PRAPARE Social Determinants of Health in the EHR

OCHIN Epic Tools for Data Collection, Screening, and Referral
What are Social Determinants of Health (SDH)?

- Nonmedical factors influencing health (Braveman et al 2011)
- Health starts long before illness (Robert Wood Johnson Foundation)
- Health starts in our homes, schools, workplaces, neighborhoods, and communities (Healthy People 2020)
- The conditions in which people are born, grow, live, work and age, and which are shaped by the distribution of money, power and resources at global, national and local levels (WHO)
<table>
<thead>
<tr>
<th>Community-level factors</th>
<th>Individual-level factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>• % of community living in poverty</td>
<td>• Household income</td>
</tr>
<tr>
<td>• % high school or college graduates</td>
<td>• Education</td>
</tr>
<tr>
<td>• Built environment</td>
<td>• Housing status</td>
</tr>
<tr>
<td>• Walkability of neighborhood</td>
<td>• Food security</td>
</tr>
<tr>
<td>• Crime</td>
<td>• Social connection / isolation</td>
</tr>
</tbody>
</table>
Why are SDH important in Primary Care?

PROPORTIONAL CONTRIBUTION TO PREMATURE DEATH

- Genetic predisposition 30%
- Behavioral patterns 40%
- Social circumstances 15%
- Environmental exposure 5%
- Health care 10%

McGinnis et al. The case for more active policy attention to health promotion. *Health Affairs.* 2002;21(2):78-93.
Conceptual Model for SDH in Primary Care

Step 1: Collect & Organize SDH Data

Community Vital Signs Data
Imported from public data sources about community-level information (e.g., US Census) matched to patient address

Patient-Reported Data
Collected by asking patients direct questions about their individual circumstances (e.g., employment, education, housing)

Step 2: Present & Integrate SDH Data into Primary Care Workflows

Panel Management
Population of Patients

Point of Care
Individual Patient Care

Referrals to social services, medical specialists
Clinical Decision Support
Patient Engagement
Clinical & Social Services Coordination

Research & Policy

Improved Health Outcomes

Step 3: SDH Data Triggers
Automated Support & Action

How Can Community Health Centers Use SDH?
How can SDH be used in Community Health Centers?

• Connect individual patients to community resources
  – Coordinate care beyond medical setting

• Data to provide direction for advocacy and investment
  – Demonstrate areas of inequity and need in community

• Segmentation of patient populations
  – Direct resources to high-leverage activities in patient subpopulations

• Risk stratification
  – Compare risk and complexity across patient panels or populations
Connections to Community Resources

• Referrals to community resources based on social or other needs identified by screening for SDH

• Patient-Centered Medical Home as hub of medical and extra-medical care coordination
  – Functions as the center of a “Medical Neighborhood”

• Reflected in increasingly diverse staff roles at CHCs
  – Community health workers, case/care managers, social workers, patient advocates, etc.
The Medical Neighborhood

Source: ahrq.gov
Advocacy and Demonstrating Areas of Need

- SDH represent data to identify and encourage action to address inequality and disparities in communities and around the globe.
Segmenting Patient Populations – High Leverage Activities

Illustration Courtesy of Oregon Primary Care Association
How the OCHIN SDH Tools Were Developed
CAPTURING SOCIAL & BEHAVIORAL DOMAINS & MEASURES IN ELECTRONIC HEALTH RECORDS: PHASE 2

This document showcases the core domains and measures that constitute an efficient panel, which the committee recommends for inclusion in all electronic health records.

TABLE S-3 Core Domains and Measures

<table>
<thead>
<tr>
<th>Domain</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Racial/ethnicity</td>
<td>U.S. Census (2 Q)</td>
</tr>
<tr>
<td>Education</td>
<td>Educational attainment (2 Q)</td>
</tr>
<tr>
<td>Financial resource strain</td>
<td>Overall financial resource strain (1 Q)</td>
</tr>
<tr>
<td>Stress</td>
<td>Els et al. (2001) (1 Q)</td>
</tr>
<tr>
<td>Depression</td>
<td>PHQ-9 (2 Q)</td>
</tr>
<tr>
<td>Physical activity</td>
<td>Exercise Vital Signs (2 Q)</td>
</tr>
<tr>
<td>Tobacco use and exposure</td>
<td>NHHS (2 Q)</td>
</tr>
<tr>
<td>Maltreated child</td>
<td>SAFEC (1 Q)</td>
</tr>
<tr>
<td>Social connections and social isolation</td>
<td>NHIAN (III) (4 Q)</td>
</tr>
<tr>
<td>Exposure to violence-firmative partner</td>
<td>HARR (4 Q)</td>
</tr>
<tr>
<td>Neighborhood and community</td>
<td>Residential address</td>
</tr>
<tr>
<td>compositional characteristics</td>
<td>Census tract median income</td>
</tr>
</tbody>
</table>

NOTE: Q = question(s).

