

# Sampling Referral Interactions for Annual Reporting

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## Manual

Created by:



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# List of Resources

1. A **Referral Sampling Tool** (in Excel). This workbook includes:
  - a. A "Referral Sampling Approach" to determine how many days to sample (or whether to track all days) and offers a proposed sampling approach, based on information you share about your referral services.
  - b. A "Referral Tracker" as a place to track referral interactions on your sampled days.
  - c. A "Review your Sampling" strategy as a way to check mid-way through the year to ensure your sampling approach is working.
  - d. "Annual Reporting" guidance for calculating the number you will report annually based on the sample data and use of the "Referral Tracker".
2. A **Sampling Referral Interactions for Annual Reporting Manual** (*this document!*), which includes:
  - a. Descriptors of referral interactions
  - b. An overview of sampling
  - c. Details on how to use the Referral Sampling Tool, including lot of examples
  - d. FAQs
3. A series of **How-to videos**:
  - a. An Overview of the Referral Sampling Tool workbook
  - b. Demonstration of the Referral Sampling Approach tool
  - c. Demonstration of the Referral Tracker
  - d. Demonstration of the Review Your Sampling tool
  - e. Demonstration of the Annual Reporting tool

# Reporting Information and Referrals

The purpose of this document is to offer you options for how to track and report referrals for FCSS program annual reporting.

**If sampling is too complicated, don't use it!** You always have the option of tracking all referrals and reporting them in the same way you have in the past.

This guide is intended for:

- FCSS Directors to make decisions about how to track and report referral services, and/or
- FCSS staff who make referrals to receive guidance on how and when to track referral interactions.

## Information and Referral Type Descriptions

- Information and Referrals are activities or services that involve staff or volunteers informing community members about available services or making referrals.
  - Interactions with individuals for Information and Referrals are generally transactional, one-time interactions.
- For Information and Referrals, you are asked to distinguish between Information Services and Referral Services.
  - You are not asked to report how many times information was provided.
- The purpose of reporting on Referral services is to capture the interactions that local FCSS programs have with Albertans that may not be participating in a program, including walk-ins and telephone calls.
  - Referrals that are provided as part of a program do not need to be reported.
  - System navigation support is reported in programs.
    - Compared with system navigation and community outreach programs, referrals are typically less involved and shorter in duration.

Type	Type Description
Information Services	<p>Information Services refers to when staff or volunteers provide community members with information about local programs and services, including:</p> <ul style="list-style-type: none"><li>• having a booth or venue at non-FCSS events to hand out brochures and provide information about local programs and services</li><li>• doing a community mailout with information about FCSS Programs and services</li><li>• maintaining community directories</li><li>• providing welcome kits to new residents</li><li>• handing out pamphlets</li><li>• mail-outs with information about local programs and services</li></ul> <p>Information Services typically have costs including printing, maintaining online material, or supplies (e.g. welcome kits). These are one-time interactions or mail-outs that do not typically involve active support. <u>You are not asked how many times information was provided.</u></p>

<b>Referral Services</b>	<p>"Referral Services" refers to when staff or volunteers connect individuals or families with other services. Referrals involve actively bridging to another service by providing targeted resources, supporting an individual in booking an appointment or doing a "warm handoff".</p> <p>These services may be called 'cold', 'warm', 'facilitated', 'informal', 'formal', or 'active' referrals. These are generally one-time interactions, though they might involve follow-ups. Referrals may be in person, by telephone (including crisis lines), or by email.</p> <p>Any costs associated with referrals are generally staffing related.</p> <p><u>You are asked to report how many referral interactions occurred.</u></p>
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## Reporting Overview

- The Accountability Framework Key Performance Measure: "*Number of referral services provided by local FCSS programs*" is mandatory for any FCSS program offering referral services. You are required to report a count of *referral interactions* (see below).
- Both exact and estimated counts of referral interactions are accepted.
  - You may choose to estimate the count using sampling. Guidance on sampling is included in this manual.
- Counts of Information Services (community mail-outs, directories, FCSS booth at a community event) are not reported.

## What is a Referral Interaction?

A referral interaction involves some sort of personal engagement or interaction with the individual and their needs. Think of an 'interaction' as an encounter or a meeting.

- Referral interactions are counted when individuals receive targeted support to access other services and resources. It is a count of conversations or interactions in which an individual or family may:
  - receive one or multiple referral(s)/resource(s)
  - receive follow-up after a previous referral interaction
  - receive assistance in reaching out to a service
  - be supported to book an appointment
  - be supported through a warm hand-off
- Providing generic directions (e.g., sending someone to the right office in the same building or redirecting someone who calls the FCSS number accidentally), or generic information-sharing (see definition of Information Services) should not be counted as a referral interaction.
- The number of above referrals made during a single interaction does not impact the count.
  - Regardless of the activities during the interaction, it would count as one referral

*interaction* in the count.

### **Example**

*An individual walks in and receives referrals for three resources/services. This counts as one interaction, not three.*

- You do not need to track or count the number of unique individuals receiving referral services.
  - If a family comes in for a referral to a service, you do not need to count the number of family members. They are considered one unit.
  - If an individual comes in multiple times over a year, you do not need to track unique individuals. Each interaction with the same individual would count as a new interaction.
  - An individual is typically only counted once on a given day, however an individual may be counted more than once on a given day if they had multiple separate visits on the same day.
  - If an individual receives referrals on multiple different days, this is considered multiple referral interactions, and this individual is therefore counted more than once (once per 'visit').
  - The same person could receive referrals days or months apart and each interaction would be counted.

