

# Healthier Prepared Food Environments: Using the Texas Nutrition Environment Assessment in Restaurants (TxNEA-R) Tool in Your Community

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## Purpose

In order to implement strategies to improve the environment of food outlets in your community, it is important to assess the prepared foods environment. The purpose of this manual is to describe the logic, background, and protocols for Texas Department of State Health Services (DSHS) staff and Texas communities to successfully use the Texas Nutrition Environment Assessment in Restaurants (TxNEA-R) tool.

**Note:** An asterisk (\*) on a protocol indicates that the protocol is in coordination with another role and more information is available on the protocols for the other role.

## Definitions

- **Community coordinator:** a community representative who oversees the community assessment and manages raters.
- **Community stakeholder:** any organization or group that is interested in improving the nutritional environment and practices of prepared food outlets or increasing the reach of prepared food outlets with healthy environments and practices.
- **DSHS coordinator:** DSHS staff who oversees and provides technical assistance to community coordinators and updates the TxNEA-R material as needed.
- **Face/construct validity:** the degree to which a tool appears to measure what it claims to measure.
- **Inter-rater reliability:** a measure of whether different raters would provide similar responses for the same survey items.
- **Internal consistency reliability:** how well certain items together measure a particular construct.
- **Prepared food outlet:** a food service establishment that sells prepared, ready-to-eat food. Types of prepared food outlets include table-service restaurants, fast-food restaurants, take-away, in-store food outlets.
  - **Table service:** an establishment where the customer is served by wait staff. This may include a restaurant inside of a hotel.
  - **Fast Food/Fast Casual:** an establishment that has tables inside but does not have formal table service, or has only limited service of items like drinks and condiments. This category includes buffets.
  - **Take-away:** an establishment where, for the majority of customers, food is not eaten inside the store, but is taken elsewhere for later consumption. It has no table service, but may have a very limited seating inside or outside the premises. This category includes food trucks.
  - **In-store:** an establishment where foods are prepared within another store whose primary purpose is not food service, such as a grocery store, convenience store, or big-box store. Food outlets that do not sell foods prepared on the premises are not included.
- **Rater:** a community member who meets with managers and collects data from prepared food outlets to assess the nutrition environment.

## About the TxNEA-R Tool

The TxNEA-R tool can be used in prepared food outlets, such as, restaurants with table service; fast food or fast casual restaurants with no or minimal table service; take-way, such as a food truck, food stand, or carry out or drive through only where a few chairs are available; and in-store settings where prepared foods are sold inside of another setting such as a grocery store, super store, or gas station. The TxNEA-R tool is not useful for specialty shops where meals are not sold, such as bakeries or smoothie shops.

Communities can use the TxNEA-R tool to assess the nutrition environment of prepared food outlets in order to:

- Improve the environment and practices of prepared food outlets.
- Increase the reach of prepared food outlets with healthy environments and practices.

TxNEA-R measures the following constructs:

- Availability of healthier and less healthy foods and beverages
- Barriers to making healthy choices
- Facilitators of making healthy choices

The TxNEA-R tool and supporting resources can be found at [www.dshs.state.tx.us/TXNEAR](http://www.dshs.state.tx.us/TXNEAR).

### Tool Components

The components of the TxNEA-R tool are the survey, instructions, and glossary. The TxNEA-R tool is available in an electronic version and a paper version. The electronic version of the tool is available on QuestionPro, an online survey software platform. All tool components can be found at the URL on the title slide. In this version, the survey, instructions, and glossary are included in the question. The online tool can be accessed on a computer or a smart device using the QuestionPro app. A practice version of the TxNEA-R tool is available on QuestionPro; data entered into the practice copy will not be included in the assessment. After becoming comfortable with the tool using the practice copy, raters should use the actual survey.

In the paper version of the tool, the survey, instructions, and glossary are separate documents. After collecting the data using the paper document, the data must be entered on QuestionPro. The paper version of the survey is more useful for larger food outlets with larger, more complicated menus that require more time. When using the paper version of the tool, raters are able to skip to different areas of the survey.

