2024 VIZIENT CONNECTIONS SUMMIT

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REFLECT | ADAPT | EVOLVE

Transforming Health Outcomes by Addressing Patients' Social Needs

M. Suzanne Kraemer, MD, Chief Quality Officer, Carilion Clinic
Aaron M.H. Boush, MHA, Community Health and Outreach Director, Carilion Clinic
Taylor Naff, PMP, Quality Program Director, Carilion Clinic

Elizabeth Crabtree Killen, PhD, MPH, Administrator, Population Health; MUSC
Rita Aidoo, LMSW, MHFA, DHA Candidate, 2027, Manager, Community Navigation, MUSC
Peggy Jenny, RN, BSN, MPHS, Director, Value Intelligence; MUSC

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Learning Objectives

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- Explain the use of a multidisciplinary, systemwide program to improve identification of SDoH.
- Describe a system of care to connect patients with health-related social needs to community programs.

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Addressing Social Determinants of Health to Transform Health Outcomes

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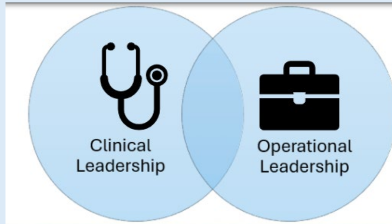
Carilion Clinic

- **#3 in Virginia (tied) US News** 16 High performing procedures/conditions
- **501c 3 not-for-profit**
- **$2.4 billion** in annual revenue
- Headquartered in **Roanoke, Virginia**
- **7** hospitals **+ 1 Children's Hospital**
- **Radford University Carilion**
- **Virginia Tech Carilion School of Medicine and Fralin Biomedical Research Institute at VTC**
- Serving **1 million** Virginians across about **18 counties** and **6 cities** in western Virginia and southern West Virginia
- **DYAD Leadership**



BY THE NUMBERS

14,569 employees

264 practice sites

3,865 babies delivered

1,041 licensed beds

43,075 hospital admissions

53,218 surgeries

846 physicians

308,916 prescriptions filled

162,010 emergency department visits

10
Roanoke County

106
Roanoke City

Health Factor Ranking 2023

LIFE EXPECTANCY

ACROSS LOCALITIES

Lower in Roanoke Valley than Virginia by more than 1 year

Roanoke City has lowest in the area of **75 yrs**

ACROSS CENSUS TRACTS

As low as **68 yrs** in census tract 26

As high as **83 yrs** in some SW Roanoke County census tracts

https://www.countyhealthrankings.org/explore-health-rankings/
Virginia Department of Health, Centers for Disease Control and Prevention and the National Center for Health Statistics

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Social – Ecological Framework*

Step 1:
Conduct Community Health Assessment

Community Data
Patient Data

Step 2:
Planning

Step 3: Resourcing

Step 4:
Implementation

Step 5:
Evaluation (ongoing)

Community

Interpersonal

Individual

EMR

**Adapted from McLeroy et al., 1988*

Carilion Clinic Community Health and Development

- Community Benefit
  - Regional Program Managers
  - CB Analysts
- Community Health & Outreach
  - Community Health Educators
  - Dietitian
  - Community Health RNs
  - Community Outreach Specialists
  - Community Health Workers
  - Peer Recovery Support Specialists

Vision: System of care that integrates Community Health services, from bedside to community, and vice versa, system-wide