### **Example**

*An individual receives a referral in January. In March, they return as a follow-up and receive another referral. This counts as two referral interactions.*

- Referral interactions may be with an individual adult; a couple; a family; an independent youth; a child and their caregiver; an individual and their support person; an individual and their friend or family member. This ensures that an interaction with a family of six and an interaction with one senior are counted as equally important interactions.
  - However, the scope of the referral needs to be considered. If a family attends their local FCSS and receives two referrals for services that benefit the family as a whole (such as family counselling and the food bank), it would be considered one referral interaction. Whereas if a family attends their local FCSS and the grandmother is referred to a senior's support group, and the child is referred to a children's day program, it would be considered two referral interactions

### **Example 1**

*A family of four walks in and receives two referrals. The family of four is considered a unit. This is one referral interaction, not four separate interactions.*

### **Example 2**

*Two friends walk in seeking their own separate referrals/resources. They are two distinct units. This would count as two referral interactions.*

### **Example 3**

*A teenager and their parents are seeking support. The family is referred to parent/youth program. This is one referral interaction, not three.*

### **Example 4**

*Two children and their grandparents are seeking support. The grandparents are referred to a senior's drop-in centre, and the children are referred to an after school drop-in program. This is two referral interactions, not four or one.*

## **Tracking Referral Interactions**

- There are various ways that you might track referral interactions:
  - All staff making referrals maintain a spreadsheet that records every interaction.
  - Each staff uses a paper tally sheet and marks every interaction. The sheets are combined at the end of the day or week.
  - Staff use a database or tracking software to track referrals; this may have been created specifically for this reason.
- You may have a process other than the ones listed here to track referrals. You are encouraged to continue your own processes if they work well.
- For annual reporting purposes, the only information you are required to track is the number of interactions. You may choose to track other information for your own learning purposes, such as age ranges, demographic groups, place of residence, or what the referral was.

**Some local FCSS programs may be required to track exact numbers of referrals for other purposes, like reporting to the municipality or another funder. If this is true, sampling is not the best strategy for you.**

For some FCSS programs, tracking referral interactions every day can be time-consuming and burdensome. Instead, you might choose to use sampling to estimate referral interactions.

# Sampling Method

## Overview of Sampling

### What is Sampling?

- Sampling means taking a small part of something to learn something about the whole; in other words, sampling is selecting a portion of something larger.
  - In this case, counting referral interactions on only some days referral services are offered can be enough to estimate referral interactions over the year.
- Sampling is generally used in research where researchers take a sample of a large population they are studying.
  - For example, a researcher might test a new therapy on a sample of cancer patients. They don't need to test the therapy on all cancer patients, but by sampling from a large group, they can make accurate predictions about how well that therapy would work for anyone with that cancer.
- Sampling can help determine the average number of referrals provided in a day, which can be used to determine an estimated annual count.
- There are lots of types of sampling. You've probably heard of "random sampling", but there are others, too:
  - **Random Sampling** – when every part of the bigger group has an equal chance of being chosen or selected
  - **Convenience Sampling** – when you choose parts of the group that are easiest to access, like participants in one session of a program
  - **Stratified Sampling** – when you divide the bigger group into sections (like age groups or gender, or other important characteristics) and sample separately from each group
- The sampling strategy you use for referral interactions depends on your knowledge of your referral services. You may use **random sampling**, or, if you have periods in the year that are busier for referral interactions than other periods, you may use a form of **stratified sampling** to account for those exceptional times.

Using a sampling method will not be 100% accurate, but it should be representative of the referral services provided and is accepted by the Ministry in annual reporting. Sampling is an effective strategy because it saves time and effort, and can help you learn information quickly and efficiently. Good samples are representative, unbiased, and large enough.

### How does Sampling work?

- **You will track every referral interaction for specified days** to arrive at an average number of referrals made per day. The average can then be multiplied by the number of days referral services are offered in a year to estimate the total number of referral interactions in the year.
- If you are comfortable with the concept of sampling, you can create your own sampling strategy. If not, an Excel workbook called the Referral Sampling Tool has built-in tools that will recommend a sampling strategy to you.

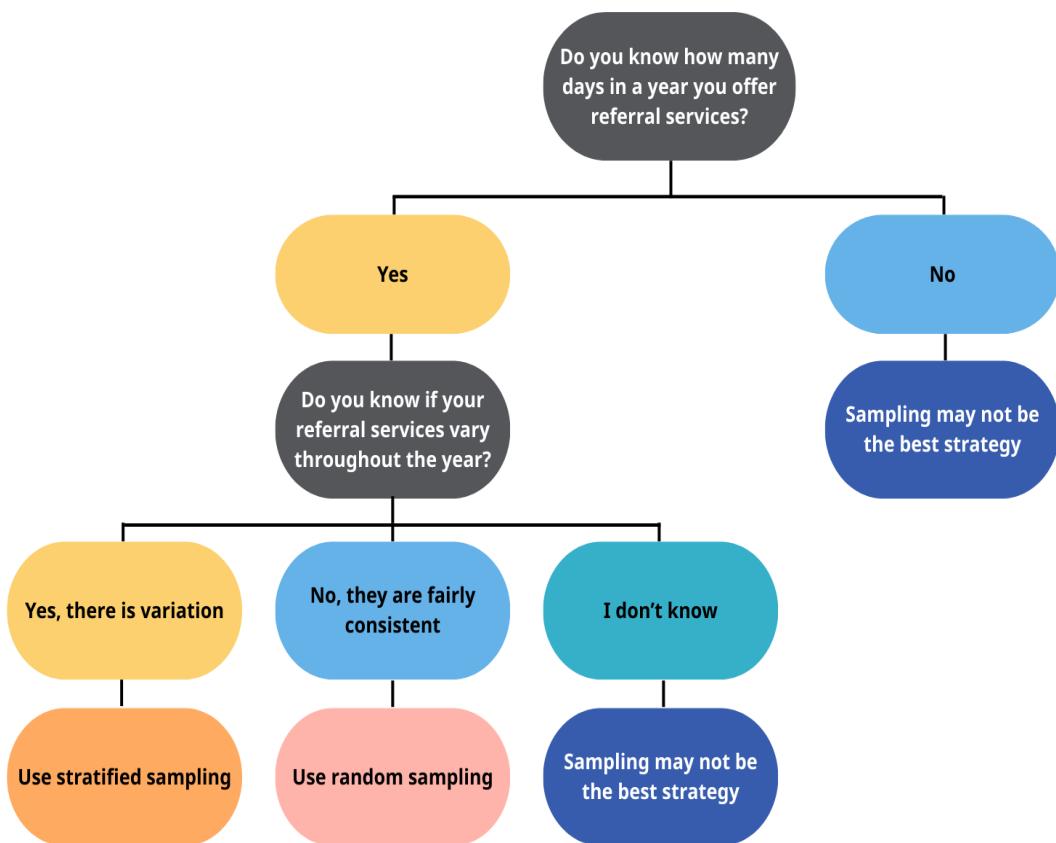
**You need to be able to estimate how many days in a year you offer referral services**

**You will need to be able to answer if you have varied referral volumes by days of the week, weeks of the month or months/seasons in a year.**

The sampling is based on days that you offered referrals, which means that **the unit of sampling is a day**. Based on the number of days you offer referrals in a year; the sampling strategy will determine how many of those days you will track referrals.

