PROTOCOL FOR FLIP PILOT STUDY.

Alyssa Schermel; Jaritza Vega; Beatriz Franco-Arellano; JoAnne Arcand; Mary R. L’Abbe; Adriana Blanco-Metzler;

© 2020, MARY R. L’ABBE

This work is licensed under the Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/legalcode), which permits unrestricted use, distribution, and reproduction, provided the original work is properly credited.

Cette œuvre est mise à disposition selon les termes de la licence Creative Commons Attribution (https://creativecommons.org/licenses/by/4.0/legalcode), qui permet l’utilisation, la distribution et la reproduction sans restriction, pourvu que le mérite de la création originale soit adéquatement reconnu.

IDRC Grant / Subvention du CRDI: 108167-001-Scaling Up and Evaluating Salt Reduction Policies and Programs in Latin American Countries
PROTOCOL FOR FLIP PILOT STUDY

September 22, 2017
Acknowledgements

We would like to thank the International Development Research Centre (IDRC) of Canada its support of the IDRC project # 108167, entitled "Scaling and evaluating salt reduction policies and programs in Latin America".

Recognition to Adriana Blanco Metzler, MSc of the Health and Nutrition Unit, of the Costa Rican Institute for Research and Education in Nutrition and Health (INCIENSA), Costa Rica, for being the Principal Investigator and coordinating the IDRC project # 108167, entitled “Scaling and evaluating salt reduction policies and programs in Latin America”.

Thanks for the technical assistance to Mary L’Abbe of the University of Toronto and JoAnne Arcand of the University Of Ontario Institute Of Technology.

This is a product of the research project "Scaling and evaluating reduction policies and programs in Latin America”. 2016-2019, funded by IDRC” The opinions expressed in this document do not represent those of the IDRC or the government."
**Protocol Authors**

Alyssa Schermel, MSc, Research Assistant, L'AbbeLab, Department of Nutritional Sciences, Faculty of Medicine, University of Toronto

Jaritza Vega S. MBA, Nutritionist, Research Assistant, Project IDRC 108167, Unit of Health and Nutrition, Costa Rica Institute of Research and Teaching in Nutrition and Health

Beatriz Franco-Arellano MSc., PhD Student, L'AbbeLab, Department of Nutritional Sciences, Faculty of Medicine, University of Toronto

JoAnne Arcand, PhD., RD, Assistant Professor, Faculty of Health Sciences, University of Ontario Institute of Technology

Mary R. L'Abbe PhD, Earle W. McHenry Professor, and Chair, Department of Nutritional Sciences, Faculty of Medicine, University of Toronto

Adriana Blanco M. MSc. Leader of the Project IDRC 108167. Unit of Health and Nutrition, Costa Rica Institute of Research and Teaching in Nutrition and Health

**Suggested Citation**


**Contact**

**Adriana Blanco Metzler, MSc**

Leader of the Project IDRC 108167 “Scaling-up and evaluating salt reduction policies and programs in Latin American Countries”, Unit of Health and Nutrition, Costa Rica Institute of Research and Teaching in Nutrition and Health.

Tres Ríos, Cartago, Costa Rica, Centroamérica

Phone. (506) 2279-9911 Ext. 146,

Fax. (506) 2279-5546

ablanc@inciensa.sa.cr

www.inciensa.sa.cr
PROTOCOL FOR FLIP PILOT STUDY

Table of Contents
IMPORTANT DATES ....................................................................................................................... 5
AVAILABLE TOOLS AND GUIDES ............................................................................................... 5
OVERVIEW OF STEPS .................................................................................................................... 6
PHOTO PROCESSING STEP-BY-STEP GUIDE .................................................................................. 8
NUTRITION FACTS DATA ENTRY PROTOCOL .............................................................................. 10
“AS CONSUMED” RECIPE PROTOCOL ....................................................................................... 11
ATWATER VALIDATION PROTOCOL ............................................................................................. 16
IMPORTANT DATES

Start Date: July, 2017 in order to send preliminary results to the 1st interim report

End Date: Complete pilot data analysis by September 15th.