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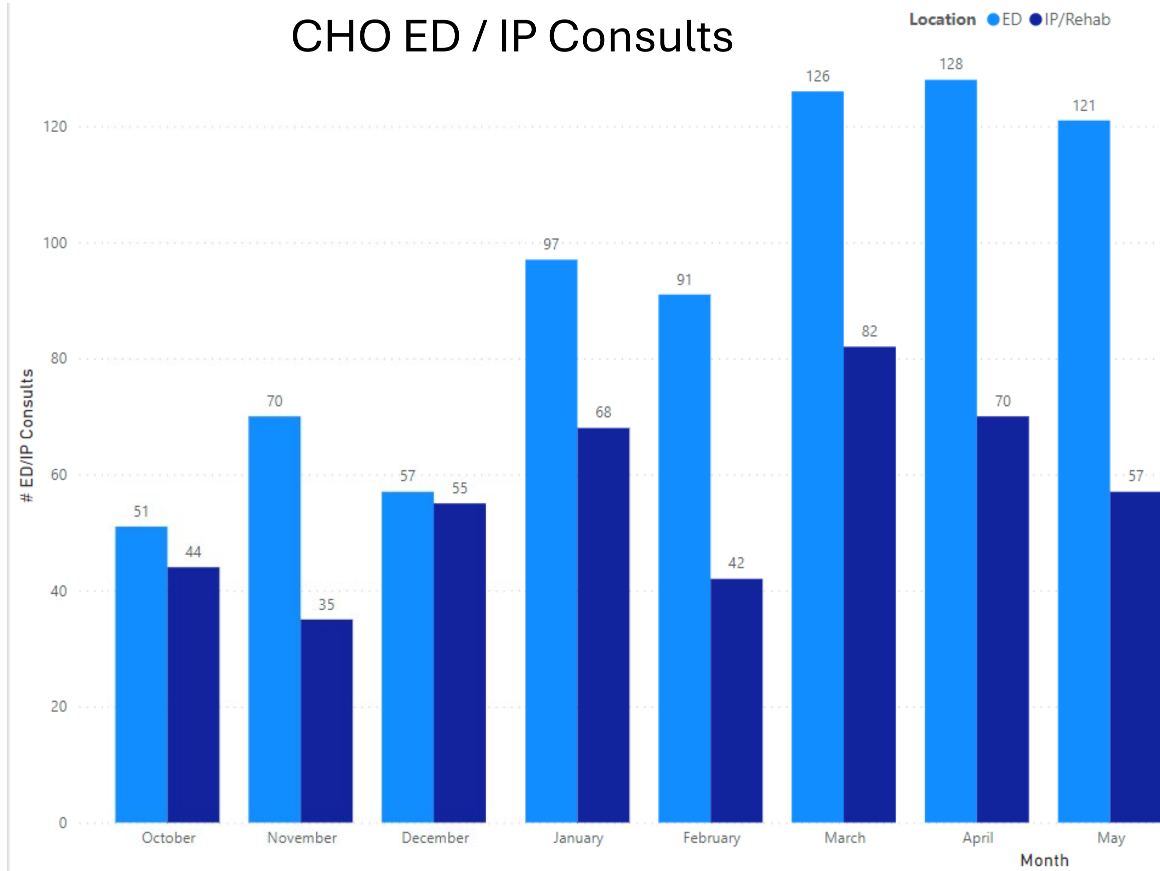
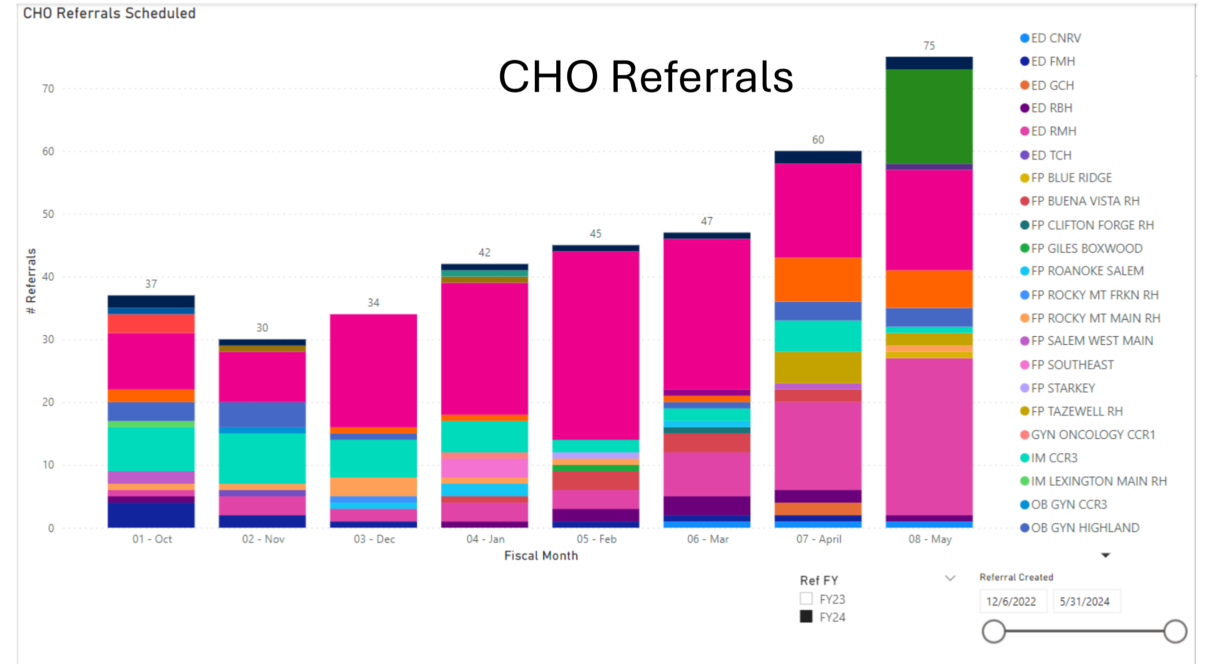
Clinical Integration (cont.)





