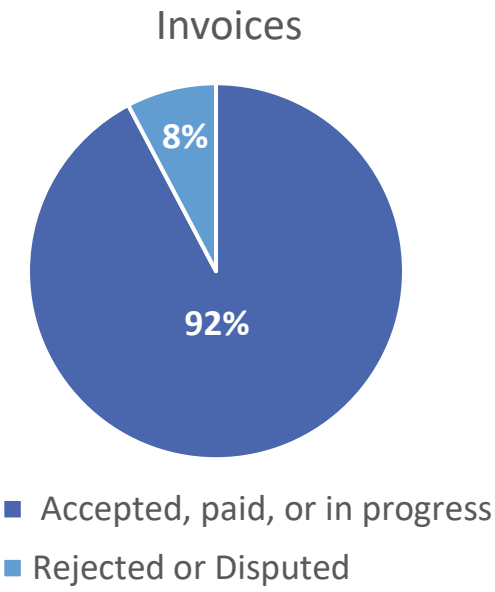


Note: Data should be interpreted with caution; figures above should not be interpreted as the number of unique Pilot enrollees served, as a single service authorization may result in multiple referrals and a single referral can result in multiple services delivered.

Source: Unite Us, Insights Center, Payments Activity Overview
Data as of Feb 25, 2023

Healthy Opportunities Pilots: Operations Status Overview
Through February 25, 2023

- Average Days to Enrollment is **<1 day**
- Average Days to Service Authorization is **<1 day**
- **98%** of Authorizations Approved
- **96%** Referrals Accepted
- **87%** Organizations Accepted Referrals in <3 days
- **99%** Closed Cases within 5 days



41,200+ Invoices Submitted

Source: Unite Us, Insights Center, Payments Activity Overview, Invoice Tracking, Workforce Management - Payments
Data as of February 25, 2023

Success Stories

- **Healthy Eating for a 6-Year Old with Type 1 Diabetes**
  - **Today was the 11th food box we delivered to one of our clients, a 6-year old with very recently diagnosed type-1 diabetes. Her mom was extremely stressed about how and what to feed her child when she was first referred to us.** When the client's mom first started picking up weekly Healthy Food Boxes from us, the only way her daughter would eat beans was in the form of canned pork & beans. This week's Healthy Food Box included a recipe and all of the ingredients to make it. It is a recipe that includes black beans. We have been including beans in the client's weekly box in different forms (hummus, lentil flour, spiral noodles, black bean crackers, etc.) to help her get used to the different flavor by pairing it with textures she likes. She's been loving all of it! **Mom said that her daughter has become such an adventurous eater over the last few weeks.** Mom has been watching YouTube videos to get ideas on how to make interesting meals from unfamiliar foods. **She said feeding her daughter the right food is starting to be easy. Great thanks to each of you for your role in helping this family find peace and health through food.**

- **Improved Diabetes Control**
  - I feel so passionate about the differences we are already making in people's lives. A few weeks ago, a participant shared that their **HbA1C is down from 11 percent to 7 percent.** That's down from an emergency to almost normal. When their **healthcare provider asked what they were doing differently, they said it was the healthy food we bring them.** I am so honored to get to do this work in the community that raised me. I really appreciate all the guidance and support you give to us!

- **Family Game-Changer**
  - **This pilot program for healthy foods is a total game changer! We have only participated in this program for a few weeks but it has had a tremendous impact on everyone in my home.** Let me begin by saying that we appreciate everything that has been provided to us. **This program has allowed us to indulge in fresh, healthy, and highly nutritious, PURE food.** Nutrition is actually a big challenge in our home. I require a special diet to meet these needs and it is difficult or even impossible at times. It's challenging to find and afford the better quality foods so we try to make it work and end up eating a lot of breads, pastas, and cheap processed food. Now that we are all eating well and meeting the nutritional needs for our bodies, we all feel different and are noticing a change. We all have more energy, cheerful moods, and physically feel good…… my husband is excited about coming home for supper these days! He is so happy about the variety and colorful options. **We have all come together more as a family to eat again. That is a small joy in my heart, that as a mother, I don't have to worry about how I am going feed my family. No one should ever have that burden on their heart….**

