State Toolkit for Validating and Auditing Medicaid Managed Care Encounter Data

Prepared for the Centers for Medicare & Medicaid Services by Erin Weir Lakhmani, Jenna Libersky, Luke Horner, and Deborah Rosenstein of Mathematica

August 2019

Revised September 2023

State Toolkit for Validating Medicaid Managed Care Encounter Data

August 2019

Erin Weir Lakhmani
Jenna Libersky
Luke Horner

Acknowledgements

[1] New Jersey contracts with Molina Healthcare for their Medicaid Management Information System (MMIS).

Acronyms

ASC	Accredited Standards Committee
CARCs	claim-adjustment reason codes
CMS	Centers for Medicare & Medicaid Services
CPT	Current procedural terminology
DRG	diagnosis-related group
EDI	electronic data interchange
EMR	electronic medical record
EPSDT	early and periodic screening, diagnostic, and treatment
EQR	external quality review
EQRO	external quality review organization
FFS	fee-for-service
GAO	Government Accountability Office
HCA	Health Care Authority
HCPCS	Healthcare Common Procedure Coding System
HEDIS	Healthcare Effectiveness Data and Information Set
HHSC	Health and Human Services Commission
HIPAA	Health Insurance Portability and Accountability Act
MCO	Managed care organization
NCPDP	National Council for Prescription Drug Programs
NDC	National Drug Code
NPI	National Provider Identifier
PAHP	Prepaid ambulatory health plan
SNIP	Strategic National Implementation Process
T-MSIS	Transformed Medicaid Statistical Information System
TPL	third-party liability
VBP	value-based purchasing
WEDI	Workgroup for Electronic Data Interchange

Contents

Chapter I:
Background, purpose, and overview of the toolkit

A. Background

About encounter data. Over time, risk-based managed care has become the dominant system for care delivery in Medicaid. As of 2016, all states except Alaska and Connecticut offered some form of managed care, enrolling more than 80 percent of all Medicaid beneficiaries. Comprehensive managed care was the most common type of managed care; nationwide, nearly 70 percent of all Medicaid beneficiaries were covered through comprehensive plans (Centers for Medicare & Medicaid Services [CMS] 2018). Under comprehensive and other risk-based managed care arrangements, states pay managed care plans a fixed amount per member per month to cover all needed services.

Although managed care plans do not bill the state for individual services that providers render, plans are required to submit encounter records to the state. These records provide details about the services delivered in each visit, such as the type of service, provider name and type, location of service, and amount paid by the plan to the provider. "Encounter data" refers to all information in these records.

Because most Medicaid beneficiaries are enrolled in managed care, encounter data are the primary source of information about their health and service use, as well as the primary source of details on spending by managed care plans. These data are therefore essential for measuring and monitoring the quality of managed care plans and for evaluating plan compliance with contract requirements. States and their actuaries also use encounter data as their main source of information for setting capitation rates and performing risk adjustment, which creates a strong financial incentive for managed care plans to produce high quality encounter data.

Medicaid encounter data pass through multiple entities and systems before reaching states and being available for Medicaid program administration. In most cases, these data will flow from providers to managed care plans, through multiple claims adjudication and IT systems, and then from the managed care plans to the state, where the data are transformed into new formats, as needed, and incorporated into a state's data repository. Sometimes the process may be even longer because subcontractors (such as pharmacy benefit managers or transportation vendors) may need to collect claim or encounter data from providers and submit that data to the managed care plans. During each stage in this process, data may be altered or transformed as they are processed through multiple systems, stored, and interpreted.

Careful validation is critical to ensuring data quality at each stage. This toolkit is designed to support the role that *states* play in validating encounter data. (Figure I.1 shows the basic flow of encounter data from providers to CMS and key processing and validation steps for each entity.)

Box I.1. Encounter data denials and rejections

Because encounter data flow through multiple entities (at a minimum, from providers to managed care plans to states to CMS), it's important to define "denied" and "rejected" in a way that is consistent with the entity performing the action. For clarity, this toolkit uses the following terms:

- **"Denied"** refers to situations in which a managed care plan denied a claim or encounter submitted by a provider.

- **"Rejected"** refers to situations in which a state rejected encounter records (or files) submitted by a managed care plan.

Chapter I:
Background, purpose, and overview of the toolkit

Federal regulations on encounter data validation. Since 1999, federal law has required that states collect encounter data from managed care plans and report these data to CMS (Balanced Budget Act of 1997, Section 4753[a][1]). In 2010, Section 6505(b) of the Affordable Care Act strengthened the requirements for Medicaid managed care plans to provide encounter data to states and permitted the federal government to withhold federal matching payments to states "with respect to any amounts expended for medical assistance for individuals for whom the State does not report enrollee encounter data to [CMS] in a timely manner" (Affordable Care Act, Section 6402[c]).

In May 2016, CMS updated and expanded the requirements for managed care plans and states related to Medicaid encounter data (42 CFR §438.242, 42 CFR §438.818). These regulations require states to validate the completeness and accuracy of the encounter data that managed care plans submit and to ensure compliance with the privacy and security standards of the Health Insurance Portability and Accountability Act (HIPAA) before submitting the data to CMS (42 CFR §438.242[d], 42 CFR §438.818[a][2]), 42 CFR §438.818[a][1]]. The rules obligate states to require that managed care plans verify the accuracy and completeness of encounter data (42 CFR §438.242[b][3][i]-[ii]) and to require through their contracts with managed care plans that states receive:

- Sufficient encounter data to identify the provider who delivers any items or services to enrollees (42 CFR §438.242[c][1])

- Encounter data at a frequency and level of detail to meet the program administration, oversight, and program integrity needs of the state and CMS (42 CFR §438.242[c][2])

- All encounter data, including allowed amount and paid amount that the state is required to report to CMS (42 CFR §438.242[c][3])

- Encounter data in a standardized format: the ASC X12N 837 and NCPDP formats, as well as the ASC X12N 835 format when applicable (42 CFR §438.242[c][4])

The regulations also allow CMS to withhold federal financial participation from states that fail to comply with the data submission and validation requirements (42 CFR §438.818[c]). Federal regulations also require that states audit managed care plan encounter data at least once every three years (42 CFR §438.602[e]).

Importance of encounter data. Many recent reports emphasize the importance of complete, accurate, and timely encounter data for the purposes of oversight, program integrity, and evaluation of Medicaid program effectiveness (Government Accountability Office [GAO] 2017a–c, 2018a–c). Such reports also acknowledge the need for all entities involved in producing and reporting encounter data—providers, managed care plans, states, and CMS—to work to improve the data's quality. When a state fails to submit accurate and complete encounter data to the Transformed Medicaid Statistical Information System (T-MSIS), CMS may impose financial penalties if, after giving adequate notice, the state cannot make its data submission compliant (42 CFR §438.818[b]-[c]; U.S. Department of Health and Human Services' Office of the Inspector General 2018).

B. Purpose of the toolkit

This toolkit provides practical information that states can use to validate and improve the Medicaid encounter data they receive from managed care plans. It's designed to support state Medicaid staff who manage the daily operations involved in validating encounter data, as well as senior managers and policymakers who oversee this function. Besides describing the foundational activities all states should perform to ensure high quality data, this toolkit contains examples of current state practices, checklists to help readers conduct validation, and links to resources that provide helpful tips and tools.

This toolkit is one of several initiatives sponsored by CMS to help state Medicaid agencies (1) comply with federal requirements for reporting encounter data, (2) improve the accuracy and completeness of their data, and (3) strengthen states' capacity to analyze and use the data to evaluate and monitor outcomes for managed care programs. The toolkit contains updates on information that appeared in a 2013 toolkit on encounter data validation (Byrd et al. 2013) but refers readers to the 2013 toolkit sections that remain useful. It also describes many practices that state Medicaid officials discussed in interviews and conference calls in 2018 (see Section D of this chapter for the methods and information sources used to produce this toolkit).

> This symbol is used throughout the toolkit each time we reference the 2013 toolkit.

Chapter I:
Background, purpose, and overview of the toolkit

Although this toolkit focuses on the steps that agencies can take to validate encounter data, knowing how encounter data flows from providers to payers and oversight entities is vital to understanding barriers to the accuracy and completeness of these data. Figure I.1 shows the flow of encounter data in detail. (The pathways for encounter data are usually slightly different when providers, such as pharmacies, have subcapitated or subcontracted arrangements with managed care plans.) Appendix I includes a simplified version of this flow chart that can be used to brief agency leaders, legislators, and others who may be interested in understanding encounter data flow at a more basic level.

Figure I.1. **Encounter data flowchart with key processing and validation steps**
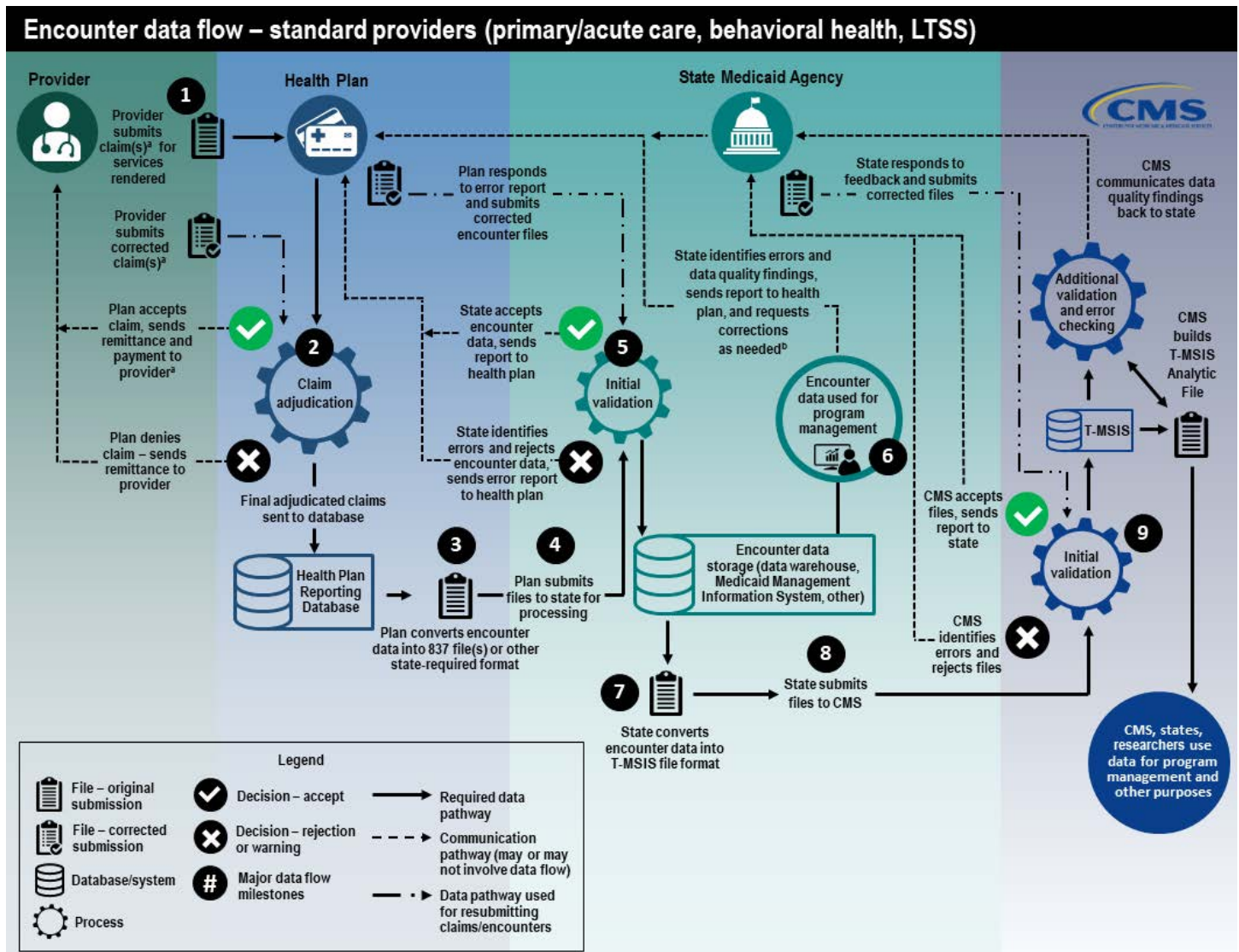
Notes:
[a] This flow chart shows provider/managed care plan data exchange under fee-for-service (FFS) payment arrangements between Medicaid managed care plans and providers. When managed care plans execute capitated contracts with providers or use value-based or incentive-based payments, the data flow looks similar to the flow shown here, but providers submit encounter records instead of claims, and payment may not be connected to the submission of individual encounters.
[b] States may also impose penalties on managed care plans for data errors, omissions, or noncompliance with the requirements for reporting encounter data.

Chapter I:
Background, purpose, and overview of the toolkit

C. Organization of the toolkit

This toolkit is organized into seven chapters:

- **Chapter I** describes the background and purpose of this toolkit.

- **Chapter II** defines "high quality encounter data," describes how states can use these data, and discusses how states' intended uses for the data affect the data validation process.

- **Chapter III** describes **foundational activities** that all states should conduct to achieve high quality encounter data.

- **Chapter IV** presents a tiered framework for encounter data validation and describes specific techniques that states can use to validate the data, including:

  - **Using pre-acceptance ("front-end") edits** to validate data compliance with standard HIPAA regulations, administrative transaction requirements, national code sets, and state-specific business rules

  - **Comparing encounter data with data from other sources**, such as managed care plans' financial reports, plans' claims and remittance advice, quality and performance measure reports, clinical records, and historic FFS or encounter records

- **Chapter V** shares ways that states can clearly define their expectations for managed care plans in **contracts or ancillary guidance documents**. Topics include:

  - **Minimum requirements for contracts,** such as data to identify service providers, expectations for timely data submission, information about the level of detail required in encounter records, requirements related to the use of standardized file formats, leadership certification of data accuracy and completeness, expectations for correcting data errors, and expectations for attending regular technical assistance meetings related to encounter data

  - **Additional considerations** including managed care plans' staffing requirements for processing and validating encounter data, things that plans are expected to do when monitoring or validating provider-level data and when interacting with providers or subcontractors, and references to ancillary guidance documents

- **Chapter VI** describes steps that states can take to **work with managed care plans** to obtain high quality encounter data. For example, states can use **incentives and penalties** to encourage managed care plans to comply with state standards. States can also develop **collaborative relationships with plans** through supportive activities, including training, technical assistance, and communications, to promote error correction and to obtain feedback for the continual improvement of data processing.

- **Chapter VII** shares **additional resources** on encounter data and web pages featuring states' contracts with managed care plans.

D. Methods and information sources

Information in this toolkit comes from state interviews, group discussions during a call series, and document reviews. Specifically, Mathematica interviewed Medicaid officials in 12 states in spring 2018 regarding their validation practices for encounter data. In partnership with CMS and the National Association of Medicaid Directors, Mathematica also hosted a series of five webinar forums between June and September 2018 for state Medicaid staff on topics related to encounter data validation. We also reviewed contracts, manuals, and other resources publicly available on state Medicaid agency websites to identify examples of validation practices featured in this toolkit.

Throughout the toolkit, we use parenthetical citations to cite information drawn from reviews of state managed care contracts or other print sources. Reference lists for these sources are included at the end of each chapter with citations. Information on state practices that is presented without a parenthetical citation was drawn from interviews and webinar forums conducted in 2018.

Chapter I References

Byrd, Vivian, Jessica Nysenbaum, and Debra Lipson. "Encounter Data Toolkit." Washington, DC: Mathematica Policy Research, November 2013. Available at https://www.medicaid.gov/medicaid-chip-program-information/by-topics/delivery-systems/downloads/medicaid-encounter-data-toolkit.pdf. Accessed November 1, 2018.

CMS. "2016 Medicaid Managed Care Enrollment by Program and Population (All)." 2018. Available at https://data.medicaid.gov/Enrollment/2016-Managed-Care-Enrollment-by-Program-and-Popula/4n8n-e6kv. Accessed September 26, 2018.

GAO. "Medicaid: Program Oversight Hampered by Data Challenges, Underscoring Need for Continued Improvements." January 2017a. Available at https://www.gao.gov/assets/690/681924.pdf. Accessed September 26, 2018.

GAO. "Medicaid Managed Care: Improved Oversight Needed of Payment Rates for Long-Term Services and Supports." January 2017b. Available at https://www.gao.gov/assets/690/681946.pdf. Accessed September 26, 2018.

GAO. "Further Action Needed to Expedite Use of National Data for Program Oversight." December 2017c. Available at https://www.gao.gov/assets/690/688857.pdf. Accessed September 26, 2018.

GAO. "Evaluations Yielded Limited Results, Underscoring Need for Changes to Federal Policies and Procedures." January 2018a. Available at https://www.gao.gov/assets/690/689506.pdf. Accessed September 26, 2018.

GAO. "Medicaid: CMS Should Take Steps to Mitigate Program Risks in Managed Care." May 2018b. Available at https://www.gao.gov/assets/700/691619.pdf, May 2018. Accessed September 26, 2018.

GAO. "Medicaid Managed Care: Improvements Needed to Better Oversee Payment Risks." July 2018c. Available at https://www.gao.gov/assets/700/693418.pdf. Accessed September 26, 2018.

U.S. Department of Health and Human Services' Office of the Inspector General. "Weaknesses Exist in Medicaid Managed Care Organizations' Efforts to Identify and Address Fraud and Abuse." July 2018. Available at https://oig.hhs.gov/oei/reports/oei-02-15-00260.pdf. Accessed September 26, 2018.

Chapter II:
Definition of high quality encounter data and their uses

A. Components of high quality encounter data

As shown in Figure II.1, encounter data are high quality when they are:

- **Complete**, meaning the data provide a record of all services rendered to managed care enrollees, and all data in the plan's data set have been successfully transferred into the state's data system.

- **Accurate**, meaning the data that managed care plans maintain represent the actual services rendered; when they were rendered (the service date); to whom they were rendered (the enrollee); by whom they were rendered (the provider); and, if a payment was rendered in connection to the service, how much was paid. Plans should also successfully map this information between themselves and the state to ensure that the data stored in the state's system match the data stored in the plan's system.

- **Consistent**, meaning the data elements in individual encounter records line up with each other (for example, the procedure codes for the services provided are consistent with the diagnosis codes reported because the latter are linked to conditions for which such services are typically rendered), and all plans submit data and files using the same forms, formats, and definitions.

Figure II.1. Components of high quality encounter data

- **Timely,** meaning plans submit all data by the state-specified deadlines so that the state can use the data for program administration and management and can submit data to CMS on time.

B. Uses of quality encounter data

States can use high quality encounter data for a number of program management and oversight purposes, including capitation rate setting for managed care plans; quality measurement, monitoring, and reporting; managed care oversight and program integrity; and policy making and decision support. Below are some common purposes and examples of encounter data use.

- **Capitation rate setting.** Nearly all states interviewed for this toolkit (11 out of 12) reported that they use encounter data for capitation rate setting, in accordance with federal regulations (42 CFR 438.5[c]). Some states have been using encounter data this way for many years (15 years in *Arizona*), whereas others have only recently begun. When states use encounter data in rate setting, they must ensure that the data accurately represent services rendered, given that inaccurate data can lead to higher or lower payments to managed care plans than appropriate for the populations covered. When states base their payments on complete and accurate encounter data, plans have a direct financial incentive to improve the quality of these data.

- **Quality measurement, monitoring, and reporting.** Several states use encounter data to construct quality measures for program management, public reporting, and program evaluation. For example, *Arizona* uses encounter data, sometimes combined with electronic medical record (EMR) data, to construct quality and performance measures, such as Healthcare Effectiveness Data and Information Set (HEDIS) measures. *Kentucky* uses encounter data to construct measures of emergency department and dental care use, as required for the annual 1115 demonstration reports that it provides to CMS. *Maryland* uses

encounter data to construct quality measures for annual evaluations of its Medicaid managed care program, including measures that examine dental access, emergency room usage, and hospital usage.

