



Comprehensive Child Welfare Information System (CCWIS)

Technical Bulletin #8: Data Exchange Standards

January 10, 2022

This Technical Bulletin provides title IV-E agencies that develop a Comprehensive Child Welfare Information System (CCWIS) with information about how to comply with the data exchange standard requirements for a CCWIS. The Technical Bulletin also provides title IV-E agencies with information about CCWIS mandatory and optional data exchanges.

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Purpose of the Technical Bulletin (TB)

This TB provides title IV-E agencies that develop a Comprehensive Child Welfare Information System (CCWIS) with information about how to comply with the mandatory and optional data exchanges and data exchange standard requirements for a CCWIS.

Audience

This TB may assist title IV-E agency staff members who are responsible for developing and executing data exchanges between their CCWIS and other systems. It will also help information technology (IT) and program staff from other agencies that will use a data exchange to share data with the title IV-E agency's CCWIS. Data exchanges can provide numerous benefits to the title IV-E agency and the exchanging agency to ensure current, accurate, and relevant data is available to support the child welfare program goals and activities. The document provides helpful information to:

- CCWIS project managers and their teams
- Child welfare data teams from the IT and program staff
- Data governance teams
- Continuous quality improvement (CQI) and quality assurance teams
- CCWIS data security staff
- Child Welfare Contributing Agencies (CWCAs)
- IT and program staff from other agencies who exchange data with the title IV-E agency's CCWIS

Background

Exchanging relevant data with other agencies ensures a title IV-E agency's CCWIS maintains comprehensive case files that combine current and historical data from the CCWIS with information on CWCA activities and services, external systems used by title IV-E agency staff to collect CCWIS data, and other agencies serving each child and family. Federal regulations require a CCWIS to use a single data exchange standard for certain bi-directional data exchanges described below. In addition, to promote efficient and economical development practices, the Children's Bureau (CB) recommends that a title IV-E agency adopt a single data exchange standard for all data exchanges.

Mandatory data exchange standards.

Federal regulations for a title IV-E agency building a CCWIS require the agency to use a single data exchange standard that describes data, definitions, formats and other specifications for bi-directional data exchanges between CCWIS and each Child Welfare Contributing Agency (CWCA) and each system external to CCWIS used by title IV-E agency staff to collect CCWIS data.¹

¹ 45 CFR 1355.52(f)

Recommended data exchange standards.

We recommend the title IV–E agency’s CCWIS use one data exchange standard that describes data, definitions, formats and other specifications for bi-directional data exchanges with:

- Child abuse and neglect system(s);
- System(s) operated under title IV– A of the Act;
- Systems operated under title XIX of the Act including:
 - Systems to determine Medicaid eligibility described in 42 CFR 433.111(b)(2)(ii)(A) and
 - Medicaid Management Information Systems as defined at 42 CFR 433.111(b)(2)(ii)(B);
- Systems operated under title IV– D of the Act;
- Systems operated by the court(s) of competent jurisdiction over title IV–E foster care, adoption, and guardianship programs; and
- Systems operated by the state or tribal education agency, or school districts, or both.

We also recommend the title IV-E agency’s CCWIS use one data exchange standard for any additional optional bi-directional and uni-directional data exchanges, per section 1355.54.

What Is a CCWIS Data Exchange?

A CCWIS data exchange is an automated, electronic submission or receipt of information, or both, between two automated data processing systems (1355.51(a)). A uni-directional or bi-directional data exchange must ensure the context and meaning of the data are preserved. A CCWIS must be capable of sending data to, and receiving data from, the other system or systems participating in a bi-directional data exchange. Relevant data refers to data collected in an information system that, in compliance with applicable confidentiality requirements², may be shared with a program that considers the data useful for meeting goals or objectives. Relevant data may be different for different data exchanges or for different title IV-E agencies. The regulations for CCWIS do not specify which data elements must be shared through an exchange, thus providing title IV-E agencies with maximum flexibility to determine the data each partner has that is useful and can be shared.