Success Stories

- **Dire need of housing**
  - **A single mom had been staying at a local shelter with her children but needed life-saving surgery. Her children couldn't remain in the shelter without her, which left her in an impossible position.** Mom had **secured an emergency housing voucher, but it wasn't enough to cover rent in the county where she'd be receiving treatment.** Through the Pilots, the care managers were able to help her **transfer her housing voucher and secure income-based housing near the hospital**. They also helped her access **financial support for her security deposit and utility setup fees** – all services that are covered for eligible HOP participants. Now **mom is able to focus on her health, schedule needed medical care, and keep her family together under one roof** with a little help from her friends and HOP.

- **Cross-Sector Teamwork and Coordination through NCCARE360**
  - **We have a member whose refrigerator/freezer broke. We knew about this because he told our delivery partner when she called to set up that week's meal delivery.** I contacted the member's CM to see how we could get him some refrigerator repair assistance. It turns out, that was right around the time when the pilot housing sector was going live. **The care manager was able to contact the member to set him up with [a organization], who will be repairing his refrigerator soon! It's so cool to go into NCCARE360 and see both of our services working together to find solutions for this member.**

- **Healthy Opportunities Change Lives**
  - Man referred for help with several social needs that were impacting his health. He was having **trouble affording healthy food**. The care manager assured him the pilots could help with that. He was **worried he might not be able to access services because his car needed costly repairs, which he couldn't afford on a fixed income**. The care manager explained the pilot could help with that too. He mentioned he was having a **hard time staying warm; his wood burning furnace didn't work**. The care manager said the pilots could help with his housing needs as well. They enrolled him in the pilots and gave him a referral for **weekly food boxes** provided by MANNA Food Bank and Bounty and Soul. They connected him with Working Wheels to **get his car up and running**. They arranged for Mountain Housing Opportunities to inspect his furnace, which revealed it was too old to be repaired. This resulted in a referral for **a new heat pump that will efficiently heat and cool his home.** Since enrolling in the pilots, he has been **eating healthier. His vehicle has been repaired, and now he's able to make regularly scheduled health appointments**. Being able to drive again has helped him **reconnect with friends, which is helping with his depression. He recently shared that the pilot has "changed my life." This is exactly what the pilot was designed to do.**

Keeping Families and Communities Safe:

Public Health Approaches to Reduce Violence and Firearm Misuse Leading to Injury and Death

https://www.ncdhhs.gov/media/18351/open

Firearm deaths and injuries are a public health problem.

- 5 North Carolinians per day die from a firearm-related death, more than 1,700 in 2020.
- Overall, more than half of firearm-related deaths are suicides and more than 4 in 10 are homicides.
- Men account for 86% of all firearm deaths and non-fatal injuries.

Children and families are among those most impacted.

- 116 North Carolina children died of a firearm related injury in 2021. Firearms are the leading cause of child injury death and are increasing.
- Child firearm injury hospitalizations have increased by 120% from 2016-2020 and child emergency department visits for firearm injury have increased by 68% from 2017-2021.
- Among youth, more than 50% of suicides and 80% of homicides in 2021 involved a firearm.
- The percent of youth involved with juvenile justice with a firearm charge has increased from 4% to 14%.
- 58% of intimate partner homicides involve a firearm.

Firearm deaths and injuries are a health equity issue.

- Black North Carolinians are almost twice as likely as white North Carolinians to be killed by a gun.
- Veterans' suicide rates in North Carolina, were 250% higher than the general population from 2016-2020. For those ages 18 to 34, it was 610% higher than the general population. The use of firearms as a method of suicide is 73.8%, compared to 53.6% for non-veterans.