- **Contract oversight.** Many states also use encounter data to support both routine and ad-hoc analyses to verify that managed care plans are following state program rules and meeting their contractual requirements. For example, states can compare beneficiaries' dates of birth to service code fields in encounter records to ensure that age-restricted services are only provided to beneficiaries in the accepted age range. States can compare the paid amounts and provider types in encounter records to ensure that certain provider types (for example, federally qualified health centers or behavioral health providers) are being reimbursed at the state-specified payment level. They can calculate the percentage of plan members who receive contractually mandated services (such as primary care visits and vaccinations). Lastly, states can link beneficiary demographic information in the eligibility file with service data in the encounter records to ensure that plans are adequately and consistently serving all Medicaid populations.

- **Program integrity.** Encounter data are crucial for states' efforts to strengthen and maintain program integrity. In an investigation of managed care plans in 38 states, the Office of the Inspector General (2018) found that plans did not always identify and recover overpayments, including those associated with fraud or abuse. Given that encounter data are used to set capitation rates and oversee program performance, a number of states use these data to ensure important aspects of program integrity, including appropriate service provision, provider participation, and service charges. States can analyze encounter data across plans to see if particular providers appear to be providing more services than are feasible (for example, providing services more than 24 hours a day) or if particular beneficiaries are receiving improbable amounts of services (for example, receiving services in three different cities on the same day). States can also use encounter data to identify providers who receive unusually high or low payments from managed care plans.

- **Policy making and decision support.** Many states report using encounter data for internal program administration and decision making and for the provision of information to legislators, state executive officers, or other policy makers, often in response to ad hoc requests. Many states also use encounter data to predict how state modifications to the structure of their Medicaid programs—for example, changes to payments or coverage—could affect access to care. As states cover more populations through managed care, encounter data represent the most accurate source of information about the use and costs of Medicaid services. States may reach misleading conclusions if they instead use FFS claims data to conduct analyses and extrapolate the results to populations and services covered by managed care.

C. How uses of encounter data affect validation

States should consider the ultimate uses of encounter data when designing validation approaches and ensure that edits examine key data fields to support each desired use. All uses described above require that encounter records contain complete and accurate beneficiary identifiers, provider identifiers, and procedure codes. In addition, states that use encounter data for certain purposes should pay particular attention to specific fields. For example:

- For **capitation rate setting,** states should verify provider payment amounts and diagnosis codes to ensure that capitation rates are adequate to cover the cost of the services in the contract and to support accurate risk adjustment.

- For **quality measurement, monitoring, and reporting,** states should check all fields used in quality measure calculations, including the date and place of service, diagnosis codes, and procedure codes.

- For **managed care oversight or program integrity,** states should focus on provider payment amounts and compare servicing providers to state provider registries or to federal and state lists of excluded providers to ensure that managed care plans are not paying unregistered or excluded providers for services.

Regardless of states' intended uses for encounter data, they should consider using a multifaceted validation approach that combines (1) automated, pre-acceptance ("front-end") edits and (2) comparisons of encounter data to other data sources ("back-end" checks). They can use automated, pre-acceptance edits to check that data in key fields are not missing, that specified data elements are submitted with the correct formats and values, and that data across reported fields are logical. States may also wish to compare beneficiary identifiers in encounter records to state eligibility data to verify a beneficiary's eligibility for Medicaid and managed care at the time when he or she received services—and to confirm that the services were appropriate given the person's demographics (for example, older adults should not receive early and periodic screening, diagnostic, and treatment [EPSDT] services). States can create internal benchmarks to compare the volume of encounter records received from managed care plans (or the volume of records for specific services) to historic FFS or encounter data in order to assess whether the number of records submitted in a certain time period is appropriate, based on states' experience.

States can also compare encounter data to various external data sources, such as provider registries and beneficiary eligibility files, managed care plans' financial reports, and clinical records, to validate the accuracy and completeness of the encounter data. Chapter IV provides more detailed information on each of these validation techniques.

Chapter II References

U.S. Department of Health and Human Services' Office of the Inspector General. "Weaknesses Exist in Medicaid Managed Care Organizations' Efforts to Identify and Address Fraud and Abuse." July 2018. Available at https://oig.hhs.gov/oei/reports/oei-02-15-00260.pdf. Accessed September 26, 2018.

Chapter III:
Foundational activities and resources to ensure high quality encounter data

To produce high quality encounter data that meet federal requirements for completeness and accuracy (42 CFR §438.242 and 438.818), states are encouraged to adopt a common set of practices regarding staff, contract requirements and other guidance, financial incentives and penalties, validation, and feedback to managed care plans. These practices—referred to as foundational activities and resources—are based on practices that most states reported using in the call series on encounter data validation in summer 2018. The participants also reviewed a draft of these practices and suggested changes to ensure that most states would be able to implement them.

A. State Medicaid staff dedicated to encounter data quality and analysis

- States should have dedicated staff that focus on encounter data quality and analysis, including one or more state staff, in addition to any external contractors used for this purpose.

- State staff dedicated to encounter data quality and analysis should coordinate with other key state staff who use encounter data for program administration, oversight, and program integrity to:

  ◦ Understand the ways in which encounter data are used,

  ◦ Design validation approaches that support the uses of encounter data, and

  ◦ Work with data users to identify, document, and resolve issues with the quality of encounter data.

> Chapter IV, Section F of this toolkit provides additional information about using state staff and external contractors for encounter data validation, and Chapter VI, Section B describes technical assistance methods used by states to help managed care plans submit high quality encounter data.

- States should have clearly identified points of contact at the state Medicaid agency responsible for encounter data quality and analysis who can work with and provide technical assistance to their counterparts at managed care plans.

  ◦ Technical assistance may be especially important when managed care plans first contract with the state or when there are major changes to the program or to a state's expectations regarding data submissions.

  ◦ State points of contact should be available to answer questions from managed care plans on an ongoing basis, as external factors such as staff turnover or changes in data systems can also affect the demand for technical assistance.

B. Contract requirements and other guidance

- Per federal regulations, state contracts with managed care plans must:

  ◦ Require managed care plans to submit information about the servicing provider in encounter records (42 CFR §242[c][1])

  ◦ Specify the timing of encounter data submission, including initial and corrected submissions (42 CFR §438.242[c][2])

  ◦ Require managed care plans to provide all encounter data that a state needs to submit for the T-MSIS (42 CFR §438.242[c][3])

> Chapter V of this toolkit describes key provisions that states should include in contracts with managed care plans or in ancillary guidance documents.

- Require managed care plans to submit encounters using the ASC X12N 837 and NCPDP formats and to use the ASC X12N 835 format as appropriate (42 CFR §438.242[c][4]; §438.242[b][3][iii])

- Require managed care plans to submit encounter data reports that comply with HIPAA standards (42 CFR §438.818[a][1])

- Require that leaders of managed care plans (for example, the chief executive officer, chief financial officer, or an authorized delegate) certify or attest that data submissions are complete and accurate (42 CFR §438.606[a])

- Contracts should also require that:

  - Staff at managed care plans who manage encounter data meet with their state Medicaid agency counterparts regularly to identify, review, and resolve issues related to encounter data quality.

  - Managed care plans reconcile or correct data errors identified through validation within specified time frames.

- Contracts should clearly define state standards for data quality—including acceptable rates of accuracy and completeness for missing, surplus, and erroneous records—and/or should specify an overall error rate (External Quality Review [EQR] Protocol Four).

- Companion guides, data dictionaries, and ancillary guidance documents should be easily accessible for managed care plans and should provide:

  - Detailed expectations for the format and schedule for data file submissions and all required data elements (42 CFR §438.242[c][2], §438.242[b][2], §438.604[a][1])

  - Clear guidance on how encounters will identify the servicing provider (42 CFR §438.242[c][1])

  - Written procedures or quality assurance protocols to help managed care plans understand how the state will validate the submitted data (42 CFR §438.242[d])

- States should involve managed care plans in the initial development of validation requirements and processes described in official state documentation, and seek feedback on their feasibility.

C. Financial incentives and penalties

- State contracts with managed care plans should clearly articulate penalties for noncompliance with the state's expectations regarding encounter data submissions.

  - Penalties can be monetary or nonmonetary.

  - Examples of noncompliance include submitting missing or duplicate data, failing to submit data on the required schedule, and excessive errors or resubmissions.

> For more information about incentives and penalties that can motivate plans to comply with state expectations for encounter data, see Chapter VI, Section A.

- States could withhold a portion of the capitation payment and release it to the managed care plan only if the total provider payments reported in encounters is within a specified percentage of the payment amount reported by the managed care plan (for example, in the plan's financial ledger).

- States should use penalties and incentives consistently and in accordance with contract terms.

D. Validation

At a minimum, states should:

- Monitor compliance with all standards for data quality defined in contracts and other guidance.

- Ensure that validation approaches support the intended uses of encounter data (for example, program administration, oversight, and program integrity) (42 CFR §438.242[c][2]).

> Chapter IV describes the steps that states should take to validate plans' encounter data.

- Adopt methods of validation that include both pre-acceptance checks that validate encounter records based on specific edits and back-end checks that compare encounter data with other data sources.

- Ensure that validation activities support the state's ability to comply with federal requirements for reporting data to CMS (42 CFR §438.818[a][2] and [3]).

1. Validation using pre-acceptance edits

- States should design and implement initial, automated pre-acceptance edits that ensure a minimum level of consistency among encounters that are accepted into a state's data system or warehouse. This includes only accepting encounters that are:

  ○ Complete (that is, not missing any state-required data elements)

  ○ Unique (that is, not duplicates, defined as multiple encounters submitted for the same service, to the same member, by the same provider, on the same date)

  ○ Incurred for members enrolled in the managed care plan on the date of service

  ○ For valid diagnoses and procedures

- **Federal regulations require managed care plans to submit encounters using the ASC X12N 837 format, which enables states to use HIPAA Strategic National Implementation Process (SNIP) edits to validate the basic integrity of the submissions.**

  ○ States can use a variety of commercial, off-the-shelf validation tools to evaluate plans' compliance with HIPAA SNIP levels 1 to 3.

- **If using standardized or existing state FFS edits, states should ensure that the edits are modified to apply to encounter data.**

  ○ States will need to "turn off" or modify FFS edits so that they appropriately apply to encounter records, or create custom edits for encounter records.

2. Validation using other data sources

- States should consider comparing total paid amounts from encounter data to financial reports generated from the managed care plans' ledgers to identify discrepancies between the two data sources.

- States should consider comparing summary trends in encounters with one or more additional sources of external data (for example, benchmarks or historical trends in FFS data or encounter data from previous years, HEDIS scores, and so on).

E. Feedback to managed care plans

- States should provide timely, written feedback on their data-validation findings to managed care plans.

  ◦ This feedback should include remittance advice on the ASC X12N 835 file.

- States should alert managed care plans to the states' intended uses for encounter data.

- States should establish mechanisms for regular, clear communication with managed care plans regarding state expectations for encounter data and any changes in expectations or processes for data collection. These mechanisms should also enable plans to ask questions of the state and obtain feedback on encounter data quality.

> Chapter VI provides examples of ways that states can provide clear, consistent feedback to plans about encounter data quality.

  ◦ Mechanisms for communication could include meetings and regular email communications paired with a dedicated inbox.

- States should design and implement a process that managed care plans can use to test their data submissions to ensure that they will meet state expectations.

- States should regularly update contract requirements and companion guides, data dictionaries, and other guidance documents to reflect feedback from managed care plans and to clarify expectations regarding encounter data.

  ◦ Regular updates enable states to incorporate lessons learned from validation (for example, clarifying expectations that plans found unclear, or incorporating additions or revisions to encounter data submission or quality standards).

- States should communicate with managed care plans about data quality in a way that emphasizes collaboration and mutual support.

Chapter IV:
Ensuring high quality encounter data through ongoing data validation and encounter data audits

Validation and auditing are related but distinct activities. States use validation to ensure that data are complete and accurate, whereas audits are used to ensure the validation process is effective. This chapter describes techniques that states can use to validate Medicaid encounter data submitted by managed care plans and audit their validation processes.

This chapter describes techniques that states can use to validate Medicaid encounter data submitted by managed care plans. The chapter starts with a framework consisting of four key tiers of encounter validation (Section A), followed by examples of specific data validation methods that fall under all four tiers, including:

- Using pre-acceptance editing techniques (Section B)

- Comparing encounter data with financial reports from managed care plans (MCP) (Section C)

- Comparing encounter data with other data sources (Section D)

- Conducting program management and integrity analyses (Section E)

New in 2023: The 2023 updated version of this toolkit incorporates guidance about the encounter data audit process in Boxes IV.1–IV.2 and IV.4–VI.10 throughout this chapter. As noted in Chapter I, states are required to validate encounter data and to periodically (at least once every three years) audit their encounter data validation process to assess the accuracy, truthfulness, and completeness of their encounter data and the sufficiency of their validation processes.

This chapter also includes examples of audit activities that align with the encounter data audit requirements (Exhibit IV.1). These examples are presented in callout boxes throughout the chapter and alongside the recommended validation methods in each section.

The chapter concludes with the benefits and challenges of using internal staff or external contractors for encounter data processing, validation, and auditing (Section F).

Chapter IV:
Ensuring high quality encounter data through ongoing data validation and encounter data audits

---

Box IV.1. Encounter data audit

Federal regulations (42 CFR §438.602[e]) require that states audit managed care plan encounter data at least once every three years. Encounter data validation and encounter data audits are similar, but distinct, activities. Validation is used to ensure that data are complete and accurate, whereas audits are used to assess the effectiveness of a state's validation methods. Encounter data validation is an ongoing activity, whereas encounter data audits, as noted above, must be completed at least once every three years. Additionally, unlike data validation, encounter data audits must be conducted by an independent auditor, rather than MCPs or states (see "Independent auditors" box for more details).

Required analyses. The encounter data audit should assess the following:
- Compliance with national encounter data standards, such as the federal reporting requirements outlined in 42 CFR §438.242 and 42 CFR §438.818, ANSI ASC X12, or T-MSIS data dictionary formats.
- Compliance of encounter data with MCP contracts and state encounter data technical guides.
- Adequacy of the state's pre-acceptance encounter data edits to assess the accuracy, truthfulness, and completeness of encounter data.
- Comparison of encounter data to external data sources and benchmarks, such as financial reports, quality measures, or medical records.

Required reports. The encounter data audits should be presented in a written report describing the (1) methodology used to conduct the audit, (2) data sources used, and (3) results of the audit, including deficiencies in encounter data validation processes and recommendations for improvement. The state Medicaid agency may also provide responses to the audit findings, including planned steps to address those findings.

As noted in the final rule issued by CMS in April 2016, states may use the processes outlined in the CMS External Quality Review (EQR), Protocol 5 (hereafter referred to as EQR Protocol 5) to satisfy the encounter data audit requirement. This chapter highlights relevant activities from EQR Protocol 5 and/or state examples for each validation method.

A. Tiered framework for encounter data validation

To ensure accurate, complete, timely, and consistent encounter data, states should use a variety of validation practices, which fall under four tiers. These tiers provide a framework for the validation techniques described in this chapter (Figure IV.1). Although most states use validation techniques from the first two tiers, ideally a state should incorporate techniques from all four tiers.

1. **Intrafield** validation verifies that the data in each field of the encounter data files comply with standard or state-specific rules. Many states use automated, pre-acceptance edits to conduct intrafield validation, including checking encounter files for missing values in required fields and verifying that fields contain appropriate values in the proper format before accepting the data into the state data system. For example, intrafield validation could include:
   - Checking for missing values
   - Verifying that date fields are in MM/DD/YYYY format and contain valid dates
   - Checking alpha and/or numeric formats and length against standards (e.g., ICD-10, CPT)
   - Verifying that data values are within specified ranges

Using the tiered framework for the encounter data audit

Audits should also follow the four-tier framework described in this chapter. Even when states only use validation practices from the first two tiers, audits should include analyses for all four tiers to best assess the accuracy, truthfulness, and completeness of the MCP encounter data and the sufficiency of the state's validation processes. Examples provided throughout this chapter cover all four tiers.

2. **Interfield** validation draws on data from other fields or records in the same file submission to verify the accuracy or appropriateness of data in a particular field. For example, interfield validation could include:
   - Identifying duplicate records
   - Verifying that inpatient discharge date is after admission date
   - Comparing procedure codes to place of service
   - Comparing procedure codes to diagnosis codes
   - Comparing payment amounts to procedure codes, service units, etc. (to identify anomalous payment amounts)

3. **Interfile** validation involves comparing encounter data with information from other Medicaid files in the state's data system, such as eligibility and enrollment files. For example, interfile validation could include:
   - Verifying enrollee eligibility on the date of service by comparing beneficiary identifiers in encounter data files to state eligibility/enrollment files
   - Comparing encounter data service and/or enrollee totals to historical FFS and/or encounter data, or to benchmarks developed based on historical encounter or fee-for-service data. (Benchmarks estimate the volume of encounters expected in a specified time period by population, provider type, service type, etc.)

4. **Intersource** validation involves comparing encounter data with information stored outside of the state's data system, such as in a managed care plan's financial reports. For example, intersource validation could include:
   - Comparing encounter paid amounts to managed care plans' financial reports or other external data sources
   - Comparing encounter data service counts (during a specified time period) to reports of HEDIS measures (or other quality/performance indicators)
   - Comparing information in encounter records to provider medical records to match diagnosis codes, procedures performed, dates of service, etc.

Figure IV.1. Four tiers of validation
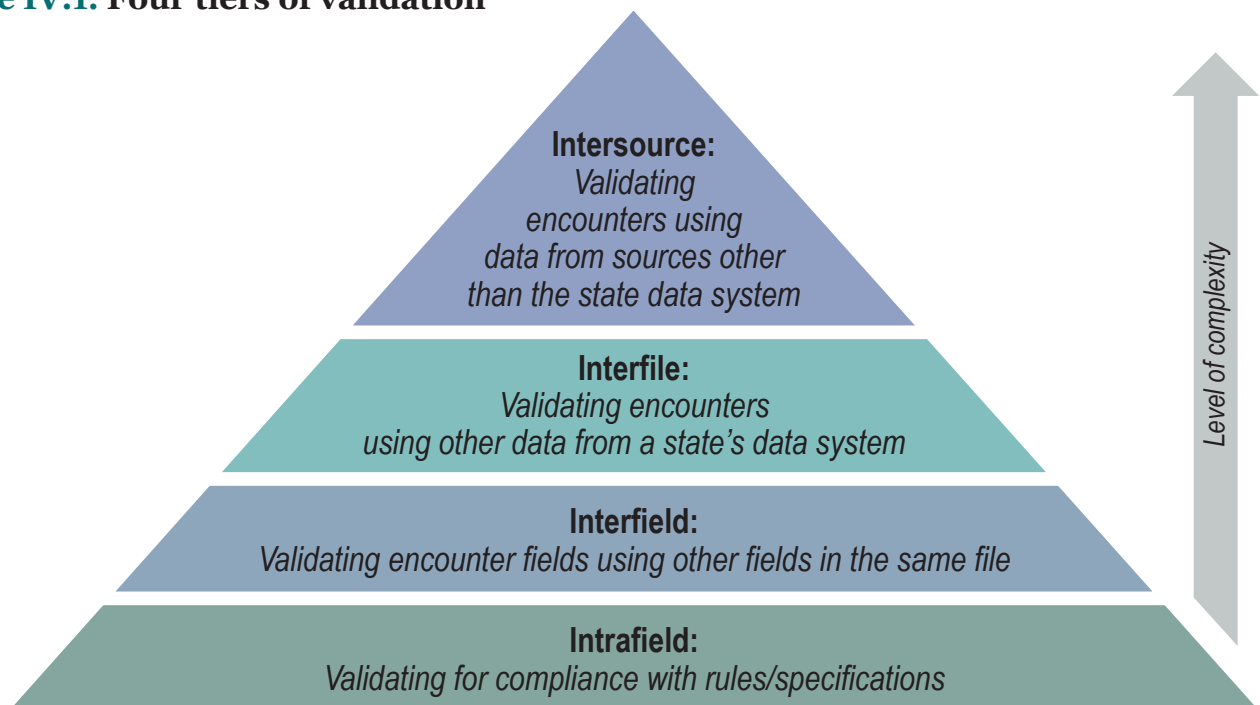
Intersource:
Validating encounters using data from sources other than the state data system

Interfile:
Validating encounters using other data from a state's data system

Interfield:
Validating encounter fields using other fields in the same file

Intrafield:
Validating for compliance with rules/specifications

Level of complexity

Source: Mathematica.

