Addressing Social Determinants of Health with Technology

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Coastal Cancer Center
Myrtle Beach, SC
Objectives

1. Define Social Determinants of Health and their importance in medicine with an emphasis on Medical Oncology
2. Discuss how technology can be leveraged to collect data for assessment
3. Review methods for implementing Point of Care intervention
### 2020 AACR Cancer Disparities Report

#### DEATH RATES*

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>African Americans</th>
<th>Whites</th>
<th>Rate Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prostate, males</td>
<td>58.4</td>
<td>18.2</td>
<td>3.21</td>
</tr>
<tr>
<td>Stomach</td>
<td>5.3</td>
<td>2.6</td>
<td>2.04</td>
</tr>
<tr>
<td>Multiple myeloma</td>
<td>6.0</td>
<td>3.0</td>
<td>2.00</td>
</tr>
<tr>
<td>Cervix uteri, females</td>
<td>3.1</td>
<td>2.2</td>
<td>1.41</td>
</tr>
<tr>
<td>Breast, females</td>
<td>27.5</td>
<td>19.6</td>
<td>1.39</td>
</tr>
<tr>
<td>Colorectal</td>
<td>18.3</td>
<td>13.4</td>
<td>1.37</td>
</tr>
<tr>
<td>Liver and intrahepatic</td>
<td>8.5</td>
<td>6.3</td>
<td>1.35</td>
</tr>
<tr>
<td>bile duct</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pancreas</td>
<td>13.3</td>
<td>11.0</td>
<td>1.21</td>
</tr>
<tr>
<td>Lung and bronchus</td>
<td>40.2</td>
<td>39.3</td>
<td>1.02</td>
</tr>
<tr>
<td>Kidney and renal pelvis</td>
<td>3.4</td>
<td>3.7</td>
<td>0.92</td>
</tr>
</tbody>
</table>

*Both sexes unless otherwise specified


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**Eliminating health disparities** for racial and ethnic minorities from 2003 to 2006 would have reduced

- **34% of cancer deaths** among all U.S. adults ages 25 to 74 could be **prevented if socioeconomic disparities were eliminated** (45).

Direct medical costs by: $230 BILLION

Indirect costs associated with illness and premature death by: 

> $1 TRILLION
Map of life expectancy: New Orleans, LA

Robert Wood Johnson Foundation, 2013
SDOH in Cancer Outcomes

• **Hispanic women** have a 35% higher cervical cancer rate than white women than White women.

• **Racial Disparities: Black men** have a 19% overall cancer mortality rate than White men.

• **Income Disparities:** Patients with **lower socioeconomic status** have a 20-40% higher risk of dying from cancer compared to those with higher socioeconomic status.
Impact of SDOH in Oncology Care

- **Transportation Challenges and Treatment Delays**: Lack of reliable transportation is a barrier to accessing timely cancer treatment, leading to delays in care and potentially worse outcomes. (Journal of Oncology Practice)

- **Housing Instability and Cancer Care**: Homelessness or unstable housing increases the risk of missed appointments, interruptions in treatment, and overall poorer cancer outcomes. (National Center for Biotechnology Information)

- **Food Insecurity and Treatment Adherence**: Cancer patients experiencing food insecurity are more likely to skip doses of prescribed medications or forego recommended treatments due to financial constraints. (Supportive Care in Cancer)

- **Social Support and Treatment Outcomes**: Strong social support networks have been associated with better adherence to treatment plans and improved quality of life among cancer patients. (Journal of Clinical Oncology)
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How do we collect this data and create meaningful interventions?
No One Left Alone (NOLA)

We aim to address health disparities, improve access to healthcare and bring healthcare equity.

Aims to address health disparities and improve access to care by carrying out research, educating the community, and recommending steps to bring healthcare equity

• Improve SDOH Data Collection
• Improve access to Cancer Care
• Improve access to Testing and Therapies
• Increase Clinical Trial Participation
# NOLA Patient Intake Form

## PERSONAL AND FAMILY HISTORY OF CANCER

<table>
<thead>
<tr>
<th>FAMILY MEMBER</th>
<th>CANCER</th>
<th>BREAST/COLON/ŨST/DYSPLASTIC/PROSTATE</th>
<th>STATUS/MALIGNANCY/DMERIT</th>
<th>17. AGE/YEAR AT DIAGNOSIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELF</td>
<td>Yes</td>
<td>No</td>
<td>or Don’t know</td>
<td>or Don’t know</td>
</tr>
<tr>
<td>Brother</td>
<td>Yes</td>
<td>No</td>
<td>or Don’t know</td>
<td>or Don’t know</td>
</tr>
<tr>
<td>Sister</td>
<td>Yes</td>
<td>No</td>
<td>or Don’t know</td>
<td>or Don’t know</td>
</tr>
<tr>
<td>Father</td>
<td>Yes</td>
<td>No</td>
<td>or Don’t know</td>
<td>or Don’t know</td>
</tr>
<tr>
<td>Mother</td>
<td>Yes</td>
<td>No</td>
<td>or Don’t know</td>
<td>or Don’t know</td>
</tr>
<tr>
<td>Grandfather</td>
<td>Yes</td>
<td>No</td>
<td>or Don’t know</td>
<td>or Don’t know</td>
</tr>
</tbody>
</table>