### Tool Psychometrics

The TxNEA-R tool is valid and reliable and has the following characteristics:

- Inter-rater reliability
  - Substantial agreement ranging from 62% to 96%, with mean percent agreement of 79%<sup>1</sup>
- Face/Construct validity
  - Dietary Guidelines for Americans 2010<sup>2</sup>
  - RAND Performance Standards for Restaurants<sup>3</sup>
  - Review by subject matter experts

- Internal consistency reliability
  - Acceptable at 0.6-0.7

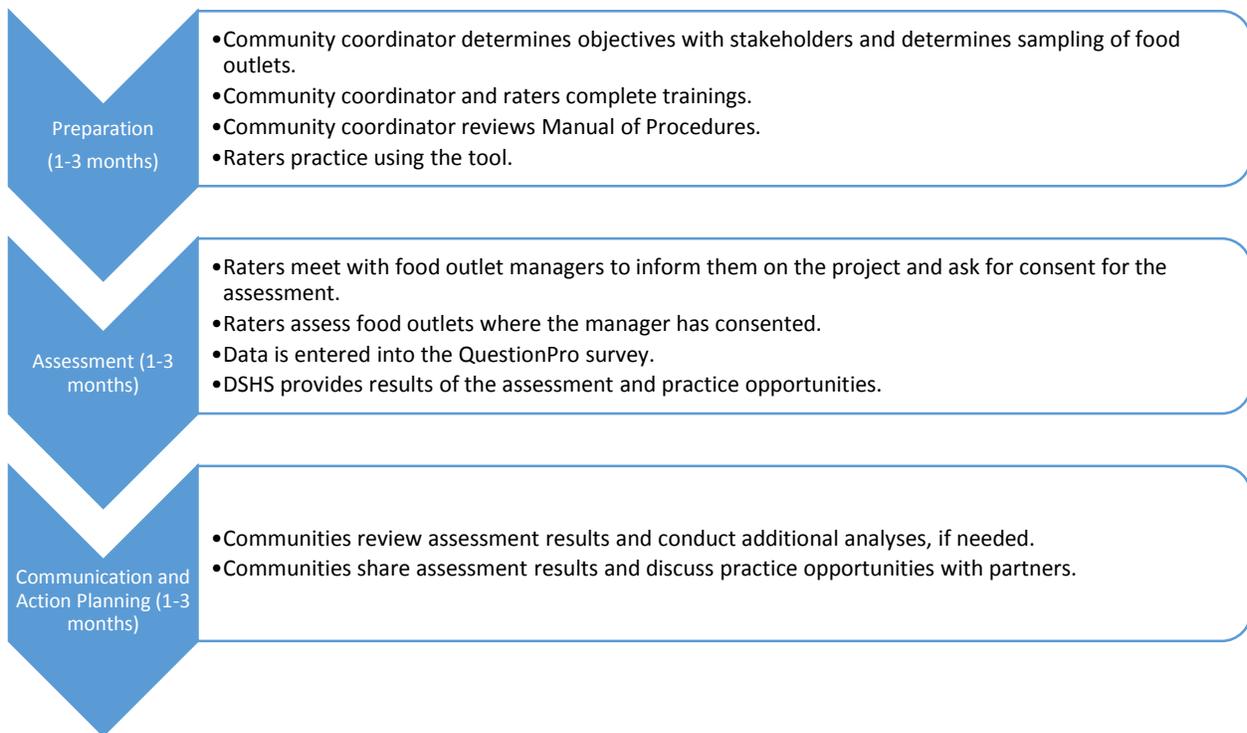
## Possible Interventions in Prepared Food Outlets

An assessment of the prepared food environment using the TxNEA-R tool can facilitate the following types of actions:

- Increase availability of healthier foods and beverages
- Decrease availability of less healthy foods and beverages
- Increase facilitators to healthy choices
- Remove barriers to healthy choices, and
- Promote food outlets with a healthy environment

## Sample Timeline for a Community TxNEA-R Assessment

This timeline suggests an approximate time period to complete a community assessment in order to inform planning. It does not include the time for interventions.