AVAILABLE TOOLS AND GUIDES

USER GUIDES
The most up-to-date version of the PDFs will always be at these links for you to download:
- English (version 6.3 most up to date as of July 28):
- Spanish (version 6.3 most up to date as of July 28):

There is also a Help tab, visible only to PAHO users:

FOOD COLLECTOR APP (page 3 of User Guide)
You can download the app on your iPhone using the following link:
http://flip.canadafoodtracker.com/app.aspx

NOTE: You should install the latest version that is available. The app store should automatically prompt those who already have the app installed to upgrade if a newer version is available. Also please note that you must update the app and not delete and reinstall the app. If you delete and reinstall the photos would also be deleted from the phone.

TECHNICAL ISSUES CONTACT (page 3 of User Guide)
At the beginning of our Canada collection, we had major problems with the app crashing and uploading photos. While most of these problems have been fixed for us, some phones in other countries may experience issues. If you experience technical problems with either the app or the website, be sure to contact support at support@dietitians.ca.
OVERVIEW OF STEPS

1. Data Collection Using Food Collector App:
   - Collect data in 3 different chains of retail supermarkets, one of them of low socioeconomic level
   - Collect data of two food categories: Soups and breakfast cereals. Collect data on as many products as possible.
   - Systematically scan grocery store shelves to ensure all products are captured. Start and one end of the aisle and work your way down to the other end of the aisle.
   - Collect 6-9 pictures per product (cover all sides of the product: Front of Pack, Back of Pack, Right Side, Left Side, Top, Bottom, Ingredients Closeup, Nutrition Facts Table Closeup, Barcode)
   - Collect all the info from the label (prices not required)
   - Select the product size that has the most space in the shelf or the medium size*
   - Information on how to use the Food Collector App can be found in the User Guide

*Collecting and linking multiple sizes of the same product (pages 14 and 24 of the English User Guide): This feature in the iPhone app and in the website is optional. Please email Alyssa Schermel at aschermel@gmail.com if you wish to use this feature so she can help you further. This feature allows you to link multiple package sizes of the same product (for example, Kellogg’s Frosted Flakes, regular size, and family size) under the same product ID in FLIP.

2. Photo Processing on the FLIP Website:
   - There is an additional step by step guide on photo processing on page 6 of this protocol (making sure photos are good quality etc. and potentially flagging them for recapture before moving on to data entry). This will be translated to Spanish next week. Use this in conjunction with the main User Guide.

3. Data Entry Using FLIP Website:
   - You will enter the enter data for: Brand name, company name, product name, food category, the serving size (in g) on the Nutrition Facts table and the sodium in mg. Additionally, you must select the type of preparation required (1. None/Ready to Eat, 2. Add water or other ingredients, 3. Cook only). Selecting “Add water or other ingredients” will allow you to enter “As consumed” information. You can also enter data for the other nutrients and ingredients (optional).
   - Information on how to use the FLIP website can be found in the User Guide
   - Information on how to enter nutrient information can be found on page 8.
   - For foods that need to be reported “As consumed” (i.e., some soups, cake and cookie mixes, etc), prepare a recipe using the protocol provided on page 9.
   - A note on MULTIPACKS: This information is not collected if the products within the multipack already exist as individual versions. If the products in the multipack do not exist as individual products (different flavours, versions), the multipack should be collected. Each product from the multipack must be separated in FLIP by adding new products. Instructions for adding a new product are found on page 21 of the User Guide. Use the same barcode for all of the products found in the multipack.
4. Quality Assurance and Analyses:

- Data can be downloaded from FLIP into an Excel file (see User Guide).
- Conduct quality assurance measures on the data in Excel.
  a. Check for duplicates (sort by barcode and identify those that match)
  b. Check for outliers (within each sodium subcategory)
  c. Perform Atwater calculations (see page 14)
  d. G-mL conversions: Scan to make sure that the necessary products are converted (use a 1:1 ratio), and compare Nutrition Facts table serving size values of similar products to ensure they were calculated correctly.
- Conduct descriptive statistics. The required data will be calculated and entered into the template data table that JoAnne and Adriana will send.
PHOTO PROCESSING STEP-BY-STEP GUIDE