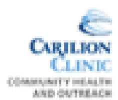
CHO Outpatient Visits

CHO Appt Type	01 - Oct	02 - Nov	03 - Dec	04 - Jan	05 - Feb	06 - Mar	07 - Apr	08 - May	Total
CHW FOLLOW UP	304	298	221	297	275	277	267	259	**2198**
CHW INTAKE	75	65	69	79	58	53	46	23	**468**
PSS FOLLOW UP	31	37	33	38	26	20	33	47	**265**
PSS INTAKE	8	9	15	7	8	8	7	14	**76**
PSS GROUP SESSION	6	6	7	4	1	6	2	1	**33**
PRS FOLLOW UP PUBLIC SPACE	1	2	4	4	3	1	5	5	**25**
Total	**425**	**417**	**349**	**429**	**371**	**365**	**360**	**349**	**3065**

*Community Health Worker Active Clients: 688
*Peer Support Services Active Clients: 106
*Average OP Caseload: 49 Clients

*As of 7.9.24

Community Health Outcomes



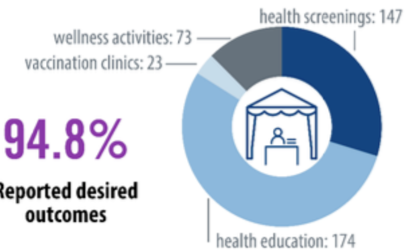
HEALTH EDUCATION IMPACT: FY 2023

876	80,451	52,725
Total interventions	Total reach	Unique individuals reached

HEALTH EDUCATION EVENTS

FISCAL YEAR 2023

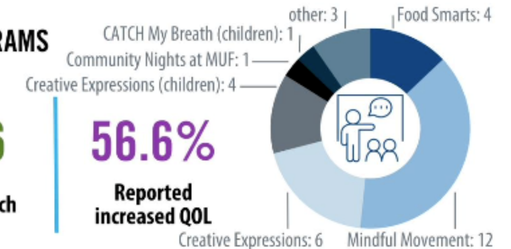
386	11,831	94.8%
Total events	Total reach	Reported desired outcomes



HEALTH EDUCATION PROGRAMS

FISCAL YEAR 2023

31	586	56.6%
Total programs	Total reach	Reported increased QOL



Peer Support Services:

- Connection to Treatment. **82% linked with a peer successfully made it to their post-ED psychiatry appointment** for opioid use disorder treatment
- Peer Support for the bridge transition. Patients who meet with a peer were **twice times** more likely to cross the bridge than those who did not meet with a peer.
- Pilot Study Outcomes, July 2018 to August 2020[1]
  - Total **decrease of patient encounters by 13%. Decrease in inpatient encounters by 55**%. Increase in **outpatient encounters by 24%**
  - **77% decrease in hospital days** after intervention
  - Average hospital days before enrollment was **24 days** and after enrollment was **12 days**.