# Protocols

## Community Coordinator Protocols

### Preparation

1. Community representatives interested in the TxNEA-R tool complete the online Tool Background training to determine if the TxNEA-R tool is in line with their organization's goals, capacity, and readiness.
  - a. The Background Training includes information on what the tool measures, what kinds of actions can be taken, resources (personnel and time) needed, the detailed nature of the project, necessary partners, and limitations of the tool.
2. A community representative who decides to use the TxNEA-R tool and leads the project becomes the community coordinator. The next step is to review the survey, instructions, and glossary to become more familiar with the tool.
3. Consult with stakeholders and identify objectives.
  - a. Contact stakeholders of a restaurant environmental intervention and engage them in the assessment and planning process. For example, if a community's objective is to recognize food outlets with healthy environments or policies, the stakeholders could be a coalition whose mission is to promote healthy eating, such as a restaurant association or an association of nutrition educators in the community who may refer their patients to the food outlets. Other examples of stakeholders could be policy makers, nonprofit and public health organizations working on chronic disease prevention, local residents, and healthcare administration or professionals.
  - b. The community coordinator may conduct a stakeholder analysis to identify stakeholders to include in the project. Stakeholder analysis tools, such as MindTools<sup>4</sup>, can be found online.
  - c. When recruiting stakeholders, describe any health outcome(s) of interest and the role of food outlets in influencing behavior. Describe strengths, limitations, and possible interventions of the tool to interested stakeholders. Describe the resources needed to complete the assessment. Ask stakeholders if they are interested and if so, what role they would want to have in the assessment or intervention. After recruiting a suitable stakeholder, decide on a method of communication.
  - d. Outline goals and objectives. An intervention could be decided at this point which would focus the assessment.
4. \* Contact DSHS to receive a Project ID.
  - a. Contact DSHS at [BringingHealthyBack@dshs.state.tx.us](mailto:BringingHealthyBack@dshs.state.tx.us) to request a project ID. Provide your contact information, a description of your project objectives, and the geographic area of your assessment. DSHS will use this information to confirm that the community's objectives are a good match with the TxNEA-R tool and send a Project ID number, a 3-digit number that identifies each community project. This number is entered at the beginning of every TxNEA-R survey and on the quiz at the end of the trainings and is used by DSHS to provide data and reports for your project.

5. Complete Community Coordinator Training and review the TxNEA-R Manual.
  - a. The training and manual describe the protocols necessary in the preparation and implementation of the TxNEA-R assessment and provides information on how to use the results.
6. Complete the Rater Protocol Training and Data Collection Training and pass the data collection quiz.
  - a. The primary audience for these trainings is the raters. The secondary audience is the community coordinators. The Rater Protocol Training consists of protocols to approach food outlet managers and conduct the assessment. The Data Collection Training outlines the instructions for using the tool and includes practice exercises. Coordinators need to know this information in order to help raters with any questions and fully understand the features of the assessment tool.
7. Follow local and federal policies related to data collection and those related to privacy and research when applicable.
  - a. The TxNEA-R tool cannot be used to collect information on human subjects, so it is exempt from Institutional Review Board (IRB) review.
  - b. For more information, contact the DSHS Institutional Review Board or your organization's IRB.  
<http://www.dshs.state.tx.us/Layouts/ContentPage.aspx?PageID=35640&id=2117&terms=IRB>
8. Decide on which prepared food outlets to assess.
  - a. Decide on a geographic area of interest for your intervention and assessment. This represents the target area where you will try to make changes to the environment of prepared food outlets. This may be a county, city, metropolitan statistical area (MSA), neighborhood, census tract, or zip code. You may choose to target areas with high prevalence of chronic disease, food swamps (areas with an abundance of less healthy food options), areas of high population density, or areas where people at highest risk of chronic disease live and work.
  - b. Community coordinators may contact [BringingHealthyBack@dshs.state.tx.us](mailto:BringingHealthyBack@dshs.state.tx.us) to request maps which display patterns of disease, population density, food access or other factors in your geographic area. For example, access to healthy food retailers can be determined based on the [modified retail food environment index \(mRFEI\)](#)<sup>5</sup>. In your request, be specific about which data to map, specify the geographic area, and provide your contact information. Allow at least 3 weeks to receive the map(s).
  - c. Decide on which prepared food outlets to assess in your geographic area. Try to include more local food outlets in your sample where the decisions and changes can be made locally. The decisions for large national chains are made at the corporate level, and local change is hard to make. Based on your project's objectives and resources, decide on and implement a sampling method for food outlets in your community.
  - d. Make a list of food outlets in the final sample and assign each of them a 3-digit Survey Number, which will be used to track progress at the food outlet and entered at the beginning of each TxNEA-R survey.

