



SUMMER

NUTRITION

SUMMIT

JANUARY 23-24, 2024



Overcoming Technical Challenges with the Summer EBT Playbook

CODE FOR AMERICA

SUMMER NUTRITION SUMMIT 2024

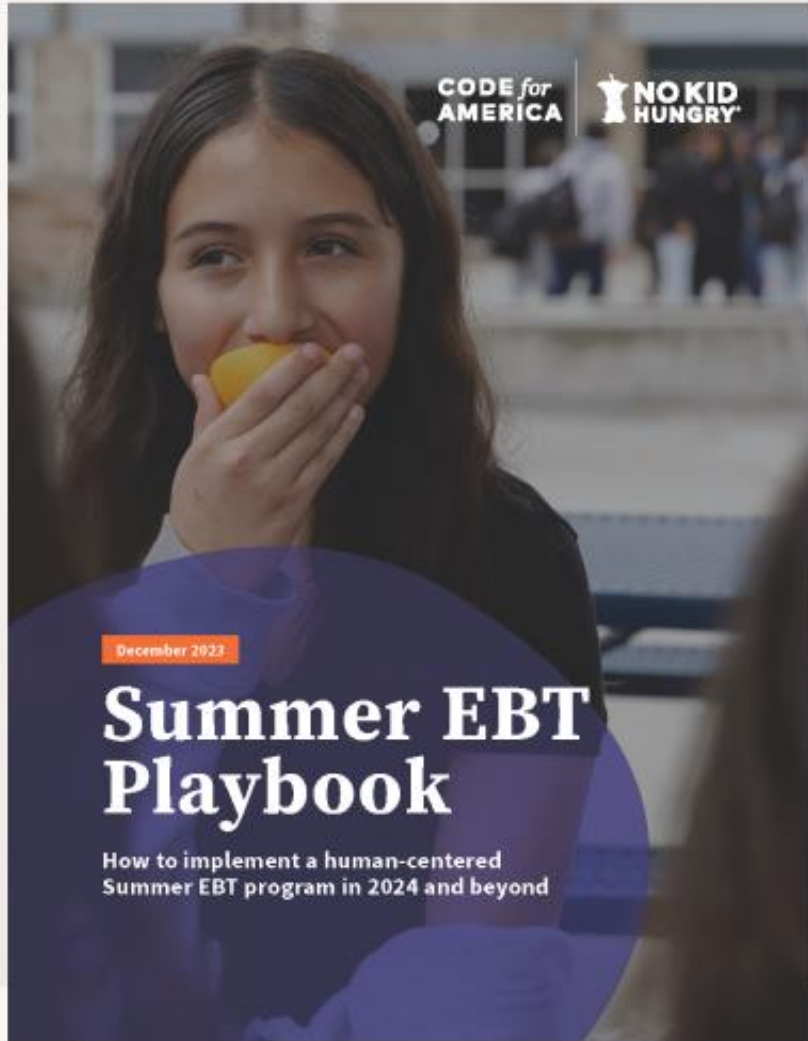


CODE *for* AMERICA

We're people-centered problem solvers
Showing that with the mindful use of technology
Government can work well for *everyone*

A successful Summer EBT program hinges on effective data and technology systems to **identify eligible children** and **issue benefits effectively.**