OCHIN Clinical Operations Review Committee

• Workgroup of OCHIN member clinical and operational leadership
  – Recommends and designs collaborative-wide Epic build

• Considered national PRAPARE toolkit questions as well as IOM recommendations

• Input from OCHIN Research team, Primary Care Associations, NACHC, and other subject matter experts

• Used clinically-validated questions and components where possible

• Prioritized clinically relevant SDH actionable in CHC setting
  – Housing, food insecurity
List of Patient-Level Social Determinants of Health in Epic

Current SDH Data Collected (PM)
- Demographics (address, age, gender, language, race, ethnicity, etc.)
- Federal poverty level
- Health Insurance status
- Homeless status

Current SDH Data Recorded (EHR)
- Alcohol use
- Tobacco use and exposure
- Depression

New SDH Section in PM/EHR Tools
- Education and learning
- Financial resource strain
- Intimate partner violence
- Physical activity
- Social connections & social isolation
- Stress
- Sexual orientation/gender identity
- Housing
- Food insecurity
SDH Patient Questionnaire (Social Needs Questionnaire)

Health starts – long before illness – in our homes, schools, and jobs. The more we know about you the better health care we can provide. The following questions will help us understand more about you. Your care team will use your answers to help you improve your health. These responses will be entered into your medical record and, as with all medical information, will always be kept private and confidential.

1. How do you learn best?
   - Reading
   - Listening
   - Pictures

2. What is the highest level of school that you have finished?
   - Less than a high school diploma
   - High school diploma / GED
   - More than high school

3. How hard is it for you to pay for the very basics like food, housing, heating, medical care, and medications?
   - Not hard at all
   - Somewhat hard
   - Very hard

Full questionnaire Available in English and Spanish
Data collected into **(1) SDH data flowsheet** via multiple input options...

- Vitals / problem list / other, e.g. barriers, social hx
- Paper form, hand-entered
- Front desk / rooming staff enters data into EHR
- MyChart form (pre-visit or at visit)

**Designated for Flexibility in Use and Workflow**

**(2) SDH data summary**

- SDH needs overview
- Link to orders
- Track past referrals

**(3) SDH referrals preference list**
Tools for Collecting and Acting On SDH in Epic: A System Walkthrough
SDH And Follow-Up System Walkthrough

Two Scenario Walkthroughs:

In-clinic workflows

Outreach workflows
SDH Reports in Reporting workbench

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Run Report and Send MyChart Portal Message

Sending request via MyChart to complete MyChart SDH Questionnaire

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## Full Appointment List

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Patient</th>
<th>Phone</th>
<th>Prov/Res</th>
<th>Status</th>
<th>Type</th>
<th>Appt Notes</th>
<th>Last House</th>
</tr>
</thead>
<tbody>
<tr>
<td>06/09/16</td>
<td>2:00 PM</td>
<td>Zzzsdh, Jack</td>
<td></td>
<td>BRIGGS, KAREN N [63771]</td>
<td>Sch</td>
<td>OVS[1]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>06/09/16</td>
<td>3:00 PM</td>
<td>Zzzshd, Eliza</td>
<td></td>
<td>BRIGGS, KAREN N [63771]</td>
<td>Sch</td>
<td>OVS[1]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>06/09/16</td>
<td>4:00 PM</td>
<td>Zzzduck, Agnes</td>
<td>Hm: +541-425-1234x6</td>
<td>BRIGGS, KAREN N [63771]</td>
<td>Sch</td>
<td>OVS[1]</td>
<td></td>
<td>5/27/2016 2</td>
</tr>
</tbody>
</table>

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Access to the SDH Flowsheet from Registration
<table>
<thead>
<tr>
<th>Meds D Provider</th>
<th>Appt Time</th>
<th>Appt Le Patient</th>
<th>Age</th>
<th>Patient Type</th>
<th>Notes</th>
<th>Appt Status</th>
<th>PHQ9 HM Stats</th>
<th>Last Housing Sq</th>
<th>Last Housing Sq</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karen N Briggs, NP</td>
<td>2:00 PM</td>
<td>20</td>
<td>Zzzzsh, Jack</td>
<td>50 year old</td>
<td>Sch</td>
<td>Overdue</td>
<td>6/2/2016</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Karen N Briggs, NP</td>
<td>3:00 PM</td>
<td>20</td>
<td>Zzzzsh, Eliza</td>
<td>30 year old</td>
<td>Sch</td>
<td>Overdue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karen N Briggs, NP</td>
<td>4:00 PM</td>
<td>20</td>
<td>Zzzduck, Agnes</td>
<td>45 year old</td>
<td>Sch</td>
<td>Overdue</td>
<td>5/27/2016</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
## SDH Summary in Patient Chart

