Social Screening Form in OpenEMR

MAY 26, 2022

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1 Overview

1.1 Background

Over the past few decades there has been an increasing focus on the Social Determinants of Health as predictors and risk factors of health inequities. Specifically, the Healthy People 2030 campaign goals and objectives from the US Department of Health and Human Services focuses largely on the SDOH as predictors of health outcomes and causes of health inequities. These are broken down into the following five categories: economic stability, education access and quality, healthcare access and quality, neighborhood and built environment, and social community and context. (Health.gov, 2021) During these same decades, the evolution and inclusion of Electronic Health Records has enabled rich data collection and a way for healthcare providers to learn more about their patients to provide better preventive care and assist in diagnosis based on increased risk factors. Unfortunately, much of the data that is stored in patient history is still reflective of the prior paradigm that genetics and behavior are the main factors of health outcomes. While family history and behavior can be important, they need to be balanced with a more thorough understanding of SDOH that goes beyond education level and occupation. In fact, the importance of family history and risk factors likely has more value as indicators of similar upbringing and SDOH than it does genetics. This would only be valuable if similar life conditions existed between the patient and their relatives. It is also important to have a deeper understanding of the relative life conditions of the individual and how they contribute to the overall stress level in a person’s life. These individual measures of stress are cumulative across all SDOH and will impact nearly all health outcomes including infectious and non-infectious diseases, accidents, and injuries leading to morbidity and mortality. (Whitehall, 2008)

The first Healthy People initiative began in 1980 by HHS and was used to track trends in health outcomes as a nation, with life expectancy and infant mortality being the main two measurements of importance. Both measurements continue to have large inequities between races, geographic location, education level, and socioeconomic status. Inequities exist among multiple datapoints including disability, obesity, cancer, asthma, diabetes, heart disease, mental illness, suicide, homicide, addiction, etc. (Singh, et al, 2016) Some of the most unfavorable outcomes exist among African Americans, Native Americans, poor, and rural individuals. While targeted studies have been completed to attempt to understand the root causes at a societal level, there is much individual variability in the reaction to the SDOH and life situation. If this data was captured and collected with patient records, this could provide vital information regarding successful interventions that can be used and targeted screenings for specific risk factors. The reinforcing loop of data will continue to produce more valuable feedback loops for future and current risk factors.
1.2 Social Screening Form in OpenEMR

The Social Screening Form available in OpenEMR was developed using questions from various screening tools and research studies as found on the SIREN website at https://sirenetwork.ucsf.edu/. SIREN is the Social Intervention and Research Network at University of California at San Francisco, sponsored by Kaiser Permanante and Robert Wood Johnson Foundation. Their mission is to improve health and health equity by advancing high quality research on health care sector strategies to improve social conditions. Additional input on categories and diagnoses was provided by the Gravity Project (https://confluence.hl7.org/pages/viewpage.action?pageId=91996855#TheGravityProject-ProjectOverview). This is a multi-year project with over 600 stakeholders from across the country that is working to standardize terms, codes, and diagnoses to assist in data capture and transfer of SDOH in EHR using FHIR.

1.3 Uses of Screening Data

There are 4 main ways that the screening data can be used:

- Greater understanding of patients in a social context that can assist in identifying higher risk attributed to Social Determinants of Health.
- Customizing prevention, intervention, and care plans to the unique social situations of each patient.
- Connecting patients to community organizations and resources to assist in providing for any urgent needs.
- Community level research to determine protective and risk factors associated with SDOH.