Benefits of a Data Exchange

CCWIS bi-directional data exchanges promote timeliness of data transfers, reduce administrative burden by eliminating the interim step of translating and importing data into separate systems, ensure standardization of data elements, streamline mandated administrative reporting, and provide access to standardized information that can be used for cross-systems, multi-level analyses. Data exchanges can provide several benefits supporting the efficient, economical, and effective administration of the titles IV-B and IV-E programs, by:

- Eliminating duplicate data entry across service delivery programs;

² 42 U.S.C. §671(a)(8), 45 CFR §1355.21(a) and 45 CFR §205.50

- Collecting comprehensive data on client histories, needs, and services while reducing data collection costs;
- Helping improve outcomes for children and families by promoting collaboration and service coordination with other programs;
- Renewing the focus on service delivery through reduced data collection and reporting burdens;
- Improving comprehensive service delivery through interoperability among partners;
- Providing informed decision-making ability through reliable, consistent, and complete data; and
- Increasing and enhancing research, evaluation, and CQI capabilities through complete, accurate, and reliable data.

Data Standards

Data standards provide a common language and a common set of technical descriptions (metadata) about the data in an IT system. They include specifications and guidelines for what the data represents, the format and structure of the data elements, the definition of the data (e.g., meaning, origin, or mapping process), and the nomenclature or conventions used for tagging or naming the data elements. Data standards also can include details on the transmission process, how the data will be manipulated or used, the process followed to ensure data quality, and other technical specifications as deemed necessary by the agencies exchanging the data. Data standards may be found in the IV-E agency's CCWIS data model or the data dictionary.

Like any other standard, data standards are usually created by the subject matter experts who know the importance and meaning of the subject data. In a CCWIS, data standards should be created collaboratively with a team comprised of program, data, and IT staff (e.g., an agency data governance team or workgroup). While data standards may initially take time to develop, the payoff comes from developing the standard once and reusing it often.

What Is a Data Exchange Standard?

Federal regulations for CCWIS define a data exchange standard to mean the common data definitions, data formats, data values, and other guidelines that the state or tribe's automated data processing systems follow when exchanging data.³ Data exchange standards exist to better enable the exchange of standardized data between two systems owned by different agencies. In CCWIS, they provide a common language and a common set of expectations that enable efficient, economical, and effective data exchanges between IT systems. Examples of data exchange standards include the National Information Exchange Model (NIEM), including the Human Services Domain, which supports information sharing and promotes interoperability between and across social service providers at the federal, state, local, and tribal levels; and the Health Information Exchange (HIE) health care professionals and patients use to access and

³ 45 CFR 1355.51.

securely share a patient’s medical information electronically. A title IV-E agency may use an existing standard (such as NIEM or HIE), modify an existing standard to meet the agency’s needs, or develop a standard tailored to the agency’s requirements.⁴ HIEs typically use Health Level 7 (HL7) V2, and Clinical Document Architecture (CDA) to exchange information. HL7 V2 is used to create Admission, Discharge, and Transfer (ADT) messages, and CDA is used to share medical information, such as a Continuity of Care Document (CCD). Another HL7 standard is Fast Healthcare Interoperability Resources (FHIR), which applications can be constructed on top of the FHIR standard. ACF has become an Organization member of HL7, and to advance the FHIR standard has created a Human and Social Services workgroup. The agency also may update the data exchange standard to support changing circumstances.⁵ Note the term “data exchange” was intentionally used in the regulations for CCWIS rather than “interface” to emphasize the purpose of information sharing.

Benefits of a Data Exchange Standard

The CCWIS data exchange standard must describe the data, definitions, formats, and other specifications that sending and receiving systems implement when exchanging data. This shared vocabulary improves collaboration and communication because all partners know precisely what data to share and the meaning of data they receive. Utilizing a data exchange standard allows users and stakeholders to know the root source of the data, the context and meaning of the data, and the characteristics and format of the data. Implementing and adhering to a data exchange standard also increases the trust users have in the quality and reliability of the data. Data exchange standards also may help reduce costs, as the standards can and should be reused for multiple exchanges and purposes.