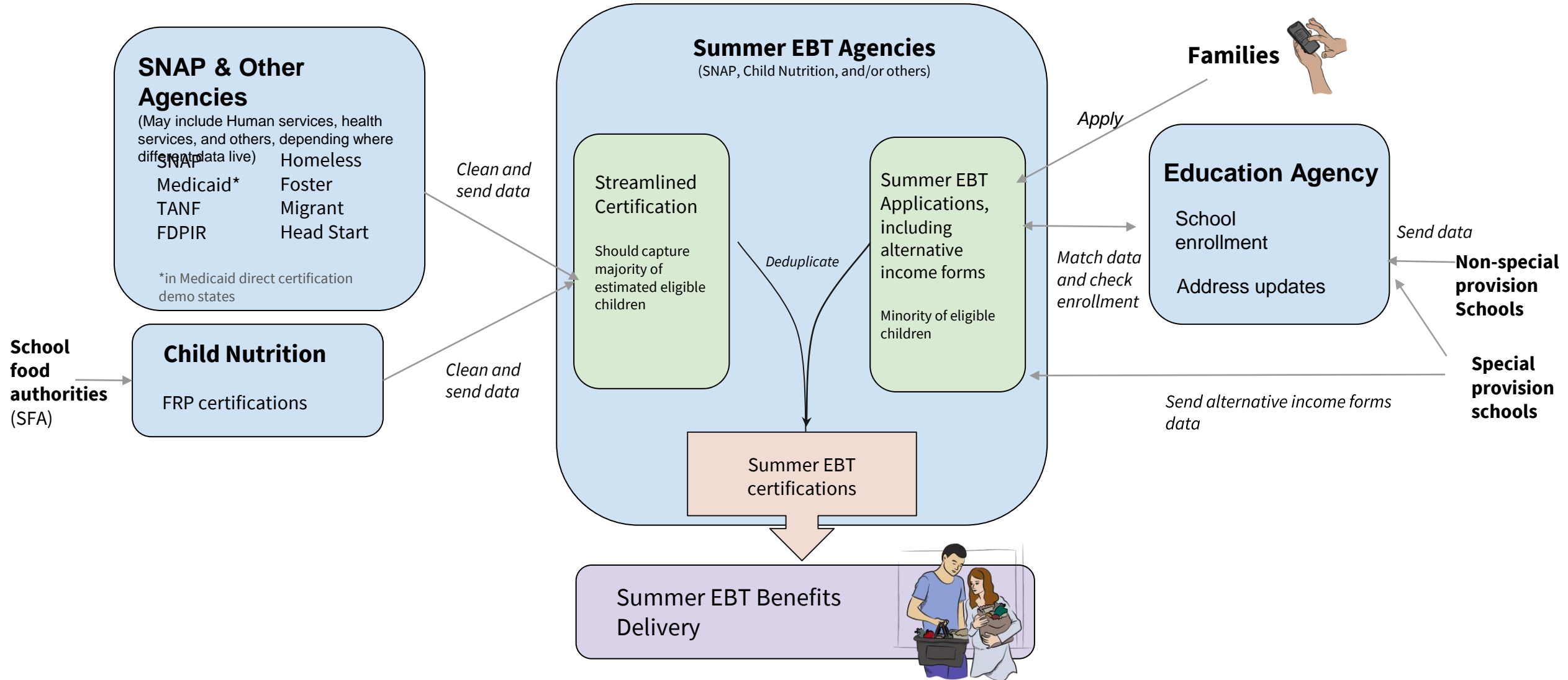




How to implement a human-centered Summer EBT program in 2024 and beyond

Download the playbook at thesummerebtplaybook.org

Summer EBT Certification Process At-a-Glance



TODAY!

Zooming in on Student Data Management for Summer EBT

**How to aggregate
student data for
streamlined
certification**

**How to link student
records across
datasets**

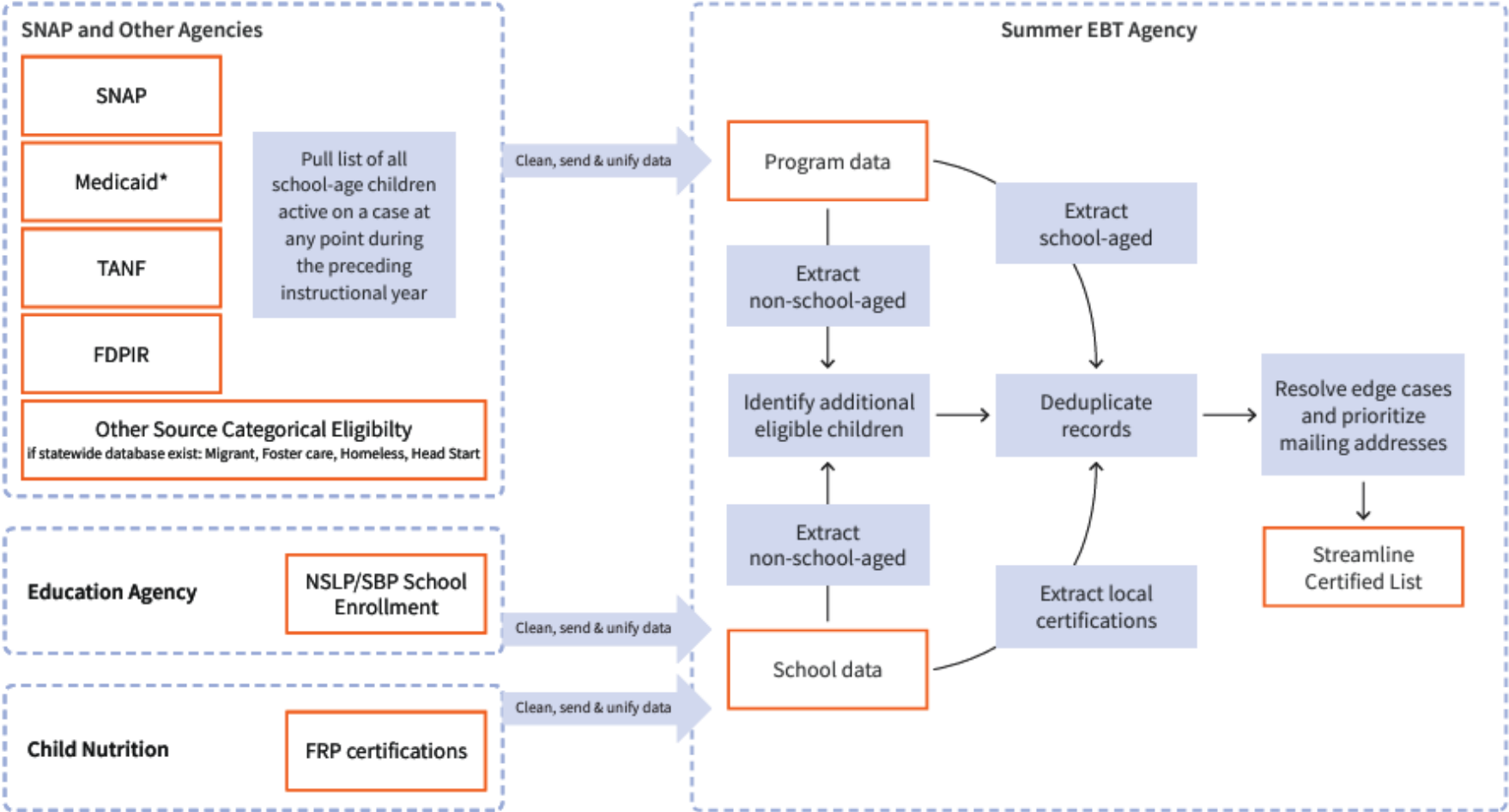
**How to create a
user-friendly, data-
friendly Summer
EBT Application**