Photo processing should be completed during data collection (after photos have been uploaded to the website), and before data entry

1) Log in to FLIP with username and password
2) Select “Incomplete” tab at the top of the page
3) Start at page 1
4) Select a product to begin photo validation
   a. Selecting “Edit” assigns a product to you and prevents other users from accessing that product
   b. Selecting “View” allows you to view a product without it being assigned to you but you cannot make edits
5) Select “Edit” to begin processing
6) View the “Log” tab for any comments made by the person who collected the product in-store
   a. Note: On the “Log” page, you can add additional comments if necessary
   b. If you open a product and it is a recaptured product, it will have a comment stating “Recapture Completed”. Double check photos to make sure the recapture is complete.

7) Select “Photos” tab to begin reviewing photos
   a. Most products have about 9 photos (Top, Bottom, Left, Right, Front, Back, NFT, Ingredients, Barcode).
   b. Linked products for multiple package sizes (pg. 14 and 24 of User Guide) will not say “original” underneath their photos (e.g. see screenshot)
   c. Some products may have more or fewer photos due to:
      i. Some products having blank sides – a photo may not have been taken (common for canned products where tops or bottoms are blank)
      ii. Some products requiring multiple photos of a side (e.g. Front) because 1 photo cannot capture all of the text with sufficient clarity or text wraps around a corner
      iii. There is a linked product

8) If there are multiple photos of one side, delete the lower quality photo(s)
   a. Be sure not to delete if the photo is a linked product photo, or multiple photos were required because of reasons cited above
**Processing Photos** – click the edit icon on a photo; click on the zoom icon to enlarge photo

9) Rotate photos if required

10) If a product is incorrectly labeled, select the appropriate label under “**Image Type**”

11) To make a request for a photo to be recaptured, click “**Recapture**” and enter detailed comments
   a. Provide the reason why a photo needs to be retaken (e.g. NFT text is too blurry)
   b. Specify which photo needs to be taken (e.g. the front, ingredient, or back photo)
   c. Specify which size product if there are linked product photos, and select the appropriate barcode from the dropdown menu

12) If the product does not need to be recaptured, you can move onto data entry (e.g. entering Nutrition Facts table information, entering ingredients, etc.)
NUTRITION FACTS DATA ENTRY PROTOCOL

Serving Size on NFT: This is the serving size indicated on the package. For example, “2 cups” or “1/2 pie” or “1 tsp”.

Weight G: This is the serving size indicated on the package in grams. If grams is not indicated on the package, the weight or volume indicated must be converted to grams, as the sodium categories are all in grams. NOTE: we are using a conversion ratio of 1:1.

Vol ML: This is the serving size indicated on the package in mL.

SchedM_Weight: Leave this field blank. This is only applicable to Canada.

Example:
Under the “package” column:

- Enter 125 in the first box beside “Serving Size on NFT”. Enter mL in the second box.
- Enter 125 beside “VOL ML”
- Convert this number to grams. In this case, grams would be 125. Enter 125 beside “WEIGHT G”
- NEVER write in the unit (mL or g) in the fields VOL ML or WEIGHT G.
- Enter the nutrient information. Do NOT enter units.
- If the food requires the addition of water or other ingredients, follow “As Consumed” Recipe Protocol
“AS CONSUMED” RECIPE PROTOCOL

On the FLIP website, you may enter “as prepared/consumed” information in the “Package As Prepared” columns of the Nutrition Facts tab. By default, these columns are greyed out and cannot be edited. To edit this section, you must select “Add water or other ingredients” from the dropdown menu in the Description tab (see page 25 of User Guide).

For Ready-to-Eat Breakfast Cereals

The nutritional information of the cereal should be recorded in the system as dry, since it is ready to eat. It should not include the contribution of milk, yogurt or any other ingredient that the package suggests to add.

For the pilot study, some soups will need to be prepared (e.g. condensed soups and soup sachets).