Data Standard vs. Data Exchange Standard

In the CCWIS environment, a data standard describes and defines the data maintained by CCWIS, while a data exchange standard describes and defines the data as it is used in a data exchange with another agency. For example, the data standard for CCWIS may indicate how often a value may be missing, when it must be entered into the system, and the permissible values, which may differ from the values agreed upon in the data exchange standard.

Compliance With Federal Regulations

The title IV–E agency must use a single data exchange standard that describes data, definitions, formats, and other specifications upon implementing a CCWIS for bi-directional data exchanges between CCWIS and each CWCA and each system external to CCWIS used by title IV–E agency staff to collect CCWIS data.⁶ Table 1 below summarizes when a data exchange standard is required and when a data exchange standard is recommended for the categories of data

⁴ 80 FR 48200 at 48215.

⁵ 81 FR 35450 at 35466–35467.

⁶ 45 CFR 1355.52(f)

exchanges described in the regulations for CCWIS.⁷

⁷ 45 CFR 1355.52(e) describes required data exchanges.
45 CFR 1355.54 describes optional data exchanges.

Table 1: Summary of CCWIS Data Exchanges

Data System	Examples of Data That May Be Exchanged
A data exchange standard is <u>required</u> for the following bi-directional exchanges that are mandatory, if applicable⁸ (45 CFR 1355.52(e)(1)(ii) & (iv))	
A CWCA that uses its own information system to support investigations, placements, or case management and has a bi-directional data exchange with the title IV-E agency’s CCWIS	Relevant data collected or needed by the CWCA which could vary depending upon the type of CWCA. For example, case management, placement, or investigation data.
External systems: Each system external to CCWIS used by title IV-E agency staff to collect CCWIS data	External system used to collect CCWIS data such as NYTD survey data, child assessment data, or foster care provider licensing data.
A data exchange standard is <u>recommended</u> for the following bi-directional exchanges that are mandatory, if applicable (45 CFR 1355.52(e)(1)(i) & (iii))	
Financial: Systems that generate the financial payments and claims for titles IV-B and IV-E	Any financial data relevant to the operation of the state/tribe’s child welfare program (this may include provider invoices and payments, dates of service, adoption subsidies, foster care payments, etc.).
Title IV-E eligibility: Each system used to calculate one or more components of title IV-E eligibility determinations	Data used in the eligibility determination process for a title IV-E foster care eligibility case such as type of removal, age, AFDC eligibility, placement setting, length of time in foster care, etc.
A data exchange standard is <u>recommended</u> for the following bi-directional data exchanges that are mandatory, to the extent practicable (45 CFR 1355.52(e)(2)(i) – (vi))	
Child abuse and neglect systems ⁹	Any relevant data needed to evaluate abuse and neglect reports (this may include demographic information on existing clients, information on open cases, and case histories). The child abuse and neglect system must provide relevant data to the CCWIS to support investigations, case management, and other child welfare functions (this may include the complete intake report).
Systems operated under title IV-A	Any relevant data from the state’s TANF system such as AFDC eligibility, which can be used to determine title IV-E eligibility, or other relevant data such as information on families and addresses
Systems operated under title IV-D	Any relevant data from the state’s child support enforcement system such as information used to locate non-custodial parents and/or other kinship care providers

⁸ “If applicable” means that CCWIS must have a data exchange if a system or module other than CCWIS is used to collect or generate the data. (80 FR 48200 at 48212.)

⁹ Almost all title IV-E agencies include this component in their CCWIS as it is a critical child welfare business function. A bi-directional data exchange is required only if this component is separate from CCWIS.