B. Using pre-acceptance edits

Nearly all states interviewed for this toolkit described the use of initial pre-acceptance edits as crucial to ensuring that they only accept complete and accurate encounter data into their systems. States described two forms of pre-acceptance edits, which are mainly used for intrafield and interfield validation: (1) edits that identify potential errors for further review or follow-up and (2) edits that reject incomplete or erroneous data submissions. Most of the interviewed states use a mix of both techniques, depending on the data fields. For example:

- *Minnesota* uses pre-acceptance edits to flag encounters that are missing a National Provider Identifier (NPI) and encounters in which the provider is not listed in the state's Medicaid registry. Minnesota also uses pre-acceptance edits to reject encounter records in which the provider's paid amounts on a line record do not match those in the header records.

- *Michigan* flags encounters in which the referring, ordering, or attending provider type is not allowed for the role specified. The state also flags encounters in which the procedure code requires a referring or ordering provider, but such a provider is not identified in the encounter record. In addition, Michigan rejects encounters with missing or invalid units of service, invalid diagnosis codes, missing beneficiary identifiers, or beneficiary identifiers that are not listed in the state's eligibility files.

- *Washington* flags encounters for services that should only be provided once for any person (for example, a hysterectomy or appendectomy) and rejects encounter records with missing dates of service, missing or invalid procedure codes, invalid places of service, or invalid beneficiary identifiers (that is, identifiers that are not in line with the state's lists of Medicaid-eligible beneficiaries or beneficiaries who are not enrolled in the submitting managed care plan).

Many states use commercial, off-the-shelf electronic data interchange (EDI) validator tools to run pre-acceptance edits on encounter data files. Typically, these tools apply a number of standardized edits and enable states to add or modify standard edits to support state-specific validation needs. For example, *Arizona* and *Tennessee* both use commercial EDI validator tools, and state programming staff incorporate state-specific edits into their tools' interfaces. *Virginia* couldn't find a single-source commercial tool that fit its needs; thus, the state recently combined multiple, single-use commercial tools to build its own comprehensive, internal encounter processing system for data exchange, validation, and visualization (Exhibit IV.1).

Pre-acceptance edits can be used for many purposes, including (1) validating compliance with HIPAA privacy and security requirements, (2) validating compliance with standard formatting rules and code sets, and (3) validating compliance with state-specific business rules. Each purpose is described in more detail in the subsections that follow.

Chapter IV:
Ensuring high quality encounter data through ongoing data validation and encounter data audits

---

Box IV.2. Auditing pre-acceptance edits

Audits should analyze aggregate data from pre-acceptance edits, including trends, plan comparisons, and averages to assess the accuracy, truthfulness, and completeness of the MCP encounter data and the sufficiency of the state's validation processes. These analyses should be tailored to the pre-acceptance edits used by the state. Examples of these analyses include:

- Calculating the average performance of a particular edit (e.g., incomplete or invalid diagnosis codes) and comparing the performance of the edit used for other plans.

- Calculating frequency distributions, ratios, means, and medians to assess the reasonableness of specific fields in the plan's encounter data. This could include analyzing encounter data volume by month across specific variables, such as provider type, to identify missing and fluctuating data.

- Assessing relationships between encounter data fields, such as the number of outpatient visits and the number of prescriptions and ancillary services (e.g., labs and x-rays) to identify missing or unreasonable data.

States may find additional details and examples in Activity 3, Steps 2 and 3 of the EQR Protocol 5.

Chapter IV:
Ensuring high quality encounter data through ongoing data validation and encounter data audits

Exhibit IV.1. **Virginia's encounter processing system**

Virginia launched a new encounter processing system in September 2017, which it plans to use to process and validate encounter data from all of the state's managed care programs. When Virginia began planning to replace its Medicaid Management Information System (MMIS), state staff concluded that the most efficient and effective way to process and validate encounter data would be to build their own encounter processing system, using a modular structure made up of commercial, off-the-shelf products from the Microsoft Exchange System. Virginia's system has four components:

Submission Portal	EDI File Validation and Compliance Check	Business Rules Engine	Analytics Platform
• MCPs submit data and receive feedback about data timeliness, accuracy and completeness	• Ensures files are in valid formats • Checks data for HIPAA compliance (SNIP levels 1-4) • Prepares data for business rules engine process	• Validates data against state business rules • Some rules identify Errors (E); others are informational (I) • Rules are based on SNIP levels 5-7	• Produces data visualizations • Runs data analyses for program management and decision support

Virginia's decision to build and manage its own system enables the state to make changes to the system quickly, communicate effectively with managed care plans, and maintain tight control of the data. Staff can modify business rules based on observations of the data and feedback from managed care plans. Requiring plans to use a single web portal to submit data and access reports keeps all key information in one place. The state expects that its system's analytics platform will support ad hoc analyses and targeted data visualizations to inform program management. The image below, from page 8 of Virginia's *Encounters Technical Manual,* shows how encounter data flow through each phase of the state's new system:
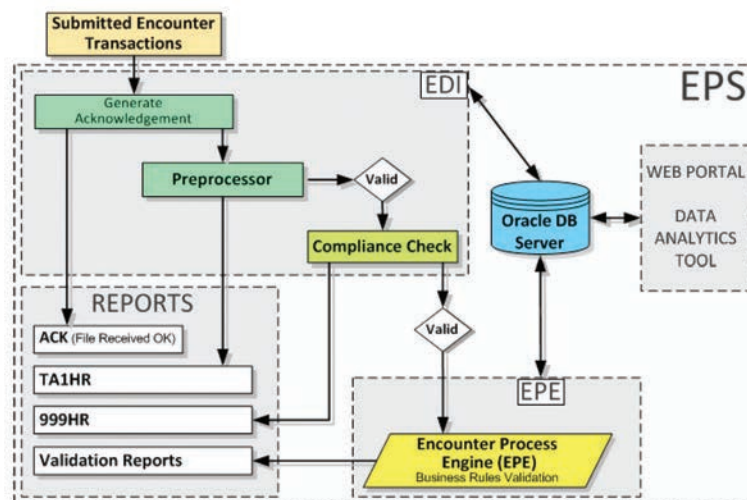
Sources: 2018 Mathematica interview with Virginia Medicaid staff; Virginia Department of Medical Assistance Services (DMAS). "Encounter Data Validation Forum #3: Internal Validation Approaches." Presentation for the Encounter Data Validation Forum Series, August 9, 2018; and Virginia's Encounters Technical Manual version 1.5 (not available online).

[1] For information about HIPAA SNIP-level edits, see Chapter IV, Sections B.1 and B.2, and Table IV.1.

Chapter IV:
Ensuring high quality encounter data through ongoing data validation and encounter data audits

1. Validating HIPAA compliance

Federal rules require state Medicaid encounter data from managed care plans to comply with HIPAA privacy and security standards (42 CFR §438.818[a][1]). To comply with these requirements, states must use ASC X12 (version 5010) or NCPDP (versions D.0 and 3.0) data transaction formats.[2] States that require plans to submit data in the X12 format can ensure HIPAA compliance by validating encounter records in accordance with what are known as WEDI SNIP levels (Table IV.1).

Of the 12 states interviewed in 2018, many reported using some SNIP edits to validate encounter data for HIPAA compliance. Two states were validating encounter data at all seven WEDI SNIP levels, and another is planning to advance its validation techniques to cover all seven levels in 2019. The remaining states reported validating through WEDI SNIP levels 3 or 4. (Table IV.1 describes the seven SNIP levels.)

Box IV.3. The development of WEDI SNIP levels

Since 1996, the Workgroup for Electronic Data Interchange (WEDI) has been an advisor to the U.S. Department of Health and Human Services and a neutral convener for the health care industry on topics related to HIPAA implementation. As part of this work, WEDI supported the development of a Strategic National Implementation Process (SNIP) to create baseline standards for EDI transactions. Through this process, the workgroup helped establish seven standard levels of data testing to guide states' and health plans' validation strategies (Table IV.1). States can use these seven levels of testing to validate HIPAA compliance and the basic integrity of managed care plans' data.

Box IV.4. Auditing encounter data compliance with HIPAA requirements

Audits should assess whether the state uses WEDI SNIP edits to validate the encounter data. This may require reviewing technical documents produced by the state, such as an encounter manual or companion guide, to ensure that the validation processes outlined meet the WEDI SNIP level requirements. For example, Virginia's technical manual says all transactions must pass SNIP levels 1, 2, 3, and 4, including those performed by subcontractors.

As part of Utah's 2019 audit, the state's independent auditor reviewed its MCP contracts and found that the state only required MCPs to comply with SNIP levels 1 and 2. The auditor recommended that the state include specifications in its contracts to enable MCPs to comply with all seven SNIP levels. The auditor also encouraged the state to review the processes of other states that validate using WEDI SNIP, focusing on processes that Utah does not currently use.

Chapter IV:
Ensuring high quality encounter data through ongoing data validation and encounter data audits

Table IV.1. WEDI SNIP levels of HIPAA compliance validation

WEDI SNIP level	Description
1: Integrity testing	Integrity tests validate the basic syntactical integrity of electronic data submissions by checking for valid segments, segment order, and the attributes of data elements (segment names must be valid for the type of data transaction); data-element types (string, number, date, time), and formats must comply with specifications; and syntax of the data file must comply with X12 rules.
2: Requirement testing	Requirement tests check the data submissions against specific requirements delineated in the *HIPAA Implementation Guide.* Level 2 validation activities include ensuring that: • Segment and loop repeat counts meet minimum requirements • Data elements are used or not used as appropriate • Data elements contain valid code values • Intrasegment ("self rules") are met (for example, if element A in a segment is populated or contains a specific value, element B in the same segment should be populated or contain a specific value)
3: Balancing	Balancing tests check the data transactions to ensure that values in summary fields match their corresponding record or segment counts (for example, whether claim line amounts add up to claim totals and whether service-level amounts match claim amounts).
4: Intersegment situational testing	Intersegment situational testing is similar to intrasegment testing, but the former validates relationships between data segments, instead of relationships between data elements in a segment. This level of testing checks that rules for *conditional* usage of loops, segments, and data elements are followed. For example, if segment A is present, then segment B must be present, or if a certain data element in segment A is populated or contains a certain value, then another data element in segment B must be populated or contain a certain value. Level 4 testing is typically dependent on the rules set by the payer or state, so specific level 4 compliance edits must be configured to align with those rules.
5: External code-set testing	Code-set testing checks certain data elements to ensure the use of standardized code sets, such as ICD-10 diagnosis codes, the Healthcare Common Procedure Coding System (HCPCS), or Current Procedural Terminology (CPT) procedure codes. Level 5 testing also ensures that the code sets are appropriate for the specific data element or transaction.
6: Product-type/ type-of-service/ line-of-business testing	These tests validate data submissions against the HIPAA requirements for certain types of health care services, such as hospice care, home health, durable medical equipment, or ambulance services, to ensure that the encounter records for these services are created and processed properly.
7: Trading partner-specific testing	Trading partner-specific tests validate data submissions against the requirements in the *HIPAA Implementation Guide* that are specific to Medicare, Medicaid, and the Indian Health Service.

Sources: CMS. "Testing! Testing! Do You Read Me? Road Maps to HIPAA Compliance: Volume 2, Map 3." February 20, 2002. Available at https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MMIS/downloads/vol2map3.pdf. Progress Software Corporation. "HIPAA Compliance Levels (WEDI SNIP)." 2016. Available at https://knowledgebase.progress.com/servlet/fileField?id=0BEa00000000AEm. Accessed September 28, 2018. RDPCrystal. "What Are the SNIP EDI Validation Levels?" RDPCrystal EDI Library Blog, May 4, 2017. Available at http://www.rdpcrystal.com/sniplevels/. Accessed September 28, 2018.

Chapter IV:
Ensuring high quality encounter data through ongoing data validation and encounter data audits

2. Validating compliance with standard formatting rules or code sets

Like the WEDI SNIP level 5 tests, which ensure that encounters comply with standardized procedure code sets, such as HCPCS or CPT, states can use pre-acceptance edits to validate compliance with other standardized coding methods. For example, states can ensure appropriate use of procedure codes and units of service in accordance with the standards set by the National Correct Coding Initiative.[3] Some states have set their formatting and coding guidelines to line up with the T-MSIS data dictionary[4] so as to simplify the process of converting data for submission to CMS; these states may also want to use pre-acceptance edits to evaluate the degree to which data submissions from managed care plans conform to the T-MSIS data definitions.

Box IV.5. Auditing compliance with standard formatting or code sets

Audits should review the pre-acceptance edits for code sets to understand if the edits align with the appropriate guidelines, such as those set forth by the National Correct Coding Initiative, Centers for Medicare & Medicaid Services (CMS), National Center for Health Statistics (for ICD-10 diagnosis codes), and the CPT editor panel (for CPT and HCPCS codes). The auditor should also review pre-acceptance edits to ensure encounter data follow the standard formatting required for submission to CMS.

Example analyses include:

- Comparing pre-acceptance edits used to verify the type and size of each data field against the T-MSIS data dictionary or other guideline.
- Assessing whether the pre-acceptance edits for ICD-10 diagnosis codes correctly identify missing, invalid, or incomplete codes and reviewing whether the edits align with the most recent guidance from CMS.

States may find additional details and examples in Activity 3, Step 2 of the EQR Protocol 5.

If states are not currently using a data dictionary or other well-documented guidelines, states should create such documentation and ensure pre-acceptance edits can validate encounter data compliance in alignment with this document. States may also consider checking for compliance with standardized rules during a review of a random sample of clinical records (see Box IV.9 for details on clinical record review). For example, Washington included a summary of the auditor's review of missing or altered procedure codes from a random sample of encounter data. The audit uncovered instances where ICD-10 procedure codes were missing or altered by the MCP.

---

3. Comparing FFS edits to encounter validation needs

States that are new to collecting encounter data from managed care plans often create pre-acceptance edits for these data based on edits used for FFS claims adjudication. However, this approach is problematic in several ways. Because encounter data do not require adjudication (that is, payment), edits used to adjudicate FFS claims may not apply to encounter data, and edits used to reject improper FFS claims may inadvertently block clean encounter records from entering the state's data system. For example, in *Minnesota*, adjudication edits applied to FFS claims typically reject claims when the billing provider is not allowed to bill for a particular claim type. Applying these edits to encounter data would reject encounter records that have already been paid by plans and are not subject to states' FFS Medicaid payment schedules.

Evaluating FFS edits before using them with encounter data. Because of the differences between FFS claims and encounter data, states should thoroughly review FFS edits before using them to validate encounter data. *Washington*, for example, conducted careful mapping early in its transition to managed care, evaluating the relevance of each FFS edit to the encounter data. Through this process, the state realized that certain fields needed to be treated differently in encounters for medical services compared with encounters for behavioral health services (for example, because patient and provider identifiers may be missing or represented differently in behavioral health encounters). To resolve this issue, the state created two pathways for encounter data submissions—one with edits for medical encounters and another with edits for behavioral health encounters. As Washington works to integrate medical and behavioral health care into a single managed care model, it is communicating with plans and providers to work toward a single pathway for

encounter submissions. Like Washington, *Minnesota* also realized that some of its FFS edits were not appropriate for encounter data. The state therefore stopped applying all of its FFS edits and gradually rebuilt an encounter-focused editing structure, which includes some FFS edits, some modified FFS edits, and some encounter-specific edits.

Stakeholder engagement. Determining which FFS edits to apply, turn off, or modify for use with encounter data requires a high degree of familiarity with the data submitted in each format (FFS claims and managed care encounters). To ensure that front-end editing systems can appropriately validate encounter data, states may wish to consult with a number of key stakeholders, including internal staff, managed care plans, and external contractors who work with claims or encounter data. Chapter VI of this toolkit shares tips on engaging plans, and Sections 3 and 4 of the 2013 Encounter Data Toolkit also provide information on understanding the data collected by plans and working collaboratively with plans.

Developing encounter-specific edits. Because key fields in encounter data may differ markedly from their FFS counterparts, states may need to develop new encounter-specific edits to validate certain fields in encounter records. For example, encounter records must include the amounts that managed care plans paid providers for services rendered; these data would not be present in an FFS claim. In addition, when other payers (besides the plan) are responsible for paying a provider, encounter records will include the secondary payer and its responsibility in a specific loop segment, but FFS claims do not require this. *Michigan* uses encounter-specific edits to ensure that encounter records submitted by plans have this other payer loop segment—along with a valid health plan identifier and a matching claim filing identifier, neither of which would be present in FFS claims.

4. Validating compliance with state-specific business rules

States can also use pre-acceptance edits to ensure that the encounter data submitted by managed care plans meet state- or program-specific standards and comply with the guidelines in state contracts or ancillary materials. (See Chapter V for tips on crafting high quality requirements for encounter data contracts.) For example:

- *New Jersey* uses an edit to identify encounter records submitted for beneficiaries who are incarcerated on the date of service. Beneficiaries are only eligible for Medicaid FFS coverage of inpatient treatment during incarceration, so this edit triggers a rejection of all outpatient encounter records and is indicated on the remittance report to the plan explaining the reason for the rejection.

- *Oregon* verifies that encounters for which plans denied provider payments do not have amounts listed in the fields for provider payment amounts. The state also verifies that encounters for which plans did pay providers have a payment amount listed or a payment amount of $0 paired with an acceptable reason code (for example, that the service was paid by a subcontractor or via a subcapitation arrangement).

- *Arizona* uses pre-acceptance edits to check the reasonableness of plans' payments for particular services by comparing the paid amount reported to the amount the state would have paid for the same services under FFS.

- *Tennessee* uses pre-acceptance edits to identify three types of erroneous records: (1) encounter records for voided claims that are missing the original claim number, (2) encounter records that are missing required segments (specifically, segments that become required because certain indicators or codes are present in particular data elements), and (3) encounter files in which line values (for example, the number of units of service indicated on each record in the file) do not equal the total summary values in the file header record. Tennessee also uses edits to automatically reject encounters with non-U.S. country codes, monetary amounts greater than $10 million, or negative values in fields where only positive values are allowed.

To identify the most common pre-acceptance edits across states, Mathematica reviewed edits used by six states: Maryland, Michigan, Minnesota, New Jersey, Tennessee, and Washington. We found that all six states either flag or reject encounters with missing or invalid dates of service, missing provider identifiers, and missing or invalid diagnosis codes, whereas five of the six states flag or reject encounters for other reasons. Table IV.2 shows the edits used by most of the states reviewed.

Box IV.6. Auditing compliance with state-specific business rules

Audits should assess MCPs' compliance with state-specific business rules to assess the accuracy, truthfulness, and completeness of the MCP encounter data and the sufficiency of the state's validation processes. To understand an MCP's process for updating source code to address state-specific business rules, the auditor may want to review the MCP's most recent Information System Capacity Assessment (ISCA) (see Activity 2, Step 1 of the EQR Protocol 5 for details on reviewing an MCP's ISCA). Audits should also assess whether the MCP has appropriately implemented the state-specific business rules by comparing any source documents containing state-specific business rules (e.g., technical manual or supplemental guidance documents) to the pre-acceptance edits. Any documentation provided to the MCP should be up-to-date and reflect the most recent state-specific business rules and polices. Box IV.2 outlines analyses for pre-acceptance edits the auditor should apply to any edits related to state-specific business rules.

Utah provides its health plans with companion guides that supplement national standards with Utah-specific requirements. During the state's 2019 audit, the independent auditor found the guides were out-of-date and did not contain all the data requirements needed for its MCP to process the encounter data appropriately.