For Condensed Soups / Soup Sachets

1. Read the preparation instructions on the can/sachet
2. For products that indicate to add water:
   a. The addition of water does not vary the nutritional value of the food, which includes the nutritional information indicated on the packaging for the dry product
   b. Only serving size will change. Add the appropriate amount of water to the serving size in the As Prepared column in FLIP.
   c. Copy the additional nutrient information from the “package” column to the “package as prepared” column in FLIP.
3. For products that indicate to add milk, add nutritional information according to the quantity and type of milk indicated on the package.
   a. Complete the As Prepared information using the template (Excel sheet) provided by Dietitians of Canada
   b. The nutritional contribution should be added according to the type of milk (e.g. 1% or 2%) indicated on the dry product package. When this information is not indicated, the nutritional contribution of the milk most commonly consumed by the country should be added. This information should be searched by each country team. For example, in Canada and Costa Rica, the milk most commonly consumed is 2% fat or partly skimmed milk.
4. Note: For products that indicate to add either milk or water, add whichever substance was added to comparable products (most products appear to have water added).

SEE EXAMPLES WITH PHOTOS BELOW.

NOTE: Nutrition information including sodium does not need to be converted per 100g. FLIP automatically does this when exporting to Excel. Only serving size must be converted to grams if in mL. Use a conversion factor of 1:1.
Example of Condensed Soup with Added Water:

In the “package as prepared” column:
- The NFT indicates that a prepared serving is 250 mL (after adding water). Enter 250 beside “VOL_ML”
- Convert this number to grams. We are using a conversion factor of 1:1. Therefore, in this case, grams would be 250. Enter 250 beside “WEIGHT_G”
- The nutrient information does not change from the NFT, since only water was added. Copy the nutrient information from the NFT to the “package as prepared” column.
- NEVER write in the unit (mL or g) in the fields VOL_ML or WEIGHT_G.
- Ignore the field SchedM_Weight. This field is only used in Canada.
Example of a Soup Sachet with Added Water:

In the “package as prepared” column:

- The instructions and NFT indicate that a prepared serving is 200 mL (1000mL/5 portions). Enter 200 beside “VOL_ML”
- Convert this number to grams. Enter 200 beside “WEIGHT_G”.
- The nutrient information does not change from the NFT, since only water was added. Copy the nutrient information from the NFT to the “package as prepared” column.
- **NOTE:** In the “package” column, you should write 11.4 beside WEIGHT_G.
Example of Condensed Soup with Added Milk and Water:

Step 1: Read the recipe directions on the soup package and determine the amount to be added.

The directions on the soup package indicate to add ½ a can of milk and ½ a can of water.

1 can = 284 mL. Therefore ½ can = 142 mL.

Step 2: Determine the overall volume of the prepared soup

Overall volume = 284 mL (soup can) + 142 mL (1/2 can water) + 142 mL (1/2 can milk) = 568 mL

Step 3: Look up the NFT information for the added ingredients.

In this case, we would be adding 2% milk (use the percent milk that is most commonly consumed in your country). In Canada, this was 2% milk. Here is the NFT for 2% milk in Canada:
Step 4: Convert the nutrient amounts found on the NFT to the amount that is being added to the condensed soup.

Given that...

Serving size of milk found on the NFT = 250mL
Volume of milk to be added to condensed soup = 142 mL

Therefore...

Calories per 142 mL of milk added = 130 calories x 142 mL / 250 mL = 74 calories
Fat per 142 mL of milk added = 5 g x 142 mL / 250 mL = 3 g
Sodium per 142 mL of milk added = 110 mg x 142 mL / 250 mL = 62 mg
Etc.

Step 5: Determine the nutrient amounts of the entire recipe (condensed soup + added ingredients).

Next, add the above calculated numbers to the nutrient information on the NFT:

Sodium per 568 mL = [850 mg (sodium information found on can) / 125mL (serving size found on can) x 284 mL (total volume of can)] + 62 mg (sodium per 142 mL of milk added) = 1,993 mg

Step 6: Determine the final nutrient amounts per prepared serving

The standard prepared serving size should be determined by country. In Canada, the standard prepared serving size for soups was 250 mL. This was based on the average serving size for ready-to-eat soups.