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Data System	Examples of Data That May Be Exchanged
Systems operated under title XIX	Any relevant data from the state’s Medicaid eligibility and claims processing system(s) necessary for Medicaid enrollment, coverage, accurate health records, care coordination, etc.
Systems operated by the court(s) of competent jurisdiction over title IV-E foster care, adoption, and guardianship programs	Any relevant data from the state’s court systems such as juvenile or family courts that may provide necessary information on a child’s removal from home, ongoing case and permanency planning, parental rights, etc.
Systems operated by the state or tribal education agency, or school districts, or both	Any relevant data from a state, county, or local education system such as enrollment information, attendance, additional services/supports, etc.
A data exchange standard is <u>recommended</u> for any optional data exchanges with other entities (45 CFR 1355.54), such as the following examples.	
A data exchange with the Social Security Administration	Data relevant for timely verification of social security numbers
Data exchanges between states and tribes	Data relevant for complying with ICWA and ongoing case management
Data exchanges with providers offering various services to children and families	Data related to provision of substance abuse, mental or behavioral health, or other treatment services

Other Considerations

A title IV-E agency should consider many other factors when developing and implementing data exchanges with other agencies. Listed below are some factors and risks that a title IV-E agency should evaluate, address, and incorporate into the title IV-E agency's plans for data exchanges, including data: quality, governance, security, maintenance, matching and duplication, agreements and contracts, and timeliness. Title IV-E agencies should consult with appropriate staff within their own agency and those agencies with whom they intend to exchange data to identify other considerations that relate to their unique business needs.

Data Quality

Data quality is imperative when exchanging data with other entities and agencies. Title IV-E agencies must implement and maintain automated functions in CCWIS to regularly monitor data quality, develop and implement a CCWIS data quality plan, and conduct biennial data quality reviews as required in 45 CFR 1355.52(d)(5). CB encourages title IV-E agencies to align technology support and automated data quality strategies with ongoing CQI activities required to evaluate services for children in the Child and Family Services Plan, and services for children in foster care through Child and Family Service Reviews and Program Improvement Plans. Refer to CCWIS Technical Bulletin #6: CCWIS Data Quality Plan at

<https://www.acf.hhs.gov/cb/training-technical-assistance/ccwis-technical-bulletin-6>.

Data Governance

Title IV-E agencies are strongly encouraged to formalize data governance as an important strategic goal. For a CCWIS, CB encourages agencies to document how title IV-E agency staff and exchange partners manage, manipulate, process, access, and use the data to support business needs. Refer to CCWIS Technical Bulletin #6: CCWIS Data Quality Plan at

<https://www.acf.hhs.gov/cb/training-technical-assistance/ccwis-technical-bulletin-6>.

Data Security and Data Breaches

Federal regulations do not require the CCWIS data exchange standard to specify the data transmission method, however, the title IV-E agency must have safeguards in place to ensure confidentiality and security of the data being exchanged.¹⁰ Data coming in from other agencies may be subject to additional security and confidentiality requirements. If so, title IV-E agencies must ensure that this data is accessible only by those staff authorized to receive/view it.

Similarly, CCWIS data sent to other agencies should be treated by the receiving agency as confidential information shared on a need-to-know basis. Title IV-E agencies should ensure their data exchange partners recognize the sensitivity of the data being exchanged and have safeguards and protocols in place to prevent unauthorized access to the data. All agencies with access to CCWIS data should have procedures in place for handling and reporting CCWIS data breaches. Refer to Information Memorandum ACYF-CB-IM-15-04 on data breaches at

<https://www.acf.hhs.gov/cb/policy-guidance/im-15-04>.

¹⁰ 45 CFR 1355.52(d)(1)(iii).

Data Maintenance

Title IV-E agencies should determine how they will keep the data in the CCWIS database current and how they will manage data from incoming exchanges that does not match CCWIS data. For example, what steps will the title IV-E agency take if it determines a family's address received from an exchange does not match the current address in the CCWIS database? Does the title IV-E agency update the CCWIS? Does the CCWIS archive the old address? Or does the title IV-E agency instead send the CCWIS address information to the agency that provided the non-matching address? In other words, who determines the valid address and how will the title IV-E agency verify and communicate that information to the agency exchanging data? A title IV-E agency should address the processes and protocols for data maintenance as part of the data governance plan.

Data Matching, Duplication, etc.

