The Role of Community Oncology in Addressing Cancer Health Disparities

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Challenges

What is the Problem?

Segments of the US population are disproportionately less likely to receive standard recommended cancer care.

34% of all cancer deaths in patients 25 to 74 years old could be prevented if socioeconomic disparities were eliminated.

Eliminating disparities in minorities would have saved $230 billion in direct costs and over $1 trillion in premature deaths and illnesses between 2003 and 2006.

American Association for Cancer Research, AACR Cancer Disparities Progress Report 2022, www.CancerDisparitiesProgressReport.org, 2022.

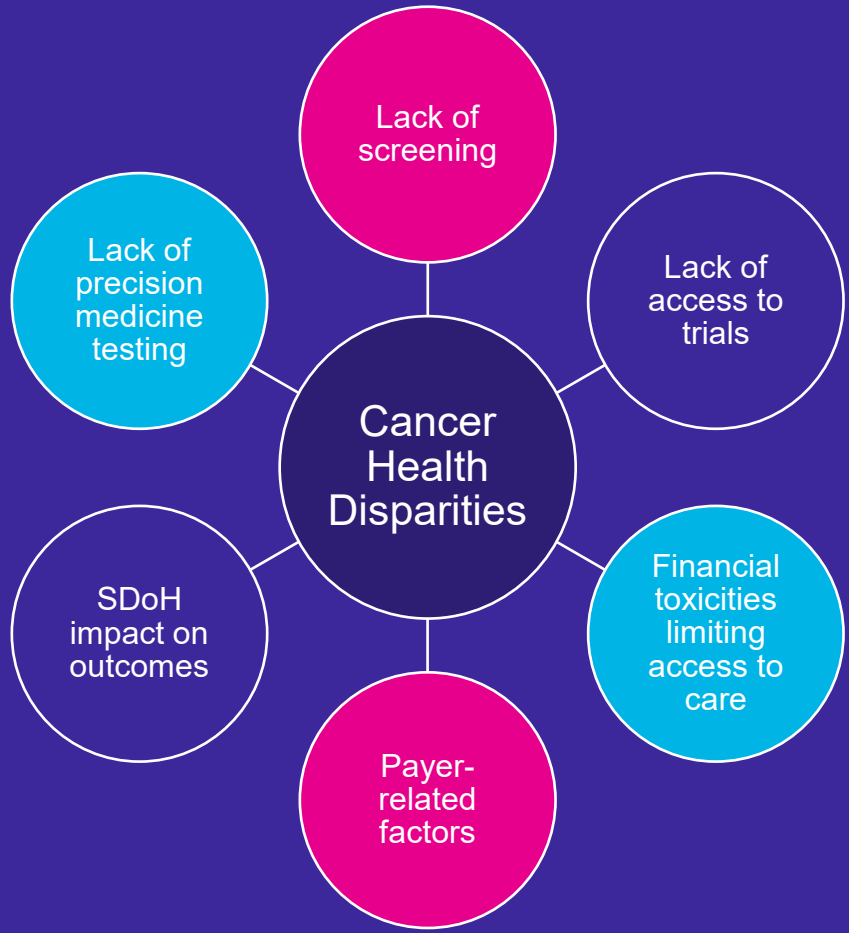
What is the Problem?

The average life expectancy gap for babies born in New Orleans may be as much as 25 years.

Robert Wood Johnson Foundation, www.rwjf.org/en/library/infographics/new-orleans-map.html, 2013.

What is the Problem?

Multiple factors interact to create cancer health disparities (CHD).



SDoH, social determinants of health

Social Determinants of Health

Economic Stability

- Employment
- Income
- Expenses
- Debt
- Medical bills
- Support

Neighborhood and Physical Context

- Housing
- Transportation
- Safety
- Parks and playgrounds
- Walkability
- ZIP code/geography

Education

- Literacy
- Language
- Early childhood education
- Vocational training
- Higher education

Food

- Hunger
- Access to healthy options

Community and Social Context

- Social integration
- Support systems
- Community engagement
- Discrimination
- Stress

Health Care System

- Health coverage
- Provider availability
- Provider linguistic and cultural competency
- Quality of care

Health Outcomes

Mortality, morbidity, life expectancy, health care expenditures, health status, functional limitations

Kaiser Family Foundation, www.kff.org/racial-equity-and-health-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity, 2018.

Lack of Cancer Screening and Impact on Individual and Population Health

Cancer screening saves lives and reduces total lifetime cost of care.

Breast cancer is the most common cancer worldwide.[1] In American women, it is the most diagnosed and the second leading cause of cancer death.[2]

- Even though breast cancer is curable when caught early, nearly 30% of women 50 years and older are not up-to-date with screening mammograms.[3]
  - The rate is especially low among uninsured women, with only 30% being current with recommended screening.