Goals for Summer EBT student data management

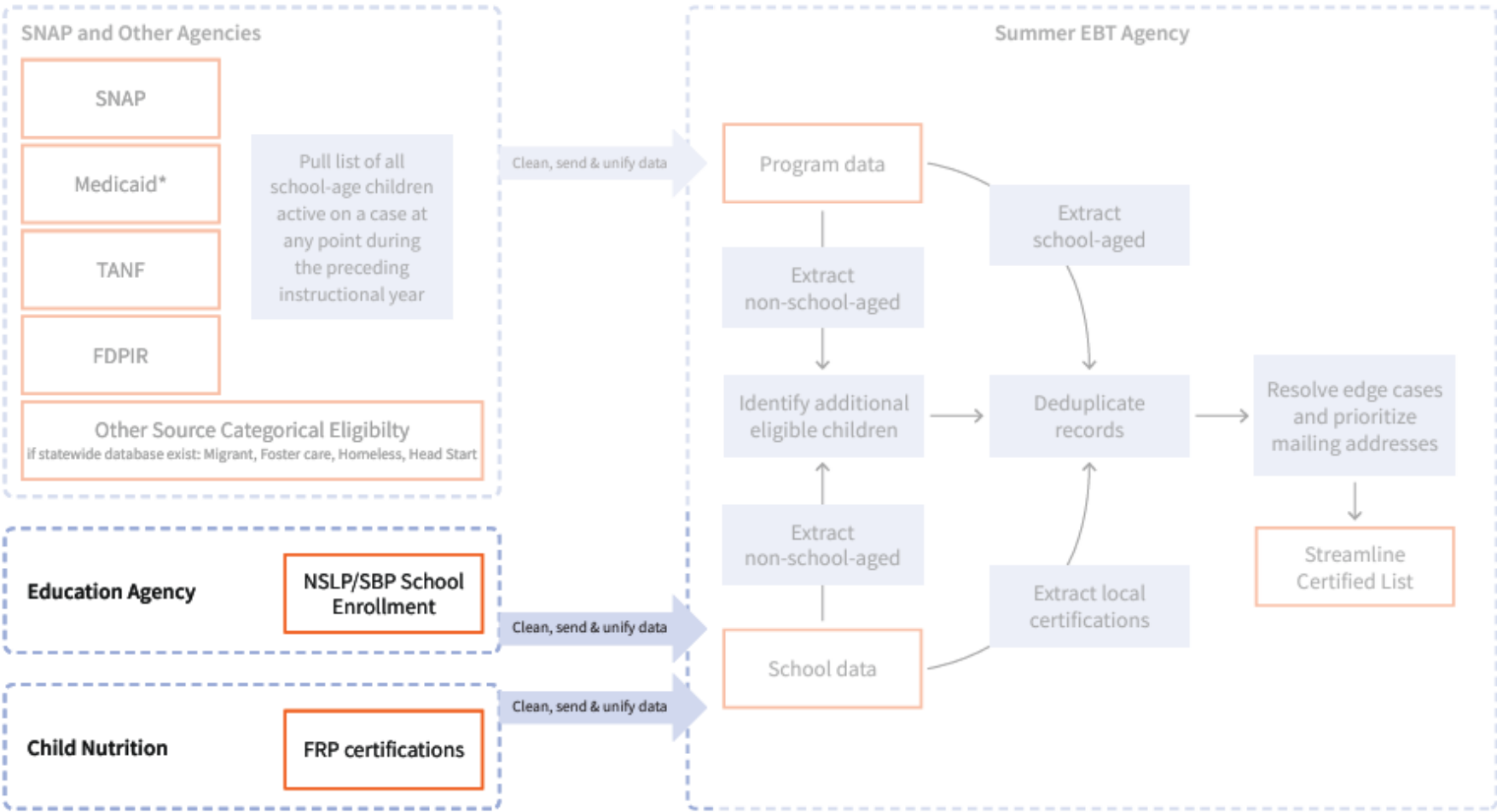
- Automatically enroll as many eligible children as possible via streamlined certification without error
- Design a Summer EBT application that makes it easy for families to give you the correct information that you need to determine eligibility and issue benefits.

Student Data Aggregation

Summer EBT data will come from many different sources, and needs to be aggregated for benefit issuance.



School data will likely present the most challenges.



Aggregating Summer EBT student data will require cleaning and standardization because ...

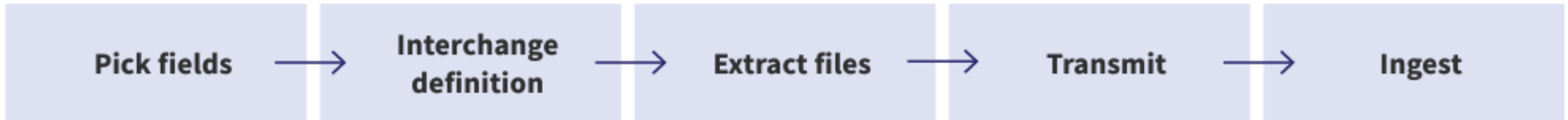
- Student data can be out of date or incomplete.
- Every local educational authority (LEA) may collect different data points or different data formats.
- Many states do not currently have a statewide database for school data (FRP and enrollment).

In a spreadsheet, 'Date of birth' could look like...

Mar-14-2018
03/14/2018
2018-Mar-03
3/14/18
03/14/2018 00:00:00
March 14, 2018

Student Data Aggregation Step-By-Step

Figure 1: Steps to aggregate data from local sources such as schools or districts to a Summer EBT agency



Pick Fields: What data elements do you need?

Interchange Definition: Be as specific as possible about what data should look like as it changes hands, e.g. file formats, encodings, illegal characters, etc.

Extract Files: Get data out of local systems and manipulate it to meet the definition; done by local agency staff.