Not surprisingly, many of the edits listed in Table IV.2 are configured to validate data fields that are especially important for certain uses of encounter data: rate setting and payment; quality measurement, monitoring, and reporting; and program integrity.

- **Rate setting and payment:** Validating diagnosis codes is important for ensuring accurate risk adjustment while rate setting. Validating provider payment amounts also helps establish baseline rates to project forward. Most of the six states reviewed for Table IV.2 flag or reject encounter records with missing or invalid data in these fields.

- **Quality measurement, monitoring, and reporting:** All six states flag or reject encounter data with missing or invalid dates of service, and five states flag or reject data with missing or invalid places of service. These fields are especially important in states that use encounter data for quality measurement, monitoring, and reporting because they are necessary for calculating quality measurements.

- **Program integrity:** Validating provider registration and payment amounts is important for program integrity; it ensures that managed care plans are not paying unregistered or excluded providers and that individual providers are not collecting suspiciously high aggregate amounts. Four states flag or reject encounter data in which provider identifiers do not match those recorded in state registries, and five states flag or reject data with missing or invalid provider payment amounts.

Table IV.2. Most commonly used pre-acceptance edits in six states

	Count of states using each edit (of six)	Edits used to flag or reject encounter records, by state					
		Maryland	Michigan	Minnesota	New Jersey	Tennessee	Washington
Flag or reject encounters with missing or invalid **date of service**[a]	6	X	X	X	X	X	X
Flag or reject encounters with missing **provider identifiers**	6	X	X	X	X	X	X
Flag or reject encounters with missing or invalid **diagnosis codes**	6	X	X	X	X	X	X
Flag or reject encounters with missing **adjudication or payment dates**	5	--	X	X	X	X	X
Flag or reject **duplicate submissions**	5	X	X	X	X	--	X
Verify **enrollee eligibility** on date of service	5	X	X	X	X	--	X
Flag or reject encounters with missing or invalid **place of service**[b]	5	X	X	--	X	X	X
Flag or reject encounters with missing or invalid **procedure codes**	5	X	X	--	X	X	X
Flag or reject encounters with missing or invalid **paid amounts**	5	--	X	X	X	X	X
Flag or reject encounters with missing or invalid **units of service** (in cases where such units are required)	5	X	X	X	X	--	X

	Count of states using each edit (of six)	Edits used to flag or reject encounter records, by state					
		Maryland	Michigan	Minnesota	New Jersey	Tennessee	Washington
Compare **provider identifiers** in encounter records to state provider registry	4	X	X	X	X	--	--
Flag or reject encounters in which procedure and/or diagnosis codes do not appropriately match a recipient's age or gender[c]	4	X	X	--	X	--	X

Source: 2018 Mathematica analysis.

[a] Invalid dates of service may include those that occur before the recipient's date of birth or after the recipient's date of death, an inpatient admission date that is before the recipient's discharge date (or vice versa), and dates of service on encounter records that are outside the date range specified in the file's header record.

[b] An invalid place of service, for example, may be an outpatient setting listed for an encounter in which the procedure recorded can only be performed in an inpatient setting.

[c] Before using this type of edit, states may want to ensure that the edits will not inhibit access to care in complex medical situations, such as people who are transgender or intersex seeking treatment that may appear atypical for their recorded gender but is still medically necessary.

C. Comparing encounter data to financial reports

The financial reports that managed care plans submit to states (sometimes called financial ledgers) can serve as an important point of comparison for encounter data. In particular, these reports can be used to periodically validate the aggregate provider payment amounts and units of service reported by plans in encounter records—fields that are critical to ensuring accurate rate setting and plans' payment and to ensuring state program integrity. In most states, plans must maintain financial records, including the amount that they pay network providers for services rendered to beneficiaries. They must also submit financial statements on a regular basis to the state department of insurance (or its equivalent) for the purpose of monitoring plan reserves and solvency. The content and level of detail related to Medicaid managed care in these reports varies across states; the more detailed and reliable the reports, the greater their utility for validating encounters.

1. Specifications for financial reports

In line with the federal requirement for states to monitor all aspects of plans' performance (42 CFR §438.66), states typically require plans to submit financial reports that provide the state with timely information on how the plans spend capitation dollars, the adequacy of the capitation rate, and emerging trends. Many states, such as *Arizona, Kansas,* and *New York*, have long-standing, detailed, robust financial reporting tools and monitoring processes created specifically for Medicaid (Table IV.3). Other states, including *Ohio* and *Florida*, have developed financial reporting tools and definitions for Medicaid based on standards established by the National Association of Insurance Commissioners. Some states find it easier to use this association's financial reporting forms and definitions, which are based on standards established for commercial health plans; however, these tools are not always useful for validating Medicaid encounter data as forms that are tailored to the populations and services covered by states' Medicaid managed care programs (Weinstock and Lipson 2015).

Regardless of the format, states with capitated managed care programs must develop financial reporting and monitoring tools that enable plans to consistently report information that the state can review regularly. Standard reporting templates, definitions, and reporting guides that outline specifications and requirements enable states to make uniform comparisons between plans, track changes

over time, and use the financial reports to validate encounter data. For example, many states require plans to report administrative and medical expenses separately in financial reports. Because paid amounts in encounter records should represent medical expenses, not administrative expenses, separating the two expenses in financial reports enables states to make an apples-to-apples comparison: the paid amount totals for a given time period in the encounter data versus the totals from the same period in the financial reports. States should also routinely review the financial reports, either through a desk review or on-site audit, to validate the information in them, to ensure the quality and consistency of the data, and to enforce any penalties for noncompliance (Dominiak and Libersky 2014).

When surveyed in 2015, *Arizona, Kansas,* and *New York* all reported that validation of encounter data using financial reports requires significant resources, especially in states with many managed care plans. To make effective use of the information reported, states must have sufficient resources as well as internal staff or external contractors who are skilled in financial analysis and knowledgeable about the intricacies of encounter data, data analysis, program policies, and statistics. But the investment pays off: benefits to states include greater financial accountability among plans; more accurate rate setting; and the ability to identify and resolve claims payment errors, problems with the state's edits, and other systems issues (Weinstock and Lipson 2015).

Table IV.3. Comparison of financial reports used to validate encounters in Arizona, Kansas, and New York

	Arizona	Kansas	New York
Source of financial information	• Audited and unaudited financial statements • Reporting requirements documented in a state-specific financial reporting guide and standard report[a]	Comprehensive financial form developed by the state with input from managed care plans (separate from the financial statements submitted to the insurance commissioner, which only provide aggregate data)	• Reporting requirements documented in the state-specific Medicaid Managed Care Operating Report • Each report must be certified for accuracy by the plan's chief executive officer and chief financial officer
Frequency of financial form submissions from managed care plans	• Annually (audited) • Quarterly (unaudited)	Monthly	Quarterly

	Arizona	Kansas	New York
Key information included in financial forms	• Expenses for each type of covered service • Separate reporting of administrative expenses, such as employee compensation, data processing, and marketing • Detailed information on assets, liability, equity, and revenue	• Costs by rate cell and service category, including costs for state plan services and for those covered under a waiver[b] • Utilization by rate cell for claims captured in the encounter system and for those that are not • Additional details for certain state plan or waiver-covered services, including "in lieu of" services,[c] subcapitation payment arrangements,[d] and other non-FFS payment arrangements • Separate reporting of administrative expenses and revenue	• Revenue and expense reports for each rate cell • A balance sheet report • Reports on claims incurred but not reported, by service category • Utilization reports • Separate reporting of administrative expenses and enrollment • Documentation of adjustments that reconcile current submissions with prior submissions

Source: Weinstock, Jason, and Debra Lipson. "Validation of Medicaid Managed Care Encounter Data Using Health Plan Financial Information: Do the Numbers Add Up?" Unpublished report submitted to the Center for Medicaid and CHIP Services. Mathematica: Washington, DC: December 2, 2015.

[a] Arizona Health Care Cost Containment System. "AHCCCS Financial Reporting Guidelines." Available at https://azahcccs.gov/Resources/Contractor/Manuals/financialReporting.html. Accessed September 28, 2018.

[b] Some service costs may not be captured by a managed care plan's encounter records. Some services may not have standard procedure codes or may be paid in nonstandard ways, such as consumer-directed budgets for home and community-based services. In addition, some services may not be covered under the contract, such as "value-added benefits" as allowed by 42 CFR §438.6(e), which permit MCOs to provide additional services that are not included in the capitation payment rate.

[c] "In lieu of" services are optional services that health plans may provide to substitute for more expensive services covered by state plans. Under federal rules, "in lieu of" services must be documented in encounter claims to be taken into account in setting capitated rates.

[d] "Subcapitation payment arrangements" refers to circumstances in which an MCO pays a network provider on a capitation basis rather than through FFS payments.

2. Analytic approach to comparing encounter data with financial data

State Medicaid agencies can assess the accuracy of a plan's encounter data and identify reporting gaps by comparing these data with data from financial reports. Because both the financial data and encounter data are provided by a state's managed care plans, these two sources should align. Therefore, a state can reasonably expect that the paid amount totals, in the aggregate and by service category, would match or be very similar (Weinstock and Lipson 2015). Of 12 states interviewed in 2018, half validate their encounter data through comparisons with financial reports, and those that do so considered this technique to be an important part of their strategy to oversee plan performance. Below are examples from these states and others interviewed in 2015.

- State Medicaid staff in *Arizona* compare encounter data extracts to financial statements for each managed care plan and by risk group, eligibility group, geographic service area, and category of service on a quarterly and annual basis. Analysts first look for large variances, such as a difference between the encounter data and financial data of more than 3 to 5 percent. When they find inconsistencies, they look at the monthly encounter data, review pending encounters, or discuss the discrepancies with the health plans. The validation process identifies gaps in data that might signal issues with encounter submissions or claims payments. If there are major differences between the two data sets, the agency will examine monthly encounter records and look for holes in the paid amounts or the submission statistics. If the problems appear to be caused by the state's automated edits—or otherwise seem not to originate with the plan—the agency will compare the data across plans to determine whether other plans are having the same problem. To identify problems in the state's encounter data system, the agency may also review pended encounters. Once these steps have been taken, state officials discuss any major discrepancies with the plans.

- *Kansas* determines the accuracy of plans' financial reports for withhold purposes based on the degree of match between aggregate values specified in financial reports and aggregate values from encounter data. However, when the state receives each plan's monthly financial data, it also compares the two data sets by service categories to identify anomalies or trends that merit discussion with the plan. Kansas does not apply withholds for inaccuracies or nonmatching payment amounts for individual service categories, but it does look carefully at all service areas to examine trends in specific types of encounters and financial data. As part of this process, the state compares data across plans to determine whether one plan appears to be out of line with the others. In doing so, Kansas considers the unique characteristics of each plan that may either reasonably account for differences or call for additional review. For example, one of the state's plans has related entities with which it subcontracts for certain services, and it pays less than market price for those services. The state accounts for this fact when comparing that plan's financial and encounter data with those of other Kansas plans.

- *New Jersey* compares the paid amounts submitted in encounter files against a "lag report" table in the financial reports that plans submit annually to the state. The paid amounts reported in encounter data must equal at least 98 percent, but no more than 100 percent, of the amounts reported in the plan's financial report for each category of claims payments. If the amounts reported in encounter data are outside of this range, the plan must prepare a reconciliation report to justify the discrepancies, and this report must be certified for accuracy by an independent auditor. If the plan does not submit a reconciliation report, or if the report is not approved by the state, the plan may be subject to liquidated damages.

- Each quarter, *Washington* requires plans to reconcile their encounter submissions with their financial reports (referred to as general ledger reports) and submit the results to the state. The reconciliation form, which is included in the plan contract, requires plans to enter the monthly total paid amounts from the encounter data and general ledger reports for inpatient/ outpatient claims, physician/other claims, prescription drugs, and dental services, along with the discrepancy between the two data sources for each claim type. The state checks the cumulative encounter data submitted on this form against the data in the state's warehouse and notifies the plan if the two sources differ by more than 1 percent. Plans must provide written justification for any discrepancies between the encounter data in the state's warehouse and the amounts listed on the form, as well as for any discrepancies between encounter paid amounts and financial ledger amounts. The state may accept or reject the plan's justifications and may also charge a $25,000 penalty to plans that exceed the 1 percent threshold for discrepancies during each quarterly validation.

Chapter IV:
Ensuring high quality encounter data through ongoing data validation and encounter data audits

---

Box IV.7. **Auditing encounter data by comparing with financial data**

Audits should use financial data as a benchmark to assess the accuracy, truthfulness, and completeness of the MCP encounter data and the sufficiency of the state's validation processes. As noted above, the financial data and encounter data are provided by a state's MCPs, so these two sources should align. Discrepancies between the sources may indicate issues with the validation processes and may require further investigation. Example analyses may include:

- Comparing costs reported in encounter data to the total expenditures reported in financial records to assess data completeness.
- Comparing audited financial reports provided by MCPs and to the encounter data for the same time period.
- Compare expenditures reported in encounter data to total expenditures reported in MCP medical loss ratio (MLR) reporting.

States may find additional details and examples in Activity 3, Step 4 of the EQR Protocol 5.

In Pennsylvania, the state's auditor compared paid amounts from an extract of of its provider reimbursement and operations management information system to the state's financial reporting. Although the auditor did not find a substantial number of discrepancies, the macro-analytic tests the auditor conducted (outlined in Activity 3, Step 2 of the EQR protocol) identified inconsistencies among the data sources.

D. Validating encounter data by comparing it with other data sources

Besides using information from plans' financial reports to validate encounter data, states can use a number of additional data sources as points of comparison for interfile and intersource encounter data validation. These additional data sources include claims data and remittance advice from plans or plan subcontractors (Exhibit IV.2), reports of quality or performance measures, patient medical records retained by clinicians, and historic FFS or encounter data maintained by the state.

Exhibit IV.2. **New Jersey's study to validate pharmacy payment amounts**

New Jersey is designing a pilot study to validate the pharmacy payment information reported by managed care plans in encounter records. In New Jersey, plans are required to report the amounts the plan paid in encounter data. But some plans subcontract with intermediary pharmacy benefit managers to pay pharmacy claims rather than paying these claims directly. Although the paid field for these encounters should contain the amount the PBM actually paid the pharmacy, plans sometimes incorrectly use the provider paid field in encounter records to report the amounts they pay to the pharmacy benefit manager.

To verify that the paid amounts reported in encounter data are the amounts that pharmacies were actually paid, New Jersey's EQRO will collect adjudicated claims data and pharmacy remittance advice from plans (which will supply the data from their pharmacy benefit managers). Using these data, the EQRO will compare the paid amounts, dates of service, and units of service in those files to the paid amounts reported in encounter data. The EQRO will share any discrepancies it finds with the state and plans for resolution.

Sources: New Jersey Department of Human Services, Division of Medical Assistance and Health Services (DMAHS). "Encounter Data Validation Forum #4: External Validation Approaches." Presentation for the Encounter Data Validation Forum Series, August 30, 2018; email correspondence between Mathematica and the New Jersey Department of Human Services, Division of Medical Assistance and Health Services.

1. Comparing encounter data with plans' quality and performance measure reports

Many states require managed care plans to report quality and performance measures, which provide information on health plans' performance in certain areas of clinical care, such as the provision of screening services, use of certain medications, and hospital readmissions. Nationally standardized quality and performance measures for health plans, such as the HEDIS measures, are constructed with detailed specifications and have national and regional benchmarks, allowing for apples-to-apples comparisons across plans. As part of the annual EQR, states (or certified vendors with which plans may contract)[5] validate performance measures to ensure that plans are calculating them properly.

Like financial data, plan-reported quality and performance measures can serve as benchmarks for checking the completeness and quality of the encounter data that the plan submits to the state. As part of the validation process, states or their EQRO contractors can independently recalculate measures that are utilization based, which means they can be constructed from claims or, in this case, encounter records. Comparing the rates that a state or EQRO calculates to those that plans report can verify that plans are calculating these measures correctly and that the data they used (for example, date and place of service, beneficiary demographics, and diagnosis and procedure codes) are accurate. Measure values that the state or its contractor calculate should be reasonably close to those reported by managed care plans. If they do not, states or their contractors can investigate whether plans are calculating the measures accurately and whether the data they use to calculate the measures differs from the encounter records they submit to the state.

Tennessee and New York both use HEDIS measure reports from managed care plans to validate encounter data. *Tennessee* requires its plans to submit HEDIS measure reports and also calculates selected HEDIS measures from the encounter data submitted by plans. The state then compares the results from the two data sets to validate the accuracy of both. Similarly, *New York* worked with a contractor to build a custom software program, the Clinical Data Mart, that enables the state to calculate certain HEDIS measures from encounter data. For details on New York's process for validating HEDIS measures, see page 75 of the 2013 Encounter Data Toolkit.

Box IV.8. Auditing encounter data by comparing with plans' quality and performance measures

Audits should use MCPs' quality and performance measures to assess the accuracy, truthfulness, and completeness of the MCP encounter data and the sufficiency of the state's validation processes. Auditors and states should investigate significant variation in quality and performance measure results. Some discrepancies may be expected (e.g., seasonality of a particular measure) but others may indicate an issue with the underlying data or data validation processes. An example analysis includes:

- Comparing findings to state-identified benchmarks (e.g., HEDIS measures, Child and Adult Core Set measures). EQR Protocol 5, Activity 3, Step 4. notes that "large swings in utilization from one time period to the next, or differences from the benchmark that are not explained by delivery system differences may indicate incomplete or erroneous encounter data, rather than a difference in provider practice patterns."

2. Comparing encounter data with clinical records

- To validate the accuracy and completeness of diagnosis and procedure data in encounter records, states can compare encounter data to information that providers document in patient-level clinical records.[6] It's common for managed care plans to review a sample of clinical records to compare against the encounter data or adjudicated claims generated for enrollees in the sample, with the goal of validating provider payments, performance measures for those providers, or their own quality measure calculations. Similarly, states or their contracted EQRO[7] can request an additional or different sample of clinical records from providers or plans and use that data to validate plans' submissions. Doing so helps ensure that the clinical and diagnosis information reported in encounter data is rigorous enough to support risk adjustment for setting capitation rates, calculating quality measures, and identifying anomalous provider claims as part of program integrity.

Of the 12 states interviewed for this toolkit, two reported using clinical record reviews to validate encounter data:

- *Maryland* contracts with its EQRO to review clinical records and match the information in those records to encounter data. The EQRO specifically seeks to confirm that the diagnosis codes reported in both data sources match and to identify situations in which a provider may have upcoded a claim or billed for services that were not rendered. The state expects at least a 90 percent match rate (the percentage of total encounter record elements reviewed that are correct when compared with clinical record data). The most recent review produced a 95.5 percent match rate. The EQRO's analysis is released annually in the state's managed care program technical report.[8]

- *Texas* also contracts with its EQRO to conduct clinical record reviews. Section 8.2.2.3.6 of the state's uniform managed care contract requires the EQRO to validate encounter data reported by the plan by reviewing the data against the charts of a random sample of enrollees eligible for Texas Health Steps. In this review, the state and EQRO check that all screens are performed when due and as reported and that reported data are accurate and timely. The state also retains the right to investigate managed care plans or their network providers, without notice, for potential fraud, waste, or abuse in cases where the reported and charted encounter data differ (Texas Health and Human Services Commission [HHSC] 2018).

Box IV.9. Auditing encounter data by comparing with clinical records

Audits should compare the clinical records to encounter data records to assess the accuracy, truthfulness, and completeness of the MCP encounter data and the sufficiency of the state's validation processes. While auditors may follow the same sampling methodology and review procedures as a data validation medical review, the audit should seek to answer different questions. In particular, auditors should draft questions that help to identify the effectiveness of their validation processes. Below are examples of research questions reframed for the encounter data audit:

- Is the correct provider ID from the medical record on the associated encounter? If not, what pre-acceptance edits should be updated or created to eliminate this issue?
- Do the diagnosis codes from the medical record match the codes in the associated encounter? Or are there any invalid, incomplete, or missing diagnosis codes? If there are discrepancies, is there is an issue with the pre-acceptance edits or are the pre-acceptance edits using outdated coding guidance?
- Are there differences in the distribution of Place of Service codes in the encounter records compared to those found in FFS or encounter data from other MCPs? Are MCPs applying the same pre-acceptance edits across programs and plans?