If referral services are new for your FCSS program, or if you don't feel confident in your ability to answer questions about the approximate number of days you offer referral services, sampling may not be the best strategy. Manually tracking for at least one year may provide you with the details you need to sample in a subsequent year.

**The following flow chart may help you decide if sampling is the best strategy for you:**



If you would like to try sampling, you may determine your own sample size based on your knowledge of your program and sampling statistics, or you may use the Referral Sampling Tool. If you are using the Referral Sampling Tool, follow the steps below. Begin by familiarizing yourself with the instructions on the first tab.

Note there are several tabs at the bottom of the workbook. Guidance for each section is provided in this manual.

- How to Use
- [Referral Sampling Approach](#)
- [Referral Tracker](#)
- [Review your Sampling](#)
- [Annual Reporting](#)



# Step by Step Guidance for Sampling Referral Interactions

**It is best to decide if you will use sampling at the start of the year. You can use the tools and guidance to set up your approach for the year so that you don't have to track referrals every day.**

## STEP 1: Identify a sample size

- Begin with the “**Referral Sampling Approach**” tab.

**Referral Sampling Approach**

**Instructions**  
Complete the following sections in order. **Section 1** determines the sample size shown in **Section 2** (the # of days to sample). **Section 3** then provides a recommended sampling strategy based on the service characteristics you entered in **Section 1**.

**Section 1: Service Characteristics**  
Provide information about your referral services.

**1. How many days in a year do you offer referral services?**  
Enter a value in B11 or select an option from the dropdown in B12.  
**Note:** Entering a value in B11 (even an estimate) will always improve your sampling strategy.

Actual (or estimate) # of days referral services are offered:  <- Enter the actual # of referral service days per year/  
Or select an option from the drop-down:  <- Select from the dropdown (if the actual number is not known)

**2. Do you have periods or days with varying referral volumes (busy times, slow times, or seasonal patterns)?**  
Select "Yes" if you have significant variation. Some days or periods have substantially more referrals than others—at least double or half. For example, you might offer 30 referrals on Mondays but only 8 on Fridays, or summer months average 40 referrals per day while winter months average 15 per day.

Select "No" if your volume is fairly steady: Most days are similar with only modest differences in referral counts. For example, you typically offer 5–10 referrals per day throughout the year, or your counts stay within a narrow range like 12–20 per day regardless of the season.

Select "I don't know" if: You're unsure about your typical patterns or haven't recorded this information before.

**3. When do your referral services vary?**  
Select the pattern that best describes when your referral volume varies.

**Section 2: Suggested Sample Size**  
Suggested # of Days to Sample:  <- Statistically-determined sample size based on service characteristics

**Section 3: Sampling Strategy**  
Suggested Sampling Approach:

How to Use **Referral Sampling Approach** Referral Tracker Review Your Sampling Annual Reporting

- **SELECT REFERRAL SERVICE DAYS.** You must have an idea of how many days in a year you offer referral services. You have two options:
  1. Answer the question in A9 by entering the estimated number of days into B11 that you think you will offer referral service for the upcoming year.

**Section 1: Service Characteristics**  
*Provide information about your referral services.*

**1. How many days in a year do you offer referral services?**  
*Enter a value in B11 or select an option from the dropdown in B12.*

*Note: Entering a value in B11 (even an estimate) will always improve your sampling strategy.*

**Actual (or estimate) # of days referral services are offered:**  <- En

**OR select an option from the drop-down:**

The more precise or specific you can be, the better the sampling strategy will be.

- Entering an actual number still doesn't have to be 100% accurate, you can enter an estimate or best guess.
- If you do not know an estimate but your best guess is better than the ranges offered in the drop-down menu in B12, then enter your best guess in B11.

**OR**

2. Answer the question in A9 by selecting from the drop-down options in B12.

**Section 1: Service Characteristics**  
*Provide information about your referral services.*

**1. How many days in a year do you offer referral services?**  
*Enter a value in B11 or select an option from the dropdown in B12.*

*Note: Entering a value in B11 (even an estimate) will always improve your sampling strategy.*

**Actual (or estimate) # of days referral services are offered:**  <- En

**OR select an option from the drop-down:**

**2. Do you have periods or days with varying referral volumes (busy times, slow times)?**  
*Select "Yes" if you have significant variation: Some days or periods have substantially more referrals than others—at least double or half. For example, you might offer 30 referrals on Mondays but only 8 on Fridays, or summer months average 40 referrals per day while winter months average 15 referrals.*

< 60 days per year (~once a week)  
60-149 days per year (~2 times a week)  
150-249 days per year (~3-4 times a week)  
250+ days per year (~5 times a week)  
I don't know

**It is recommended that you use a best guess over the drop-down options whenever possible.**

## Tips for Estimating Referral Service Days (Cell B11)

- **Start with your typical schedule:**
  - Think about how often you normally offer referrals (e.g., every Monday).

### Example

*Offering referral services one day a week would be ~52 times a year; twice a week would be ~104 times a year, etc.*

- If you offer referral services full time, that is, every working day of a year, consider using the estimate of 252. This is all working days in a year, minus statutory holidays.
- **Adjust for exceptions:**
  - Subtract days when referrals weren't available due to staff holidays, staff shortages, or other disruptions.

### Example

*If you usually offer referrals on Mondays (52 Mondays in a year) but miss about 10% of them because of staff time off, your estimate would be:  $52 - (10\% \times 52) \approx 47$  days.*

*Round up to the higher whole number.*

- **Use past records if available:**
  - Previous calendars, staff schedules, or reports can help refine your guess.

### Example

*You generally offer referral services twice per week, but this varies if there are Statutory holidays or staff time off.*

*You could select 60 – 149 days per year, but you also know you are close to 104 (twice per week over the year). A better option would be to enter 100 into B11, to account for some time off.*

*Even though the actual number of days may be slightly less or more, this will give you a more accurate sampling approach than choosing from the drop-down options of ranges.*

- **INDICATE VARIATION IN REFERRAL VOLUME.** Answer the question in A14: *Do you have periods or days with varying referral volumes (busy times, slow times or seasonal patterns)? (Yes ; No ; I don't know)*

**2. Do you have periods or days with varying referral volumes (busy times, slow times, or seasonal patterns)?**

Select "Yes" if you have significant variation: Some days or periods have substantially more referrals than others—at least double or half. For example, you might offer 20 referrals on Mondays, but only 5 on Fridays, or summer months average 40 referrals per day while winter months average 15 per day.