Many states and tribes use common identifiers for cases and individuals. Using common identifiers can help eliminate the risks and concerns with matching case records and avoiding duplication of records. If an agency exchanging data with the CCWIS does not use common identifiers, then the title IV-E agency and the exchanging agency should determine best practices for data matching to ensure the record is correct.

Data Sharing Agreements

In many instances, title IV-E agencies will want to draft and execute a data sharing agreement or memorandum of understanding (MOU) with the agencies with which they will be exchanging data. Data sharing agreements should identify the data exchange standard and document data guidelines such as what data will be shared, how it will be used, how it cannot be used, and how it is maintained, protected, updated, archived, and deleted. Such an agreement also will specify the term or time limit for the agreement. It also can include details of any costs associated with the data exchange. CB encourages title IV-E agencies to document all details of their data exchanges.

Contracting Considerations

If the title IV-E agency chooses to outsource or utilize a vendor for CCWIS data exchanges, the agency should follow all established state or tribe guidelines for IT procurements. Working together with the partnering agencies, the title IV-E agency should thoroughly identify and document the agencies' needs that reflect the business processes of both agencies and subsequently create a detailed statement of work. They should decide in advance exactly what the vendor will need to provide in terms of services and deliverables. The service may include only the data exchange, or the vendor could provide additional services such as de-duplication, data cleansing, data validation against data standards, or other types of data manipulation.

Additionally, the title IV-E agency should:

- Consider the type of data security, data protection, data encryption, and/or compliance controls that are needed. The vendor should be able to provide proof and evidence these services are being provided as part of their ongoing operations.
- Ensure protocols are in place for identifying data breaches and notifying the agencies in

case of such a breach.

- Define data breach services in the contract.
- Thoroughly review the service level agreement (SLA), which should articulate the full range of services provided by the vendor and, just as importantly, what is not included in the SLA.
- Ask how the vendor handles planned downtime for maintenance, security scans, equipment upgrades, etc.
- Consider the types of data backups, data retention, and data archival services the vendor provides and ensure they meet the needs of the title IV-E agency and their partner agencies.
- Determine the location of the data. If it is offshore or internationally, do the laws and regulations of the host country govern the data?
- Ensure all parties know and agree on who owns the data.
- Consider the real-time availability of the data and the frequency of updates.
- Determine the technology that will support the data transfer between the systems. Is software proprietary to the vendor? Are there additional costs and if so, how are the costs established?
- Thoroughly review the initial and ongoing costs. Determine and agree on how costs are established. Ensure there are no hidden costs or fees. Know how anomalies (the unknowns) and scope changes are handled within the contract.
- Accurately project the expected rate of growth of the size of the database and ensure the contract allows for such growth over the contract's period of performance.
- If the contracted vendor has additional subcontractors, ensure all contract clauses flow down and apply to all subcontractors.
- Determine and document the plan for terminating or exiting the contract either prematurely or at the end of the period of performance. Know if there are any penalties for terminating the contract. Create a thorough transition plan with the vendor that details how the data will be transitioned either to another vendor or back to the agencies.
- Determine what role the vendor will play in defining and documenting the data exchange standards and maintaining that documentation.

Timeliness

Data-sharing agencies must consider how and when the data exchanges take place. For example, data could be exchanged in real time, every 15 minutes, processed overnight, or according to another agreed-upon schedule. Title IV-E agencies should work with their cooperating agencies to determine what works best to support the business processes of both agencies and what is feasible while being efficient, economical, and effective.

Conclusion

Exchanging relevant data with other agencies ensures a title IV-E agency's CCWIS maintains comprehensive case files that combine current and historical data from the CCWIS database with information on CWCA activities and services, external systems used by title IV-E agency staff to collect CCWIS data, and other agencies serving each child and family. Utilizing a data exchange standard allows users and stakeholders to know the root source of the data, the context and meaning of the data, and the characteristics and format of the data. Implementing and adhering to a data exchange standard also increases the trust users have in the quality and reliability of the data. Data exchange standards also may help reduce costs, as the standards can and should be reused for multiple exchanges and purposes.