States may find additional details and examples in Activity 4 of the EQR Protocol 5. Note that because data validation and the data audit serve different purposes, states should not use the same medical review for both activities.

In the summary report of Wisconsin's most recent audit, the state's independent auditor describes the findings from a medical record review. As described in the EQR Protocol, the auditor set an error threshold (for Wisconsin, this threshold was 95 percent). This means that the auditor would expect there to be discrepancies between the encounter data and medical records on no more than 5 percent of the records. The most recent review found validation rates below the expected threshold, but did not provide recommendations or next steps.

3. Comparing encounter data with historical trends or benchmarks from FFS or encounter data

Many of the states interviewed for this toolkit use historical FFS or encounter data to validate current encounter submissions. Some states, such as *Arizona* and *New Jersey*, use their historical program data to construct benchmarks for the volume of encounter records expected for particular types of services over a certain period of time. These comparisons can be useful because they enable the state to assess whether the volume of record submissions is what the state would expect, based on program history. This helps states identify anomalies for further investigation before using the data to calculate capitation rates for managed care plans, thereby avoiding potentially erroneous payments. When comparing current encounter data to historical data, states may wish to examine the volume of encounter records submitted per member or the number (or percentage) of members with encounter records submitted (Byrd and Hedley Dodd 2015), as well as the volume of records submitted by specific service types, for certain providers or provider types, or member subpopulations.

But developing benchmarks for encounter data volume may be challenging and may not be appropriate in every managed care program. In constructing benchmarks, states must consider differences in risk level or service utilization across plan enrollees, along with environmental or policy changes that may create discrepancies between the populations served currently and those served historically. For example:

- *Minnesota*'s expansion of Medicaid to childless adults ages 19 to 64 significantly changed the populations enrolled in the state's managed care program for children and families. This change has in turn changed the health and service use documented in encounters, making it difficult for the state to use historical data to create accurate benchmarks.

- Similarly, *New Jersey* began contracting with a new managed care plan during the time when the state was adding long term services and supports to their managed care program. Because the new plan began accepting enrollees after the state had already assigned nursing facility residents and recipients of home and community-based services to the other managed care plans with previously held contracts, the new plan has younger, healthier enrollees than its competitors, who serve more nursing facility residents and fewer Medicaid expansion adults. New Jersey uses benchmarks to validate plans' encounter data but accounts for the population differences between plans when evaluating their compliance with the benchmarks.

Even with major changes in enrollment and service use, states can use historical data to validate the completeness of current encounter data. *New Jersey* has used a detailed benchmarking process for several years and has developed benchmarks for service categories that have historically shown consistent reporting and are not likely to be skewed by particular events. As of August 2018, the state monitors 23 active benchmarks for specific categories of service. The state rebases these benchmarks every few years to ensure that they reflect current service trends and, in the rebasing process, uses 24 months of historical data to identify service categories with consistent reporting across a significant period of time. (Figure IV.2 shows the comparison tool used for rebasing.)

New Jersey also meets with managed care plans each month to discuss their progress toward the state's service benchmarks and gives plans six months to explain or correct data that do not meet the benchmarks before imposing penalties (for example, liquidated damages). Table IV.4 lists New Jersey's categories of service benchmarks (effective July 2015), the service categories for which benchmarks are pending (newer services without historical data or benchmarks that are not yet in use), and the benchmark amounts (the number of services that plans are expected to provide). This table also shows the status of each benchmark category—whether the benchmark is (1) pending (not yet in use), (2) being tracked by the state but the state is not yet withholding funds related to the benchmark, or (3) associated with a withhold.

See page 35 of the 2013 Encounter Data Toolkit for a detailed explanation of New Jersey's benchmark development process.

Box IV.10. **Auditing encounter data by comparing with benchmarks from FFS or encounter data from other MCPs**

The auditor may consider various sources to set benchmarks, including data from other MCPs in the state, state eligibility data, and historical encounter data. The state should review and address discrepancies raised by the auditor with the relevant MCPs.

Example analyses may include:

- Constructing benchmarks based on the plan's historical service use for comparison with current plan data.
- Comparing plan performance to that of plans that cover the same or similar populations and benefit packages

States may find additional details and examples in Activity 3, Step 4 of the EQR Protocol 5.

Ensuring high quality encounter data through ongoing data validation and encounter data audits

Figure IV.2. New Jersey's benchmarking comparison tool and sample data

NJ FamilyCare Example of Monthly Encounter Processing Report

The Accepted and Denied Encounter Processing Analysis Report illustrates:

- The total number of encounters submitted

- The number of denied encounters

- Total duplicates submitted

- Denied capitation detail records (CAPDT)

- Note: this report is an example of monthly denials, corrected encounters, and duplicates to illustrate the calculations for computing monthly withholds, refunds, and liquidated damages

	Mar-2016	Apr-2016	May-2016	Jun-2016	Jul-2016	Aug-2016	Sep-2016	Oct-2016	Nov-2016	Dec-2016	Jan-2017	Feb-2017	Mar-2017
Total Submitted Encounters Accepted (excludes CAPDT)	205,334	189,810	168,418	188,127	286,902	273,270	242,445	210,904	304,254	248,973	279,506	278,858	271,871
Total Denied Encounters (excludes CAPDT)	1,808	2,391	698	5,164	21,634	3,415	3,514	2,759	5,144	3,464	2,585	5,852	2,831
Resubmissions thru - 03/2017	1,253	1,085	45	1,221	16,223	711	1,523	808	1,830	935	480	1,559	12
Duplicate encounters	10,429	2,236	1,713	1,422	3,483	6,522	1,510	4,622	2,520	2,393	7,944	13,748	2,373
Calculated values													
2% of submitted encounters	4,107	3,796	3,388	3,763	5,738	5,465	4,849	4,218	6,085	4,979	5,590	5,577	5,437
Duplicate encounters in excess of 2% are liquidated damages and not refundable													
Duplicate encounters in excess of 2%	6,322	-	-	-	-	1,057	-	404	-	-	2,354	8,171	$0.00
Excess denied encounters result in a withhold if not remedied in 3 months and amounts withheld are liquidated after 9 months of withholding													
Duplicate encounters in excess of 2%	-	-	-	180	-	-	-	-	-	-	-	-	-
Capitation detail													
Capitation records submitted	32,956	36,082	36,282	36,411	38,643	37,575	38,881	42,663	39,865	42,620	42,570	47,084	48,910
Capitation records denied	289	426	789	573	1,830	701	20	218	44	69	8	24	18
Denied capitation encounters in excess of 2% are liquidated damages and not refundable													
Excess denied capitation encounters	-	-	64	-	1,057	-	-	-	-	-	-	-	$0.00
Liquidated amounts and withhold percentages													
Amounts liquidated	$6,322	$0	$64	$0	$1,057	$1,057	$0	$404	$0	$0	$2,354	$8,171	$0.00
Excesss denied encounters result in a withhold if not remedied in 3 months and amounts withheld are liquidated after 9 months of withholding													
Denied encounters withhold	0.0000%	0.0000%	0.0000%	0.5000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%

NJ FAMILY CARE
Affordable health coverage. Quality care.

Source: New Jersey DMAHS. "Encounter Data Validation Forum #4: External Validation Approaches." Presentation for the Encounter Data Validation Forum Series, August 30, 2018.

Chapter IV:
Ensuring high quality encounter data through ongoing data validation and encounter data audits

Table IV.4. New Jersey's completeness benchmarks by category of service

Category of service description	Encounter code	Current benchmark[a]	Track = T, withhold = W, pending = P
AUDIOLOGY	AUK	0.200	T
AUDIOLOGY OP NOT ER	AUO	2.100	T
DENTAL	DDD	50.000	W
DENTAL EPSDT	EPD	175.000	W
EPSDT OP NOT ER	EPO	0.250	T
EPSDT MEDICAL	EPS	45.000	W
EPSDT PRIV NURSE	EPY	7.400	T
OUTPATIENT HOSP ER	ERE	50.000	T
FAMILY PLANNING	FPU	3.700	T
HEAR AID BATTERIES RX	HAB	Pending	P
HEARING AIDS	HAJ	1.100	T
HOME HEALTH	HHH	300.000	T
HOME HEALTH OP NOT ER	HHO	1.200	T
HOSPICE SERVICES	HOH	Pending	P
INPATIENT ACUTE	IAI	8.000	W
LABORATORY SERVICE	LSL	350.000	W
LAB SERV OP NOT ER	LSO	145.000	W
MEDICAL DAY CARE	MDC	Pending	P
MED EQUIPMENT PHARMACY	MEB	3.400	T
MED EQUIPMENT HOME HLTH	MEH	Pending	P
MED EQUIPMENT OP NOT ER	MEO	0.0001	T
DME	MEQ	13.000	W
MENTAL HEALTH OP ER	MHE	0.100	T
MENTAL HEALTH INPT	MHI	0.019	T
MENTAL HEALTH	MHM	7.000	T
MENTAL HEALTH OP NOT ER	MHO	1.100	T
MANAGE LONG TERM SVC & SUP	MLT	Pending	P
MED SUPPLY PHARMACY	MSB	5.200	W
MED SUPPLY HOME HLTH	MSH	Pending	P
MED SUPPLY OP NOT ER	MSO	17.000	W
MEDICAL SUPPLIES	MSR	32.000	W
NURSING FACILITY CUSTODIAL	NFC	Pending	P
NURSING FACILITY INSTITUTIONAL	NFI	Pending	P
OUTPATIENT OTHER NOT ER	OOO	174.000	W
OTHER THERAPY PHYSICIAN	OT3	3.000	T
OTHER THERAPY	OTC	9.000	T
PODIATRIST	OTF	12.000	W
PERSONAL CARE ASSISTANCE	PCA	Pending	P
PERSONAL PREFERENCE PROGRAM	PPP	Pending	P

[a] These benchmarks, in effect as of July 1, 2015, represent the state's expected number of encounters for specified service categories in a given service month per 1,000 members. Benchmarks are uniform across managed care plans.

Category of service description	Encounter code	Current benchmark[a]	Track = T, withhold = W, pending = P
PROSTHETICS & ORT	POP	4.500	W
RADIOLOGY OP NOT ER	RAO	47.000	W
RADIOLOGY	RAX	94.000	W
PHARMACY REIMBURSEABLES	RXA	4.800	T
PHCY EXCLUDE REIMBURSABLES	RXB	750.000	W
PHARMACY OP NOT ER	RXO	30.000	W
SUBSTANCE ABUSE OP ER	SAE	Pending	P
SUBSTANCE ABUSE INPT	SAI	Pending	P
SUBSTANCE ABUSE	SAN	Pending	P
SUBSTANCE ABUSE OP NOT ER	SAO	Pending	P
STANDARD MEDICAL PHYSICIAN	SM3	590.000	W
NURSE SPECIALTY	SM4	7.000	W
PHYSICIAN ASSISTANT	SM5	1.000	T
TRANSPORTATION OP NOT ER	TRO	6.000	T
TRANSPORTATION	TRT	12.000	W
UNKNOWN	UNZ	n.a.	T
VISION PHYSICIAN	VC3	17.000	W
OPTOMETRIST	VCV	18.000	W
OPTICAL APPLIANCE	VCW	29.000	W

Source: New Jersey Department of Human Services, Division of Medical Assistance and Health Services. "[Medicaid Managed Care] Contract to Provide Services." January 2018. Available at https://www.state.nj.us/humanservices/dmahs/info/resources/care/hmo-contract.pdf. Accessed October 23, 2018.

[a] These benchmarks, in effect as of July 1, 2015, represent the state's expected number of encounters for specified service categories in a given service month per 1,000 members. Benchmarks are uniform across managed care plans.

n.a. = not applicable.

E. Using program management analyses for encounter data validation

High quality encounter data are valuable for program management and program integrity purposes, but the reverse is also true: program management and integrity analyses can help states validate encounter data. In program integrity investigations to identify improper payments, for example, a state may find aberrant payment patterns that are caused by data quality issues rather than by fraud. Similarly, in using encounter data to examine patterns of service use for program management purposes, states may find anomalous service use resulting from incomplete or erroneous data.

All states interviewed for this toolkit reported that using encounter data for program management and integrity activities enabled them to validate the encounter data as well. For example:

- *Washington* uses encounter data for program integrity audits and investigations, for analyses focused on program oversight and plan monitoring, and for research.

- *Arizona* uses encounter data for a number of program management purposes, including rate setting and risk adjustment, reinsurance calculation and payment, pharmacy rebates, measurement and reporting of clinical performance, medical record audits, analysis and reporting of program integrity, and support for legislative and program decisions. To support these activities, Arizona uses a variety of regular and ad hoc operational reports that help staff interpret and use encounter data, as well as identify data anomalies that may indicate data or reporting issues. For example, to prepare for the state's annual rate setting, actuaries compare average monthly encounter submissions to those from similar time periods in the previous year, as well as examine data by program (acute care, long-term care, or foster care) and service type (professional, facility, dental, or

pharmacy). The actuaries also compare the monthly expenditures with the number of encounters submitted (totals, by rate cells, by contractor, by managed care plan, managed care plan by rate cell). Each of these ad hoc reports are run for three to five years to identify potential gaps or errors in the data (such as missing data, low data volume, and spikes in data volume). When actuaries identify anomalies, they report them to the state's encounter data team for further investigation.[9]

F. Using internal staff or external contractors to validate encounter data

Section 1 of the 2013 Encounter Data Toolkit describes how states can build a strong team of encounter data staff, with the skills and knowledge required to effectively manage and validate encounter data. The section also addresses the fact that some states may need to supplement staff capabilities with external contractors.

Although most of the data validation activities described in this chapter could be conducted by internal staff or external contractors, states vary in their approaches to staffing each activity. Some states conduct all data validation in house; others contract with EQROs or other research organizations to perform some data validation. Five of 12 states interviewed for this toolkit rely on internal staff for encounter data validation, two use external contractors for most validation activities, and five use a mix of internal staff and external contractors.

Each state must determine the right balance of state staff and contractors to attain the highest level of data quality possible. Though states can use contractors to perform many aspects of validation, the states we interviewed recommend dedicating at least some state staff to encounter data. Having one or more state staff members focused on encounter data quality enables states to:

- Appropriately supervise and direct the work of contractors that are performing specific data validation activities

Independent auditors. The encounter data audit should be conducted by an auditor who is independent from the MCP and the state Medicaid agency division that is responsible for collecting and processing encounter data. The auditor should have experience with encounter data collection, processing and validation, as well as experience conducting audits using auditing principles such as the Generally Accepted Auditing Standards.

- Communicate effectively with staff focused on program administration, oversight, and program integrity to understand the ways in which those staff use encounter data, to design validation approaches that support those uses, and to identify and resolve issues with data quality

- Provide managed care plans with clearly identified points of contact in the state Medicaid agency; these contacts can work with and provide technical assistance to their counterparts at managed care plans

Table IV.5 lists the benefits and challenges of using internal staff and external contractors to perform encounter data validation.

Table IV.5. Benefits and challenges of using state staff versus contractors for encounter data validation

	Benefits	Challenges

State staff	• Because of co-location and shared management structures, state Medicaid agency staff may find it easier to communicate with other state departments responsible for oversight, program management, program integrity, and management of encounter data. Better communication can lead to:
	
	  ◦ Greater knowledge of data and program policies across state staff in all departments and divisions
	
	  ◦ More integrated approaches to data and program management
	
	  ◦ More coordinated rollouts of new program initiatives for managed care plans
	
	  ◦ Quicker recognition of data errors and anomalies
		• Hiring and maintaining a team of staff with the requisite skills to validate encounter data can be challenging.
		
		• Staff positions may be subject to state hiring constraints.

Contractors	• Contractors who have worked with a state for many years may have a comprehensive knowledge of state data and validation approaches. They may make recommendations for improvements in validation practices based on that knowledge. • Contractors may be able to recommend and implement validation approaches they have used in other states, which can be particularly helpful for new or small programs. • Contractors may be able to bring diverse resources to a problem on short notice, which can be particularly helpful for new or changing programs.	• If contractors only interact with a given state's data a few times each year, they may be less acquainted with the nuances of the data than state staff are. • Contractors may be less knowledgeable about state-specific policies or program characteristics than state staff. • Contractors may require state approval for changes, which can add a layer of administrative complexity. • Use of external contractors still requires significant resource investment by state staff, who must communicate with and oversee the work of contractors. • Using contractors to validate data may diminish the state's internal knowledge base regarding encounter data and ways the data may be used.

Chapter IV References

Byrd, Vivian, and Allison Hedley Dodd. "Assessing the Usability of Encounter Data for Enrollees in Comprehensive Managed Care, 2010–2011." August 2015. Available at https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/Downloads/MAX_Encounter_Brief_2010_2011.pdf. Accessed October 11, 2018.

Dominiak, Maria, and Jenna Libersky. "Medical Loss Ratios for Medicaid Managed Care." Medicaid Managed Care Technical Assistance Brief. Washington, DC: Mathematica, January 2014.

Texas HHSC. "Contractual Document (CD) Subject: Attachment A—Medicaid and CHIP Managed Care Services RFP, Uniform Managed Care Contract Terms and Conditions." September 2018. Available at https://hhs.texas.gov/sites/default/files/documents/services/health/medicaid-chip/programs/contracts/uniform-managed-care-contract.pdf. Accessed September 28, 2018.

Weinstock, Jason, and Debra Lipson. "Validation of Medicaid Managed Care Encounter Data Using Health Plan Financial Information: Do the Numbers Add Up?" Unpublished report submitted to the Center for Medicaid and CHIP Services. Mathematica: Washington, DC: December 2, 2015.

Chapter V:
Ensuring high quality data through clearly defined expectations

Setting clear expectations is essential to receiving high quality encounter data. To this end, states should incorporate plain language into contracts and ancillary guidance documents to help managed care plans submit timely, complete, accurate, and consistent encounter data. This chapter describes how states can formalize their expectations and standards in plan contracts, as well as in data dictionaries and other guidance documents (Section A). It also describes minimum requirements for contracts and other guidance documents (Section B) and requirements that go beyond the minimum (Section C).

A. Purpose of contracts or other guidance documents in encounter data validation

States can use two types of documents to communicate their expectations and standards to plans: (1) contracts, which are legally binding documents describing the plans' terms of participation in the managed care program, and (2) data dictionaries and other ancillary guidance documents, which can supplement contracts by providing additional details on the data submission process and expectations. Because ancillary guidance documents are maintained outside of the contract, they can be updated more frequently, provide more detailed instructions, and include technical assistance tools (for example, graphics, screenshots, links to training webinars or other tools, and contact information for key state staff).

Federal regulations require all states to include a minimum set of encounter-related requirements in their contracts with managed care plans. But nearly all states interviewed for this toolkit include additional requirements in their contracts and also use manuals or companion guides to provide supplemental instructions. Taken together, these documents can serve a critical role in ensuring consistency in plans' reporting of encounter data. When states update their processes for encounter data collection and validation, they should also update their contracts and ancillary documents to codify these changes and help plans understand and comply with the updated standards.

To ensure that managed care plans have easy access to current information on encounter data collection and validation, some states maintain a web page or SharePoint site featuring up-to-date copies of all relevant guidance. Several states that we interviewed (including *Arizona, Michigan, Minnesota, Oregon,* and *Texas*) have designated web pages for this purpose. See Exhibit 4.2 in the 2013 Encounter Data Toolkit for a screenshot of Minnesota's encounter data web page.

B. Minimum requirements for contracts or ancillary guidance documents

To comply with federal rules and ensure that managed care plans fully understand state expectations for encounter data submissions, state contracts with plans or ancillary guidance documents should address the following topics: (1) identifying servicing providers; (2) submitting data in a timely way; (3) reporting required details and meeting standards for data quality; (4) using standard file formats; (5) certifying the accuracy of encounter data submissions; (6) providing incentives or imposing penalties related to data timeliness, accuracy, or completeness; (7) correcting errors; and (8) attending meetings on encounter data. These topics are described below.