Select "No" if your volume is fairly steady: Most days are similar with only modest differences in referral counts. For example, you typically offer 5-10 referrals per day throughout the year, or your counts stay within a narrow range like 12-20 per day regardless of the season.

Select "I don't know" if: You're unsure about your typical patterns or haven't tracked this information before.

**3. When do your referral services vary?**

Select the pattern that best describes when your referral volume varies.

Yes
No
I don't know

- Answer **“Yes”** if the difference between your busiest or slowest referral days and a typical day is about the same or greater than the number of referrals made on a typical day.
- Answer **“No”** if the difference between your busiest or slowest days and a typical day is less than the number of referrals made on a typical day.
- **If you are unsure**, selecting “No” will encourage you to sample randomly, which is a better strategy than stratified sampling when you are unsure.

### Example

*If your busiest days have about 8 referrals, and your typical days have about 4 referrals, the difference (4) is double a typical day and the same as a typical day. This is high variation. Select “Yes”.*

### Example

*If your busiest days have about 10 referrals, and your typical days have about 6 referrals, the difference (4) is less than double, and less than the amount in a typical day. This is low variation. Select “No”.*

Note that “variation” can refer to days that are busier (e.g., Mondays are busier than other days in the week) or days that are less busy (e.g., Fridays are less busy than other days in the week). Variation refers to any days that are **exceptional**, compared to **typical** days.

- **INDICATE WHEN THE VARIATION OCCURS.** If you answered “Yes” in B15, that your referral interactions do vary, answer the question in A17: *When do your referral services vary? (Daily pattern (certain days of the week); Weekly pattern (certain weeks of the month); Monthly/seasonal pattern (certain times of year); No consistent pattern)*

3. When do your referral services vary?  
Select the pattern that best describes when your referral volume varies.

Section 2: Suggested Sample Size

Suggested # of Days to Sample:

Daily pattern (certain days of the week)
Weekly pattern (certain weeks of the month)
Monthly/seasonal pattern (certain times of year)
No consistent pattern

- Your suggested sample size—that is, the number of days that you should track referral interactions—appears in cell B21, next to “Suggested # of Days to Sample”.
  - You may see “**Don’t sample. Track all days**” if you have:
    - selected “I don’t know” in response to the number of days you offer referral services, or
    - entered a value in B11 less than 30.
  - When you don’t know the number of days you offer referral services, you don’t have enough information for sampling to work. If you aren’t confident in the number of days you will offer referral services, tracking every interaction will set you up with the information you’d need to use a sampling method the following year.
  - If you offer referral services less than 30 days per year, sampling is not the best strategy, and you are recommended to track every day.
- The output in B21 is the minimum recommended number of days to sample. You are always welcome to do more. Increasing your sample size makes your estimate more accurate.
- Your suggested Sampling Strategy—that is, how you should determine your sample and whether or not to use random or stratified sampling—appears in B24.
- **Note that for your sample size and strategy to appear, you must have answered B11 or B12 and B15 (and B18 if relevant). If anything is missing, nothing will appear.**

Saving the information you enter into the Referral Sampling Tool will prepare you to use the rest of the tools in the workbook.

## STEP 2: Identify the days you will sample

- Once you've identified a number of days to sample, you'll want to have a plan for what days to track throughout the year.

### *When you do not have variation*

- If you answered 'No' in B15 (that your services do not vary), you will use **random sampling**.

- To randomly select dates, you have two options:

- Use an online tool<sup>1</sup>:

- [EveryRandom.com](http://EveryRandom.com)
- [GigaCalculator.com](http://GigaCalculator.com)
- [RedStagLabs.com](http://RedStagLabs.com)

Consider using a generator that allows you to exclude weekends, if applicable.

OR

- if you are comfortable with Excel, you may use the following formula:

```
=WORKDAY(DATE(2026,1,1)-  
1,RANDBETWEEN(1,NETWORKDAYS(DATE(2026,1,1),DATE(2026,12,  
31))))
```

- This formula will generate a random workday between January 1 2026 (2026,1,1) and Dec 31 2026 (2026,12,31).
  - To update the year, simply update the dates in the formula.
- Copying this formula down a column will generate multiple dates. You can copy into as many rows as you need to generate as many dates as you need (as recommended in cell B21).
- Note that this formula will keep producing new dates every time anything in the spreadsheet is edited. To avoid this, use the formula in a blank spreadsheet to generate your dates, then copy the dates and **Paste Values** (not the formula), into the Referral Tracker.
  - The video tutorial offers an example.
- Note that you may get duplicate dates; in this case, simply choose the next available date.
- In any case, if the days generated do not align with days that you offer services, you may move the date to the next best date.

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<sup>1</sup> This is not an endorsement of any particular site, these are just examples of tools to help you generate random dates. There are several free online tools, you can explore which ones work best for you.

### Example 1

Your output suggests that you randomly sample 20 days in the year.

You use an online calculator that suggests the following dates: 2026-01-27; 2026-05-25; 2026-12-28; 2026-06-30; 2026-10-19; 2026-11-06; 2026-10-22; 2026-09-04; 2026-09-08; 2026-10-05; 2026-12-24; 2026-08-27; 2026-02-10; 2026-10-29; 2026-08-18; 2026-04-24; 2026-10-29; 2026-08-21; 2026-03-04; 2026-10-14

You know your referral coordinator is on holiday June 22 – June 30. You can swap out June 30, for the next best available date: July 2<sup>nd</sup>.

### Example 2

Your output suggests you randomly sample 15 days in the year.