87% of eligible Medicaid or Medicare participants did not receive lung cancer screenings, according to one study.[4]

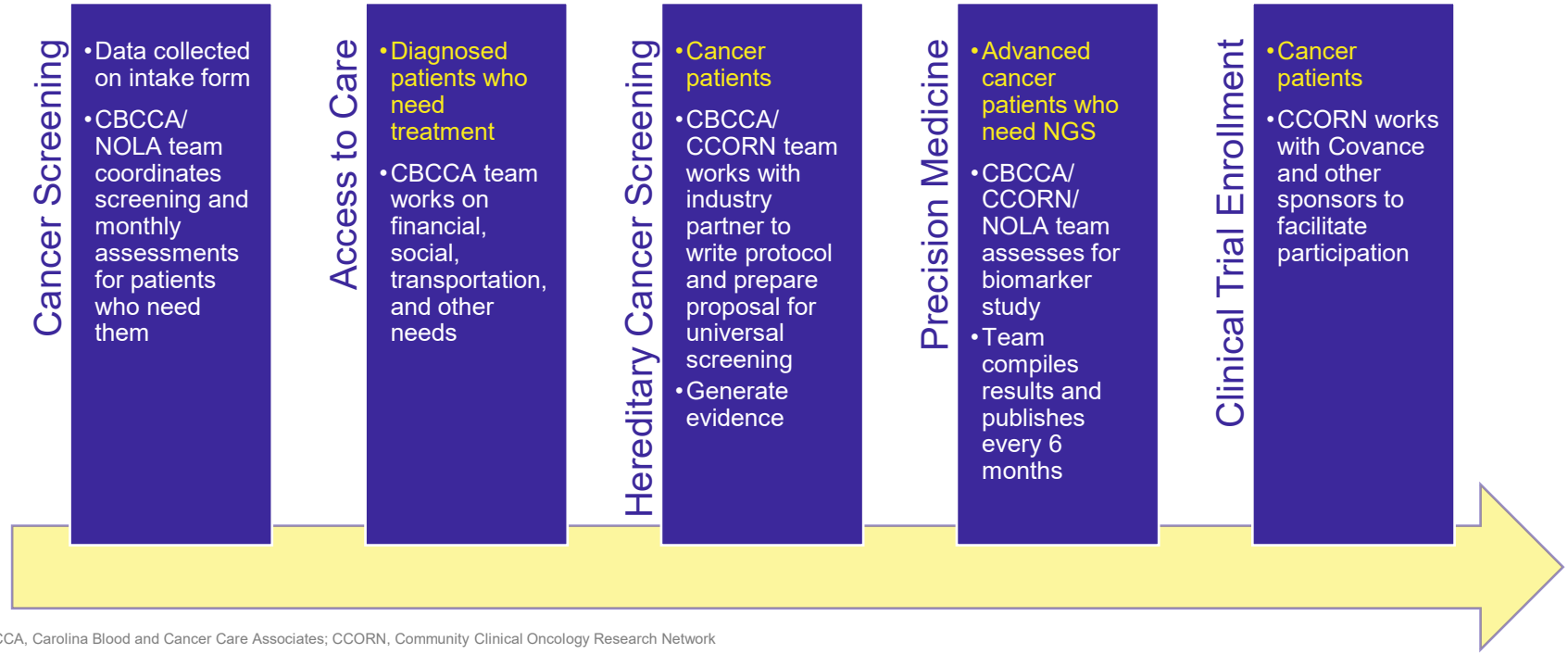
- States in which Medicaid covered this preventive exam had higher screening rates.
- Only 15.7% of 48,923 Medicaid patients received screening, meaning 84% did not.
- Only 12.5% of 332,926 Medicare beneficiaries received screening, meaning 87.5% were not screened.

[1]World Cancer Research Fund International, https://www.wcrf.org/cancer-trends/worldwide-cancer-data/, 2022. [2]Centers for Disease Control and Prevention, https://www.cdc.gov/cancer/dcpc/research/update-on-cancer-deaths/index.htm, 2022. [3]American Cancer Society, *Breast Cancer Facts & Figures 2019-2020,* 2020. [4]Allen S, Sandberg N, Gallagher K, et al. Despite insurance coverage, at-risk people not getting life-saving lung cancer screenings. Epic Research, https://epicresearch.org/articles/despite-insurance-coverage-at-risk-people-not-getting-life-saving-lung-cancer-screenings, 2021.

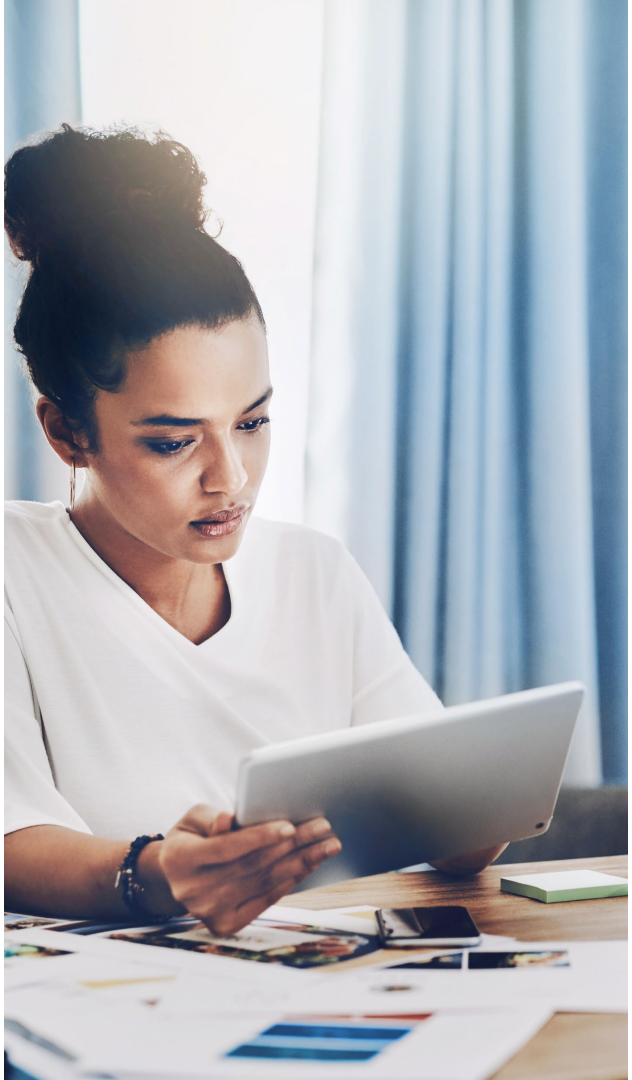
Community-Based Program to Address Challenges