1. Identifying servicing providers

To support program oversight and integrity, federal regulations require states to collect and maintain sufficient encounter data to identify the provider who delivers any items or services to enrollees (42 CFR §438.242[c][1]). Several states comply with this requirement by specifying in their contracts that encounter data should include national provider identifiers (NPIs). Some state contracts also describe cases in which NPIs would not be necessary or available, and provide clear guidance on how plans should identify those providers in encounter records. For example, states may require plans to use alternate coding systems to identify providers who may not have NPIs, such as providers of behavioral health care or long-term services and supports. *Minnesota* is one such state; it requires plans to submit encounter records with NPIs for servicing providers who have them, and for those who don't, to submit records with unique

Minnesota provider identifiers. Minnesota's contract also requires plans to separately identify the specific treating provider when the paid provider is a group practice or when the record documents the use of personal care assistants (Minnesota Department of Human Services 2018).

2. Submitting data promptly

Federal regulations require states to specify in managed care plan contracts the frequency with which plans should submit encounter records (42 CFR §438.242[c][2]). State requirements for timing and frequency vary, but 8 of the 12 states interviewed for this toolkit required plans to submit encounter data at least monthly, usually within 30 days of plan adjudication of provider claims. Specifically:

- *Michigan, New Jersey, Virginia,* and *Washington* require their plans to submit encounter data every month. These states also specify that plans must submit encounter records within a certain period of time (30 or 60 days) after the plan adjudicates the related provider claims (Michigan Department of Health and Human Services, Division of Medical Assistance and Health Services 2018; New Jersey Department of Human Services 2018; Commonwealth of Virginia Department of Medical Assistance Services 2017–2018; Washington State Health Care Authority [HCA] 2018a–d).

- *Texas* requires submission of medical encounter data within 30 days of adjudication and pharmacy data within 25 days of adjudication (Texas HHSC 2018).

- *Minnesota* requires plans to submit encounter data every two weeks, within 30 days of adjudication for encounter records derived from original provider claims, and within 45 days of adjudication for encounter records derived from adjusted claims (Minnesota Department of Human Services 2018).

- *Tennessee* and *Kentucky* require plans to submit encounter data on a weekly basis (Tennessee Department of Finance and Administration, Division of TennCare 2018; Commonwealth of Kentucky Department for Medicaid Services 2015–2018).

The 2013 Encounter Data Toolkit includes a list of factors for states to consider in determining an appropriate frequency for data submissions (see Exhibit 5.1).

The deadlines by which providers must submit claims (or encounter records, in the case of subcapitation arrangements) to plans affect the timeliness of plans' data submissions to states. Without state guidance, **timely filing requirements** for claims submissions may vary by plan, and thus the timing of data submissions to the state may vary. Therefore, in addition to defining timelines for data submission relative to the adjudication of provider claims, some states also define submission timelines relative to the date the service was rendered.[10] For example:

- *New Jersey* specifies that encounter records must be submitted within 12 months of the date of service (and within 12 months of the date of discharge for hospital admissions).

- In *Oregon*, managed care plans are required to submit encounter records within 45 days of adjudication.

Box V.1. Timely filing requirements

Timely filing requirements designate the time frame in which a provider must submit a claim for services rendered to a patient— for example, within 180 days of the date of service. If a provider does not submit a claim before the payer's deadline, the claim may be denied.

Chapter V:
Ensuring high quality data through clearly defined expectations

As the lag time between service provision and data collection increases, providers and plans may find it more difficult to correct data errors and omissions. For this reason, requiring plans to submit encounter data frequently (and shortly after provider claims are processed) enables states to address validation issues quickly and begin using the data for program management and program integrity purposes in a timely way. Having current encounter data is also important for a growing number of health systems that are measuring quality and informing practice decisions based on existing patterns of care.

In addition to establishing clear deadlines for the initial submission of data, states should also clearly define time frames for submitting corrected data when errors are found. See Section B.7 of this chapter for information about setting expectations for data correction.

3. Level of detail and standards for data quality

Federal regulations require that states specify the level of detail for encounter records and that the level of detail be based on program administration, oversight, and program integrity needs (42 CFR §438.242[c][2]). Similarly, CMS's EQR Protocol 4 (2012) encourages states to set standards for the accuracy and completeness of encounter data, along with objective standards to which the data will be compared.

In line with these requirements, a state's written expectations about the level of detail required in data submissions should address:

- The **types of encounter records that managed care plans must submit to the state** (for example, records of medical, dental, pharmacy, and behavioral health services as well as records related to the provision of long-term services and supports).

- **Submission of all encounter records**, including records for provider claims that were paid and records for claims that were denied.

- **Situations in which encounter records must be voided or replaced.** For example, *Arizona*'s contract requires plans to void or replace encounters if claims received by the plan are changed for any reason and the corresponding encounter record has already been submitted. This requirement helps the state ensure consistency across the claims records maintained by plans and the encounter records maintained by the state (Arizona Health Care Cost Containment System 2018).

- **Required data elements** (that is, fields that must be complete). At a minimum, states must require managed care plans to submit data for all elements that the state needs to submit to CMS (42 CFR §438.242[c][3]). States must include beneficiary identifiers and health plan identifiers in T-MSIS data files submitted to CMS[11] to ensure that enrollees can be linked to their managed care plan. States must also submit data to CMS showing that providers were paid for services covered by Medicaid.[12] During the 2018 Encounter Data Validation Call Series, several states reported challenges validating the provider payment amounts in encounter data across plans, as plan reporting for this data element is often inconsistent. To ensure that plans accurately report this information, several states define in their contracts the information that should be included (or excluded) from plan reporting of payment amounts (see Exhibits V.1 and V.2 for examples of contract language from *Minnesota* and *Arizona*). In its data submission guidelines, *Oregon* publishes a list of data elements that plans must include, by encounter file type (that is, dental, professional, institutional, and pharmacy; see Table V.1).

- The **data formats and values** that plans are expected to use (or not use) in their encounter data submissions, including code sets for specific data fields. States should consider aligning this guidance with the T-MSIS data dictionary[13] for data elements that the state must submit to CMS.

States should also describe their expectations regarding encounter data quality. For example, states should consider defining acceptable (or unacceptable) rates of errors—including missing data, record rejections, and duplicate records—and any incentives or penalties for meeting or missing the state's standards. EQR Protocol 4 recommends that states set their allowable error rates below 5 percent for each time period examined (CMS 2012). For example, *New Jersey* sets its allowable error rate at 2 percent, imposing financial penalties if more than 2 percent of a plan's submitted records are duplicates or are rejected by the state (New Jersey Department of Human Services 2018).[14]

Exhibit V.1. **Minnesota's contract language on reporting provider payment amounts**

Section 3.6.1.B.5 of the 2018 Prepaid Medical Assistance and MinnesotaCare contract states:

"[The managed care plan] shall submit on the encounter claim for NCPDP Batch 1.2/D.0, 837P, 837D, and 837I the Provider allowed and paid amounts. For the purposes of this section, 'paid amount' is defined as the amount paid to the Provider excluding Third Party Liability, Provider withhold and Provider incentives, and Medical Assistance cost-sharing. For the purposes of this section, 'allowed amount' is defined as the Provider contracted rate prior to any exclusions or add-ons."

Minnesota's contract also requires plans to comply with ancillary guidance documents. One of these documents is the "837 Encounter Companion Guide," which provides additional specifications for the values and formats that plans should use to report provider payment amounts in encounter records, including:

- Include the decimal in the value so it represents dollars and cents: xx.xx.

- Do not include commas.

- 0.00 is valid, but a negative number is not.

- Submit the paid amount only on the CPT/HCPCS code line for which payment was determined or made. Submit this amount only once.

- All other lines within the same claim where payment is inclusive of another line should be sent with 0.00 in the paid amount.

- Do not repeat the paid amount on every line within the claim.

- For all subsequent claims that are part of a package payment, where no additional payment is made (e.g., a global or surgical claim), submit 0.00 in the paid amount.

- For any claim services that are payable outside of the global CPT/HCPCS code (e.g., physician-administered drugs), submit the paid amounts on the related line.

- Capitated services should be submitted if they are calculated and go through the claim system, by line or on one line, as appropriate.

- 837P—individual paid amounts are at the line level.

- 837I—claim total paid is on the header; individual paid amounts are at the line level, according to the level at which payment was made. For example, if an inpatient claim is paid according to a diagnosis-related group (DRG), the amount is at the header. If there are additional procedures that are paid on the claim, those are on lines. The total paid for the DRG and any additional payments is on the header. A different example is inpatient CD residential treatment, which is paid at the line. The total paid for the claim is put on the header.

Sources: Minnesota Department of Human Services. "Contract for Prepaid Medical Assistance and MinnesotaCare." Model contract. January 1, 2018. No longer available online. Minnesota Department of Human Services. "Minnesota 837 Encounter Companion Guide to the HIPAA Implementation Guide: Professional, Institutional, and Dental Claims (DHS-6761)." November 2016. Available at https://edocs.dhs.state.mn.us/lfserver/Public/DHS-6761-ENG. Accessed October 16, 2018.

Exhibit V.2. Arizona requirements to identify payment amounts and arrangements

In Arizona, many plans use sub-capitation arrangements to pay providers, which complicates the reporting of payments in encounter records. Because plans do not pay these subcontractors at FFS rates, encounter records do not have specific payment amounts associated with them. To capture this payment information, Arizona requires plans to use CN1 codes, a standardized code taxonomy for contract type included in ASC X12 837 guidelines, to identify encounters paid through sub-capitation arrangements. The state's encounter manual includes a crosswalk of CN1 codes and sub-capitation identifiers on page 2 of Chapter 7 (see table below). Plans' use of this coding taxonomy enables the state to validate payment amounts in encounter records even when the services were paid through sub-capitation.

Arizona's crosswalk of CN1 contract codes used to identify sub-capitation arrangements

CN1 code	Definition	Subcapitation identifier	Description
01	Diagnosis-related group (DRG)	00	**Fee-for-service arrangement.** Used to report service paid under a DRG arrangement.
02	Per diem	00	**Fee-for-service arrangement.** Used to report services paid under a per diem arrangement.
03	Variable per diem	00	**Fee-for-service arrangement.** Used to report services paid under a variable per diem arrangement.
04	Flat	00	**Fee-for-service arrangement.** Used to report services paid under a fee arrangement.
05	Capitated	01	**Sub-capitation/contractual arrangement.** Used to report services provided under a sub-capitated/contractual arrangement.
06	Percent	00	**Fee-for-service arrangement.** Used to report services paid under a percent arrangement.
09	Other	08	**Negotiated settlement.** Used to report services that are included in a negotiated settlement—for example, claims paid as part of a grievance settlement.
09	Other	04	**Contracted transplant service.** Used to report covered transplant services paid via catastrophic reinsurance.
* 01, 02, 03, 04, 05, 06	--	05	**Nontransplant service for transplant recipient.** Used to report services provided when a member is a transplant recipient (member exception code = "25").
--	--	06	**Denied service.** Used to report valid Arizona Health Care Cost Containment System services that are denied—for example, if a claim was denied for untimely submission.

Source: Arizona Health Care Cost Containment System. "AHCCCS Division of Healthcare Management (DHCM) Encounter Manual—Chapter 7." February 2019. Available at https://www.azahcccs.gov/PlansProviders/Downloads/Encounters/Manual/Chapter7.pdf. Accessed October 16, 2018.

Exhibit V.2. **Arizona requirements to identify payment amounts and arrangements (continued)**

As more states use value-based and alternative payment arrangements, more challenges arise for tracking provider payments in encounter data. Arizona uses a multistep approach to ensure that it receives complete information on provider payments. First, the state requires plans to submit detailed payment data for their value-based purchasing (VBP) agreements with providers in a separate report, called the Structured Payment File (Arizona Health Care Cost Containment System 2017). Encounter records for services delivered to beneficiaries or by providers who are part of a VBP contract must then be linked to data in the Structured Payment File in order to provide a complete picture of all payments received by particular providers. Second, to ensure that encounter data can be appropriately linked to the payment data submitted in the Structured Payment File, Arizona requires plans to add a VBP indicator to encounters paid under a VBP contract. The Arizona Health Care Cost Containment System's Contractor Operations Manual (2017) provides guidelines on the use of VBP indicators.

Table V.1. Oregon's list of required encounter data elements, June 2018

Data elements	837D (dental)	837P (professional)	837I (institutional)		NCPDP (pharmacy)
			outpatient	inpatient	
Plan PHP ID (NPI or Oregon Medicaid ID)	X	X	X	X	X
Member name	X	X	X	X	X
Member ID (prime ID)	X	X	X	X	X
Claim-adjustment reason code(s) (CARCs) to show whether third-party liability (TPL) exists	X	X	X	X	--
CARCs to show reason for reduced payment on claims where TPL exists but the full amount was not paid	X	X	X	X	--
Amount paid by plan to provider	X	X	X	X	X
Any TPL payments, including Medicare	X	X	X	X	X
Billing provider IDa	X	X	X	X	X
Rendering provider ID	X	X	X	X	--
ICD-10 diagnosis code(s) at the highest level of specificity	X	X	X	X	--
Date(s) of service	X (for each line item)	X (for each line item)	X (for each line item)	X (from admission through discharge[b])	X (dispense date)
Procedure code(s) (e.g., CPT, HCPCS)	X	X	X (for most revenue codes)	X (for some revenue codes)	--
National Drug Code (NDC), as applicable, including units of measurec	--	X	X	--	X
Line-item charges	X	X	X	X	--
Units of service	X	X	X	X	--
Revenue codes	--	--	X	X (for accommodation and ancillary services)	--
Type of admission code	--	X	--	X	--
Patient discharge status coded	--	--	--	X	--
Total charge	X	X	X	X	X
ICD-10 procedure codes	--	--	--	X	--
NDC quantity	--	--	--	--	X
Amount billed	--	--	--	--	X
Prescribing provider ID	--	X	--	--	X
Prescription number	--	--	--	--	X
Refill number	--	--	--	--	X
Days supplied	--	--	--	--	X
Dispense-as-written indicator	--	--	--	--	X

Source: Oregon Health Authority, Health Systems Division. "Encounter Data Submission Guide." June 2018. Available at https://www.oregon.gov/oha/HSD/OHP/Tools/Encounter%20Data%20Submission%20Guidelines%20June%202018.pdf. Accessed October 29, 2018.

[a] NPI and taxonomy are required for all providers eligible for NPI; for providers of non-health-related services, use Oregon Medicaid Provider Number.

[b] For nursing facility continuous stays, use the last of the month for the discharge date. Not to exceed the 20-day post-hospital extended care benefit.

[c] Report the total number of units of each dosage form, strength, and package size by NDC of each covered outpatient drug administered to Health Systems members.

[d] If the member is found appropriate for long-term psychiatric care during the acute inpatient hospital psychiatric care stay, use a discharge code of 05.

4. Using standard file formats

Federal regulations include several requirements designed to standardize data collection. First, states must collect encounter data in nationally recognized, standard file formats (that is, ASC X12 837 and NCPDP formats) and must use the ASC X12 835 file format as appropriate (42 CFR §438.242[c][4]). States are also required to collect encounter data that meet HIPAA standards (42 CFR §438.818[a][1]).

These requirements recognize the value that standardized data bring to both states and managed care plans. States that collect encounter data in nationally standardized file formats can leverage standard formatting requirements and apply off-the-shelf software solutions and pre-programmed edits. Managed care plans—especially regional or national entities—may find their reporting burden reduced when data requirements across states and product lines are the same. For these reasons, nearly all 12 states interviewed for this toolkit require plans to submit encounter data in ASC X12 837 and NCPDP file formats.

To ensure that plans use these file formats and adhere to HIPAA standards, states should state clearly in their contracts that plans must comply with the rules described above. See Exhibit V.3 for an example of contract language from Tennessee that explains these requirements.

Exhibit V.3. Tennessee's contract language requiring use of nationally standardized file formats and HIPAA-compliant encounter transactions

Sections A.2.23.4.1 and A.2.23.4.2 of Tennessee's statewide TENNCARE contract state:

"The CONTRACTOR's claims management system shall contain the following capabilities for the purpose of encounter data submissions…:

- Specifications for submitting encounter data to TENNCARE in standardized Accredited Standards Committee (ASC) X12N 837 and National Council for Prescription Drug Programs (NCPDP) formats, and the ASC X12N 835 format as appropriate.

- Adherence to HIPAA standards.

"The CONTRACTOR's systems are required to conform to HIPAA-standard transaction code sets as specified in the HIPAA Implementation and TennCare Companion guides."

Source: Tennessee Department of Finance and Administration, Division of TennCare. "Medicaid Managed Care Statewide Contract with Amendment." July 1, 2018. Available at https://www.tn.gov/content/dam/tn/tenncare/documents/MCOStatewideContract.pdf. Accessed October 23, 2018.

---

5. Certifying the accuracy of encounter data submissions

Many states interviewed for this toolkit said that they required plan leaders to certify that their encounter data submissions are complete and accurate, in accordance with federal regulations (42 CFR §438.606[a]). All of the states that shared their contract requirements related to encounter data certification clearly specify:

- The leaders who have the authority to certify encounter data (in most cases, the chief executive officer, chief financial officer, or a delegate who is authorized to sign for one or both of these positions)

- That the certification must attest to the accuracy, completeness, and truthfulness of the data

Several states also include a state-issued certification letter template with their contract (often as an appendix) and require that plans include the signed letter with each data submission or on an otherwise specified basis. See Exhibit V.4 for *Washington*'s model certification letter from its Apple Health contract.

Exhibit V.4. Washington's encounter data certification letter

Monthly Certification Letter
Template

TO: Health Care Authority

[TODAYS DATE]

RE: Certification of the Encounter Data Files
For: [TRANSMITTAL PERIOD – Month and Year]

To the best of my knowledge, information and belief as of the date indicated, I certify that
the encounter data or other required data, reported by [MCO/BHO/QHH Name] to the
State of Washington in the submission is accurate, complete, truthful and is in accordance
with 42 CFR 438.606 and the current Managed Care/BHO/QHH lead entity Contract in
effect.

MCOs and QHHs ADD: I also certify that any claims cost information within the submitted
encounter data is proprietary in nature and assert that it is protected from public
disclosure under Revised Code of Washington 42.56.270(11).

The following electronic data files for [MCO/BHO/QHH Name] were uploaded to
ProviderOne on the following dates during the transmittal period:

Batch Number	Date Submitted (MM/DD/YYYY)	Number of Encounters	Number of Encounter Records	File Reject [R] Partial File [P]

Sincerely,

Authorized Signature (CEO, CFO or Authorized Designee)
Title

Attachment 5, Monthly Certification Letter
AHMC Contract
Rev. 1/27/2017

6. Incentives and penalties used to enforce data timeliness, accuracy, or completeness

Incentives, withholds, and penalties can encourage managed care plans to improve their encounter data, but only if the plans understand them and the states apply them. To ensure that incentives or withholds are feasible and penalties are enforceable, states should include detailed information about them in their contracts. Details should include the amount or value of the incentives and penalties and the conditions under which the state will apply them. This information will help plans shape their validation strategies to achieve the goals that the incentives or penalties are intended to encourage. For examples of how states can use incentives and penalties, see Chapter VI, Section A.

7. Correcting errors

Along with clearly defining expectations for original data submissions, it's also important to set clear expectations in contracts for correcting errors in encounter files, as unresolved errors can inhibit the effective use of data.

Contract language should specify:

- The state's definitions of complete and accurate data for corrected file submissions

- Actions that plans are expected to take to identify data errors, correct data, or dispute data errors or rejections

- Expected time frames for submitting corrected data

- Penalties that a state may apply if a plan fails to correct data errors, including the amount or value of penalties, the conditions under which the state will apply them, and the process to determine whether to apply them

In addition, either the contract or supporting guidance documents should:

- Explain the process that the state and managed care plans will use to identify, discuss, and resolve issues in encounter data. For example, some states require that specific plan staff attend regular meetings with the state to discuss the quality of their data submissions and resolve any errors. Some states even impose penalties if plan staff do not attend these meetings.