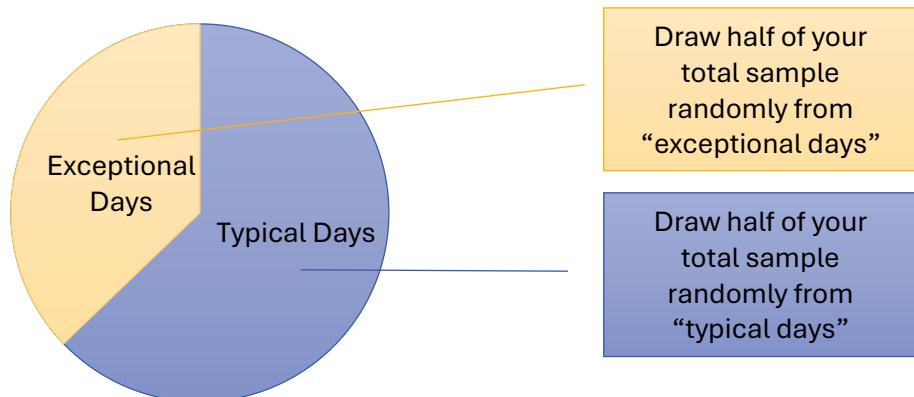
You use the Excel formula: =WORKDAY(DATE(2026,1,1)-1,RANDBETWEEN(1,NETWORKDAYS(DATE(2026,1,1),DATE(2026,12,31)))) and copy it down 15 rows:

25-Feb ; 09-Jul ; 25-Feb ; 12-May ; 17-Mar ; 23-Jul ; 23-Mar ; 10-Dec ; 07-Oct ; 26-May ; 30-Nov ; 20-Apr ; 03-Jun ; 24-Apr ; 14-Jan

You notice that one date is duplicated. You swap out 25-Feb for the next available date: 26-Feb.

### When you have variation

- If you answered 'Yes in B15 (that your services do vary), you will use **Stratified sampling**. This means, you will divide the days you offer referrals into two: one group that is exceptional, either by being busier or slower, and one group that is typical. You will sample more from your exceptional days than from your typical days.
  - Once you have divided into two groups, you will use random sampling within each group.



## VARY BY DAY OF THE WEEK

- The output in B24 will ask you to sample half of your suggested sample size from your exceptional days of the week and half from your typical days.
  - Where your sample is not easily divisible in half, one extra day will be added to your exceptional days.
  - Reminder: “exceptional” days vary from a “typical” day usually by being busier or slower.
- To randomly sample from each of the groups:
  - Exceptional days: Use an online tool<sup>2</sup> and exclude the typical days of the week:
    - [EveryRandom.com](http://EveryRandom.com)
    - [GigaCalculator.com](http://GigaCalculator.com)
    - [RedStagLabs.com](http://RedStagLabs.com)
  - Typical days: Use the same online tool but exclude the exceptional days, selecting instead the remaining days in the year.

### Example 1

*Your output suggests you sample 55 days in the year. You indicate that your referrals vary by day of the week. You know that Mondays are always busier and Tuesdays through Fridays are less busy, or ‘typical’.*

*You should sample half your sample from Mondays, rounding up. Since 55 isn’t easily divided by 2, sample 28 Mondays randomly in the year, and 27 days randomly from the rest of the days throughout the year.*

*You use an online tool to generate 28 days from Mondays, excluding all other days of the week. You use the same online tool to generate 27 days from Tuesday-Friday, excluding Mondays and weekends.*

### Example 2

*Your output suggests you sample 70 days in the year. You indicate that your referrals vary by day of the week. You know that Friday are the busiest days, and that Mondays are much slower. Tuesday – Thursday are stable, ‘typical days’.*

*You should sample 35 days randomly from Mondays and Fridays (perhaps 17 Mondays and 18 Fridays in the year), and 35 days randomly from Tuesday to Thursday.*

*Even though Mondays vary by being more busy and Fridays vary by being less busy, they are both “exceptional” days and should be*

<sup>2</sup> This is not an endorsement of any particular site, these are just examples of tools to help you generate random dates. There are several free online tools, you can explore which ones work best for you.

*targeted in stratified sampling.*

*You use an online tool to generate 35 days from Mondays and Friday excluding weekends, Tuesdays, Wednesdays and Thursdays. You use the same online tool to generate 35 days from Tuesdays, Wednesdays and Thursdays, excluding Mondays, Fridays and weekends.*

## VARY BY WEEK WITHIN A MONTH

- Since your referrals vary by week, the sampling strategy output in **B24 will switch the sampling unit to weeks instead of days**; the output will always be a multiple of 5 to keep whole weeks together.
- The output in B24 will ask you to sample half of your suggested sample size from your exceptional weeks and half from your typical weeks.
  - “Half” will always round to a multiple of 5, and by default more days will be given to exceptional weeks.
  - Reminder: “exceptional” weeks vary from a “typical” day by being busier or slower.
- You should aim to keep weeks together; that is, do not try to sample specific days within weeks. Instead, you’ll track for an entire week at a time.
- Sampling from whole weeks is more complex than days. **You may wish to number all the weeks in a year and manually identify which are your anticipated exceptional weeks.**
  - Create a new list of the weeks you have identified as exceptional and use an Excel formula to help you randomly select from those weeks:

`=INDEX($A$1:$A$12, RANDBETWEEN(1, COUNTA($A$1:$A$12)))`

- Where your numbered weeks are in column A
- Where 12 is updated to reflect the number of weeks you will be sampling, as identified in your Referral Sampling Approach
- For the remaining, typical weeks, use the same process with the remaining numbered weeks

### Example

*Your output suggests you sample 55 days in the year. You indicate that your referrals vary by weeks within a month. You know that the first week of the month is always busiest.*

*You should sample ~30 days (or 6 weeks) randomly from the first week of the month, and 25 days (or 5 complete weeks) randomly from the remaining weeks in the year.*

*You should keep entire weeks together, do not try to sample specific days.*

*You number all 52 weeks in the year, and identify the first weeks of the*

month to be weeks: 1, 6, 10, 14, 19, 23, 28, 32, 36, 41, 45, 49. You enter these numbers into column A of a blank workbook and use the formula to generate 6 random weeks: 10, 23, 28, 41, 45, and 49.

You will sample all five workdays of weeks 10, 23, 28, 41, 45, and 49.

You enter the remaining week values (2, 3, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16, 17, 18, 20, 21, 22, 24, 25, 26, 27, 29, 30, 31, 33, 34, 35, 37, 38, 39, 40, 42, 43, 44, 46, 47, 48, 50, 51, 52) and use the Excel formula to generate 5 random weeks: 8, 15, 16, 29, 42, 46

You will sample all five workdays of weeks 8, 15, 16, 29, 42, 46.

Together you will be sampling all five workdays of weeks, 8, 10, 15, 16, 23, 28, 29, 41, 44, 46, and 49, for a total of 11 weeks (55 days).

## SEASONAL or MONTHLY VARIATION

- Selecting “Monthly or seasonal pattern” can apply for groups of months, e.g., winter season may be October – Dec, or for individual months, e.g., January is always busy.
- The output will ask you to sample half of your suggested sample size from your busy or exceptional season (or months) and half from the remaining seasons (or months).
  - “Half” will always round up to add an extra day to your exceptional season (or months).
- To randomly sample from each of the groups:
  - Busy or exceptional season: Use an online tool<sup>3</sup> and set your start and end dates to define your busy season:
    - [EveryRandom.com](http://EveryRandom.com)
    - [GigaCalculator.com](http://GigaCalculator.com)
    - [RedStagLabs.com](http://RedStagLabs.com)
  - Typical seasons: Use the same online tool but select the remaining days of the year, excluding your exceptional season.