NOLA Program

No One Left Alone: Addressing cancer health disparities at a local level



CBCCA, Carolina Blood and Cancer Care Associates; CCORN, Community Clinical Oncology Research Network



NOLA Program in Action

Addressing cancer health disparities at a local level

Screenings

- Identified and arranged for exams for more than 600 patients who had not received screenings

Finances

- Raised nearly $2.3 million to cover out-of-pocket costs or free drugs
- Created insurance fund currently supporting more than 20 patients

Testing

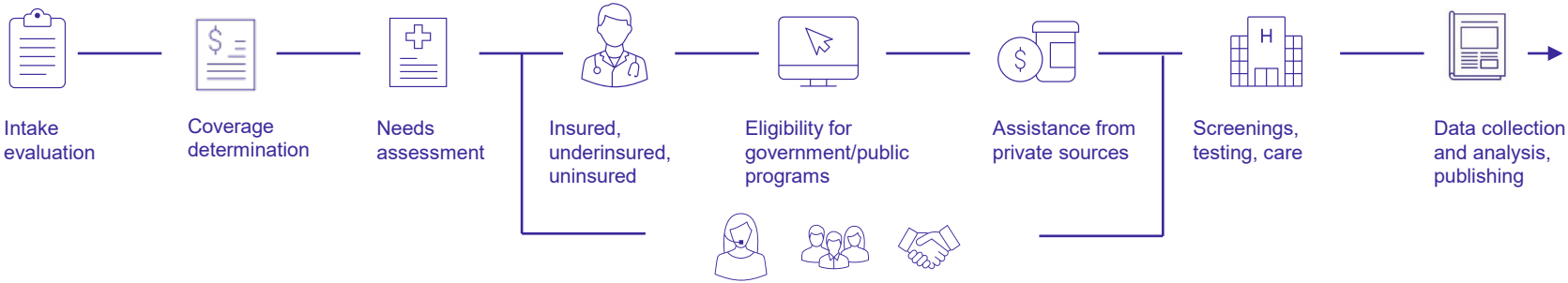
- Established pilot program to identify gaps in germline tests
- Reached testing rates over 80% in 3 large groups

Starting Phase 3 studies soon

No One Left Alone (NOLA) program, Established October 2021, Carolina Blood and Cancer Care Associates, Rock Hill, SC.

NOLA Process

Addressing cancer health disparities at a local level



NOLA Needs Evaluation

Meeting patient needs

Fully insured, able to cover OOP costs

Verify benefits

Calculate OOP needs

Obtain preauthorizations

Proceed with treatment plan

Underinsured, needs assistance with OOP costs

Calculate OOP needs

Identify gaps

Seek assistance based on type of insurance

- VA, MAP

Determine eligibility for federal, state, and local programs

Underinsured, Medicare only

Pursue copay assistance, free drugs

Determine eligibility for Medicaid, LIS Part D, other federal and state local programs

Investigate local programs, 501(c)(3) nonprofits

Uninsured

Determine eligibility for federal, state, and local programs

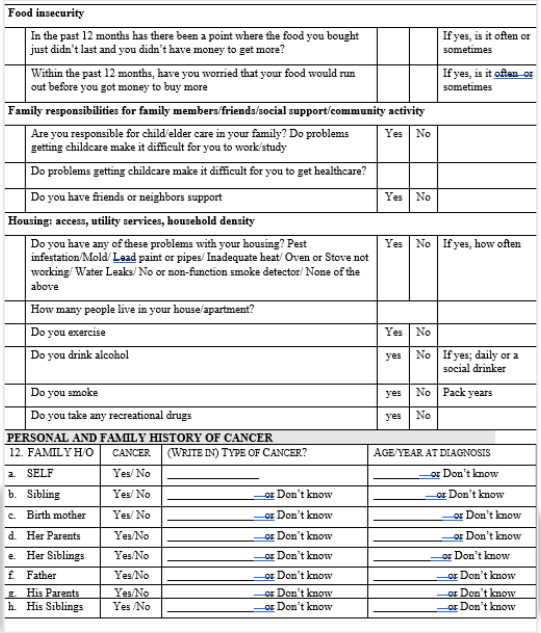
Pursue copay assistance, free drugs, cancercare.org

Investigate legislative help, Medicaid PBM, other agencies

OOP, out-of-pocket; MAP, Medicare Advantage plan; LIS, low-income subsidy; PBM, pharmacy benefits manager