Self-Injury and Suicide

Intentional injury to other and Homicide

Unintentional Injury and Death

Key public health actions to reduce firearm death and injury in North Carolina

Expand firearm safe storage initiatives
- Wider safe storage campaigns
- Local safe storage teams
- CALM training
- Health care provider gun safety counseling with safety device distribution
- Safety device distribution

Expand Community and Hospital based Community Violence Prevention and Interruption Programs

Strengthen Protective Orders for Survivors of Intimate Partner Violence

Enable Extreme Risk Protective Orders – Red Flag laws

Expand Medicaid

More research, evaluation, dissemination of findings

Office of Violence Prevention

- Enhance collaboration and coordination across state agencies – Department of Public Safety, Department of Health and Human Services, Department of Justice, Governor's Crime Commission (GCC), Task Force for Racial Equity and Criminal Justice
- Improve data collection and sharing
- Manage grant programs to pursue and direct federal funding to communities focused on violence prevention
- Provide technical assistance, sharing of best practices, and promote cross agency collaboration in local communities
- Partner with universities for research, data, evaluation

Thank you

Questions?

Applying Life Stressors and Protective Factors in Child Death Reviews

Abby Collier, MS
Director
National Center for Fatality Review and Prevention

Life Stressors

SOCIAL/ECONOMIC				
Structural racism	Job problems	Housing instability	Cultural differences	Pregnancy scare
Discrimination	Money problems	Witnessed violence	Language barriers	
Poverty	Food insecurity	Tobacco exposure	Lack of childcare	
Neighborhood discord	No phone	Lack of transportation	Pregnancy	
MEDICAL				
Lack of money for care	Caregiver unskilled in providing care	Multiple providers, not coordinated	Felt dismissed by provider	Lack of family or social support care
Provider bias	Limitations of health insurance	Lack of provider-family compatibility	Caregiver distrust of healthcare system	Services not available
RELATIONSHIPS				
None listed below	Parent's incarceration	Isolation	Cyberbullying as a perpetrator	Stress due to sexual orientation
Family discord	Breakup	Bullying as victim	Peer violence as victim	Parents' divorce/separation
Argument with parents/caregivers	Argument with significant other	Bullying as a perpetrator	Peer violence as a perpetrator	
Social discord	Argument with friends	Cyberbullying as a victim	Stress due to gender identity	
SCHOOL (AGE 5 AND OVER)				
School failure	New school	Pressure to succeed	Extracurricular activities	Other school problems
TRANSITIONS (AGE 5 AND OVER)				
Release from hospital	Release from juvenile justice facility	Release from immigration detention center	Transition to/from child welfare system	End of school year/school break
Transition from any level of mental health care to another (e.g. inpatient to outpatient, inpatient to residential, etc.)				
TECHNOLOGY (AGE 5 AND OVER)				
Electronic gaming	Texting	Restriction of technology	Social media	
TRAUMA (AGE 5 AND OVER)				
Rape/sexual assault	Family/domestic violence	Previous abuse		

Protective Factors

SOCIAL/ECONOMIC			
Strong social support networks	Safe, stable, affordable housing	High-quality preschool	Economic and financial help
Focus on the strengths and needs of marginalized communities	Healthy and affordable food	Fresh air, parks, and safe places to play	Work opportunities with family-friendly policies
Affordable, nurturing, and safe childcare	Steady employment	Basic needs are met	
MEDICAL			
Mastery of communication and language skills	Medical and mental health services	Positive physical development	Family or social support for medical care
Comprehensive health insurance	Early and comprehensive screening	Trusted providers	
RELATIONSHIPS			
Emotional self-regulation	Protection from harm and fear	Language-based discipline	Caring adults (outside of immediate family)
Secure attachment(s)	Opportunities to resolve conflict	Mentors	Extended family support
Positive peer relationships	Positive norms	Clear expectations for behavior	Emotional support from family
Engagement and connections in two or more of the following contexts (e.g., peers, school, athletics, employment, religion, culture)			
SCHOOL (AGE 5 AND OVER)			
Positive teacher expectations	Positive partnering between school and family	Academic achievement	Supplemental services such as feeding, and screening for vision
Opportunities for prosocial school engagement	Plans for the future		
TRANSITIONS (AGE 5 AND OVER)			
Navigates changes in routine or schedule	Behavioral and emotional autonomy	Opportunities for exploration in work and school	Future planning
TECHNOLOGY (AGE 5 AND OVER)			
Age-appropriate access to technology	Age-appropriate monitoring	Technology used to access needed healthcare	Technology used to reduce isolation
TRAUMA (AGE 5 AND OVER)			
Physical safety	Psychological safety	Healthcare to address previous trauma	