### Example 1

Your output suggests you sample 55 days in the year. You indicate that your referrals vary by season; you know Oct-Dec is busiest.

You should sample 28 days from October to December and 27 days from the rest of the year.

You use an online calculator with a start date of Oct 1 and an end date of Dec 31 to identify 28 days. You use the same online calculator with a start date of Jan 1 and an end date of Sept 30 to identify the other 27 days.

<sup>3</sup> This is not an endorsement of any particular site, these are merely examples of tools to help you generate random dates. There are several free online tools, you can explore which ones work best for you.

## **Example 2**

*Your output suggests you sample 70 days in the year. You indicate that your referrals vary by season. You know that Jul – Sep is the slowest time of year.*

*You should sample 35 days randomly from July – Sept and 35 days randomly from the rest of the year.*

*You use an online calculator with a start date of Jul 1 and an end date of Sep 30 to identify 35 days.*

*You use the same calculator to identify dates from the remaining part of the year, however it is split over two sections: First, use a start date of Jan 1 and end date of Jun 30. This 6 month period is two thirds of your “typical” period (6 months out of 9 typical months), so you identify two-thirds of your sample: 23 days (Two thirds of 35 is ~23). You then use start and end dates of Oct 1 – Dec 31 to identify the remaining 12 dates (one third of 35).*

**Keep it simple!** Sampling is intended to be easier than tracking every referral interaction. If your approach is more complicated than tracking all interactions, don't use it!

The goal is to ensure that the tracking days cover the average days, the busy days, and the slow days, to be representative.

### STEP 3: Populate the Referral Tracker and set reminders for your selected days

- Once you have identified which dates you will be tracking referral interactions, you may enter them into the Referral Tracker tab of the Referral Sampling Tool.
- If you saved the Referral Sampling Tool after answering questions on the Referral Sampling Approach, use that same file.

- Use of the Referral Tracker is not required. You may use any other method you already use to keep track of the days.
- Make sure your referral coordinator(s) or staff have a way of knowing which days to track! Calendar reminders are a good strategy.

**Saving the information you enter into the Referral Tracker will prepare you to use the rest of the tools in the workbook.**

## STEP 4: Start tracking

- Now it's time to start tracking. On the days you identified to sample, track the number of interactions, using any method (e.g., tally sheets).
- At the end of the day, enter the daily total in the Referral Tracker tab Column E from Step 3 next to the appropriate date.
  - You may choose to jot down any notes about the day.

**If, for any reason, you missed a planned day, leave it blank.**

**If referral interactions were a 0 that day, be sure to enter the 0. Do not leave it blank!**

## STEP 5: Checking your sampling strategy

- To increase confidence in your sampling strategy, it's recommended that you do a check-in, perhaps around mid-way through the year, or when you have sampled about half of your selected dates. This is optional.
- A check-in is a good idea if anything about the referral service changes (e.g., staffing, capacity, turnover, services offered).
- The “Review your Sampling” tab in the Referral Sampling Tool offers some guidance.

**Review Your Sampling**

**Instructions**

If you used the Referral Tracker, several calculations will be automatically calculated: the average, the range and the median.

Questions are posed and guidance is offered if your sampling strategy needs to be adjusted.

**Descriptive Statistics**

Average referrals per day	3.19
Median referrals per day	3
Range of referrals (Minimum - Maximum)	0-6
Average/ Median Difference	6%

**Sample Quality**

Total days sampled	29
Target days	55
% of target days completed	53%

**Review Your Overall Results**  
Is the average close to what you expected based on your target? Is the range (lowest to highest day) wider than expected?

**Compare Your Average and Median**  
When your average and median are similar, it suggests your results are balanced. A large difference suggests some days are sampling less accurate.

**Review the Average/ Median Difference**

- **Less than 10%:** Your data is well-balanced. Consider this when calculating your average.
- **10-20%:** Moderate imbalance detected. Some days are sampling less accurately, which may improve accuracy, especially if you have completed more sampling days to improve accuracy.
- **More than 20%:** Significant imbalance likely detected. Some days are sampling less accurately, especially if you have completed more sampling days to improve accuracy.

If you are using stratified sampling and specifically sampled your exceptional days, consider another check-in. If you are using random sampling, consider another check-in. If you are using systematic sampling, consider another check-in. If you are using convenience sampling, consider another check-in. If you are using quota sampling, consider another check-in.

Try looking at the Notes column in the Referral Tracker for more information.

Referral Sampling Approach | Referral Tracker | **Review Your Sampling** | Annual Reporting | +

- If you have been using the Referral Tracker, four statistics are calculated for you:
  - **Average:** the average number of referral interactions per day that you have tracked
  - **Range:** the lowest number of referral interactions and the highest number of referral interactions you have tracked so far, as a range: Minimum – maximum
  - The **median:** the midpoint of the referral interactions you have tracked
  - **Average/Median difference:** the percentage difference between the average number of referral interactions, and the median.
- After reviewing the statistics, use the red outlined box in the tool to reflect on your data.
  - Look at the average and ask yourself, “Does this seem right?”
    - If it seems plausible, keep tracking as planned.

- If it seems too high or too low, consider adding days to your sampling strategy. Adding ~10% more days will decrease the margin of error in your strategy.
- Look at the range and ask yourself, “Is this larger than expected?”
  - If it is what you expected, keep tracking as planned.
  - If it is a smaller range than expected, keep tracking as planned.
  - If it is a larger range than expected, consider adding days to your sampling strategy. Adding ~10% more days will decrease the margin of error in your strategy.
- Look at the Average and Median (and Average/Median difference) and ask yourself, “Are they similar or far apart?”
  - If they are close—that is, if the Average/Median difference is less than ~20%—do nothing, keep tracking as planned.
  - If the Average/Median difference is greater than ~20%, consider adding days to your sampling strategy. Adding ~10% more days will decrease the margin of error in your strategy.

### **Example**

*To add 10% more days, multiply your original sample size by 0.1 (or 10%).*

*If your original sample was 30 days, multiply by 0.1 (10%):*

$$30 * 0.1 = 3$$

*to add 3 days to your sampling, for a total of 33.*

- The examples below show you how to account for sampling approaches that used random sampling or stratified sampling.