9. **Optional:** Locate or develop materials to inform food outlet managers about the project.
  - a. Locate or develop materials on the project, the health outcome, the health behavior, and the role of food outlet managers to help raters gain the consent of food managers to participate in the project.
  - b. Include recent data on these materials to describe the prevalence of nutrition-related chronic diseases. Use data to describe the demand for healthy options or the role of healthy options in a good business model.
    - i. Do not blame food outlet managers for adverse health outcomes related to eating out. Emphasize how they could support healthy choices for children and adults in the community and how this could improve their business.
      1. Use plain language and visuals to support your message.
      2. Provide accommodations for accessibility as needed.
10. Determine the number of raters necessary for the project and recruit raters, if needed.
  - a. Based on your timeline, the number of prepared food outlets you plan to assess, and the capacity of raters, determine the number of raters needed. See rater protocols for a description. A recommended practice is to pair two raters to engage food outlet managers and complete the assessment. Recruit an appropriate number of raters as needed.
  - b. It is recommended to work with raters with whom you have a strong relationship and who are detail-oriented and/or knowledgeable in nutrition. Students of public health or nutrition may be a good choice.
11. \* Direct raters to complete the online training and train them on the materials for the food outlet managers if needed. Confirm that raters have successfully completed the Rater Protocol Training and Data Collection Training and piloted the tool.
  - a. Raters must pass the quiz at the end of the Data Collection Training, practice the survey at a food outlet outside of the sample, and follow up with the community coordinator.
  - b. This is to ensure that the tool is being used correctly and to make sure if the raters are comfortable with the tool when discussing the project with food outlet managers and while conducting assessments.
12. \* Provide raters with device keys, the Project ID, and their Rater ID and record the information on Form 2. This information is needed to complete the practice survey.
  - a. Device keys enable raters to collect data on a smart device using the QuestionPro app without being connected to the Internet.
    - i. Email [BringingHealthyBack@dshs.state.tx.us](mailto:BringingHealthyBack@dshs.state.tx.us) to request the device keys.
    - ii. Organize the device keys using Form 1.
    - iii. Send each rater a device key. Instructions to enter the device key are in the rater protocol training. Raters need to uninstall the app or remove the device key when they have completed data collection. This allows the device key to be used by someone else.
  - b. DSHS has a limited number of device keys. If there are not enough device keys for each rater.
    - i. Raters may still collect data using the paper tool and enter it on QuestionPro.

13. \* Debrief with raters on how their assessment went.
  - a. Raters should notify the coordinator when they have completed one practice survey at a prepared food outlet.
14. \* Assign food outlets and survey numbers to raters and direct raters to begin engaging food outlet managers. After the rater confirms that he/she has practiced the tool, send a list of survey numbers and the restaurant information to the rater.
  - a. Assign food outlets with survey numbers. Assign survey numbers to raters and note the assignments on Form 1. You may want to assign groups of restaurants that are close together to one rater or pair of raters to be considerate of their time and resources. Be considerate of travel distance for volunteers whose mileage is not paid. Based on the capacity of raters, assign 1 or 2 raters to each food outlet. It may be better to send raters in pairs. Let pairs know which rater they are paired with and the other rater's contact information.
  - b. Raters may need to contact the prepared food outlet more than once to get in contact with the manager. After they get in contact, raters may need to meet with a food outlet manager more than once to explain the project and gain the manager's consent. Establishing a good relationship with food service managers is important because they must agree to participate in the project and be open to suggestions in order to access the food establishment.

#### Field Work

15. \* Raters inform restaurant owners and managers about the project and gain consent and cooperation to participate. Communicate regularly with raters.
16. \* Work with raters to complete data collection and assist raters as needed. Receive Form 2 from raters when they have completed data collection and confirm that all surveys are complete. Contact DSHS for technical assistance.