1.4 Form Questions, Scores, and Domains

<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
<th>Max Score</th>
<th>Domain</th>
<th>SubDomain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is the highest level of education that you have completed?</td>
<td>Less than High School</td>
<td>5</td>
<td>5</td>
<td>Education</td>
</tr>
<tr>
<td></td>
<td>High School Diploma or GED</td>
<td>3</td>
<td></td>
<td>Education</td>
</tr>
<tr>
<td></td>
<td>2 Year College or Vocational Degree</td>
<td>1</td>
<td></td>
<td>Education</td>
</tr>
<tr>
<td></td>
<td>Bachelors Degree</td>
<td>0</td>
<td></td>
<td>Education</td>
</tr>
<tr>
<td></td>
<td>Advanced Degree, Masters or Doctorate</td>
<td>0</td>
<td></td>
<td>Education</td>
</tr>
<tr>
<td></td>
<td>Choose not to answer</td>
<td>0</td>
<td></td>
<td>Education</td>
</tr>
<tr>
<td>Question</td>
<td>Yes</td>
<td>No</td>
<td>Choose not to answer</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----</td>
<td>----</td>
<td>----------------------</td>
<td></td>
</tr>
<tr>
<td>2. Do you or any of your family members have a disability?</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>3. What is your housing situation today?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permanent and Safe</td>
<td>0</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temporary (shelter, family, friends)</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unsafe housing (mold, exposure, unclean)</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Car, van, or mobile home</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unsheltered (tent, park, vacant lot)</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choose not to answer</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. What is your current work situation? Check all that apply.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full Time</td>
<td>0</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part Time</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temporary</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seasonal or Migrant</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Looking for Work</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retired</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disabled</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Employed</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choose not to answer</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. How many hours do you work in a week?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. What is the total income for all your family in the past year? (This will help us know if you are eligible for benefits)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. How many people are in your household? Including yourself.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Are you a primary caregiver for any of the following? Check all that apply.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not a primary caregiver</td>
<td>0</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children under 5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children age 5 to 12</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children over 12</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Needs Child</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disabled or Ill Adult</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elderly</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Do you or a family member owe money that you struggle to pay back? Check all that apply.</td>
<td>Other: 1</td>
<td>Caregiver Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------</td>
<td>----------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No debt</td>
<td>0</td>
<td>11 Financial Insecurity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Bills</td>
<td>3</td>
<td>Financial Insecurity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Cards</td>
<td>1</td>
<td>Financial Insecurity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rent/Mortgage</td>
<td>1</td>
<td>Financial Insecurity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Loans</td>
<td>1</td>
<td>Financial Insecurity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxes</td>
<td>1</td>
<td>Financial Insecurity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal Fees</td>
<td>1</td>
<td>Financial Insecurity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Car Loan or License</td>
<td>1</td>
<td>Financial Insecurity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td>1</td>
<td>Financial Insecurity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>Financial Insecurity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. In the past year, have you or a family member struggled to pay for any of the following? Check all that apply.</th>
<th>No Financial Struggles 0 15 Material Hardship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy Food</td>
<td>3 Material Hardship</td>
</tr>
<tr>
<td>Medicine or Medical Care</td>
<td>2 Material Hardship</td>
</tr>
<tr>
<td>Child Care or School</td>
<td>2 Material Hardship</td>
</tr>
<tr>
<td>Utilities (Poser, water)</td>
<td>1 Material Hardship</td>
</tr>
<tr>
<td>Phone, Internet</td>
<td>1 Material Hardship</td>
</tr>
<tr>
<td>Rent or Mortgage</td>
<td>2 Material Hardship</td>
</tr>
<tr>
<td>Transportation</td>
<td>1 Material Hardship</td>
</tr>
<tr>
<td>Clothing</td>
<td>1 Material Hardship</td>
</tr>
<tr>
<td>Education</td>
<td>1 Material Hardship</td>
</tr>
<tr>
<td>Other</td>
<td>1 Material Hardship</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. In the past year, has lack of transportation prevented you or a</th>
<th>No Transportation Problems 0 8 Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question</td>
<td>Yes</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>12. In the past year, have you or a family member not gotten medical care because of any of the following? Check all that apply.</td>
<td></td>
</tr>
<tr>
<td>Access to Healthy Food</td>
<td>2</td>
</tr>
<tr>
<td>Work or Meetings</td>
<td>2</td>
</tr>
<tr>
<td>School or Childcare</td>
<td>1</td>
</tr>
<tr>
<td>Visit Family or Friends</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
<tr>
<td>13. In the past year, have you and your family members seen dentists?</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>0</td>
</tr>
<tr>
<td>No, not insured</td>
<td>1</td>
</tr>
<tr>
<td>No, need dentist</td>
<td>1</td>
</tr>
<tr>
<td>No, not able to take time off work</td>
<td>1</td>
</tr>
<tr>
<td>No, other</td>
<td>1</td>
</tr>
<tr>
<td>Choose not to answer</td>
<td>0</td>
</tr>
<tr>
<td>14. How often do you see or talk to people that you care about or feel close to? (For example: talking to</td>
<td></td>
</tr>
<tr>
<td>Less than once a week</td>
<td>3</td>
</tr>
<tr>
<td>1 time a week</td>
<td>2</td>
</tr>
<tr>
<td>Choose not to answer</td>
<td>0</td>
</tr>
</tbody>
</table>
10

friends on the phone, visiting friends or family, going to church or club meetings)  

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Count</th>
<th>Social Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-3 times a week</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4-5 times a week</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Almost every day</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Choose not to answer</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

15. Stress is when someone feels tense, nervous, anxious, or can’t sleep at night because their mind is troubled. How stressed are you?