Transmit: Get data into one place securely and provide information about data quality.

Ingest: Combined data together, clean it, and prepare it for future uses; assess data completeness across all sources.

Principles for Data Aggregation

- **Data validation** - Check data at every step: right number of records, what's the distribution of birthdays, any missing fields or characters, etc?
- **Process monitoring** - It should be easy to know who has submitted their data already.
- **Clear communication** - What's expected of local staff, technically and logistically? How can they get help?
- **Right application of expertise** - Local staff know their data but might not know data systems.
- **Lasting processes** - Turnover can be high. Build documentation and training
- **Security** - Collect minimum necessary data and other security best practices.
- **Data provenance** - It should be clear where data comes from, and who to talk to in case of an issue.

Recommended Student Data Fields

- School or district name (and identifier, if an id exists)
- First name
- Last name (in the case of multiple last names: full, first, or last)
- Middle name or initial
- Mailing address
- Date of birth
- FRP status
- Student identifier, if applicable
- First and last dates enrolled or date of certification and date of leaving school
- Parent or guardian name
- Contact information, including phone number or email
- FRP eligibility category and method of determination

The database that houses aggregated student data can be very simple.

At minimum, we recommend that you should be able to...

Store fields:

- Name, date of birth, school or district, mailing address, FRP status
- "Other information needed to issue benefits timely"

We also recommend that your solution:

Be maintainable:

- Allow updates and new data
- Secure, backed-up, logged, etc

As a reach goal, it could:

Be maintained:

- School data uploaded with some frequency

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Best Practices for Data Aggregation in Summer EBT

This document outlines various approaches for school data aggregation and discusses the positive and negative aspects of each choice. It is intended both for program officers who want to know what they should expect out of their aggregation procedures as well as technical staff looking for implementation tips.

Introduction to Data Aggregation for Summer EBT

Data aggregation means the task of gathering data from disparate providers into one place in a way that ensures that no data is lost, all the data are usable, and the data are received in time to be used.

Figure 1: Steps to aggregate data from local sources such as schools or districts to a Summer EBT agency



Data aggregation may be needed for multiple purposes for Summer EBT depending on the existing method these data are currently collected and stored. This includes:

- Student information from children certified for free or reduced price (FRP) meals through the use of applications will have to be aggregated from School Food Authorities (SFAs) to perform streamlined certification.
- Non-school-aged children directly certified (DC) for FRP meals by assistance program participation as well as non-school-aged children certified for FRP meals due to Other Source Categorical Eligibility will need to be aggregated from SFAs. School-aged versions of these lists will need to be obtained as well if those children cannot be identified from statewide databases.

Best Practices for Data Aggregation
resource available at
thesummerebtplaybook.org

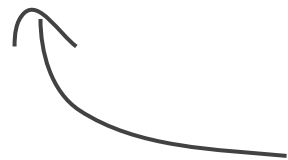
Record Linkage

Record Linkage

Record Linkage is the process of identifying records in one or across several data sources that represent the same unique individual.

The challenge of record linkage is that it's not always easy to tell if two records represent a single person, or if it's actually two people with similar information.

First Name	Middle Initial	Last Name	Date of Birth
Thomas	L.	Jones	10/4/15
Tom		Jones	4/10/15



ARE THESE THE SAME
STUDENT? 🤖

There are two types of record linkage needed for Summer EBT data management: **Deduplicating** and **Matching**.

Data Deduplication = Are any of these student records duplicates of each other?

- *Goal:* Reduce duplicates down to a single record

Data Matching = Does this student in spreadsheet A also exist in spreadsheet B?

- *Goal:* Identify a unique individual across multiple data sources

Record Linkage will be required several times at different points in the Summer EBT benefit delivery process:

- All data used for streamlined certification (e.g. SNAP data, Head Start data, FRP data, etc.) needs to be **deduplicated** to ensure that each child receives benefits only once.
- Summer EBT applications have to be **matched** against school enrollment lists.
- Summer EBT applicants will need to be **deduplicated** against children already certified for Summer EBT to ensure that they receive benefits only once.
- School data, including certifications for FRP meals based on applications and NSLP school enrollment, may need to be **deduplicated** over time as children change schools.
- Parents/guardians can be **matched** across certifications to consolidate children into households for the purposes of issuing single cards to families.

Record Linkage strategies must account for common data discrepancies

Name

- First name and middle name combined
- Last name hyphenated vs. combined into one name
- Middle name included in one place and not another
- Jr. or Sr. included or not included
- Nicknames used in some places, full names in another
- Special characters used in some places and not others
- Names transposed, e.g. first and middle or middle and last names swapped
- Middle names different in different data sets
- Sometimes name fields have character limits, so a very long name might not be included in full in one dataset vs. another

Date of Birth

- Dates transposed, e.g. month and date swapped
- Sibling's birth dates swapped
- Errors due to a simple typo

Address

- Address could differ across datasets because a child has moved and the data in one set is old or hasn't been updated
- St. vs. Street, etc.
- Apartment number included vs. not included

Parent or Guardian Name

- Parent or guardian name fields present the same matching challenges as student name fields (see above)
- Sometimes a different parent or guardian is listed in different datasets, e.g. in school data vs. SNAP system data

“Fuzzy” vs. “Exact” record linkage

Data Deduplication = Starting with **exact matching** is recommended

- *Goal:* Reduce duplicates down to a single record
- *Risk:* Mistakenly deleting a record that’s not actually a duplicate
- *Strategy:* Exact matching will ensure records are truly the same.

Data Matching = **Fuzzy matching** is recommended

- *Goal:* Identify individuals present in one data source that are also in another
- *Risk:* Mistakenly determining that an applicant isn’t a valid student because they can’t be matched in enrollment data.
- *Strategy:* Fuzzy matching gives you the highest chance of finding a match.