NOLA Patient Intake Form

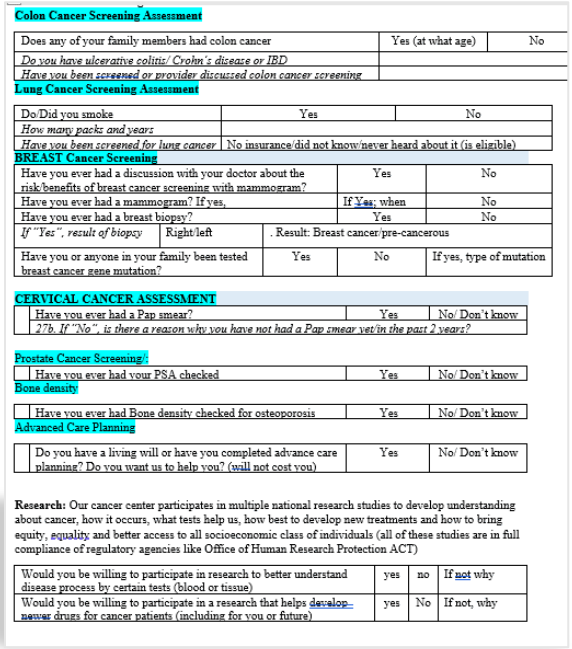
Generate task list and action plan for meeting health and social needs as well as eligibility for assistance



Food insecurity			
	In the past 12 months has there been a point where the food you bought just didn't last and you didn't have money to get more?		If yes, is it often or sometimes
	Within the past 12 months, have you worried that your food would run out before you got money to buy more		If yes, is it often or sometimes
Family responsibilities for family members/friends/social support/community activity			
	Are you responsible for child/elder care in your family? Do problems getting childcare make it difficult for you to work/study	Yes / No	
	Do problems getting childcare make it difficult for you to get healthcare?		
	Do you have friends or neighbors support	Yes / No	
Housing: access, utility services, household density			
	Do you have any of these problems with your housing? Pest infestation/Mold/ Lead paint or pipes/ Inadequate heat/ Oven or Stove not working/ Water Leaks/ No or non-function smoke detector/ None of the above	Yes / No	If yes, how often
	How many people live in your house/apartment?		
	Do you exercise	Yes / No	
	Do you drink alcohol	yes / No	If yes; daily or a social drinker
	Do you smoke	yes / No	Pack years
	Do you take any recreational drugs	yes / No	

PERSONAL AND FAMILY HISTORY OF CANCER

12. FAMILY H/O	CANCER	(WRITE IN) TYPE OF CANCER?	AGE/YEAR AT DIAGNOSIS
a. SELF	Yes/ No	_____	_____or Don't know
b. Sibling	Yes/ No	_____or Don't know	_____or Don't know
c. Birth mother	Yes/ No	_____or Don't know	_____or Don't know
d. Her Parents	Yes/No	_____or Don't know	_____or Don't know
e. Her Siblings	Yes/No	_____or Don't know	_____or Don't know
f. Father	Yes/No	_____or Don't know	_____or Don't know
g. His Parents	Yes/No	_____or Don't know	_____or Don't know
h. His Siblings	Yes /No	_____or Don't know	_____or Don't know



Colon Cancer Screening Assessment

Does any of your family members had colon cancer	Yes (at what age)	No
Do you have ulcerative colitis/ Crohn's disease or IBD		
Have you been screened or provider discussed colon cancer screening		

Lung Cancer Screening Assessment

Do/Did you smoke	Yes	No
How many packs and years		
Have you been screened for lung cancer	No insurance/did not know/never heard about it (is elizible)	

BREAST Cancer Screening

Have you ever had a discussion with your doctor about the risk/benefits of breast cancer screening with mammogram?		Yes	No
Have you ever had a mammogram? If yes,		If Yes; when	No
Have you ever had a breast biopsy?		Yes	No
If "Yes", result of biopcy	Right/left	. Result: Breast cancer/pre-cancerous	
Have you or anyone in your family been tested breast cancer gene mutation?	Yes	No	If yes, type of mutation

CERVICAL CANCER ASSESSMENT

Have you ever had a Pap smear?	Yes	No/ Don't know
27b. If "No", is there a reason why you have not had a Pap smear yet/in the past 2 years?		

Prostate Cancer Screening/:

Have you ever had your PSA checked	Yes	No/ Don't know

Bone density

Have you ever had Bone density checked for osteoporosis	Yes	No/ Don't know

Advanced Care Planning

Do you have a living will or have you completed advance care planning? Do you want us to help you? (will not cost you)	Yes	No/ Don't know

Research: Our cancer center participates in multiple national research studies to develop understanding about cancer, how it occurs, what tests help us, how best to develop new treatments and how to bring equity, equality and better access to all socioeconomic class of individuals (all of these studies are in full compliance of regulatory agencies like Office of Human Research Protection ACT)

Would you be willing to participate in research to better understand disease process by certain tests (blood or tissue)	yes	no	If not why
Would you be willing to participate in a research that helps develop newer drugs for cancer patients (including for you or future)	yes	No	If not, why