<table>
<thead>
<tr>
<th>Stress Level</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>0</td>
</tr>
<tr>
<td>A little bit</td>
<td>0</td>
</tr>
<tr>
<td>Somewhat</td>
<td>1</td>
</tr>
<tr>
<td>Quite a bit</td>
<td>2</td>
</tr>
<tr>
<td>Very Much</td>
<td>3</td>
</tr>
<tr>
<td>Choose not to answer</td>
<td>0</td>
</tr>
</tbody>
</table>

16. In the past year, have you had any of the following stressful life events occur? Check all that apply.

<table>
<thead>
<tr>
<th>Event</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Stressful Life Events</td>
<td>0</td>
</tr>
<tr>
<td>Death of a loved one</td>
<td>5</td>
</tr>
<tr>
<td>Divorce or separation</td>
<td>3</td>
</tr>
<tr>
<td>Loss of Job</td>
<td>3</td>
</tr>
<tr>
<td>Moved</td>
<td>2</td>
</tr>
<tr>
<td>Major illness or injury</td>
<td>3</td>
</tr>
<tr>
<td>Victim of a crime</td>
<td>3</td>
</tr>
<tr>
<td>Witness of a crime or accident</td>
<td>1</td>
</tr>
<tr>
<td>Legal issues</td>
<td>2</td>
</tr>
<tr>
<td>Homeless</td>
<td>3</td>
</tr>
<tr>
<td>Incarcerated</td>
<td>3</td>
</tr>
<tr>
<td>Bankruptcy</td>
<td>3</td>
</tr>
<tr>
<td>Marriage</td>
<td>1</td>
</tr>
<tr>
<td>Birth of a child</td>
<td>1</td>
</tr>
<tr>
<td>Child moving out</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
</tbody>
</table>

17. Do you feel safe walking and living in your neighborhood?

<table>
<thead>
<tr>
<th>Safety Level</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, all the time</td>
<td>0</td>
</tr>
<tr>
<td>Yes, during the day</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
</tr>
<tr>
<td>Choose not to answer</td>
<td></td>
</tr>
</tbody>
</table>

18. In the past year, have you or a family member been afraid of a partner or ex-partner?

<table>
<thead>
<tr>
<th>Violence Level</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>5</td>
</tr>
<tr>
<td>Choose not to answer</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Response</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>19. In the past year, have you been a female headed household?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Choose not to answer</td>
</tr>
<tr>
<td>20. In the past year, have you or anyone in your family struggled with addiction?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Choose not to answer</td>
</tr>
<tr>
<td>21. Have you ever been discharged from the Armed Services?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Choose not to answer</td>
</tr>
<tr>
<td>22. Are you a refugee?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Choose not to answer</td>
</tr>
<tr>
<td>23. In the past year, have you been discriminated against because of any of the following? Check all that apply.</td>
<td>No Discrimination</td>
</tr>
<tr>
<td></td>
<td>Race/Ethnicity</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
</tr>
<tr>
<td></td>
<td>Sexual Preference</td>
</tr>
<tr>
<td></td>
<td>Gender Expression</td>
</tr>
<tr>
<td></td>
<td>Religion</td>
</tr>
<tr>
<td></td>
<td>Disability</td>
</tr>
<tr>
<td></td>
<td>Age</td>
</tr>
<tr>
<td></td>
<td>Weight</td>
</tr>
<tr>
<td></td>
<td>Socioeconomic Status</td>
</tr>
<tr>
<td></td>
<td>Education</td>
</tr>
<tr>
<td></td>
<td>Marital Status</td>
</tr>
<tr>
<td></td>
<td>Citizenship</td>
</tr>
<tr>
<td></td>
<td>Accent or Language</td>
</tr>
<tr>
<td></td>
<td>Criminal History</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>24. In what situations have you been discriminated in? Check all that apply.</td>
<td>No Discrimination</td>
</tr>
<tr>
<td></td>
<td>Employment</td>
</tr>
<tr>
<td></td>
<td>Housing</td>
</tr>
<tr>
<td></td>
<td>Health Care</td>
</tr>
<tr>
<td></td>
<td>Law Enforcement</td>
</tr>
</tbody>
</table>
1.5 Scoring

The scoring is not intended to be used as a diagnostic tool with normal ranges. Each practice and neighborhood will have a variety of situations and scores among their patients. This score can be used as a baseline for each patient or practice to evaluate on an individual level.