Data Matching Demo

Goal: Match P-EBT applications against school enrollment records to validate eligibility

Data Matching Demo ✨

Goal: Match P-EBT applications against school enrollment records to validate eligibility

Step / Strategy	Command (temp)	Description	Matches Captured	Percent of Total
1	exact_fn_ln_dob_gender	Exact match on FN, LN, DOB, gender	103,515	83.9%

AN EXACT MATCH ON 4 FIELDS CAPTURED 84% OF APPLICANTS

Data Matching Demo

Goal: Match P-EBT applications against school enrollment records to validate eligibility

Step / Strategy	Command (temp)	Description	Matches Captured	Percent of Total
1	exact_fn_ln_dob_gender	Exact match on FN, LN, DOB, gender	103,515	83.9%
2	dob_last_exact_first_or_middle_contained	Exact on DOB & Exact on LN & FN or MN contained	6,070	4.9%

**DROPPING GENDER AND
INCORPORATING MIDDLE
NAMES FOUND 6,000
MORE MATCHES!**

Data Matching Demo

Goal: Match P-EBT applications against school enrollment records to validate eligibility

Step / Strategy	Command (temp)	Description	Matches Captured	Percent of Total
5	dob_last_contained_fir st_lev_2	Exact on DOB & LN contained & FN LevDist =< 2	1,345	1.1%

*THIS SEARCH LOOKS FOR
FIRST NAMES THAT
MIGHT BE OFF BY TWO
CHARACTERS...*

Data Matching Demo ✨

Goal: Match P-EBT applications against school enrollment records to validate eligibility

Step / Strategy	Command (temp)	Description	Matches Captured	Percent of Total
5	dob_last_contained_fir st_lev_2	Exact on DOB & LN contained & FN LevDist =< 2	1,345	1.1%

↑
**THIS SEARCH LOOKS FOR
FIRST NAMES THAT
MIGHT BE OFF BY TWO
CHARACTERS...**

**...AND FINDS 1,300 MORE
MATCHES!**

Data Matching Demo

Goal: Match P-EBT applications against school enrollment records to validate eligibility

Step / Strategy	Command (temp)	Description	Matches Captured	Percent of Total
12	+NAME+DOB	Fuzzy name & DOB	1,010	0.8%

**A FUZZY MATCH JUST ON
NAME AND DATE OF
BIRTH FINDS 1,000 MORE
MATCHES**

*THE WHOLE PROCESS
WAS 14 STEPS, AND WENT
FROM
EXACT → FUZZY*

1	exact_fn_ln_dob_gender	Exact match on FN, LN, DOB, gender	103,515	83.9%
2	dob_last_exact_first_or_middle_contained	Exact on DOB & Exact on LN & FN or MN contained	6,070	4.9%
3	dob_last_contained_first_middle_contained	Exact on DOB & LN contained & FN or MN contained	4,891	4.0%
4	school_LN_contained_FN_gender	Exact on School ID & LN contained & FN exact & gender	4,030	3.3%
5	dob_last_contained_first_lev_2	Exact on DOB & LN contained & FN LevDist =< 2	1,345	1.1%
6	dob_first_middle_contained_last_lev_2	Exact on DOB & LN LevDist =< 2 & FN or MN contained	881	0.7%
7	school_fn_mn_contained_ln_2_gender	Exact on School ID & LN LevDist =< 2 & FN or MN contained	560	0.5%
8	dob_first_lev_1_last_lev_2	Exact on DOB & LN LevDist =< 2 & FN LevDist =< 1	445	0.4%
9	school_fn_mn_contained_ln_contained_dob2	Exact on School ID & DOB LevDist =< 2 & LN contained & FN or MN contained	202	0.2%
10	school_fn2_ln_1_dob_2_gender	Exact on School ID & DOB LevDist =< 2 & LN LevDist =< 1 & FN Dist =< 2 & gender	160	0.1%
11	dob_first_last_reversed	Exact on DOB & FN contains LN & LN contains FN (either direction is a match)	95	0.1%
12	+NAME+DOB	Fuzzy name & DOB	1,010	0.8%
13	+NAME+DOB+OTHER_ID	Fuzzy name & DOB & School ID	132	0.1%
14	+NAME+OTHER_ID	Fuzzy name & School ID	5	0.0%
		Total matches	123,341	100.0%

AND ULTIMATELY
 CAPTURED 123,000
 MATCHES
 20K MORE THAN THAT
 FIRST EXACT MATCH

7	school_fn_mn_contained_ln_2_gender	Exact on School ID & LN LevDist =< 2 & FN or MN contained	560	0.5%
8	dob_first_lev_1_last_lev_2	Exact on DOB & LN LevDist =< 2 & FN LevDist =< 1	445	0.4%
9	school_fn_mn_contained_ln_contained_dob2	Exact on School ID & DOB LevDist =< 2 & LN contained & FN or MN contained	202	0.2%
10	school_fn2_ln_1_dob_2_gender	Exact on School ID & DOB LevDist =< 2 & LN LevDist =< 1 & FN Dist =< 2 & gender	160	0.1%
11	dob_first_last_reversed	Exact on DOB & FN contains LN & LN contains FN (either direction is a match)	95	0.1%
12	+NAME+DOB	Fuzzy name & DOB	1,010	0.8%
13	+NAME+DOB+OTHER_ID	Fuzzy name & DOB & School ID	132	0.1%
14	+NAME+OTHER_ID	Fuzzy name & School ID	5	0.0%
		Total matches	123,341	100.0%

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Best Practices for Record Linkage in Summer EBT Delivery

This document defines record linkage, covers its applications for Summer EBT, provides a few quick recommendations, and then goes into greater implementation detail. It is intended both for program officers who want to know what they should expect out of their deduplication and matching procedures as well as technical staff looking for implementation tips.