Demographics

- Race, ethnicity, language
- Income, education, employment

Social and economic needs

- Transportation, housing
- Food insecurity
- Responsibilities, social support

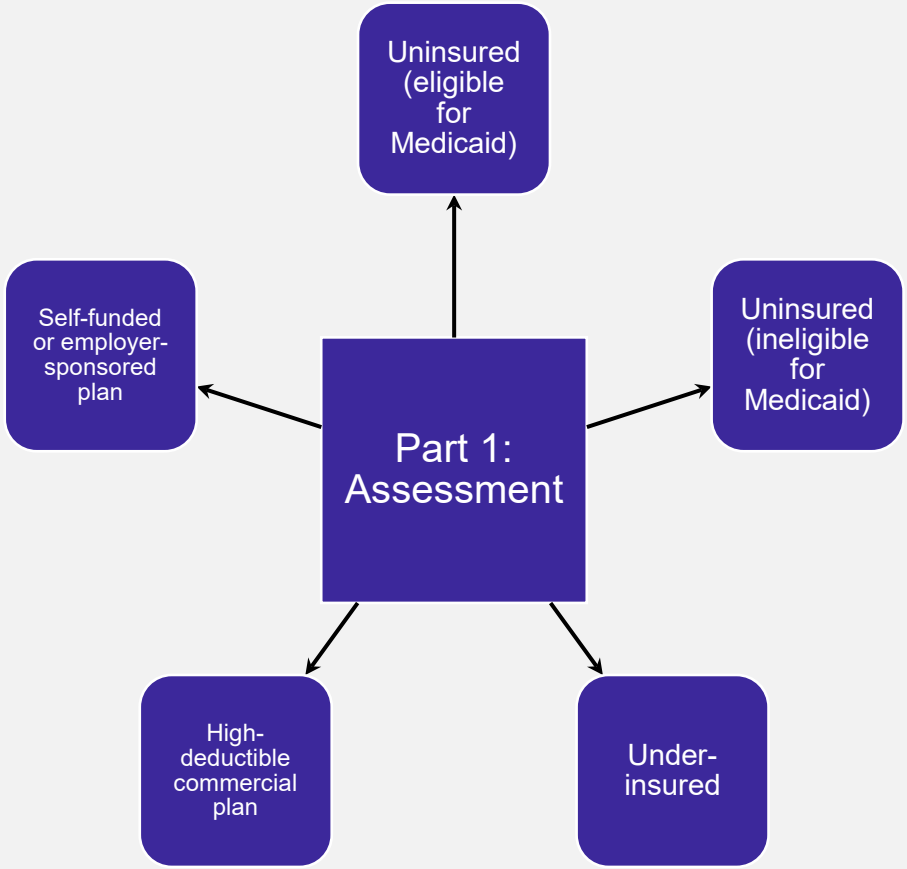
Health information and needs

- Personal and family histories
- Screenings
- Research participation

How NOLA Provides Access to Care

Part 1: Assessment

- Identify insurance status
- Collect income information
- Collect information on dependents



Master NOLA Spreadsheet

Health needs include

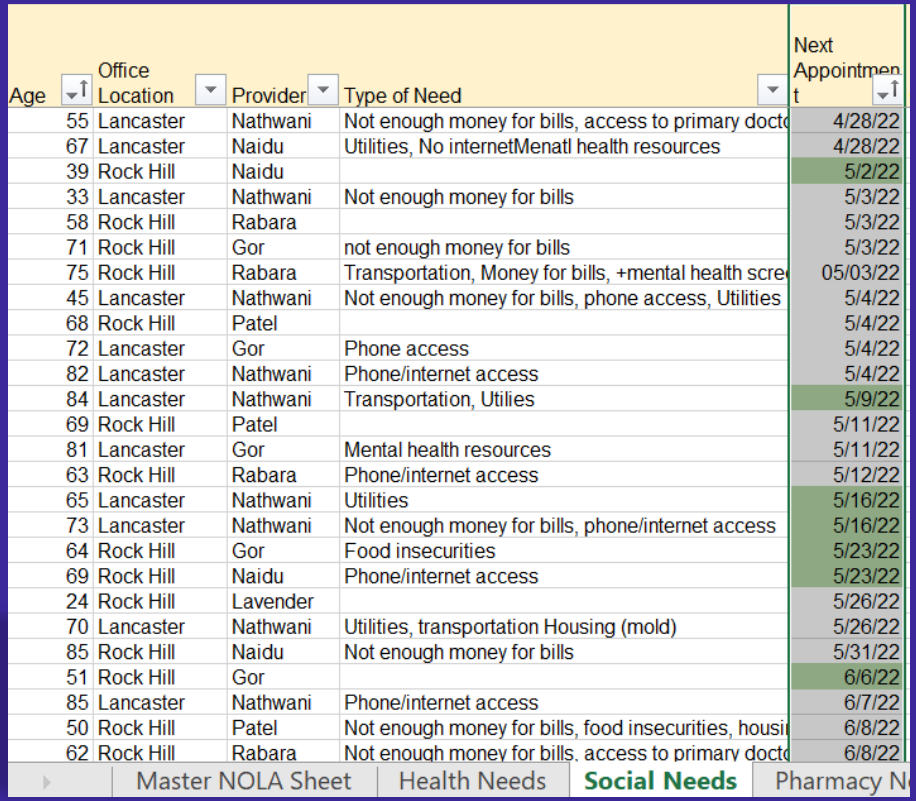
- Cancer screenings
- Smoking cessation
- Osteoporosis

Social needs include

- Financial stability
- Phone/internet access
- Mental health resources
- Utilities
- Food security
- Transportation