#### Planning, Implementing, Evaluating, and Sustaining Strategies

17. \* Request your assessment results.
  - a. Contact [BringingHealthyBack@dshs.state.tx.us](mailto:BringingHealthyBack@dshs.state.tx.us) to ask for the results of your assessment. Include your Project ID. DSHS will send the assessment results, raw data, and practice opportunities.
    - i. The assessment results report lists the results for each prepared food outlet and for all the food outlets aggregated.
    - ii. The practice opportunities describe options of interventions to improve the prepared food environment which have occurred in restaurants. It also describes the effectiveness of these interventions and links to implementation tools.
    - iii. The raw data can be used to conduct additional analyses if needed.
18. Review assessment results and practice opportunities. Conduct additional data analysis if needed.
  - a. Review assessment results and practice opportunities within your organization. You may wish to share the aggregated results with volunteer raters.



## Rater Protocols

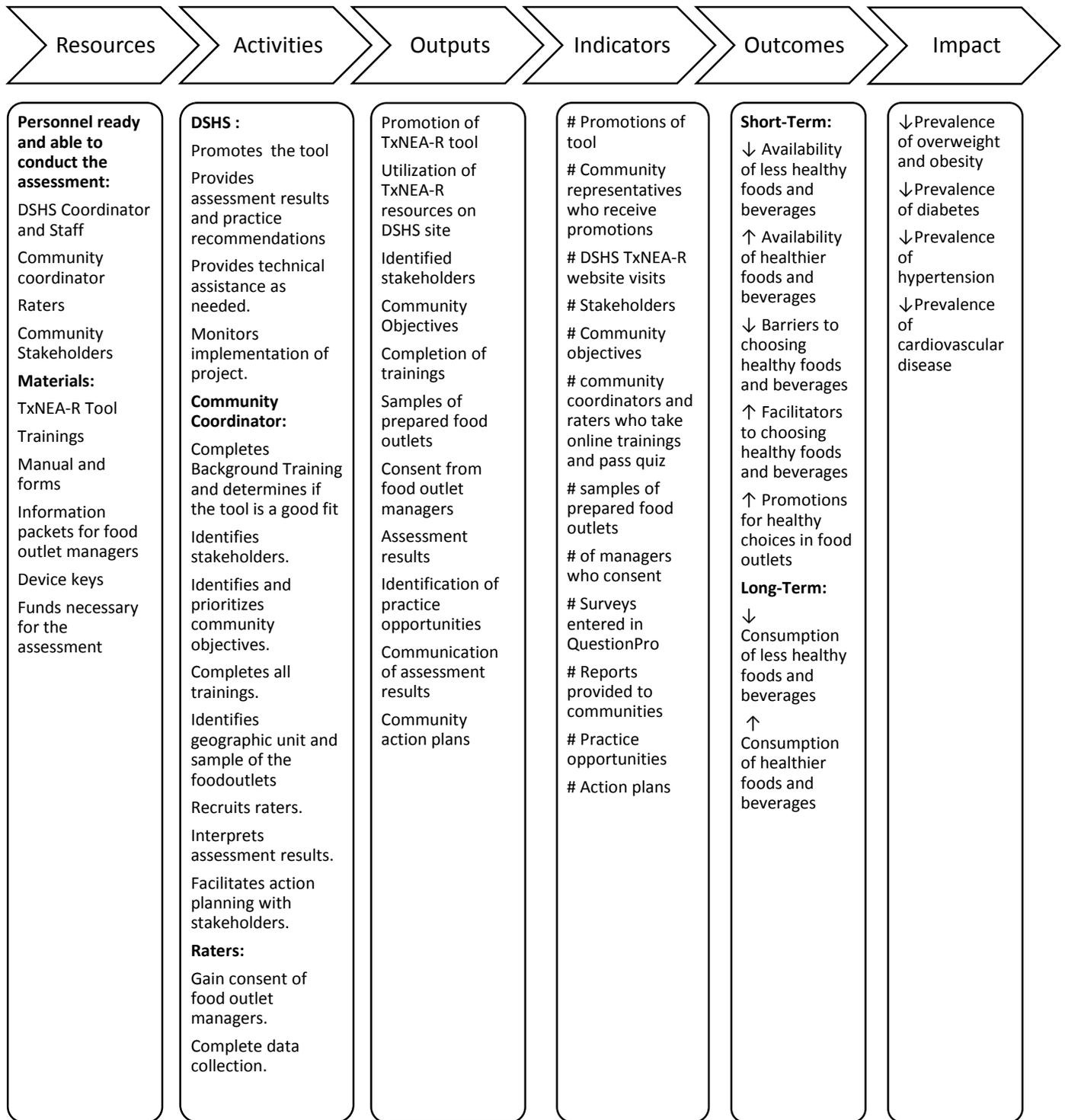
### Preparation

1. \* Optional: Complete Background Training.
  - a. A recommended practice is to complete the online Background Training that is required for the community coordinator.
    - i. This will help raters understand the tool's purpose and what types of interventions can result. It can also help raters to better present the project to food outlet managers and answer their questions.
2. \* Complete online Rater Protocol Training, Data Collection Training and pass quiz at the end.
  - a. The online Rater Protocol Training describes the protocols for approaching food outlet managers and gaining their agreement in working on improving the environment of their food outlet and collecting data using the tool.
    - i. The Data Collection Training describes the survey questions, instructions, and definitions and includes practice exercises.
  - b. Complete the data collection quiz after completing the Rater Protocol and Data Collection trainings. Raters should enter the Project ID and Rater ID before taking the quiz and pass the quiz.
3. \* Receive Project ID, Rater ID, and device key (optional) from community coordinator.
  - a. The Project ID identifies the data for the project and allows DSHS to filter it from the rest of the data. The Rater ID helps the community coordinator keep track of who filled out which surveys, in case any questions arise later.
  - b. The device key allows raters to collect data on a smart device using the QuestionPro app without an Internet connection.
    - i. If you do not receive a device key, data may be collected using the paper tool. Instructions on how to enter the device key are in the rater protocol training.