Background

Record linkage is the process of identifying the sets of elements in one or more datasets that correspond to the same unique individual. The challenge of record linkage is that it is not always obvious if two records represent a single individual, or if it is actually two individuals with similar information. For instance, are "Thomas L. Jones" and "Tom Jones" the same person, or different people?

Deduplication and *matching* are record linkage tasks that differ in what is done to those linked sets. In deduplication, the linked records are typically reduced down to a single representation that can be used in some future process, while in *matching* the goal is to see if any linkage at all can be made between records in a query and target datasets. There are numerous record linkage tasks for Summer EBT:

- All data sources for streamlined certification, including assistance program participants (SNAP, TANF, FDPIR, and Medicaid, if applicable), Other Source Categorically Eligible program participants (migrant, runaway, homeless, foster care, or Head Start), and children certified for free or reduced price (FRP) meals by application will need to be deduplicated to ensure that each child receives the benefit only once.
- All applicants to Summer EBT will need to be matched against enrollment in a National School Lunch Program (NSLP) or School Breakfast Program (SBP) participating school in order to check eligibility.

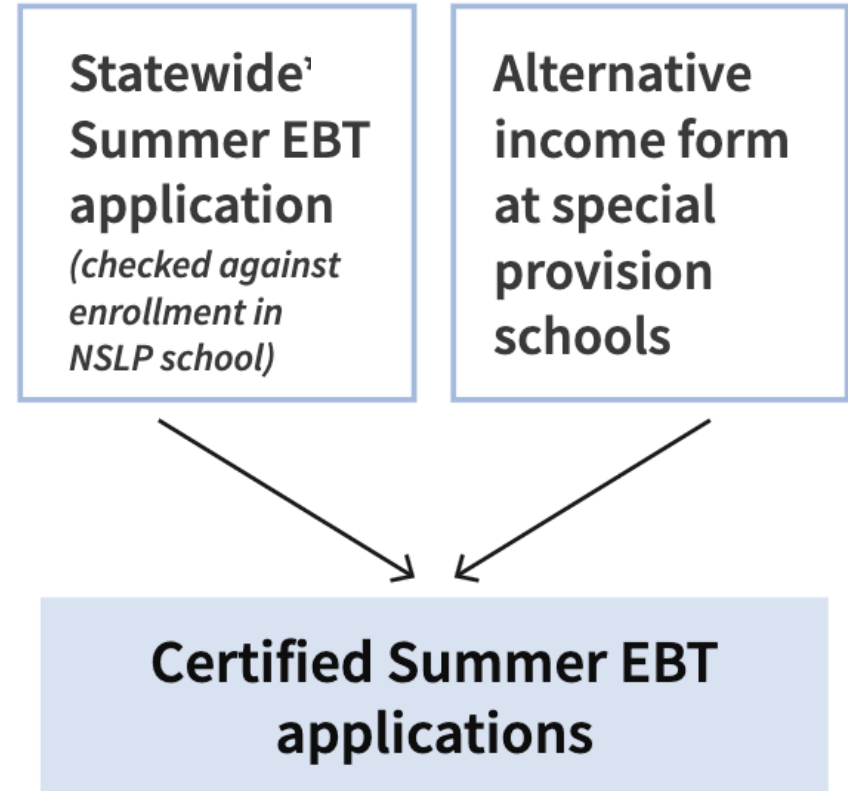
Best Practices for Record Linkage
resource available at
thesummerebtplaybook.org

Summer EBT Application

Summer EBT Applications

Income-eligible students who can't be streamline certified will have to apply for Summer EBT and then be matched against school enrollment.

This is expected to be the minority of eligible children.



Because Summer EBT applications need to be **matched against enrollment data, and **deduplicated** against streamlined certification lists, the way the application collects data matters.**

Because Summer EBT applications need to be **matched against enrollment data, and **deduplicated** against streamlined certification lists, the way the application collects data matters.**

Summer EBT applications should be designed to help you get the best, most usable data possible.

Guiding principles for designing a Summer EBT application include:

- Using minimal questions
- Creating a mobile-friendly application
- Using plain language
- Leveraging data-friendly design



**THESE ARE HUMAN
CENTERED DESIGN
PRINCIPLES AS WELL AS
GOOD DATA PRACTICES!**

Best Practice: Minimal Questions

- Less is more! Only ask for the information you absolutely need.
- Seeing a lot of questions on each screen can be visually overwhelming. The general rule of thumb is one question per screen.
- Group like questions together so that they're easier to understand and answer.

[< Go Back](#)



Does anyone in the household get money from any of these sources?

Check all that apply. We'll need to know how much they get each month.

Unemployment

Workers compensation

Spousal support

Child support

Disability benefits

Veterans benefits

Other unearned income

None of the above

Continue

ONE QUESTION ON THIS SCREEN

A FEW RELATED QUESTIONS ON THIS SCREEN



Add a student you're applying for

What's their first name?
Legally as it appears on official documents, e.g. birth certificate

What's their middle name?
If they have one.