1.6 Timing

It is recommended that this form is given before first appointment and then followed up every year for changes. Patients will be more truthful if they are able to fill out the form on their own via patient portal or given a tablet to complete privately. Please note that all studies involving SDOH surveys showed that most patients responded favorably to answering these questions when told that it will help their provider learn about them to give better health care. It would be beneficial if each provider included a message with the link to the form that explains what Social Determinants of Health are and that they account for over 50% of health outcomes. Most people are glad to hear that some of their health issues are not due to their behavior or genetics.
2 Form Setup

2.1 Register in OpenEMR Forms Administration:

2.2

2.3 Install DB (note that it will go to Miscellaneous folder)

2.4 Enable the form (click on disabled)
2.5 Confirm Enabled

3 Using the Social Screening Form

3.1 Opening via Encounter, click on “Miscellaneous”

3.2 Radio Buttons

The circle buttons are radio buttons and only one can be chosen at a time.

3.3 Checkbox

The square buttons are checkboxes and multiple can be checked.
3.4 Other Input Fields

In some of the questions there are “Other” input boxes. These fields are 30 characters long and can be entered when the Other checkbox is on or off.

3.5 Number Inputs

There are 3 questions that have integer input fields: Hours Worked (number between 0 and 200), Household Income (number between 0 and 10,000,000), and Household Size (number between 1 and 20).
3.6 Scoring

The score is set to calculate every time the form is touched. The points are determined from the table in section 1.4.

3.7 Saving

Clicking the Save button on the bottom will post the data to the SQL table.
4 Social Screening Report

4.1 Location

The Social Screening Report will be automatically appended to the patient Encounter record.

4.2 Social Screening Risks

These risks are determined and listed based on the answers in the form. If they have not checked any risk factors then this will simply say “No Social Screening Risks”

4.3 Contact and Score

The recommended Contact or No Contact method will be bolded after all risks.
4.4 Possible Diagnoses

The possible diagnoses are listed based on the answers and attached domains.

Possible Diagnoses:
- Financial Insecurity
- Material Hardship
- Housing Instability
- Medical Cost Burden
- Caregiver Burden
- Social Isolation
- Elevated or Toxic Stress
- Discrimination
- Uninsured or Underinsured

4.5 Reopening Form

In order to reopen and change the answers, simply click on the Edit button at the top of the report. This will bring up the original form with all the previous answers pre-populated.
5 Technical Documentation

5.1 PHP Location: OpenEMR/Forms/SDOH

5.2 Info.txt

This file contains the name that appears in Forms Administration.

5.3 New.php

This php file contains the HTML code that displays the form, allows edit of form, javascript for scoring, and save function to SQL.
5.4 Report.php

This contains the code for the report that displays on the encounter summary in patient record. The first section displays the Social Risks determined from specific answers and the bottom section shows the possible diagnoses.

5.5 Save.php

This contains the code and SQL insert for a new form or update for a form edit.
5.6 Table.sql

This is the Table Create script that is run when adding the form in forms administration.

```
CREATE TABLE IF NOT EXISTS `form_sdoh` ( 
    id bigint(20) NOT NULL auto_increment, 
    date datetime default NULL, 
    pid bigint(20) default NULL, 
    user varchar(255) default NULL, 
    groupname varchar(255) default NULL, 
    authorized tinyint(4) default NULL, 
    activity tinyint(4) default NULL, 
    education varchar(30), 
    disability varchar(30), 
    housing varchar(30), 
    housingotherinput varchar(30), 
    workfulltime varchar(5) default NULL, 
    PRIMARY KEY (id) 
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

5.7 View.php

This code is run when the “Edit” button is selected for the form and it points the code to the New.php.