4. \* Practice using the tool and debrief with your community coordinator.
  - a. Using the paper copy of the tool, choose a prepared food outlet and conduct the assessment. Practice using the protocols for data collection. Practice using Form 2 and the protocols. Explain to the food outlet manager that you are practicing the tool and ask for their permission to proceed. Use the practice version of the tool. Explain that the data from the assessment will not be used.
  - b. Try to choose a food outlet with a children's menu so that the entire survey is shown. If there is no children's menu, the rater will not be able to practice this part of the assessment.
5. \* Receive a list of prepared food outlets and corresponding survey numbers from the community coordinator. The Survey Number is entered at the beginning of each survey.
6. Prepare for work in the field.
  - a. Complete Table 1 in Form 2 using the survey numbers. If you are paired with another rater, exchange contact information and coordinate schedules with them. Complete the checklist on Form 2.

## Field Work

7. Meet with food outlet owners/managers to inform them about the project and gain consent and cooperation to participate.
  - a. Building trust and a positive working relationship with food outlet managers is important to gain their participation in the intervention.
  - b. Approach the foodservice manager in a professional manner. It may take 1-3 attempts of contacting the food outlet before reaching the manager. Explain which organization(s) you are with, the objectives of the project, and how this could benefit the manager's business. Ask if they would be willing to take a few minutes to hear more about the project. Repeated visits may be needed to gain the manager's consent. If your community coordinator has provided information for the managers, offer to present it to them.
    - i. If the manager is not interested, offer to leave the information for them to look over and your contact information, and thank them for their time.
8. Data collection
  - a. Use the survey, instructions, and glossary to complete assessments of food outlets where you have gained manager consent.
  - b. If using the paper tool, enter the data into QuestionPro.
  - c. Ask the food outlet staff questions as needed.
9. \* Communicate regularly with your project coordinator about the status of your assigned food outlets.
10. After completing data collection at all your assigned food outlets, remove the device key or uninstall the QuestionPro app from your device. This will allow the device key to be used again.
11. \* Complete Table 2 in Form 2 and send Form 2 to the community coordinator when surveys have been entered.

# Logic Model



## References

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