What's their last name?
Legally as it appears on official documents, e.g. birth certificate

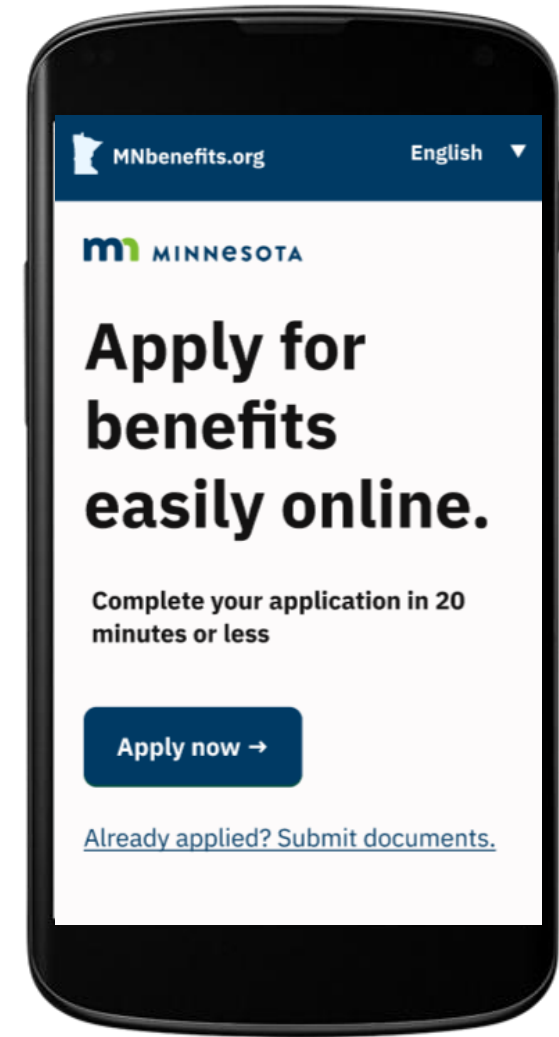
When were they born?
Month / Day / Year

 / /

Best Practice: Mobile-Friendly

Many - if not most - families will be applying for Summer EBT on their phones.

- It's a smaller screen - think about the hierarchy of content and visual elements, and only include essential elements
- Don't require users to consistently multi-task or reference other sites
- Use extremely clear calls to action
- Design for fingers, not mouses (buttons are larger, no information is available on hover, etc.)
- Remove UI elements requiring larger screen sizes (for example, large horizontal progress bars)



Best Practice: Plain Language

Written material is in “plain language” if your audience can:

- Find what they need
- Understand what they find
- Use what they find to meet their needs.

Checklist for plain language

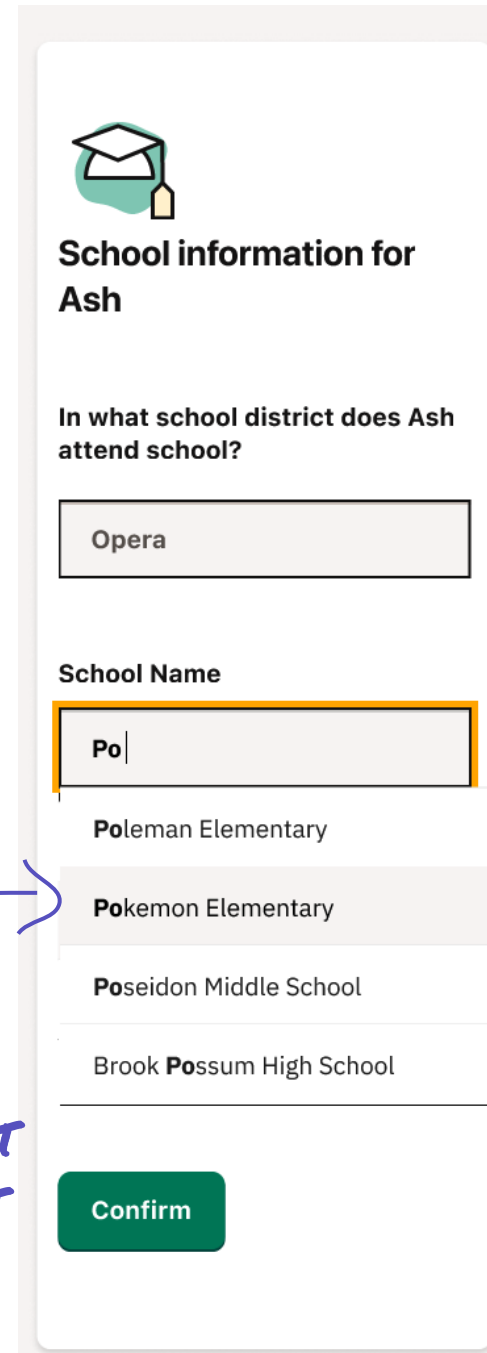
- Written for the average reader
- Organized to serve the reader’s needs
- Has useful headings
- Uses “you” and other pronouns to speak to the reader
- Uses active voice
- Uses short sections and short sentences
- Uses the simplest tense possible
- Uses base verbs, not hidden verbs
- Omits excess words
- Uses concrete, familiar words
- Uses the same terms consistently
- Uses “must” to express requirements (not “shall”)
- Places words carefully (subjects and objects should be close to their verbs, put exceptions last)
- Uses lists and tables to simplify complex material


Best Practice: Data-Friendly

Ask for data in a way that makes matching easier on the backend.

- Use dropdowns instead of open-text entry fields where possible (e.g. school name)
- Validate address information in real time
- Ask for unique identifiers (like school ID #) if possible.

*AUTO-COMPLETE
INSTEAD OF OPEN-TEXT
FOR SCHOOL DISTRICT
AND SCHOOL NAME*



 School information for Ash

In what school district does Ash attend school?