### Federal Poverty Level
No account selected for this visit

### Housing Lack

<table>
<thead>
<tr>
<th>Housing</th>
<th>Latest Value Recorded</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the last month, have you spent any time outside, in a shelter, or in a place not meant for sleeping?</td>
<td>Yes</td>
<td>8/9/2016</td>
</tr>
<tr>
<td>In the last month, have you had concerns about the conditions and quality of your housing?</td>
<td>Yes</td>
<td>8/9/2016</td>
</tr>
<tr>
<td>In the last 12 months, how many times have you moved from one home to another?</td>
<td>5</td>
<td>8/9/2016</td>
</tr>
<tr>
<td>Housing Instability Score</td>
<td>3</td>
<td>8/9/2016</td>
</tr>
</tbody>
</table>

### Food Insecurity

<table>
<thead>
<tr>
<th>Food Security</th>
<th>Latest Value Recorded</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;(I/We) worried whether (my/our) food would run out before (I/We) got money to buy more.&quot; Was that often true, sometimes true, or never true for (you/your household) in the last 12 months?</td>
<td>Often true</td>
<td>8/9/2016</td>
</tr>
<tr>
<td>&quot;The food that (I/We) bought just didn’t last, and (I/We) didn’t have money to get more.&quot; Was that often, sometimes, or never true for (you/your household) in the last 12 months?</td>
<td>Never true</td>
<td>8/9/2016</td>
</tr>
<tr>
<td>&quot;(I/We) couldn’t afford to eat balanced meals.&quot; Was that often, sometimes, or never true for (you/your household) in the last 12 months?</td>
<td>Don’t know or Refused</td>
<td>8/9/2016</td>
</tr>
<tr>
<td>USDA 2Q Score</td>
<td>1</td>
<td>8/9/2016</td>
</tr>
</tbody>
</table>

### Intimate Partner Violence
Add to SDH Problem List

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Social Determinants on Problem List

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Ordering Referral to Community Services

![Community Referrals](image)

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SDH Questionnaire in MyChart Portal

Social Needs Questionnaire

Health starts - long before illness - in our homes, schools, and jobs. The more we know about you the better health care we can provide. The following questions will help us understand more about you. Your care team will use your answers to help you improve your health. They will be entered into your medical record, and, as with all medical information, will always be kept private and confidential.

Education and Learning

How do you learn best?

- Reading
- Listening
- Pictures

What is the highest level of school that you have finished?

- Less than a high school diploma
- High school diploma / GED
- More than high school

Financial Resource Straining

How hard is it for you to pay for the very basics like food, housing, heating, medical care, and medications?

- Not hard at all
- Somewhat hard
- Very hard

What is it hard to pay for?

Select all that apply.

- Food
- Housing
- Utilities (electric, etc)
- Childcare
- Medical needs (medicine, doctor, etc)
- Transportation
- Phone
- Clothing
- Other
MyChart Responses in SDH Summary Section

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Order Referral linked to SDH Diagnosis on Problem List (Housing Lack)
Reporting Workbench – Reports for Specific Positive Responses

<table>
<thead>
<tr>
<th>MRN</th>
<th>Patient</th>
<th>DOB</th>
<th>Age</th>
<th>Sex</th>
<th>PCP</th>
<th>Last Housei</th>
<th>Last Housei</th>
</tr>
</thead>
<tbody>
<tr>
<td>4091367</td>
<td>Zzz Boo Woo, Bear</td>
<td>09/03/1999</td>
<td>16 year old</td>
<td>Female</td>
<td>Englander, Wayne</td>
<td>1</td>
<td>5/5/2016</td>
</tr>
<tr>
<td>4105852</td>
<td>Zzzduck, Agnes</td>
<td>02/15/1971</td>
<td>45 year old</td>
<td>Female</td>
<td>Default, Mchd Provider</td>
<td>2</td>
<td>5/27/2016</td>
</tr>
<tr>
<td>4294077</td>
<td>Zzzmchd, Beeson Pni</td>
<td>02/14/1980</td>
<td>36 year old</td>
<td>Female</td>
<td>Fix, Mchd</td>
<td>3</td>
<td>5/26/2016</td>
</tr>
<tr>
<td>4325224</td>
<td>Zzz, Careplan</td>
<td>01/22/1961</td>
<td>55 year old</td>
<td>Female</td>
<td>Fix, Mchd</td>
<td>3</td>
<td>5/16/2016</td>
</tr>
<tr>
<td>4394183</td>
<td>Zzzfreeman, Notinjail</td>
<td>09/19/1982</td>
<td>33 year old</td>
<td>Female</td>
<td>Fix, Mchd</td>
<td>1</td>
<td>5/20/2016</td>
</tr>
<tr>
<td>4394310</td>
<td>Zzztest, Mary2</td>
<td>06/07/1981</td>
<td>35 year old</td>
<td>Female</td>
<td>Fix, Mchd</td>
<td>3</td>
<td>6/7/2016</td>
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<tr>
<td>4394311</td>
<td>Zzztest, Mary</td>
<td>06/07/1981</td>
<td>35 year old</td>
<td>Female</td>
<td>Fix, Mchd</td>
<td>1</td>
<td>6/7/2016</td>
</tr>
</tbody>
</table>

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Questions?

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