Community Health Worker Services:

- According to UPENN Center for Community Health Workers, every dollar invested in the CHW intervention would return $2.47 to an average Medicaid payer within the fiscal year[2].
- **Estimated ROI: $1,193,269.35 annually**

1: Note: Total patients in analysis: 1,080. Data based on one-year pre-enrollment in intervention and one year post enrollment in intervention. Source: Strata.
2: Shreya et. al., UPENN, Evidence-Based Community Health Worker Program Addresses Unmet Social Needs And Generates Positive Return On Investment, 2020, https://www.healthaffairs.org/doi/10.1377/hlthaff.2019.00981

Social-Ecological Framework* Interventions

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- **Policy, Systems, and Environmental Changes (PSE)**
  - Community Health Improvement and Investment Process
  - Support Public Policy Advocacy
- **Community**
  - Health Improvement Coalitions and Partnerships
  - Health Communication Campaigns
  - Place-Based Initiatives
- **Interpersonal**
  - Group Health Education Intervention
  - Peer Recovery and Lay-level Groups or Interventions
- **Individual**
  - Peer Support Specialists
  - Community Health Workers
  - Community Health Nursing Interventions

*Adapted from McLeroy et al., 1988

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Lessons Learned

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- Partnership with Quality
  - Combing CHA process with hospital and quality data
  - Health Equity
  - Showing clinical value for community health interventions
- EMR department build- Community Health part of the care team
  - Time
  - Resources
  - Data and reporting
- Creating system to make connections to the right patient at the right time
  - Referrals CHO not dependent on providers
  - SDoH referrals via Unite Us

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THIS IS OUR MISSION

CARILION CLINIC

to improve the health of the communities we serve

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THIS IS OUR COMMUNITY

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MUSC Health
Medical University of South Carolina

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Addressing Social Determinants of Health to Transform Health Outcomes

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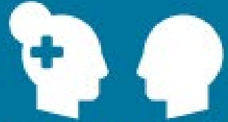
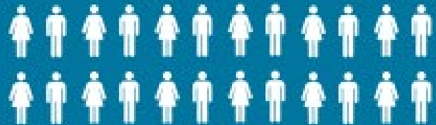
MUSC BY THE NUMBERS 2024

The Only Comprehensive Academic Health System in South Carolina

2.4 MILLION
Patient encounters annually



130,000
Accountable Care Organization members

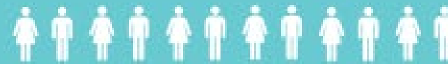


Statewide health system

1 of 2 National Telehealth Centers of Excellence

3,189 Students

22,312 Physicians/ Faculty / Staff



25,501 Total people

5.9 BILLION
Total enterprise operating budget

10.1 BILLION
Current estimated economic impact

16*
Hospitals
(5 in development)

2,700
Licensed beds

750
Care locations

*Includes owned and governing interest

Employee demographics

16% of leaders are underrepresented minorities (URMs)

78% of workforce identify as female

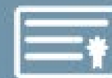
32% of workforce identify as racial/ ethnic minority

The Medical University

6 Colleges

933
Residents & Fellows

42 Degree programs



University Hospital

#1 rated in S.C. by U.S. News & World Report

300.6 MILLION
Research funding

NCI-designated Cancer Center

1,197
Clinical trials

55
Active faculty startups

33
Products in market

595
U.S. and International patents

REV. 011824

System-Wide Social Determinants of Health (SDoH) Screening and Resource Connection