### **Example 1 – No change**

*Your sampling check-in shows:*

- Average: 2.8
- Range: 0 – 7
- Median: 3
- Average/Median difference: 5.3%

*Your average seems reasonable; your range is narrow and expected and your median/average difference is less than 20%. No change required, keep tracking with your selected dates.*

## **Example 2 – Random Sampling**

*Your sampling check-in shows:*

- *Average: 2.8*
- *Range: 0 – 21*
- *Median: 4*
- *Average/Median difference: 33.7%*

*Though your average seems reasonable, your range is larger than you expected and the percent difference between your average and your median is greater than 20%. This suggests that some days have had more referrals than you anticipated.*

*Your sampling strategy was 55 days in a year, randomly sampled because you had indicated low variation. You have completed 25 of those days. Adding 10% ( $55 * 0.1$ ) adds 5.5 days (round up to 6). You should now sample a total of 61 days, or 36 more (30 already planned + 6 new days).*

*You will need to update your selected dates by using the same online calculators or Excel formula. Keep the dates you have already identified and generate 6 more. If you have duplicates, select the next available date.*

## **Example 3 – Stratified Sampling**

*Your sampling check-in shows:*

- *Average: 6.1*
- *Range: 0 – 25*
- *Median: 3*
- *Average/Median difference: 68%*

*Your average seems potentially high, your range is large, and your average/median difference is greater than 20%.*

*Your sampling strategy was 70 days in a year, but stratified with half the sample from the winter season and half from the remaining seasons.*

***If your busy season has already passed, do not adjust your sampling strategy.*** If you do your check-in after the exceptional time period has passed, adding new days to sample to your typical periods will throw off the results. Instead, do nothing. If your “exceptional” periods were days of the week or weeks of the year, however, you can probably still add more days.

**If you still have upcoming exceptional days,** add half of the new days to the exceptional days and half of the new days to the typical days:

*By adding 10% (7 days), you should split those 7 days over your two groups, and sample more (4) additional days from your busy season and 3 additional days from the remaining seasons.*

*Using a random date generator, set the dates to your busy period, e.g. “winter season” might be November 1 and December 31. Set the number of days to generate (4). If you have dates that duplicate a day you already sampling, choose the next available date.*

*Use the random date generator again and set the dates to the remaining dates in the year, minus your busy period. In this example, it might be July 1 – Oct 31. Set the number of dates to 3. If you have dates that duplicate a day you already sampling, choose the next available date.*

*Add these dates to your Referral Tracker.*

**NOTE:** These examples suggested adding 10%, while the Referral Sampling Tool suggests 20% if your difference is greater than 20%. You will have to assess what is feasible for you. As a rule of thumb, the more you sample, the more accurate your sampling will be. These are guidelines, not hard rules.

## STEP 6: Calculate the number you will report

- The Annual Reporting tab in the Referral Sampling Tool offers guidance on how to calculate an annual count, regardless of whether you used the Referral Tracker or not.
- If you saved the Referral Sampling Tool and Referral Tracker, use that same file; the Annual Reporting tab will auto-calculate an annual count for you in cell B11.
  - You may update the number of days referral services were offered in B9; otherwise, it will take the value entered in the Referral Sampling Approach.

Annual Reporting	
<b>Instructions</b>	
If you used the Referral Tracker, an average of all sampled days will be calculated.	
If you know the exact number of days you offered referral services, enter that into B8, otherwise the value entered in the Referral Sampling Approach (B11) will be used.	
If you do not know the exact number of days you offered referral services and/or if you selected a drop down menu, make a best guess. Use schedules over the last year to help you estimate.	
<b>If you used the Referral Tracker:</b>	
<b>Estimated Annual Referrals (Referral Tracker)</b>	
Average referral interactions per day	3.2
Total days referral services were offered	240
Estimated Annual Referrals	764
<b>If you did not use the Referral Tracker:</b>	
<b>Estimated Annual Referrals (Manual Entry)</b>	
Average referral interactions per day	5.0
Total days referral services were offered	240
Estimated Annual Referrals	1,200

- If you did not use the Referral Tracker, take your average number of referral interactions for all tracked days (including days where you recorded 0 referral interactions) and enter it into B16.
  - Enter the number of days you offered referral services into B17 .
  - The number you obtain in B18 will be an estimated count for the entire year.

## Example

You have sampled 20 days in the year with random sampling. Your spreadsheet looks like this:

<b>Sampled Day</b>	<b>Number of Referral Interactions</b>
26-Jan	1
10-Feb	3
13-Feb	4
23-Feb	6
4-May	0
5-May	0
15-May	
3-Aug	1
5-Aug	3
21-Aug	3
9-Sep	1
11-Sep	0
17-Sep	
19-Sep	8
2-Oct	7
29-Oct	12
5-Nov	3
12-Nov	3
9-Dec	1
29-Dec	0

You use the Annual Reporting tab in the Referral Sampling Tool. Your average will automatically be calculated in B8: 3.1

You may also manually calculate your average by summing all the daily totals and dividing by the number of days that you tracked:

$$1+3+4+6+0+0+1+3+3+1+0+8+7+12+3+3+1+0 = 56$$

$$56 / 18 = 3.1$$

18 is used instead of 20 because two days are blank, indicating that referrals were not tracked on those days.

To calculate your annual count, you multiply the average (3.1) by the

*total number of days you offered referral services in a year. In this case you offered referral services ~100 days of the year. This value is taken from your Referral Sampling Approach*

*3.1 \* 100 = 310 referral interactions in the year.*

*You report 310 referral interactions in your annual reporting*

*If you determine that the estimate of 100 is no longer accurate, you can update the value in the Referral Sampling Approach. For example, you may know, retrospectively, that you actually offered services on 105 days, by updating 100 to 105 in cell B11 of the Referral Sampling Approach, the annual count is now 326.*

# FAQs For Sampling Referral Interactions

## I IDENTIFIED A SAMPLING STRATEGY BUT NOW WE ARE BUSIER THAN I ANTICIPATED, WHAT DO I DO?

If anything changes with how many days you offer referrals or how busy your referrals are, follow Review Your Sampling check-in to determine if you need to add to the number of days you sample.