Pharmacy needs

- Access to medications
- Transportation



Age	Office Location	Provider	Type of Need	Next Appointment
55	Lancaster	Nathwani	Not enough money for bills, access to primary docto	4/28/22
67	Lancaster	Naidu	Utilities, No internetMenatl health resources	4/28/22
39	Rock Hill	Naidu		5/2/22
33	Lancaster	Nathwani	Not enough money for bills	5/3/22
58	Rock Hill	Rabara		5/3/22
71	Rock Hill	Gor	not enough money for bills	5/3/22
75	Rock Hill	Rabara	Transportation, Money for bills, +mental health scre	05/03/22
45	Lancaster	Nathwani	Not enough money for bills, phone access, Utilities	5/4/22
68	Rock Hill	Patel		5/4/22
72	Lancaster	Gor	Phone access	5/4/22
82	Lancaster	Nathwani	Phone/internet access	5/4/22
84	Lancaster	Nathwani	Transportation, Utilies	5/9/22
69	Rock Hill	Patel		5/11/22
81	Lancaster	Gor	Mental health resources	5/11/22
63	Rock Hill	Rabara	Phone/internet access	5/12/22
65	Lancaster	Nathwani	Utilities	5/16/22
73	Lancaster	Nathwani	Not enough money for bills, phone/internet access	5/16/22
64	Rock Hill	Gor	Food insecurities	5/23/22
69	Rock Hill	Naidu	Phone/internet access	5/23/22
24	Rock Hill	Lavender		5/26/22
70	Lancaster	Nathwani	Utilities, transportation Housing (mold)	5/26/22
85	Rock Hill	Naidu	Not enough money for bills	5/31/22
51	Rock Hill	Gor		6/6/22
85	Lancaster	Nathwani	Phone/internet access	6/7/22
50	Rock Hill	Patel	Not enough money for bills, food insecurities, housi	6/8/22
62	Rock Hill	Rabara	Not enough money for bills, access to primary docto	6/8/22

Master NOLA Sheet | Health Needs | **Social Needs** | Pharmacy N

NOLA Needs Evaluation

Meeting patient needs

Health needs

- Screenings, based on personal and family history, occupation, published recommendations
  - Schedule screenings and follow-up
- Hereditary cancer testing
  - SEMA4, PREFER, Gallery, GRAIL
- Clinical trial participation

Financial needs

- Contributions and assistance with copays, deductibles, other gaps
  - Foundation support (CBCCA)
  - State and Federal government programs
  - Local programs
  - Private assistance (pharma, labs)
  - 501(c)(3) nonprofit organizations

NOLA Progress

- Thank you to Johnson and Johnson, Community Oncology Alliance, and Amgen for “walking the talk”
- Could use more support from pharma for local initiatives
- State and federal help would be a possibility

CRO, contract research organization

Learnings

- **Teamwork and cohesive approach with consistency necessary**
- **All solutions local**
- **SDoH very critical**
- **Patient assistance programs and financial assistance not sufficient**
- **Obtaining insurance help best approach for financial toxicity**
- **Requirements: biomarker testing, just-in-time studies, access to clinical trials**

NOLA by the Numbers

Early results

- 25 foundations contributed financial support for 101 patients
- Free drugs worth more than $1.63 million obtained

Addressing Cancer Health Disparities in a Multilateral Collaboration in an Independent Community Cancer Clinic: Translating Words Into Action

KASHYAP PATEL, MD; HIRANGI MUKHI, BS; ANJANA PATEL, BSC; NIYATI NATHWANI, MD; DHWANI MEHTA, MS; JENNIFER SHERAK, MBA; NATASHA CLINTON, MSN, APRN, AOCNP; HOLLY PISARIK, JD; BENJAMIN BROWN, BS; SARA ROGERS, PHARMD; MARY KRUCZYNSKI; NICOLAS FERREYROS, BA; TED OKON, MBA

APPENDIX A. Foundation Support Procured for CBCCA Patients Under NOLA, 2021

Foundations	No. of patients enrolled	Paid by foundation	Pending payment, foundation (in process)
Company 1	2	$0.00	$2492.28
Company 2	3	$12,302.57	$0.00
Company 3	2	$5079.55	$0.00
Company 4	14	$12,507.19	$407.62
Company 5	1	$2055.00	$0.00
Company 6	1	$2779.50	$0.00
Company 7	1	$1348.54	$0.00
Company 8	3	$6650.72	$0.00
Company 9	1	$6198.70	$521.76
Company 10	2	$3335.88	$0.00
Company 11	32	$13,797.98	$0.00
Company 12	1	$315.00	$80.00
Company 13	2	$5000.00	$0.00
Company 14	4	$3739.69	$135.00
Company 15	3	$1705.03	$100.44
Company 16	5	$7830.97	$0.00
Company 17	1	$361.82	$0.00
Company 18	3	$11,207.14	$0.00
Company 19	3	$6414.69	$0.00
Company 20	1	$6616.52	$0.00
Company 21	2	$529.85	$0.00
Company 22	9	$6973.80	$0.00
Company 23	3	$9321.04	$0.00
Company 24	1	$6088.34	$0.00
Company 25	1	$15.00	$0.00
TOTAL	**101**	**$132,194.52**	**$3737.30**
		$3737.30 (pending)	
		$135,931.82	

CBCCA, Carolina Blood and Cancer Care Associates; NOLA, No One Left Behind.

APPENDIX B. Free Drugs Received for Patients

Dosage	No. of units	Cost per unit	Total cost
12,600 mg	1260	$69.70	$89,216.00
6100 mg	610	$69.83	$42,596.30
16,600 mg	16,600	$49.34	$819,044.00
1500 mg	1500	$19.65	$29,475.00
14,500 mg	580	$32.09	$18,612.20
7650 mg	765	$90.42	$69,171.30
1260 mg	1260	$12.60	$15,876.00
3000 mg	300	$73.39	$22,017.00
1,240,000 U	1240	$8.50	$10,540.00
4200 mg	420	$41.13	$17,274.60
2250 mg	2250	$1.09	$2452.50
45 mg	6	$104.71	$628.26
720 mg	720	$27.62	$19,886.40
4200 mg	420	$67.77	$28,463.40
1500 mg	150	$39.18	$5877.00
5700 mg	570	$84.56	$48,199.20
560 mg	56	$37.98	$2126.88
840 mg	840	$185.73	$156,013.20
1560 mg	1560	$60.62	$94,567.20
20 mg	200	$6.55	$1,310.00
10,800 mg	1080	$74.94	$80,935.20
1760 mg	176	$57.33	$10,090.08
102 mg	204	$241.26	$49,217.04
TOTAL			**$1,633,588.76**

mg indicates milligrams; U, units
Note: Each entry represents an individual drug; names of drugs and J codes can be made available upon request.