```
<?php
include("new.php");
?>
```

6 Changes to the form

6.1 Adding Fields to Radio Button Questions

Each Radio Question points to one varchar(30) column in the SQL table. Therefore, answers can be added with an insert to the new.php code.
6.1.1 Changes in New.php

First, find the question in the code. For this example we will add another selection to the Disability Question:

Copy the 4 lines of the first radio selection to below it. Update the label in the ‘Yes’ selection to ‘Yes – Self’. Then update the id, value, and label to ‘Yes – Family’.

6.1.2 Add in Scoring

Next go to the top of New.php to add in a line for scoring. For this example, we’ll add 3 points to disabilityfamily and leave disabilityyes with 5.
6.1.3 Add in Report.php for Risks
To ensure that it gets added into the Social Screening Risks list, copy the 3 rows for disabilityyes and update the value and label.

```php
if ($$thisData['disability'] == 'disabilityyes') {
    echo '<tr><td><span class="text">Disability</span></td><td><span class="text">Yes</span></td></tr>
}
```

6.1.4 Add in Report.php for Diagnoses
In this case we do not have a separate Diagnoses for “Disability” so I copied lines from a different diagnoses and created one for “Disability”. For radio boxes, the first field is the name of the radio button or SQL column, and the second field is the value.

```php
if ($$$thisData['disability'] == 'disabilityyes') {
    echo '<tr><td><span class="text">Disability Test</span></td><td><span class="text">Yes</span></td></tr>
}
```

6.2 Adding Fields to Checkbox Questions
Each Checkbox in the multi-check questions corresponds to its own SQL column so there are a few more steps when adding Checkbox Fields

6.2.1 Add in New.php
This example is adding test1 and test2 ids to the checkbox question by copying the lines from above.
6.2.2 Add in Scoring on New.php
Similar to the radio, this should also be added to the score if it is a risk.

```php
function CalculateTotal()
{
    let totalscore = 0;
    if (document.getElementById('lessthan5').checked == true) {totalscore += 5; }
    if (document.getElementById('highschool').checked == true) {totalscore += 3; }
    if (document.getElementById('associate').checked == true) {totalscore += 1; }
    if (document.getElementById('disabilityyes').checked == true) {totalscore += 5; }
    if (document.getElementById('disabilityfamily').checked == true) {totalscore += 3; }
    if (document.getElementById('housesteno').checked == true) {totalscore += 2; }
    if (document.getElementById('housesaf') . checked == true) {totalscore += 2; }
    if (document.getElementById('housesc'). checked == true) {totalscore += 3; }
}
```

6.2.3 Add in Report.php for Risks
Add the Risks into the top section of Report.php.

```php
if ($sdohData['careunder5'] == 'on') {
    echo '<tr><td><span class=text> . all("Caregiver for Children Under 5") . '</span></td></tr>
}
if ($sdohData['test1'] == 'on') {
    echo '<tr><td><span class=text> . all("Test 1") . '</span></td></tr>
}
if ($sdohData['test2'] == 'on') {
    echo '<tr><td><span class=text> . all("Test 2") . '</span></td></tr>
}
```

6.2.4 Add in Report.php for Diagnoses
A new section for test diagnoses was added and copied from the lines above it.