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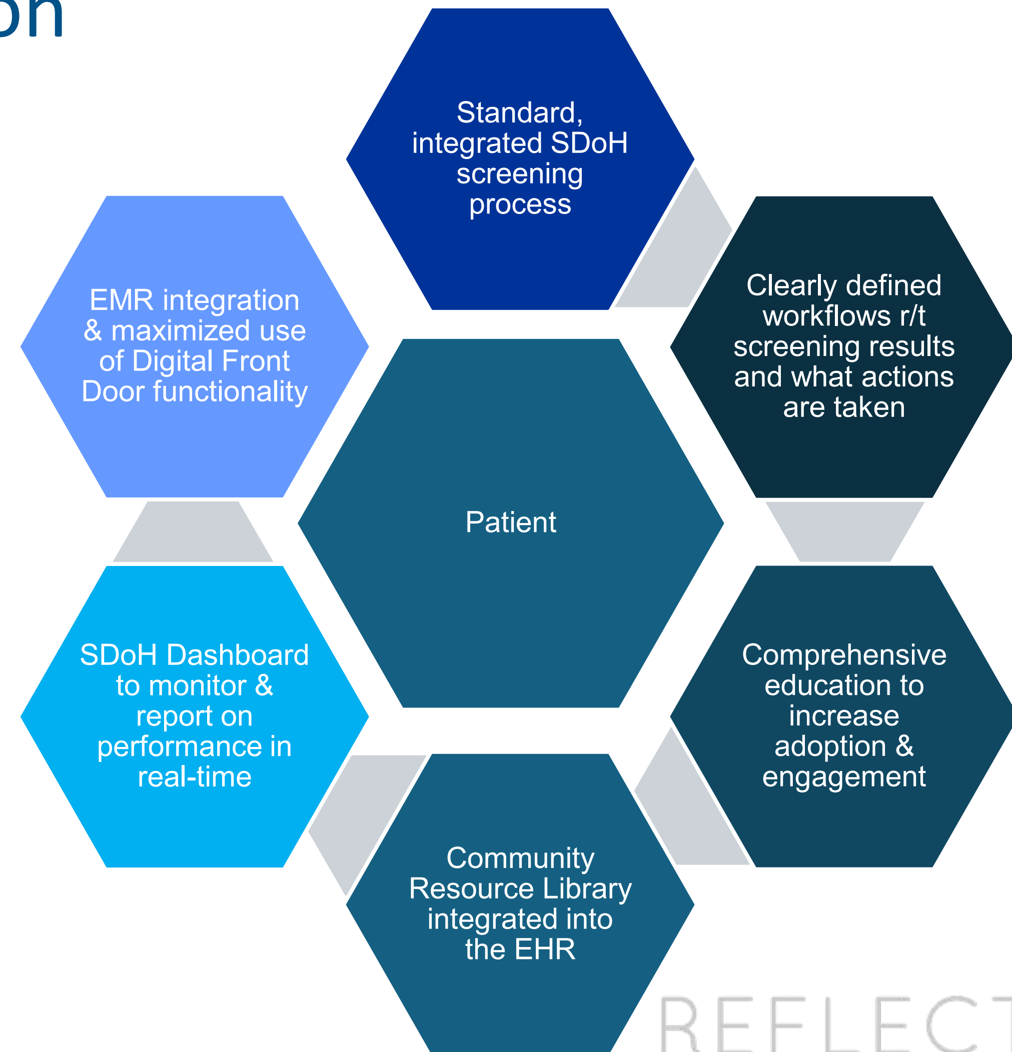
Since 2021, MUSC's Population Health department has facilitated a system-wide, multidisciplinary initiative focusing on:

- Screening for and documentation of SDoH
- Developing clear, efficient workflows to connect patients to community resources
- Developed MUSC Community Resource Library of over 1,400 Community Based Organizations (CBOs) and helping agencies statewide



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CARE COORDINATION

Community Navigation

Highlight

- Expanded MUSC's Community Resource Library currently comprising 1,400+ statewide resources.
- Coastal Connections program completed 150+ Patient Outreaches in FY23. >90% of referrals received resources.
- Community Health Worker team served 1,230 pts between April 2023-May 2024.
- Participated in >40 Community Health Events statewide to network and outreach community members between April 2023 – May 2024.
- Awarded funding from Publix Supermarket to help address Food Insecurity needs.
- Represented MUSC on SC Food Council Committee.
- Represented MUSC on Tri-county Human Services Coalition.

CHW patients enrolled prior to June 2024	
239/1558	Decreased BMI > 5%
1110/1558	Improvement in at least 1 vital sign (SBP, DBP, BMI)
184/1558	No longer hypertensive
8	Admissions per month avoided
96	Admissions per year avoided

"Thank you! I love how MUSC reaches out to the community to help people!"

"Thank you for the call, shows you really care."

"There have been several times we didn't have enough food and it is hard. Thank you for helping me."

"Thank you for being so patient with me, because sometimes I don't understand."

"Thank you for finding transportation for me to get from Conway to Charleston."

Lessons Learned

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- Plan for continual education in any venue offered!
  - Be prepared to explain the “why”
- Maintain awareness of local, state, and federal policy changes that impact the targeted population to provide context to key performance indicators
- Community Health Workers (CHWs) are most impactful when they are a member of the community they are serving
- Require CHW certification within 6 months of hire to establish baseline role definition

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Key Takeaways

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- Provide pathway to resources
  - CHWs are instrumental in impacting health outcomes
  - Establish process and tools to build and maintain a community resource library – make it easy!
  - Incorporate CHW documentation into the EHR
- Establish key performance indicators that show return on investment

Questions?

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