Sodium per 250 mL = 1,993 mg / 568 mL x 250 mL = 877 mg (this is the amount of sodium recorded in FLIP under the “Package As Prepared” column)

Note: Do not forget to record the per prepared serving (250 mL) in FLIP under the “Package As Prepared” column in the VOL_ML row.
ATWATER VALIDATION PROTOCOL

PURPOSE: Atwater validation is used to identify errors in data inputting of the nutrition information in the FLIP database. It will indicate product where the calories, fat, carbohydrate, and/or protein contents may have been entered incorrectly. Should any errors be found, they can then be corrected. This validation does not indicate if there are errors in other nutrients on the Nutrition Facts table.

The following document outlines the protocol used to validate the macronutrient and calorie contents for as packaged and as consumed foods inputted into FLIP.

1. Calculating Atwater Values:

Atwater values are calculated with the following equation using as sold values and then repeated again with as consumed values for products where it is applicable. To include this calculation in your Excel report, check the Atwater box under the “Export” tab in FLIP.

\[
\text{Atwater Calorie Content (kcal/serving)} = (\text{Carbohydrate content (g/serving)} \times 4\text{kcal/g}) + (\text{Protein content (g/serving)} \times 4\text{kcal/g}) + (\text{Fat content (g/serving)} \times 9\text{kcal/serving})
\]

2. Compare Calculated Atwater Calories with Inputted Calories

Based on the formula in step #1, compare the two calorie contents to enable the identification of discrepancies using the following equation for the as sold values and then repeated again with the as consumed values for products where it is applicable.

\[
\text{Calorie % Difference} = \left(\frac{\text{Calorie Content from FLIP (kcal/serving)} - \text{Atwater Calorie Content (kcal/serving)}}{\text{Calorie Content from FLIP (kcal/serving)}}\right) \times 100
\]

Do the above equation in two stages so you can calculate the absolute calorie difference (Calorie Content from FLIP – Atwater Calorie Content).

3. Identifying Outlier Values

i. Values for the “Calorie % Difference” that are >20% or < -20% are “initial outliers” and the values inputted in FLIP may need to be checked. **

ii. Of the “initial outliers” see if any are caused by a small absolute calorie difference (less than 13.5 calories). This is more likely to occur because of a small serving size or because the product is already lower in calories. Because of the CFIA rounding criteria, products can vary by up to 13.5 calories ¥. Those that vary 13.5 calories and more will be referred to as “2nd step outliers”.

a. Declared calorie content can be rounded up or down to the nearest multiple of 10 calories (up to 5 calories of rounding).

b. Declared fat, carbohydrates, and protein can be rounded up or down by 0.5g to the nearest multiple of 1g (up to 4.5 calories for fat, 2 calories for protein and carbohydrates = 8.5 calories of rounding).

*NOTE: Atwater values can be exported from FLIP. The values in this variable are calculated automatically using the equation in Step 2 then multiplied by 100 to see the % difference. This is calculated for the “as sold” version.

** +/- 20% is the accuracy required on the NFt by the CFIA.

iii. Of the “2\textsuperscript{nd} step outliers”, see if any of the variation can be caused by high fibre contents. This can be determined by multiplying the fibre content (g/serving) by 4 calories/g and subtracting this from the Atwater Calorie Contents. Then repeat step 2 with these values and run through Step 3 i) and ii) again. Those that cannot be explained by the fibre content will be referred to as “3\textsuperscript{rd} step outliers”.

iv. Of the “3\textsuperscript{rd} step outliers”, see if any of the variation can be explained by the presence of low and no-calorie sweeteners in the ingredient list. Those that do not contain any low and no-calorie sweeteners will be referred to as “4\textsuperscript{th} step outliers”.

v. The “4\textsuperscript{th} step outliers” are the ones that need to be checked in FLIP to ensure there were no errors when the calorie, fat, carbohydrates, and protein was being entered. If an error is found, then it should be corrected in FLIP (if people have already begun analysis, then inform the FLIP team of the change to ensure everyone knows there has been updates). If the information entered matches what is on the NFT, then this product is considered correct.

a. If there are circumstances where there is a major error (e.g. >100% variation) in the manufacturers’ declaration on the NFT, then these products should be flagged to the team so that it can be excluded from analyses when appropriate.