- Define the situations in which plans will be expected to submit corrections to data submissions.

- Define the methods and time frames for resubmission.

See Exhibit V.5 for contract language from Tennessee on the correction of errors.

Exhibit V.5. Tennessee's contract language about correcting erroneous encounter data

Section A.2.23.4.3.2 of Tennessee's statewide TENNCARE contract states:

"TENNCARE will reject an entire file or an individual encounter failing certain edits, as deemed appropriate and necessary by TENNCARE to ensure accurate processing or encounter data quality, and will return these transactions to the CONTRACTOR for research and resolution. TENNCARE will require expeditious action on the part of the CONTRACTOR to resolve errors or problems associated with said claims or the adjudication thereof, including any necessary changes or corrections to any systems, processes or data transmission formats. The CONTRACTOR shall, unless otherwise directed by TENNCARE, address entire file rejects within two (2) business days of TENNCARE's rejection and individual encounter rejects within forty-five (45) calendar days of TENNCARE's rejection. Such errors will be considered acceptably addressed when the CONTRACTOR has either confirmed and corrected the reported issue or disputed the reported issue with supporting information or documentation that substantiates the dispute. TennCare may require resubmission of the transaction with reference to the original in order to document resolution. Failure to promptly research and address reported errors, including submission of and compliance with an acceptable corrective action plan as required may result in damages and sanctions as described in Section A.2.23.13."

Source: Tennessee Department of Finance and Administration, Division of TennCare. "Medicaid Managed Care Statewide Contract with Amendment." July 1, 2018. Available at https://www.tn.gov/content/dam/tn/tenncare/documents/MCOStatewideContract.pdf. Accessed October 23, 2018.

---

8. Attending regular meetings about encounter data

As discussed in Chapter VI, Section B, states should meet regularly with their managed care plans to identify, review, and resolve issues related to encounter data quality. To ensure that plans are participating in this process and sending appropriate staff to the meetings, states could incorporate provisions into their contracts that require certain staff to attend. To ensure that these requirements are enforceable, states could also include penalties in their contracts to be levied against plans that do not comply. For example, *Tennessee*'s contract allows the state to assess liquidated damages of $1,000 per staff member per meeting if the appropriate staff do not attend required on-site meetings (Tennessee Department of Finance and Administration, Division of TennCare 2018).

C. Additional contract considerations

In addition to the minimum requirements described above, many states include additional provisions in their contracts with managed care plans or in ancillary guidance documents. These include:

1. Managed care plans' staffing requirements for encounter data processing and validation

Some states want managed care plans to dedicate specific staff to work with them to ensure the quality of encounter data. These states use contract provisions to require plans to hire for and maintain certain positions, identify required backgrounds or skills for staff in such positions, or specify ways that these staff must interact with the state. For example:

- In all of its managed care contracts, *Washington* requires plans to designate a specific staff member to work with the state on the review and quality control of encounter data (Washington State HCA 2018a–d).

- *New Jersey* requires plans to have encounter reporting staff or claims processor supervisors (New Jersey Department of Human Services 2018).

- *Arizona* requires plans to have encounter data managers who ensure that the plans are meeting the requirements of the Arizona Health Care Cost Containment System. The Arizona contract also states that "sufficient staffing under this position must be in place to ensure timely and accurate processing and submission of encounter data and reports to AHCCCS." Furthermore, Arizona requires plans to have provider claims educators to instruct providers on claims submission requirements, including coding updates and electronic claims transactions (Arizona Health Care Cost Containment System 2018).

2. Managed care plans' activities to monitor and validate provider-level data

States must require managed care plans to validate the claim and encounter data they collect from providers to avoid passing erroneous data on to the state (42 CFR §438.242[b][3]). Some states also require plans to use specific edits or to conduct particular validation activities in order to ensure that plans focus on areas of data improvement that are most important to the state. For example:

- *Virginia*'s contracts specify certain edits that managed care plans must use to validate the accuracy and completeness of claims and encounter data from providers, including edits to validate members' and providers' identification numbers, dates of service, and diagnosis and procedure codes (Commonwealth of Virginia Department of Medical Assistance Services 2017–2018).

- *New Jersey* requires plans to verify whether a member is enrolled and the provider is eligible for payment on the date of service. Plans must also use certain types of edits to validate the accuracy and completeness of data from providers (New Jersey Department of Human Services 2018). See Exhibit V.6 for specific contract language.

Exhibit V.6. New Jersey's contract language describing edits that plans must make to provider data submissions

New Jersey requires managed care plans to perform certain types of data validation to avoid sending erroneous data to the state. Section 3.4.1.B of New Jersey's managed care contract states:

"The system shall perform sufficient edits to ensure the accurate payment of claims and ensure the accuracy and completeness of encounters that are submitted. Edits should include, but not be limited to, verification of Member enrollment, verification of provider eligibility, field edits, claim/encounter cross-check and consistency edits, validation of code values, duplicate checks, authorization checks, checks for service limitations, checks for service inconsistencies, medical review, and utilization management. Pharmacy claim edits shall include prospective drug utilization review (ProDUR) checks."

Source: New Jersey Department of Human Services, Division of Medical Assistance and Health Services. "[Medicaid Managed Care] Contract to Provide Services." January 2018. Available at https://www.state.nj.us/humanservices/dmahs/info/resources/care/hmo-contract.pdf. Accessed October 23, 2018.

---

3. Managed care plans' interactions with providers and subcontractors

Contracts in several states also include provisions to guide managed care plans' interactions with providers and subcontractors (for example, pharmacy benefit managers or dental benefit subcontractors). These provisions are designed to encourage providers and subcontractors to transmit complete, accurate, and timely claims and encounter records. For example:

- *New Jersey's* managed care contract requires plans to provide instructions to providers that explain how the providers should submit encounter data to the plan. These instructions must be shared within 20 days of placing the provider in active status. The state also requires plans to design an incentive system for providers that encourages complete and timely submission of data. The system must include both rewards and sanctions that are tied to performance (New Jersey Department of Human Services 2018).

- ***Arizona*** and ***Kentucky*** instruct plans to require their subcontractors to comply with the state's requirements for encounter reporting and claims submission (Arizona Health Care Cost Containment System 2018; Kentucky Department for Medicaid Services 2018).

4. References to data dictionaries or ancillary guidance materials

Many states use data dictionaries, manuals, or other ancillary materials to provide additional guidance to managed care plans beyond the language in the contracts. States that use these materials should also include language in their contracts requiring compliance with the ancillary documents, which will ensure that penalties related to noncompliance are enforceable. It may also be helpful to describe where plans can find the most up-to-date versions of these documents. ***Texas*** is one state that requires plans to comply with both nationally standardized guidance documents and state-specific ancillary documents (Texas HHSC 2018). Exhibit V.7 shows Texas's supporting contract language.

Exhibit V.7. **Texas's contract language requiring compliance with ancillary guidance documents**

Texas uses ancillary guidance documents to provide detailed specifications for the encounter data submitted by managed care plans. The state requires compliance with those documents in its uniform managed care contract (version 2.26). Section 8.1.18.1 of the contract reads:

"The [plan] must provide complete and accurate Encounter Data for all Covered Services, including Value-added Services. Encounter Data are subject to the requirements in 42 C.F.R. § 438.242 and § 438.818. The Encounter Data must be submitted by the [plan] in accordance with HHSC's required format and required data elements for Medicaid and CHIP [managed care plans]. Encounter Data must follow the format and data elements as described in the most current version of HIPAA-compliant 837 Companion Guides, NCPDP format (pharmacy), Encounters Submission Guidelines, and the STAR+PLUS Handbook Appendices Section XVI, Long Term Services and Supports Codes and Modifiers. HHSC will specify the method of transmission, the submission schedule, and any other requirements in UMCM Chapter 5.0, 'Consolidated Deliverables Matrix.' The [plan] must submit Encounter Data transmissions at least monthly, and include all Encounter Data and Encounter Data adjustments processed by the [managed care plan]. In addition, Pharmacy Encounter Data must be submitted no later than 25 Days after the date of adjudication and include all Encounter Data and Encounter Data adjustments processed by the [plan]. Encounter Data quality validation must incorporate assessment standards developed jointly by the [plan] and HHSC. The [plan] must submit complete and accurate Encounter Data not later than the 30th Day after the last Day of the month in which the claim was adjudicated. The [plan] must make original records available for inspection by HHSC for validation purposes. Encounter Data that does not meet quality standards must be corrected and returned within a time period specified by HHSC."

Source: Texas HHSC. "Contractual Document (CD) Subject: Attachment A—Medicaid and CHIP Managed Care Services RFP, Uniform Managed Care Contract Terms and Conditions." September 2018. Available at https://hhs.texas.gov/sites/default/files/documents/services/health/medicaid-chip/programs/contracts/uniform-managed-care-contract.pdf. Accessed September 28, 2018.

Chapter V:
Ensuring high quality data through clearly defined expectations

> **Exhibit V.8.** Checklist for states: Key elements to include in managed care plan contracts and/or ancillary guidance documents
>
> States can use this list to check their contracts and/or ancillary guidance documents for the minimum requirements and additional requirements described in Chapter V.
>
> | | Minimum requirement? | Location in this chapter | Element | Location in state's managed care plan contract and/or guidance documents[a] |
> |---|---|---|---|---|
> | o | Yes | Section B.1 | Collection of data to identify providers who rendered services | -- |
> | o | Yes | Section B.2 | Expected frequency of encounter data submission | -- |
> | o | Yes | Section B.3 | Expectations for level of detail in encounter records *(types of encounters to be submitted, situations requiring voids or replacements, required data elements, formats and values to be used in data fields)* | -- |
> | o | Yes | Section B.4 | Use of standard file formats and compliance with HIPAA standards *(ASC X12 837 and 835, NCPDP)* | -- |
> | o | Yes | Section B.5 | Certification of data accuracy and completeness | -- |
> | o | Yes | Section B.6 | Incentives and/or penalties associated with data timeliness, completeness, and accuracy | -- |
> | o | Yes | Section B.7 | Expectations for correction of errors and missing data | -- |
> | o | Yes | Section B.8 | Attendance at regular encounter data meetings | -- |
> | o | No | Section C.1 | Staffing requirements for managed care plan for processing and validating encounter data | -- |
> | o | No | Section C.2 | Expected managed care plan activities for monitoring and validating data submitted by providers or subcontractors | -- |
> | o | No | Section C.3 | Expected managed care plan interactions with providers and subcontractors | -- |
> | o | No | Section C.4 | References in contract to compliance with ancillary guidance documents | -- |
>
> [a]States can use this column to insert references to state contracts or other guidance documents.

Chapter V:
Ensuring high quality data through clearly defined expectations

Chapter V References

Arizona Health Care Cost Containment System. "AHCCCS Contractor Operations Manual: Chapter 300—Financial." Revised July 6, 2017. Available at https://www.azahcccs.gov/shared/Downloads/ACOM/PolicyFiles/300/315-CYE16-17.pdf. Accessed November 15, 2018.

Arizona Health Care Cost Containment System. "Amendment to Contract YH14-001 (Acute Care)." January 1, 2018. Available at https://www.azahcccs.gov/Resources/Downloads/ContractAmendments/AcuteCare/AcuteCareAmendment_010118_Final.pdf. Accessed October 23, 2018.

CMS. "EQR Protocol 4: Validation of Encounter Data Reported by the MCO: A Voluntary Protocol for External Quality Review (EQR)." September 2012. Available at https://www.medicaid.gov/medicaid/quality-of-care/medicaid-managed-care/external-quality-review/index.html. Accessed October 4, 2018.

Commonwealth of Kentucky Department for Medicaid Services. "Master Agreement Modification: Medicaid Managed Care Services—Aetna Better Health of Kentucky." 2015–2018. Available at https://chfs.ky.gov/agencies/dms/dpqo/Documents/AetnaBetterHealthContractJanJun2018_FINAL2.pdf. Accessed October 23, 2018.

Commonwealth of Virginia Department of Medical Assistance Services. "Medallion 3.0 Managed Care Contract." Model contract. 2017–2018. Available at http://www.dmas.virginia.gov/files/links/774/Medallion%203.0%20Contract%202017-2018.pdf. Accessed October 16, 2018.

Kentucky Department of Medicaid Services. "Medicaid Managed Care Services Contract." June 2018. No longer available online.

Michigan Department of Health and Human Services. "State of Michigan Contract: Comprehensive Health Care Program for the Michigan Department of Health and Human Services." July 2018. Available at https://www.michigan.gov/documents/contract_7696_7.pdf. Accessed October 23, 2018.

Minnesota Department of Human Services. "Contract for Prepaid Medical Assistance and MinnesotaCare." Model contract. January 1, 2018. No longer available online.

New Jersey Department of Human Services, Division of Medical Assistance and Health Services. "[Medicaid Managed Care] Contract to Provide Services." January 2018. Available at https://www.state.nj.us/humanservices/dmahs/info/resources/care/hmo-contract.pdf. Accessed October 23, 2018.

Tennessee Department of Finance and Administration, Division of TennCare. "Medicaid Managed Care Statewide Contract with Amendment." July 1, 2018. Available at https://www.tn.gov/content/dam/tn/tenncare/documents/MCOStatewideContract.pdf. Accessed October 23, 2018.

Texas HHSC. "Contractual Document (CD) Subject: Attachment A—Medicaid and CHIP Managed Care Services RFP, Uniform Managed Care Contract Terms and Conditions." September 2018. Available at https://hhs.texas.gov/sites/default/files/documents/services/health/medicaid-chip/programs/contracts/uniform-managed-care-contract.pdf. Accessed September 28, 2018.

Washington State HCA. "Washington Apple Health (Medicaid) Managed Care Contract with Amendments." 2018a. Available at https://www.hca.wa.gov/assets/billers-and-providers/model_contract_ahmc.pdf. Accessed May 10, 2018.

Washington State HCA. "Washington Apple Health Foster Care Contract with Amendments." 2018b. Available at https://www.hca.wa.gov/assets/billers-and-providers/model_contract_k1686.pdf. Accessed May 10, 2018.

Washington State HCA. "Washington Apple Health Fully Integrated Managed Care Contract with Amendments." 2018c. Available at https://www.hca.wa.gov/assets/billers-and-providers/ipbh_fullyintegratedcare_medicaid.pdf. Accessed May 10, 2018.

Washington State HCA. "Washington Behavioral Health Services Wraparound Contract with Amendments." 2018d. Available at https://www.hca.wa.gov/assets/billers-and-providers/ipbh_fullyintegratedcare_nonmedicaid.pdf. Accessed May 10, 2018.

Chapter VI:
Working with managed care plans to ensure high quality encounter data

To ensure high quality encounter data, states must work closely with managed care plans to implement rigorous validation. This chapter describes key practices that support the state-plan partnership required for this validation. First, it discusses states' use of incentives and penalties to induce plans to comply with state data standards (Section A). It then presents elements of effective collaboration that enable states to gather information on data quality, provide useful feedback, and continually improve data collection (Section B).

A. Using incentives and penalties to motivate plans' compliance with data standards

In addition to setting clear expectations for encounter data, as described in Chapter V, states must also ensure that managed care plans meet those expectations. Many states use incentives or penalties that are scaled to the severity of the data errors (for example, the degree of incompleteness or the tardiness of the submission) to motivate plans to comply with state guidance and metrics. To ensure that incentives and penalties are effective, states should connect them to key state standards, data fields, or focus areas (for example, reducing the amount of missing data or eliminating duplicate submissions) that support the intended uses of the data. States may also wish to publicize incentives awarded or penalties imposed to promote plan compliance. For more details on incentives and penalties, see page 13 of the 2013 Encounter Data Toolkit.

Besides designing incentives and penalties to motivate plans to comply with key standards or to improve data quality in certain areas, states should:

- **Describe incentives and penalties clearly in contracts,** including an explanation of the situations that trigger the incentive or penalty, minimum or maximum amounts to be awarded or withheld, steps that plans can take to avoid penalties, and the timelines involved (such as the length of time a plan may have to correct an error before being penalized)

- **Communicate with managed care plans frequently and clearly** about issues with encounter data quality and the potential penalties to be imposed

- Send notifications to penalized plans **to clearly describe why a penalty has been imposed** and what steps the plan should take to remedy the situation

Several examples of financial and nonfinancial incentives and penalties follow.

1. Financial incentives

States can design specific financial incentives, such as bonus payments or withholds, that are tied to encounter data timeliness, completeness, accuracy, or consistency. During the 2018 Encounter Data Validation Call Series, several states emphasized the value of using withholds to encourage managed care plans to comply with data requirements (rather than imposing financial penalties) because withholds do not require the state to "chase the money," as is the case when assessing penalties.

In addition, using encounter data to set capitation rates or service-specific payment amounts can motivate plans to submit complete and accurate encounter data that include total service costs. Nearly all states interviewed for this toolkit reported using encounter data for rate setting. Three states also reported using encounter data to identify services that warrant kick payments,[15] and five states use encounter data to calculate quality or performance measures, which may trigger incentive payments in some states. See Chapter II, Section B, for more information on the uses of encounter data.

2. Nonfinancial incentives

States can also provide nonfinancial rewards to managed care plans that submit timely, complete, accurate, and consistent encounter data. For example, states can use metrics related to data quality in the algorithms that determine how many new enrollees are passively assigned to a health plan, or states can use these metrics in public scorecards of plan quality. When using encounter data performance in scorecards, it's important to emphasize scores that fall short of state goals to encourage improvement across the board; reports that focus on average plan performance and specific plans' deviation from that average may not spur improvement among higher-performing plans. Two examples of states using these techniques are *Arizona* and *Texas*:

- *Arizona* factors approval rates of encounter submissions from managed care plans into its auto-assignment algorithm.[16]

- *Texas* produces a quality report card for managed care plans. The report card, which bases some of its quality measures on encounter data, is included in enrollment packets to Medicaid enrollees to help them make informed choices on health plans.

3. Financial penalties

Of all types of incentives and penalties, financial penalties are the most common. Several states interviewed for this toolkit use penalties to sanction managed care plans for late, incomplete, or inaccurate data submissions as well as for failing to correct data errors. These states typically collect liquidated damages from plans that fail to comply with the state's requirements.

Table VI.1 shows the types of violations that trigger financial penalties in six states. Besides these six states, *Virginia* also uses financial sanctions to motivate managed care plans to submit high quality data, but Virginia has designed a system wherein plans incur points for different types of contract violations, based on the severity of the violation (for example, a particular violation may be worth 1, 5, or 10 points). Plans can also accrue points for failing to meet state standards for encounter data submission. As plans accumulate points, they are subject to financial sanctions of $5,000 (for 16 to 25.5 points) to $30,000 (for 71 to 100.5 points), with sanctions imposed for each type of infraction (Commonwealth of Virginia Department of Medical Assistance Services 2017–2018).

4. Nonfinancial penalties

Although states often use financial penalties to motivate managed care plans, nonfinancial penalties can also be useful. Examples of nonfinancial penalties include suspending enrollment, ceasing passive or default enrollment, disenrolling current enrollees, suspending plan marketing activities, and terminating current contracts or refusing to sign future contracts with the plan. Several states interviewed for this toolkit use nonfinancial penalties—either on their own or combined with financial penalties or incentives—to encourage managed care plans to submit high quality encounter data. For example:

- *New Jersey* includes a statement in its managed care contract alerting managed care plans to the state's ability to "refuse to consider for future contracting a Contractor that fails to submit encounter data on a timely and accurate basis." (New Jersey Department of Human Services 2018).

- In *Arizona,* plans that fail to exchange encounter data successfully with the state within 120 days of the start of the contract may have their enrollment capped. (Arizona Health Care Cost Containment System 2018).

- In *Virginia*, plans that accumulate more than 100.5 points in violations may have their contracts terminated. (See Section A.3 of this chapter for more information about Virginia's point system for contract violations and related sanctions.)