## SOCIAL DETERMINANTS OF HEALTH

<table>
<thead>
<tr>
<th>Employment</th>
<th>Referral PLAN/INTERVENTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is your employment status?</td>
<td></td>
</tr>
<tr>
<td>2. Working full time</td>
<td></td>
</tr>
<tr>
<td>3. Working part time</td>
<td></td>
</tr>
<tr>
<td>4. Unemployed</td>
<td></td>
</tr>
<tr>
<td>5. Student</td>
<td></td>
</tr>
<tr>
<td>6. Keeping house or raising children full-time</td>
<td></td>
</tr>
<tr>
<td>7. Retired</td>
<td></td>
</tr>
<tr>
<td>8. Disabled</td>
<td></td>
</tr>
<tr>
<td>9. Others</td>
<td></td>
</tr>
</tbody>
</table>

## Mental Health

<table>
<thead>
<tr>
<th>Access to services</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you have access to the internet, a cell phone, a computer?</td>
<td>Yes</td>
</tr>
<tr>
<td>2. Do you have access to health care you need for yourself and family?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

## Food insecurity

<table>
<thead>
<tr>
<th>Food insecurity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you feel food insecure or hungry?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

## Family responsibilities

<table>
<thead>
<tr>
<th>Family responsibilities for family members or friends</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Are you responsible for preventing or elder care in your family?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

## Social support and community safety

<table>
<thead>
<tr>
<th>Social support and community safety</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you have friends or neighbors that provide support or help you?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

## Housing

<table>
<thead>
<tr>
<th>Housing</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you have any problems with your housing?</td>
<td>Yes</td>
</tr>
<tr>
<td>2. How many people live in your home on a regular basis?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

## Exposure to violent behavior, neighborhood conditions, and physical environment

<table>
<thead>
<tr>
<th>Exposure to violent behavior, neighborhood conditions, and physical environment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Has anyone in your community or neighborhood been shot or stabbed?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

## MUSCULAR HISTORY

<table>
<thead>
<tr>
<th>MUSCULAR HISTORY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you have any problems with transportation to your health care visits?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

## LANGUAGE/LITERACY

<table>
<thead>
<tr>
<th>LANGUAGE/LITERACY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Are you able to communicate with your doctor in your primary language?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

## REFERRAL TO CLINICAL AND SOCIAL SERVICES

<table>
<thead>
<tr>
<th>REFERRAL TO CLINICAL AND SOCIAL SERVICES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Patient refers to financial/social services</td>
<td>Yes</td>
</tr>
<tr>
<td>2. Patient refers to mental health services</td>
<td>Yes</td>
</tr>
<tr>
<td>3. Patient participates in research studies or other activities</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Data Collection
Intervention

• Patient receives a call from staff member to address the disparity identified and provide information about resources available in the community
• Follow up calls as needed for additional support
• Billing performed monthly
• Raised nearly $3 million in year 2 to cover out of pocket drug cost/free drug
• Created insurance fund that supported over 20 patients
How can we leverage technology to streamline a SDOH program?
Vital Components

1. Largely automated – no manual data entry
2. Low effort for my staff and physicians
3. Creates an opportunity for meaningful point of care intervention
4. Interventions must be curated locally
5. Integration with EHR
Social Determinants of Health
Estimated Time: 2 mins
Scan QR to answer

Mammo Screening Form
Estimated Time: 2 mins
Scan QR to answer

Review of Systems
Scan QR to answer

Scan me to complete requests on your personal device.
**Section 1: Demographics**

*What is your current zip code?*

*What is your country of birth?*

*Do you speak a language other than English at home?*
- Yes
- No

*What is your race?*
- American Indian or Alaska Native
- Asian
- Black or African American
- Choose not to disclose
- Native Hawaiian or Other Pacific Islander
- Other Race
- Unknown
- White

*What is your ethnicity?*
- Hispanic or Latino
- Non Hispanic or Latino
- Choose not to disclose
- Unknown

*What is your gender?*
FOOD RESOURCES IN HORRY COUNTY

United Way of Horry County-Lowcountry Food Bank
Check website for pantries near you.
  - Phone: 843-446-5341
  - lowcountryfoodbank.org