Patel, K; Mukhi H, Patel A, et al. Addressing cancer health disparities in a multilateral collaboration in an independent community cancer clinic: translating words into action. Evid Based Oncol. 2022;28(6)August 2022.

NOLA by the Numbers

Comprehensive genomic profiling analysis

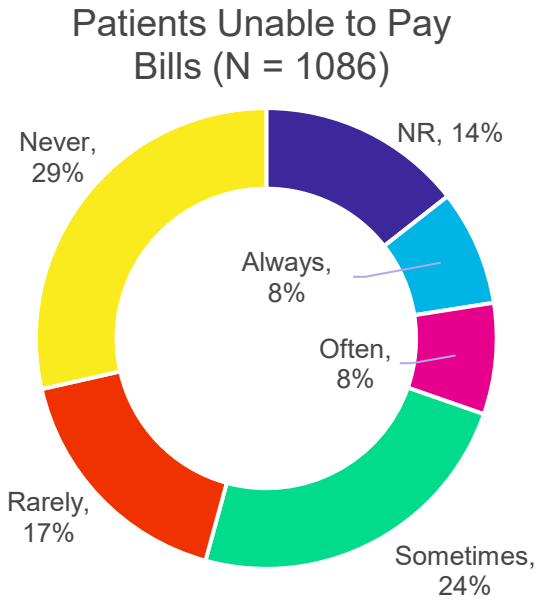
Next-generation sequencing, whole-exome sequencing, and liquid biopsy testing

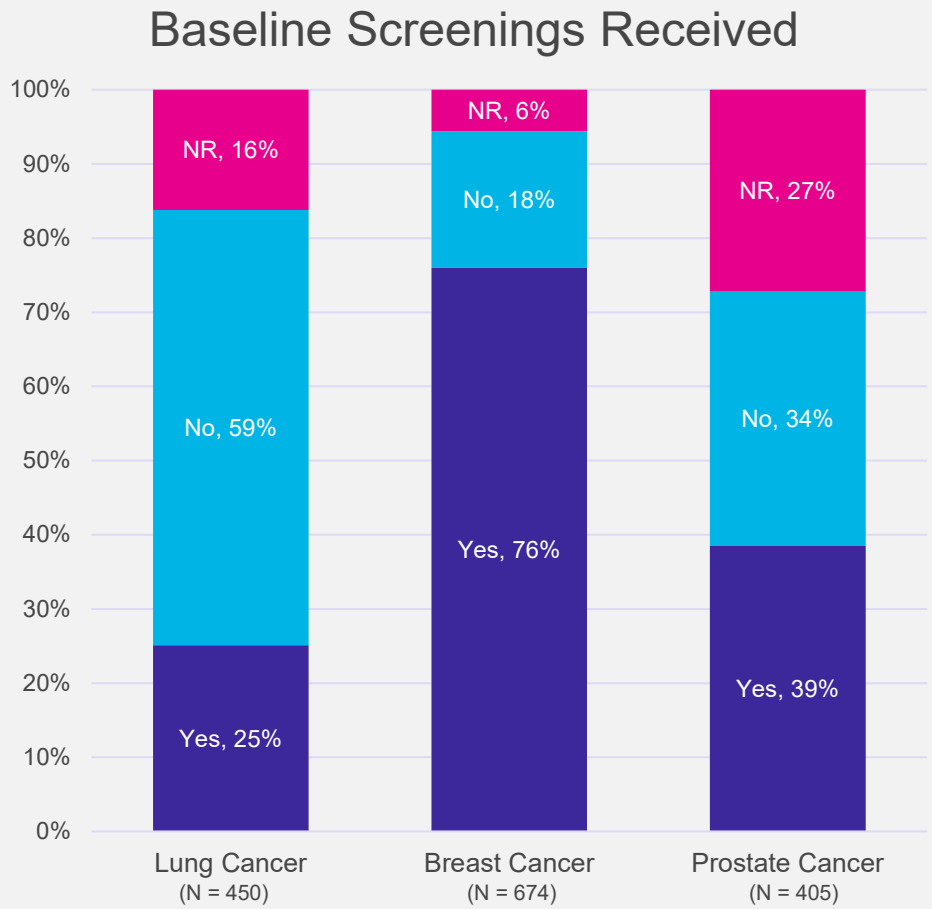
(N = 355, December 2021)

Clinical trials available 206	Approved therapies available 60	Potential germline implications 40
Approved therapies for other cancers with mutations in same gene 40	Approved therapies for different mutation in same gene 12	Approved therapies in breast cancer with different hormonal expression 10
Approved therapies for same mutation in other indications 9	NCCN-approved treatments for other cancers with mutations in same gene 8	Approved therapies for more advanced mutation 6

"Approved therapies" refers to approval by the US Food and Drug Administration (FDA), unless otherwise specified.