```php
if ($sdohData['moneyfood'] == 'on'
|| $sdohData['transportfood'] == 'on') {
    echo '<tr><td><span class=text> . all("Food Insecurity") . '</span></td></tr>
}
if ($sdohData['test1'] == 'on'
|| $sdohData['test2'] == 'on') {
    echo '<tr><td><span class=text> . all("Test Diagnoses") . '</span></td></tr>
```

6.2.5 Add in Save.php for input into SQL table
There are 2 separate sections for the Save.php code. Be sure to add the new field to both sections.
6.2.6 Add into Table.sql
The last step in PHP is to add the columns to the SQL table.

6.2.7 Save and Export Code
6.2.8 Disable and Remove Form from Forms Administration
6.2.9 Reregister and enable Form

6.3 Add Input Field

There are a few different types of fields that can be added from the examples already in the forms. Note that these will always require the same steps as the Checkbox additions since they will require new columns. Please refer to steps 6.2.2 to 6.2.9 above.

6.3.1 Integer Field Examples
6.3.2 Text Field (Other Input)
Note that on the Other Input fields, the field is within the same div tag as the Other checkbox so it appears on the same line. If you would like it to be a separate line and question than you can use the Number input format but change the type and size references.

6.3.3 Text Field (Additional Notes)
The Additional Notes field at the bottom is a larger text area with separate rows.
7 Appendix

7.1 Sample Form - Social Screening Tool

1. What is the highest level of education that you have completed?
   - Less than High School
   - High School Diploma or GED
   - 2 Year College or Vocational Degree
   - Bachelors Degree
   - Advanced Degree, Masters or Doctorate
   - Choose not to answer

2. Do you or any of your family members have a disability?
   - Yes
   - No
   - Choose not to answer

3. What is your housing situation today?
   - Permanent and Safe
   - Temporary (shelter, family, friends)
   - Unsafe housing (mold, exposure, unclean)
   - Car, van, or mobile home
   - Unsheltered (tent, park, vacant lot)
   - Other: ________________________________
   - Choose not to answer

4. What is your current work situation? Check all that apply.
   - Full Time
   - Part Time
   - Temporary
   - Seasonal or Migrant
   - Looking for Work
   - Retired
   - Disabled
   - Student
   - Not Employed Outside the Home
   - Choose not to answer

5. How many hours do you work in a week?

6. What is the total income for all your family in the past year? (This will help us know if you are eligible for benefits)
7. How many people are in your household? Including yourself.
8. Are you a primary caregiver for any of the following? Check all that apply.
   - [ ] Not a primary caregiver
   - [ ] Children under 5
   - [ ] Children age 5 to 12
   - [ ] Children over 12
   - [ ] Special Needs Child
   - [ ] Disabled or Ill Adult
   - [ ] Elderly
   - [ ] Other
9. Do you or a family member owe money that you struggle to pay back? Check all that apply.
   - [ ] No debt
   - [ ] Medical Bills
   - [ ] Credit Cards
   - [ ] Rent/Mortgage
   - [ ] Student Loans
   - [ ] Taxes
   - [ ] Legal Fees
   - [ ] Car Loan or License
   - [ ] Utilities
   - [ ] Other
10. In the past year, have you or a family member struggled to pay for any of the following? Check all that apply.
    - [ ] No Financial Struggles
    - [ ] Healthy Food
    - [ ] Medicine or Medical Care
    - [ ] Child Care or School
    - [ ] Utilities (Power, water)
    - [ ] Phone, Internet
    - [ ] Rent or Mortgage
    - [ ] Transportation
    - [ ] Clothing
    - [ ] Education
    - [ ] Other
11. In the past year, has lack of transportation prevented you or a family member from any of the following? Check all that apply.
12. In the past year, have you or a family member not gotten medical care because of any of the following? Check all that apply.
- No delayed medical care
- No Insurance
- Copay or Deductible is too high
- Needed care is not covered by insurance
- Not able to take time off work
- No provider available
- Did not understand provider recommendations
- Lack of trust in medical care
- No child care
- Other

13. In the past year, have you and your family members seen dentists?
- Yes
- No, not insured
- No, need dentist
- No, not able to take time off work
- No, other
- Choose not to answer

14. How often do you see or talk to people that you care about or feel close to? (For example: talking to friends on the phone, visiting friends or family, going to church or club meetings)
- Less than once a week
- 1 time a week
- 2-3 times a week
- 4-5 times a week
- Almost every day
- Choose not to answer

15. Stress is when someone feels tense, nervous, anxious, or can’t sleep at night because their mind is troubled. How stressed are you?
16. In the past year, have you had any of the following stressful life events occur? Check all that apply.

- [ ] No Stressful Life Events
- [ ] Death of a loved one
- [ ] Divorce or separation
- [ ] Loss of job
- [ ] Moved
- [ ] Major illness or injury
- [ ] Victim of a crime
- [ ] Witness of a crime or accident
- [ ] Legal Issues
- [ ] Homeless
- [ ] Incarcerated
- [ ] Bankruptcy
- [ ] Marriage
- [ ] Birth of a child
- [ ] Child moving out
- [ ] Other