Mission for the Nations Ministry Fellowship Food Bank
  - Serving Conway, SC on:
    - Thursdays from 11AM-1PM
    - Sundays from 10:30AM-1PM
    - Serving Georgetown, SC on Wednesdays from
      11AM-1PM
    - missionsformnations.com

Catholic Charities of South Carolina
  - 2294 Technology Blvd
  - Conway, SC 29526
  - Phone: 843-438-3247 or 843-438-3083
  - charitiessc.org/wellness-services

Socastee Food Pantry/The Fathers House Church
  - Serving the community from 10AM-2PM Monday-
    Wednesday.
  - 4513 Hwy 17 Bypass
  - Myrtle Beach, SC 29577
  - Primarily run by Veterans

Horry County Branch Food Bank
  - 4716 Northgate Blvd
  - Myrtle Beach, SC 29577
  - 843-488-9341
  - Monday - Thursday 10 AM-1 PM

St. Elizabeth Missionary Baptist Church
  - 57 Church St
  - Aynor, SC, 29511
  - 843-434-9513
  - 4th Saturday 9:30 AM - 10:30 AM

Home Delivered Meals – Mobile Meals of the Grand Strand Inc.
  - P.O. Box 7421
  - Myrtle Beach, SC 29572
  - 843-236-2827

Juniper Bay Baptist Church
  - 5205 Juniper Bay Rd
  - Conway, SC, 29527
  - 843-397-5757
  - 4th Wednesday of the month 8:30AM-12PM

Project Restoring Hope
  - 290 Dunn Shortcut Rd
  - Conway, SC, 29527
  - 843-365-4673
  - 2nd Saturday of the month 8AM-10AM

Cherry Hill Missionary Baptist
  - 421 Smith Street
  - Conway, SC, 29526
  - 843-488-2265
  - Monday, Wednesday, Friday 1-3 PM

Churches Assisting People
  - 307 Wright Boulevard
  - Conway, SC, 29526
  - 843-488-2277
  - Monday - Thursday 10AM - 2PM

The Shepherd’s Table
  - 1412 A Gamecock Ave
  - Conway, SC, 29526
  - 843-488-3663
  - Prepared Meals Served Monday-Friday 11AM-12PM and 4PM-5:30PM
  - Pantry Hours Monday, Wednesday, Friday 1PM-5PM

St. Paul MBC/Conway
  - 3449 Highway 55
  - Conway, SC, 29526
  - 843-365-2900
  - 2nd & 4th Friday of the month - 11AM-12PM

Once a Month Volunteer Prepared Meal Delivery
  - By Lasagna Love
  - http://lasagnalove.org

RESOURCES
New Navigation and Care Management Codes
Services Addressing Health Related Social Needs

- **Community Health Integration** - SDOH need significantly limits ability to diagnose/treat

- **Social Determinants of Health Risk Assessment** - administration of a standardized, evidence based SDOH risk assessment tool

- Specific Documentation requirements typically with data collected by auxiliary personnel and documented by physician
G codes

G0019 - **Community health integration** services performed by certified or trained auxiliary personnel, including a community health worker, under the direction of a physician or other practitioner; 60 minutes per calendar month (billed monthly)

G0022 – Each additional 30 min

G0136 - billed when the practitioner administers a standardized, evidence-based **SDoH risk assessment** of 5-15 minutes (billed q6m)
SDOH Z-codes

Z55 series - Problems related to literacy
Z56 series - Problems related to employment
Z57 series - Occupational exposure to risk factors
Z59 series - Problems related to housing
Z60 series - Problems related to social environment
Z62 series - Problems related to upbringing
Z63 series - Other problems related to primary support group, including family circumstances
Z64 series – Problems related to certain psychosocial circumstances
Z65 series – Problems related to other psychosocial circumstances
How do we Capture and Bill these Codes
• Ongoing navigation note in EHR to track time spent over the month
  • Challenges: manual tracking and billing process
  • Advantage: time tracked accurately

• EHR based tracking solutions
  • Challenges: tracking time accurately
  • Advantage: time tracked automatically, billing guidance based on time tracked
Social Determinants of Health

- Seamlessly screen patients using the AHC HRSN tool (CMMI) directly from OncoEMR and view identified potential social risks
- Capture social needs as ICD-10s and track progress with follow-ups in one convenient location on the summary page or visit notes
- Leverage SDOH report to understand social need trends across your patient population

Note: these are illustrative mocks and subject to change
Is this Achievable?
Vital Components

1. Largely automated – no manual data entry
2. Low effort for my staff and physicians
3. Creates an opportunity for meaningful point of care intervention
4. Interventions must be curated locally
5. Integration with EHR
Questions?