NOLA by the Numbers





NR, not reported
No One Left Alone (NOLA) program, Established October 2021, Carolina Blood and Cancer Care Associates, Rock Hill, SC.

NOLA by the Numbers

Insurance needs met	3%
Social needs discussed	22%
Cancer screenings scheduled	20%
Cancer screenings discussed	54%

No One Left Alone (NOLA) program, Established October 2021, Carolina Blood and Cancer Care Associates, Rock Hill, SC.

What is Next?

Implement nationwide program based on NOLA

Partnerships and expansion

- Practice participation expansion
- Industry stakeholder engagement

Identify and address more needs

- Additional patients and challenges
- Needs that affect well-being and health
  - Transportation, food, shelter
- Local, regional, and national resources

Analyze and publicize

- Track improvements in care delivery
- Publish and present
- Create “cookbook” for improving outcomes by addressing SDoH

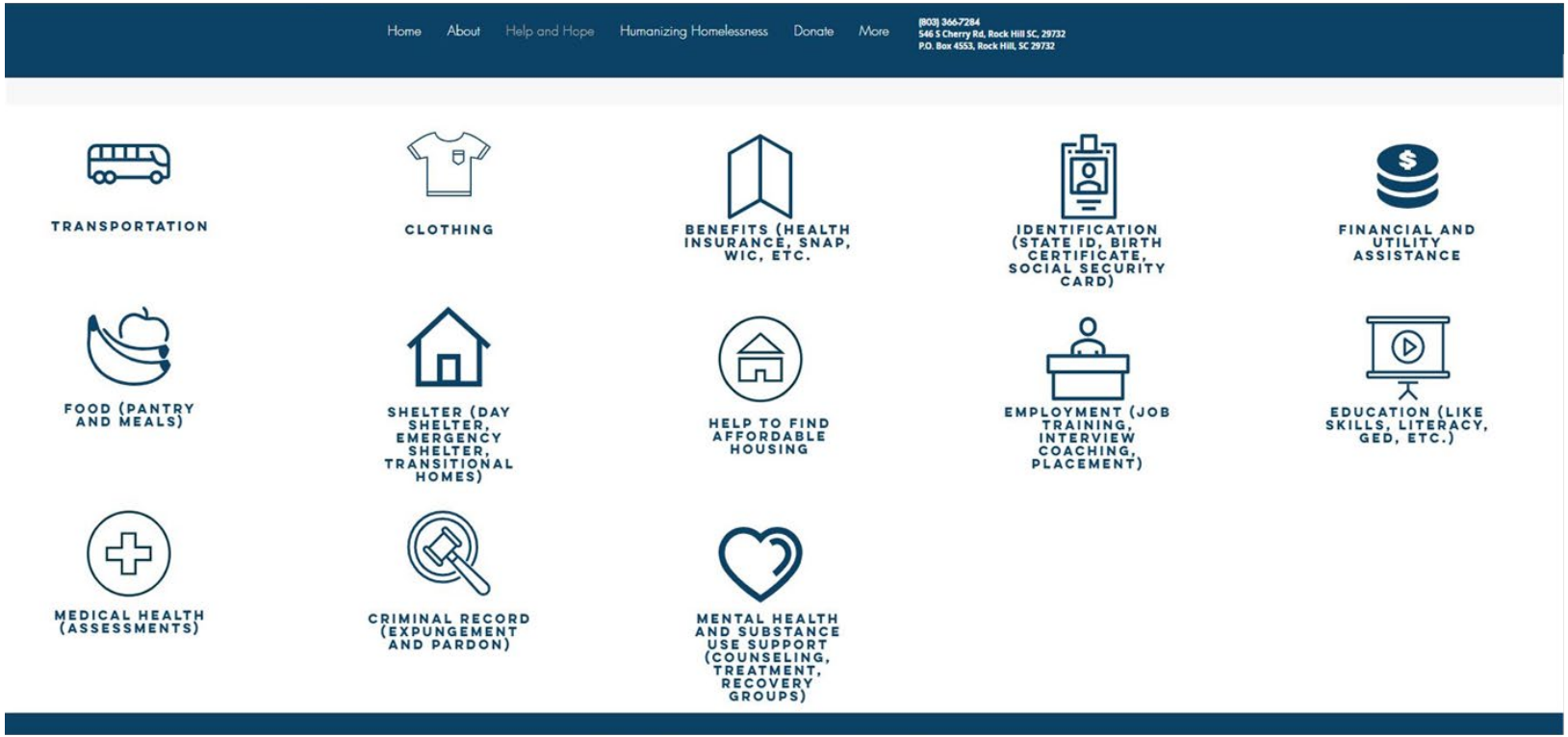
Identify

- Identify patients, issues, and other critical needs peripheral to health care
- Refer to Pathways team or other appropriate source

Analyze and publicize

- Trace and track improvements
- Create standards for best practices
- Pursue health economics outcomes research (HEOR)
  - Seek additional funding based on improved outcomes
- Analyze comprehensive data and publish
  - National meetings, journals, media briefs, social media

Pathways Community Center



Pathways Community Center, Rock Hill, SC, https://www.pathwaysyc.org/helpandhope, 2022.

“In its first year, NOLA generated financial assistance worth more than $1.7 million and assisted 154 patients.”

Patel, K; Mukhi H, Patel A, et al. Addressing cancer health disparities in a multilateral collaboration in an independent community cancer clinic: translating words into action. *Evid Based Oncol*. 2022;28(6)August 2022.

thank you