## I IDENTIFIED A SAMPLING STRATEGY BUT WE'VE HAD TO CUT BACK SERVICES, WHAT DO I DO?

Rather than cutting your sampling strategy, try to stick with it. If the dates no longer apply, update to dates that do work. If you do not have as many days available anymore, consider not sampling at all.

## I CHECKED IN ON MY SAMPLING AND I'M NOT SURE IF THE AVERAGE IS ACCURATE OR THE RANGE IS EXPECTED. WHAT SHOULD I DO?

If you did a check in and you're not sure if the average or the range are expected, what you do depends on whether you used Stratified Sampling (that is, variation), or Random Sampling (no variation).

If you used Stratified Sampling, with varied times throughout the year, it may be best to do nothing. Adding extra days unnecessarily may complicate things and may actually risk skewing your sample. Your original sampling strategy was selected based on what you knew to be true and if that hasn't changed, don't change your sampling strategy.

If you used Random Sampling and you have the capacity, adding 10% extra sample days will always result in a more accurate estimate.

## HOW DO I RANDOMLY SELECT DAYS?

You have several options. You can use any online random date selector, here are few options:

- [EveryRandom.com](http://EveryRandom.com)
- [GigaCalculator.com](http://GigaCalculator.com)
- [RedStagLabs.com](http://RedStagLabs.com)

You can also use Excel to help you create random dates, using this date generator:

=WORKDAY(RANDBETWEEN(DATE(2026,1,1),DATE(2026,12,31)),0)

## I IDENTIFIED DAYS TO SAMPLE AND I STARTED, BUT NOW SOME OF THE UPCOMING DAYS DON'T WORK ANYMORE, CAN I CHANGE MY SELECTION?

Yes, if you will not be offering referral services on a date selected, move it to the next available date that does work.

### **WHAT IF I DON'T KNOW DETAILS ABOUT MY REFERRAL SERVICES?**

Appropriate sampling does require that you know some things about your services. If it is your first year of offering referral services, or you just don't know much about your numbers, you may want to manually track for at least a year, so that you have the information available to choose a sampling approach the following year.

### **CAN I MAKE UP MY OWN SAMPLING STRATEGY?**

It is important that sampling is based on statistical information, not just convenience. Yes, you can come up with a different sampling strategy than the one available to you in the Excel workbook, but you should be able to justify it. You should also be using 90% confidence intervals and a 10% margin of error.

### **WHAT IS THE MINIMUM I CAN SAMPLE?**

The minimum sample depends on how many days you offer service and whether or not there is variation. However, if you offer very few days of referral services in a year (< 30), you should consider not sampling but tracking each day. Likely a sample size would be very close to the actual number of days anyway.

### **I'M NOT SURE HOW MANY DAYS WE OFFER REFERRAL SERVICES. WHAT DO I DO?**

If you have no idea at all, it is best that you don't sample. Track the number of days so that in the next year you will be able to use a sampling strategy.

If you just don't know the exact number of days, the drop-down menu options likely have wide enough ranges for you to make a best guess.

If you don't know the exact number of days but could estimate more precisely than the drop-down options, enter your best guess. A best guess is still better than using the drop-down options.

### **THE NUMBER OF DAYS WE OFFER REFERRAL SERVICES IS LIKELY BETWEEN TWO OF THE DROP-DOWN GROUPS, WHAT DO I DO?**

If, for example, you think your days of referral services is between 200 and 300, you should select the higher of the two options from the drop-down (250+) which will result in more sampling days and a more accurate estimate. Alternatively, you could enter 250 into A11 for an even more accurate estimate.

### **WE HAVE MISSED SEVERAL OF OUR IDENTIFIED TRACKING DAYS, WHAT DO I DO?**

If you identified dates but, for any reason, have been unable to track on those days, try to add the next best available date to your sample. It is ok to miss <10% of the days, but if you miss more than that there is risk that the sampling won't be an accurate representation.

**CAN I START SAMPLING MID-WAY THROUGH THE YEAR?**

Yes. If you have been tracking referrals manually for the start of the year but want to switch to sampling, follow all of the guidance in this manual as if it were planned for the start of the year. For dates generated that you have already tracked use that information in your Referral Tracker, and then continue to sample on the remaining dates in the year. The other data you've gathered will not be used.

**I HAVE QUESTIONS, SOMETHING DOESN'T MAKE SENSE. WHO CAN I ASK?**

If your sampling approach is complicated or uses complex calculations or strategies, it may be best for you to stick with manual counting.

We also encourage you to talk to other FCSS programs to see if they have encountered similar questions or challenges.

# Appendix - Sampling Formula Details

This section allows you to understand the math, logic and decision-making behind the sampling tools. Dive in if you love statistics and fine print!

- For the purposes of this guidance, “full time” is considered 252 days:
  - A year has 365 days (or 366 in a leap year).
  - Removing weekends:
    - There are 52 weeks in a year → 52 Saturdays + 52 Sundays = 104 weekend days.
  - Remove statutory holidays:
    - Alberta has 9 statutory holidays (New Year’s Day, Family Day, Good Friday, Victoria Day, Canada Day, Labour Day, Thanksgiving, Christmas Day). Plus one floating holiday (like National Day for Truth and Reconciliation, if observed).
  - So:  $365 - 104 - 9 = 252$  working days per year
  - You may adjust this based on your program offerings.
- The Referral Sampling Approach uses a standard formula for calculating sample size:

$$n = \frac{Z^2 * p(1 - p) * N}{Z^2 * p(1 - p) + E^2 * (N - 1)}$$

- Where:
  - $n$  = required sample size (number of days to sample)
  - $N$  = total population size (actual referral service days)
  - $Z$  = Z-score for confidence level (1.645 for 90% confidence intervals)
  - $p$  = estimated proportion (0.5 for maximum variability)
  - $E$  = margin of error (0.1 or 10%)
- This formula is derived from Cochran’s sample size formula for finite populations, commonly used in survey sampling and research design.
- Academic published research uses a standard of 95% confidence intervals (to calculate the z-score) and a 5% margin of error.
  - For FCSS programs, we are using a 90% confidence interval and 10% margin of error to minimize tracking burden for programs, while still allowing the Ministry to have confidence in the estimation.
- In the Referral Sampling Approach, the groupings for the drop-down menu options about the number of days you offer services were chosen based on the number of times per week services may be offered:
  - <60 (about once a week)
  - 60 -149 (about 2 or 3 times a week)
  - 150 – 249 (about 3 to 4 times a week)
  - 250+ (about 4 or 5 times a week)

We did not have historical data on which to base these groupings.