Opera

School Name

Po

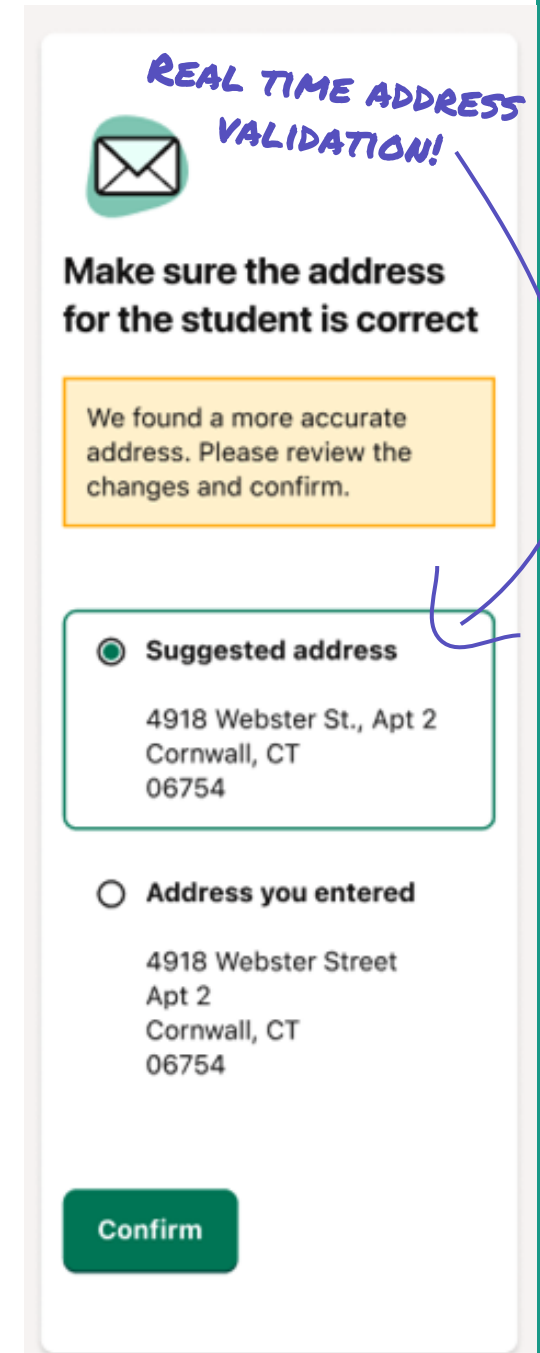
Poleman Elementary

Pokemon Elementary


Poseidon Middle School

Brook Possum High School

Confirm



REAL TIME ADDRESS VALIDATION!

 Make sure the address for the student is correct

We found a more accurate address. Please review the changes and confirm.

Suggested address

4918 Webster St., Apt 2
Cornwall, CT
06754

Address you entered

4918 Webster Street
Apt 2
Cornwall, CT
06754

Confirm

Application Demo



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Tips for Creating a Human-Centered Summer EBT Application

Before you create a new, separate statewide Summer EBT application:

- 1. Have you done everything you can to maximize use of streamlined certification in your state?** Applications burden families and can be costly for the state if they are hard to process or verify. Doing so will likely reduce cost and complexity for the state. See our tips for how to maximize use of streamlined certification ([page 39 of the Summer EBT Playbook](#)).
- 2. Are there opportunities to combine a Summer EBT application with existing benefits applications or other school forms in your state?** Finding these may reduce burden on clients (and caseworkers) across all benefits enrollment experiences. This might look like:
 - **Add Summer EBT to an already-existing integrated benefits system.** If there are families that do not qualify for SNAP, Medicaid, or other means-tested programs but would qualify for Summer EBT, configure the logic of the backend system such that Summer EBT is included as a recommended program to apply for. Any relevant information that they have already entered into other applications should be automatically populated in their Summer EBT application.
 - **Use Summer EBT applications for Free and Reduced Price (FRP) meals eligibility,** so that parents/guardians are not submitting two different applications at the beginning of the year
 - Currently, in most states, applications for free and reduced price meals are collected and processed at the individual school level. The creation of a state-wide Summer EBT application may be an opportunity to centralize and modernize the school meals application process by consolidating eligibility questions for both programs into one singular application. Streamlining the school meals application process by combining it with the Summer EBT application process at the state level could take the administrative burden of administering and processing these applications off of schools and potentially create a simpler and more secure application experience for families.

Best Practices for Summer EBT
applications resource available at
thesummerebtplaybook.org

Resources for You



Download the playbook and checklist
thesummerebtplaybook.org

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Summer EBT Checklist

Planning and preparing for an effective Summer EBT program is a multi-step process. Use these checklists to help your team stay organized as you plan for your Summer EBT implementation. This document provides a high-level, step-by-step guide to Summer EBT, and a detailed checklist of the major steps needed to launch a successful program.

Summer EBT Step-by-Step Overview

The Basics

- Has the state's 50% administrative funding match been secured?
- How will you divide up key roles and responsibilities among Summer EBT agencies?
- What legal agreements will be necessary to execute between agencies at the state and local levels?
- Has a staffing plan for Summer EBT been developed at all partner agencies?

Key Milestones:

- All collaborating agencies have been identified
- Notice of Intent has been submitted
- State administrative funds have been secured
- All necessary interagency MOUs and/or data sharing agreements have been executed

Eligibility

- For households that apply for Summer EBT, how will you confirm student enrollment in a National School Lunch Program (NSLP) or School Breakfast Program (SBP) school?

Download the playbook and checklist
thesummerebtplaybook.org

We are here to support you

- Questions about your specific situation? Come chat with us!
- Contact us via www.thesummerebtplaybook.org with questions or technical assistance needs

CODE *for*
AMERICA



Thank you!