\textsuperscript{¥}http://www.inspection.gc.ca/food/labelling/food-labelling-for-industry/nutrition-labelling/additional-information/compliance-test/eng/1409949165321/1409949250097?chap=6

\textsuperscript{*}http://www.hc-sc.gc.ca/fn-an/securit/addit/list/9-sweetener-edulcorant-eng.php
Pasos para el procesamiento de fotografías

El procesamiento de fotografías deberá de ser completado durante la captura de información (después de que las fotografías hayan sido almacenadas en el sitio web), y antes del ingreso manual del resto de los datos.

1) Ingresa al sitio FLIO con tu usuario y contraseña
2) Selecciona la pestaña **Incomplete** ("Incomplete") en la parte superior de la pantalla
3) Empieza en la página 1
4) Selecciona el producto para iniciar la validación de la fotografía
   a. Al seleccionar **Editar** ("Edit"), el sistema te asigna el producto y evitar que algún otro usuario pueda acceder a dicho producto.
   b. La opción de **Ver** ("View") te permite observar un producto sin que se te asigne, pero no podrás hacer cambios a dicho producto.
5) Seleccionar **Editar** ("Edit"), para iniciar el procesamiento de datos
6) Revisa la **Bitácora** ("Log") para observar cualquier comentario que alguna otra persona haya realizado al momento de la captura de las fotografías en la tienda.
   a. Nota: En la pestaña de **Bitácora** ("Log"), puedes agregar cualquier otro comentario adicional de ser necesario
   b. Si abres un producto y es un producto re-capturado, observaras un comentario diciendo **Recaptura Completa** ("Recapture Completed"). Verifica nuevamente las fotografías para asegurar que la recaptura haya sido completada.
7) Selecciona la pestaña de **Fotografías** ("Photos") para inicial la revisión de las fotos

   a. La mayoría de los productos tendrá alrededor de 9 fotografías (arriba, abajo, izquierda, derecha, atrás, tabla nutrimental, lista de ingredientes y código de barras).

   b. Los productos que hayan sido combinados como empaques múltiples (pg. 14 y 24 de la guía del usuario) no indicarán "original" debajo de las fotografías (ver abajo).

   c. Algunos productos tendrán más o menos fotografías debido a:

      i. Algunos productos tendrán lados en blanco y por ende la fotografía no se realizó (esto es común para productos enlatados donde la partes de arriba y abajo están en blanco).

      ii. Algunos productos requieren más de una fotografía por cada lado (por ejemplo, en el frente), ya que una foto no era suficiente para capturar todo el contenido o existía texto en las esquinas.

      iii. Es un producto combinado con otro

8) Si hay imágenes múltiples de un solo lado, elimina las de menor calidad.

   a. Asegúrate de **NO** borrar la imagen si es que se encuentra logada a otro producto, o se requieren múltiples fotos debido a las razones arriba mencionadas.

**Procesando fotografías** – haz clic en el icono de Editar ("Edit") en la imagen, haz clic en la lupa para aumentar la fotografía.
9) Si se requiere, rota las fotografías

10) Si un producto está etiquetado incorrectamente, selecciona la etiqueta apropiada debajo de "Image Type"

11) Para que se recaptura una fotografía, haz clic en Recapturar ("Recapture") e ingresa el detalle de los comentarios
   a. Provee las razones por las cuales la fotografía debe ser recapturada (por ejemplo, la tabla nutricional no es legible)
   b. Específica cuál es la fotografía que debe ser tomada nuevamente (por ejemplo, el frente, el listado de ingredientes, la fotografía de la parte trasera)
   c. Específica cuál es el contenido del empaque que debe ser retomado y selecciona el código de barras apropiado del menú desplegable

12) Si el producto no requiere ser recapturado, puedes continuar con el ingreso manual de datos (por ejemplo, ingresar la información de la tabla nutricional, ingresar los ingredientes, etc.)