17. Do you feel safe walking and living in your neighborhood?

- [ ] Yes, all the time
- [ ] Yes, during the day
- [ ] No
- [ ] Choose not to answer

18. In the past year, have you or a family member been afraid of a partner or ex-partner?

- [ ] Yes
- [ ] No
- [ ] Choose not to answer

19. In the past year, have you been a female headed household?

- [ ] Yes
- [ ] No
20. In the past year, have you or anyone in your family struggled with addiction?
   - Yes
   - No
   - Choose not to answer
21. Have you ever been discharged from the Armed Services?
   - Yes
   - No
   - Choose not to answer
22. Are you a refugee?
   - Yes
   - No
   - Choose not to answer
23. In the past year, have you been discriminated against because of any of the following? Check all that apply.
   - No Discrimination
   - Race/Ethnicity
   - Gender
   - Sexual Preference
   - Gender Expression
   - Religion
   - Disability
   - Age
   - Weight
   - Socioeconomic Status
   - Education
   - Marital Status
   - Citizenship
   - Accent or Language
   - Criminal History
   - Other
24. In what situations have you been discriminated in? Check all that apply.
   - No Discrimination
   - Employment
   - Housing
   - Health Care
Law Enforcement
Education
In Public (Shopping, Dining, Parks)
Religious or Civic Organizations
Government
Banks or Finance Services
Other

25. Would you like to be contacted with resources or assistance?
   - Yes, by phone
   - Yes, by email
   - Yes, by portal message
   - No
   - Other

Your total score is

Other Comments
7.2 SDOH Infographics

7.2.1 Healthy People 2030
What makes us healthy?

Good health matters, to individuals and to society. But we don’t all have the same opportunities to live healthy lives.

To understand why, we need to look at the bigger picture:

The healthy life expectancy gap between the most and least deprived areas in England is over 18 YEARS

Find out more: health.org.uk/what-makes-us-healthy
7.2.3 Bruin Medical Review

Social Determinants of Health & Why They Matter

What are Social Determinants of Health?
According to the CDC, they are conditions in the places where people live, learn, work, and play that affect a wide range of health risks and outcomes.

The 5 Key Areas:

Healthcare Access & Quality
Lower socioeconomic communities might not have quality healthcare and thus might have:
- A lack of primary care specialists or preventive care
- Increased prevalence of pre-existing health conditions

34.2% of people in poverty are insured. In 2017, 28.9 million people in the United States were uninsured or underinsured.

Education Access & Quality
Higher levels of education are correlated with better health:
- This means that community members without access to higher education fare worse.
- Lower education levels:
  - Lower pay
  - Inaccessible health coverage
  - Lower health literacy rates

Social & Community Context
Relationships such as one's family and friends have a huge impact on health:
- Interconnected parents
- Domestic violence
- Unsafe communities
- Unaffordable necessities

All of these disproportionately impact marginalized communities.

Neighborhood & Built Environment
The neighborhood you live in can have a huge impact on your health:
- Some neighborhoods might have:
  - Higher rates of crime
  - Inaccessible nutritious food
  - Unsafe or water
  - Higher levels of pollution

This is most often seen in marginalized and impoverished communities.

Economic Stability
Community members living in poverty might not be able to afford:
- Healthcare
- Housing
- Higher education
- Nutritious food

All of which have impacts on physical and mental health.

Experts Suggest:
- Raising awareness to healthcare providers about financial barriers
- Empowerment in health care
- Redesigning the healthcare insurance system to cover more community members
- Increasing the number of healthcare providers and healthcare services in marginalized communities
- Pursuing an upstream approach to healthcare by acknowledging and addressing how social determinants can impact health
- Increasing health literacy, especially around causes and inventions that can reduce health disparities

Sources:

bruinmedicalreview.com
7.2.4 The Homeless Hub, Canada

**WHAT MAKES CANADIANS SICK?**

- **50% YOUR LIFE**
  - Income
  - Early childhood development
  - Disability
  - Education
  - Social exclusion
  - Social safety net
  - Gender
  - Employment/working conditions
  - Race
  - Aboriginal status
  - Safe and nutritious food
  - Housing/homelessness
  - Community belonging

- **25% YOUR HEALTH CARE**
  - Access to health care
  - Health care system
  - Wait times

- **15% YOUR BIOLOGY**
  - Biology
  - Genetics

- **10% YOUR ENVIRONMENT**
  - Air quality
  - Civic infrastructure

*These are Canada's social determinants of health #SDOH*
7.2.5 American Hospital Association

SYSTEMIC

SYSTEMIC CAUSES
The fundamental causes of the social inequities that lead to poor health.

COMMUNITY

SOCIAL DETERMINANTS OF HEALTH
Underlying social & economic conditions that influence people's ability to be healthy.

PERSON

SOCIAL NEEDS
Individuals' non-medical, social or economic circumstances that hinder their ability to stay healthy and/or recover from illness.