Chapter VI:
Working with managed care plans to ensure high quality encounter data

Table VI.1. States' use of financial penalties

Situations in which states impose a financial penalty	Kentucky	Minnesota	New Jersey	Tennessee	Texas	Washington
Late submission of encounter data (or failure to submit data)	X	--	X	X	X	--
Deadline missed for correcting erroneous records and resubmitting (or failure to correct)	X	X	--	X	--	--
Submission of encounter files in incorrect format	X	--	--	--	--	--
Failure to comply with state's encounter data requirements	--	--	--	X	--	--
Incomplete encounter data (or not meeting completeness benchmark)	--	--	X	X	X	--
Duplicate encounters (or exceeding duplicate-rate threshold)	X	--	X	--	--	--
Rejected encounters (or exceeding rejection-rate threshold)	--	X	X	X	--	--
Erroneous encounters (or exceeding error-rate threshold)	X	--	--	--	X	--
Lack of alignment between encounter payment amounts and plan's financial reports	--	--	--	--	X	X
Lack of attendance at required encounter data meetings	--	--	--	X	--	--

Source: Mathematica's analysis of financial penalties described in state managed care contracts:

- Commonwealth of Kentucky Department for Medicaid Services. "Master Agreement Modification: Medicaid Managed Care Services—Aetna Better Health of Kentucky." 2015–2018. Available at https://chfs.ky.gov/agencies/dms/dpqo/Documents/AetnaBetterHealthContractJanJun2018_FINAL2.pdf. Accessed October 23, 2018.

- Minnesota Department of Human Services. "Contract for Prepaid Medical Assistance and MinnesotaCare." Model contract. January 1, 2018. No longer available online.

- New Jersey Department of Human Services, Division of Medical Assistance and Health Services. "[Medicaid Managed Care] Contract to Provide Services." January 2018. Available at https://www.state.nj.us/humanservices/dmahs/info/resources/care/hmo-contract.pdf. Accessed October 23, 2018.

- Tennessee Department of Finance and Administration, Division of TennCare. "Medicaid Managed Care Statewide Contract with Amendment." July 1, 2018. Available at https://www.tn.gov/content/dam/tn/tenncare/documents/MCOStatewideContract.pdf. Accessed October 23, 2018.

- Texas HHSC. "Contractual Document (CD) Subject: Attachment A—Medicaid and CHIP Managed Care Services RFP, Uniform Managed Care Contract Terms and Conditions." September 2018. Available at https://hhs.texas.gov/sites/default/files/documents/services/health/medicaid-chip/programs/contracts/uniform-managed-care-contract.pdf. Accessed September 28, 2018.

- Washington State HCA. "Washington Apple Health (Medicaid) Managed Care Contract with Amendments." January 1, 2018–December 31, 2018a. Available at https://www.hca.wa.gov/assets/billers-and-providers/model_contract_ahmc.pdf. Accessed May 10, 2018.

- Washington State HCA. "Washington Apple Health Foster Care Contract with Amendments." January 1, 2018–December 31, 2018b. Available at https://www.hca.wa.gov/assets/billers-and-providers/model_contract_k1686.pdf. Accessed May 10, 2018.

- Washington State HCA. "Washington Apple Health Fully Integrated Managed Care Contract with Amendments." January 1, 2018–December 31, 2018c. Available at https://www.hca.wa.gov/assets/billers-and-providers/ipbh_fullyintegratedcare_medicaid.pdf. Accessed May 10, 2018.

- Washington State HCA. "Washington Behavioral Health Services Wraparound Contract with Amendments." January 1, 2018–December 31, 2018d. Available at https://www.hca.wa.gov/assets/billers-and-providers/ipbh_fullyintegratedcare_nonmedicaid.pdf. Accessed May 10, 2018.

B. Working with managed care plans to achieve high quality encounter data

Incentives and penalties can have a major impact on managed care plans' submission of high quality encounter data. But it's also critical to maintain collaborative relationships with plans to encourage their commitment to data quality, stimulate open communication about barriers to submitting high quality data, and help overcome those barriers. Several states interviewed for this toolkit said that collaborative relationships with plans are important and suggested that, to develop such relationships, states need to:

- Communicate frequently and transparently with plans about data issues

- Provide technical assistance to help plans meet state expectations

- Seek plan feedback early and often (for example, during the initial setting of expectations, development of technical assistance tools, implementation of new programs or program changes, and on an ongoing basis)

The rest of this section describes specific steps that states can take to work with managed care plans to continually improve the quality of encounter data.

1. Assess plans' ability to collect and report high quality encounter data

States are required to conduct several types of reviews to evaluate how well managed care plans collect and report encounter data:

- **Readiness reviews:** Federal regulations require states to conduct readiness reviews to assess managed care plans' ability to "perform satisfactorily" in systems management, including the management of encounter data (42 CFR §438.66[d][4][iv][B]). States may conduct these reviews themselves or contract with an EQRO. EQR Protocol 4 offers guidance and tools for designing and executing a readiness review that assesses a plan's ability to collect and report high quality encounter data, along with information on findings from these reviews that may lead to inaccurate or incomplete encounter data (CMS 2012).[17] For a list of managed care plans' practices on data quality assurance that states or their EQROs should investigate during readiness reviews, see pages 21–23 in the 2013 Encounter Data Toolkit.

- **External quality review:** Besides reviewing the capacity of managed care plans' systems during the readiness process, state EQR activities must include an informational systems capability assessment. Appendix V of the 2012 EQR Protocol[18] describes the processes involved in this assessment.

- **Encounter data audit:** Finally, per 42 CFR 438.602(e), states must audit their encounter data at least every three years. To meet this requirement, states can perform (or contract with another entity, such as an EQRO, to perform) the validation activities described in EQR Protocol 4. These include an assessment of plans' capability to collect accurate and complete encounter data.

2. Provide the four Ts: time, training, testing, and technical assistance

The four Ts—time, training, testing, and technical assistance—all help to create an environment that promotes high quality data submission.

Time. When implementing a new program or a change to encounter-related policies or systems, states should provide managed care plans with enough lead time to learn about the new requirements, understand them, and make the necessary internal systems changes. Announcing anticipated changes before implementation also enables plans and other stakeholders to become familiar with the changes and provide feedback to the state before policies and procedures are made final.

Training. Trainings on state requirements for encounter data, submission processes, and the interpretation of state feedback can help plans understand the state's expectations, while giving them a chance to identify areas where they need clarification or technical assistance. Such trainings can occur either in person or electronically—for example, via webinars or recorded training tools. Training

tools on state web pages or SharePoint sites are easy for plans to locate and use to train or retrain their staff. States may also wish to require certain plan staff to complete state training before working with encounter data or on a recurring basis. This can help staff develop and maintain adequate knowledge of the state's expectations, systems, and mechanisms for data submission and correction.

Testing. Testing environments—in which managed care plans can submit sample data files and receive feedback—are an especially useful tool, both when bringing new plans on board (for example, during program startup) and on an ongoing basis. Plans can use testing environments to assess how changes to their internal data systems, such as state-required changes, will affect the encounter data reported to the state. This enables them to identify and fix system issues before submitting "live" data to the state's production environment. Several states use testing to improve the encounter data submitted by plans. For example:

- *Arizona* imposes a one-month testing period on new managed care plans, in which the state supplies plans with fake claims data that they must process through their own systems and send back to the state as encounter records. The process is modeled on the state's actual encounter data submission process and helps the state assess whether the plan can successfully submit high quality encounter data.

- *Virginia* requires managed care plans to submit test data successfully before the state will accept real encounter data. Plans must pass the testing phase within 12 weeks of program inception or any state-mandated change to the submission process, and the test data must meet the specifications in the state's encounter data manuals and guides. Virginia describes the testing requirements in its managed care plan contracts. If a plan submits inaccurate data, the contracts allow Virginia to revoke a plan's privileges to produce encounter data and to require additional testing to be completed within 30 days of notification (Commonwealth of Virginia Department of Medical Assistance Services 2017–2018).

- *Maryland* allows managed care plans to check their encounter data in a testing environment housed in the state's data system. Plans can submit encounter data to this testing environment at any time and receive an 835 file that indicates any corrections that would be needed if the plan submitted these data to the state.

Technical assistance. A final, critical component of state support for managed care plans is technical assistance. One state stressed the importance of technical assistance in new managed care programs, saying that "there are always issues that you cannot anticipate that come up . . . that can be resolved by talking with the [plans]." States may provide technical assistance in a number of ways—for example, through written communications, in-person or electronic meetings, or helpdesk emails—and some modes may be more appropriate than others in certain circumstances. Pages 24–27 of the 2013 Encounter Data Toolkit discuss state options for providing encounter-related technical assistance to managed care plans.

The most common form of technical assistance, reported by all 12 of the interviewed states, is regularly meeting with managed care plans to discuss encounter data issues. Many states emphasized the importance of holding meetings specifically focused on encounter data management—rather than incorporating encounter data discussions into meetings on general program oversight—and ensuring that the plans' technical staff attend the encounter data meetings. When state staff dedicated to encounter data analysis and quality meet with their plan counterparts, both parties can discuss encounter-related issues in detail and devise effective solutions to complex problems.

Some states also suggested including other entities in these meetings, such as plan subcontractors or external vendors involved in validating state encounter data. For example, *Minnesota* invites managed care plan subcontractors (for dental services, pharmacy services, and so on) to quarterly meetings with plans because the subcontractors help produce the encounter data. Including them ensures that all parties involved in encounter data management are on the same page regarding any issues or process changes.

Besides regularly meeting with managed care plans to discuss encounter data, several states interviewed for this toolkit reported using other forms of communication to provide ongoing technical assistance. For example:

- *Arizona* and *New Jersey* send e-newsletters to provide updates and maintain regular communications with managed care plans on encounter-related topics.

- *Maryland, Michigan, Oregon,* and *Washington* maintain email addresses that plans can use to communicate with the states about encounter data submissions or processes. The inboxes are monitored by state staff who have expertise in encounter data management. *Oregon* said that the encounter data inbox is "one of the best things" the state has done because it enables the staff who monitor the inbox to see the range of issues that plans are experiencing, rather than a narrow view of one plan's issues. In Oregon, each plan is assigned a liaison from the state's encounter data team, but plans can also email questions to the state at any time.

- *Arizona* and *Oregon* assign staff liaisons to each managed care plan so that plans have a specific person they can reach for one-on-one technical assistance.

- When system changes generate questions from all managed care plans, *Virginia* and *Washington* compile and circulate answers to these questions to all plans.

3. Communicate validation results to help managed care plans correct erroneous data

For the validation techniques described in Chapter IV to improve data quality, states must provide clear feedback to managed care plans about the timeliness, accuracy, completeness, and consistency of encounter data submissions. Most states use ASC X12 835 files or other automated feedback reports to acknowledge receipt of the data, indicate whether the state accepted or rejected any files and records, and alert plans to issues flagged with pre-acceptance edits. (See Chapter IV, Section B, for details on pre-acceptance edits.) For example:

- *Minnesota* and *Virginia* issue acknowledgment and error reports and post them on a dedicated web portal. Besides issuing standard EDI responses, Virginia also issues specific error reports (Exhibit VI.1) and a file of all encounter records processed alongside the processing results. Because all of these reports are stored in the state's web portal, managed care plans can access them at any time.

- In 2017, *Washington* began using the "MC-Track" component of its data system for all communications with managed care plans, including reports and other correspondence about encounter data. MC-Track requires the plans to acknowledge receipt of any correspondence within a certain number of days; these acknowledgments are flagged and tracked in the system.

In addition to automated reports, several states provide more detailed reports to highlight data issues beyond those identified with pre-acceptance edits. For example:

- *New Jersey* sends managed care plans a monthly report from the state's Encounter Data Management Unit, showing how many encounter records were rejected, how many were duplicates, and whether erroneous or duplicate submissions triggered withholds or liquidated damages. See Exhibit VI.2 for a sample of this report.

- Besides sending monthly reports on the volume and timeliness of encounter submissions, *Michigan* is creating a monthly error report to help managed care plans identify error trends and alert the plans to data that may be rejected in the future. The report will be informational and identifies soft edits that may be turned to reject in the future.

- *Oregon* sends weekly reports to managed care plans that show how many encounter records the state processed compared with the number of encounter records each plan reported on its certification form. The state requires managed care plans to research any discrepancies between these two sources, explain them to the state, and submit corrections. Oregon also sends managed care plans a monthly report that summarizes the data it received and any issues to be resolved (for example, encounter records with missing data or dates of service when the member was not enrolled in the plan). The state designates these records as "pending" and requires plans to correct the issues (or provide an adequate explanation) within 63 days of notification.

Exhibit VI.1. Virginia's error reports

Virginia issues error reports through its Encounter Processing System that show managed care plans which encounter records were flagged as erroneous in the state's pre-acceptance edits. The reports include transaction control numbers for each flagged record to help plans identify which encounters have an error (an "E" in the "DISP" column in the sample report below) and why those records were flagged (the reasons are listed under "Rule Name" in the sample report):

DEPARTMENT OF MEDICAL ASSISTANCE SERVICES
Virginia Medicaid Enterprise System - Encounter Processing Solution

EPS-EPE-003 ☰EPS REPORTS

EPS RESPONSE: ENCOUNTER ERROR DETAIL
03-NOV-2017 04.30.46.244 PM

FILEID	PROGRAM NAME	ISA NUMBER	SENDER ID	ENCOUNTER RECEIVED	COMPLIANCE REJECTED	VALIDATION TOTAL	VALIDATION PASSED	VALIDATION FAILED
F1711030000500CP16EI	CCCPLUS	000001003	CP16000	97	0	97	59	38

No.	PAYER CLAIM ID	EPS TCN	LINE	RULE ID	RULE NAME	DISP	ERROR DATA
1	ESVBB1BB5V01	T1711030002179BCPEIR	0	DP020601	Billing Provider NPI is Not Associated With Service Center	E	1093706806
2	ESVBB1BH6K00	T1711030002183BCPEIO	0	DP020601	Billing Provider NPI is Not Associated With Service Center	E	1528028396
3	ESVBB1BG7F00	T1711030002199BCPEIO	0	FC051401	Accommodation Code is Missing or Invalid	E	
4	ESVBB1BG7G00	T1711030002200BCPEIO	0	FC051401	Accommodation Code is Missing or Invalid	E	
5	ESVBB1BG7H00	T1711030002204BCPEIO	0	FC051401	Accommodation Code is Missing or Invalid	E	
6	ESVBB1BG7J00	T1711030002205BCPEIO	0	FC051401	Accommodation Code is Missing or Invalid	E	
7	ESVBB1BG8L00	T1711030002206BCPEIO	0	FC051401	Accommodation Code is Missing or Invalid	E	
8	ESVBB1BG7K00	T1711030002210BCPEIO	0	FC051401	Accommodation Code is Missing or Invalid	E	
9	ESVBB1BG7L00	T1711030002211BCPEIO	0	FC051401	Accommodation Code is Missing or Invalid	E	
10	ESVBB1BG7M00	T1711030002212BCPEIO	0	FC051401	Accommodation Code is Missing or Invalid	E	
11	ESVBB1BG7N00	T1711030002214BCPEIO	0	FC051401	Accommodation Code is Missing or Invalid	E	
12	ESVBB1BG7P00	T1711030002215BCPEIO	0	FC051401	Accommodation Code is Missing or Invalid	E	
13	ESVBB1BG7Q00	T1711030002216BCPEIO	0	FC051401	Accommodation Code is Missing or Invalid	E	
14	ESVBB1BG7R00	T1711030002217BCPEIO	0	FC051401	Accommodation Code is Missing or Invalid	E	

©copyright 2017 DMAS, Richmond, Virginia ✱ ⊘VCCC at (866) 637-8482 ✱ ✉DMASEDISupport@dmas.virginia.gov

Source: Virginia DMAS. "Encounter Data Validation Forum #3: Internal Validation Approaches." Presentation for the Encounter Data Validation Forum Series, August 9, 2018.

Exhibit VI.2. **New Jersey's monthly encounter-processing report**

New Jersey sends a monthly report to managed care plans to show them how many of their encounter records were rejected, how many were duplicates, and whether erroneous or duplicate submissions triggered withholds or liquidated damages. The report format, with mock data, is shown below:

	Mar-2016	Apr-2016	May-2016	Jun-2016	Jul-2016	Aug-2016	Sep-2016	Oct-2016	Nov-2016	Dec-2016	Jan-2017	Feb-2017	Mar-2017
Total Submitted Encounters Accepted (excludes CAPDT)	205,334	189,810	168,418	188,127	286,902	273,270	242,445	210,904	304,254	248,973	279,506	278,858	271,871
Total Denied Encounters (excludes CAPDT)	1,808	2,391	698	5,164	21,634	3,415	3,514	2,759	5,144	3,464	2,585	5,652	2,831
Resubmissions thru - 03/2017	1,253	1,065	45	1,221	16,223	711	1,523	808	1,830	935	480	1,559	12
Duplicate encounters	10,429	2,236	1,713	1,422	3,483	6,522	1,510	4,622	2,520	2,393	7,944	13,748	2,373
Calculated values													
2% of submitted encounters	4,107	3,796	3,388	3,763	5,738	5,465	4,849	4,218	6,085	4,979	5,590	5,577	5,437
Duplicate encounters in excess of 2% are liquidated damages and not refundable													
Duplicate encounters in excess of 2%	6,322	-	-	-	-	1,057	-	404	-	-	2,354	8,171	$0.00
Excess denied encounters result in a withhold if not remedied in 3 months and amounts withheld are liquidated after 9 months of withholding													
Duplicate encounters in excess of 2%	-	-	-	180	-	-	-	-	-	-	-	-	-
Capitation detail													
Capitation records submitted	32,956	36,082	36,282	36,411	38,643	37,575	38,881	42,663	39,865	42,620	42,570	47,084	48,910
Capitation records denied	289	426	789	573	1,830	701	20	218	44	69	8	24	18
Denied capitation encounters in excess of 2% are liquidated damages and not refundable													
Excess denied capitation encounters	-	-	64	-	1,057	-	-	-	-	-	-	-	$0.00
Liquidated amounts and withhold percentages													
Amounts liquidated	$6,322	$0	$64	$0	$1,057	$1,057	$0	$404	$0	$0	$2,354	$8,171	$0.00
Excesss denied encounters result in a withhold if not remedied in 3 months and amounts withheld are liquidated after 9 months of withholding													
Denied encounters withhold	0.0000%	0.0000%	0.0000%	0.5000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%

Note: This exhibit shows mock data only and does not reflect actual data from any New Jersey managed care plan.
Source: New Jersey DMAHS. "Encounter Data Validation Forum #4: External Validation Approaches." Presentation for the Encounter Data Validation Forum Series, August 30, 2018.

4. Require managed care plans to reconcile encounter data with their own claim records and correct errors or discrepancies

Several states require managed care plans to reconcile the encounter data in the state's data system with the claims and encounter records in plan databases. This process identifies missing and potentially erroneous data, which the state can require the plans to correct. For example:

- Each year, *Michigan* requires managed care plans to submit a list of active encounter reference numbers from their claims-processing systems. The state then compares these lists to the active encounter records in the state's data system to identify any discrepancies. The state reports the results of the reconciliation process in an encounter comparison report and shares the results with each plan. Plans must address the discrepancies by sending the state any encounter records that are missing from the state's data system or by processing voids for records that should not be in the state's data system.

- *Michigan* also contracts with an actuarial firm for the state's Encounter Quality Initiative. The actuaries collect encounter information from the state's data system and compare it with information submitted by managed care plans. Discrepancies in the total number of encounters reported, dollar amounts, procedure counts or utilization rates, and other metrics can be viewed via the actuary's online tool. See Exhibit VI.3 for more information about Michigan's Encounter Quality Initiative.

- *Arizona* and *Minnesota* send encounter data files back to managed care plans in the form of a report and ask them to compare the files with the claims information in their internal data systems and identify any discrepancies. *Arizona* sends these files each month and has incorporated language into its contract requiring plans to reconcile the reports with their data to validate the completeness of their encounter submissions (Arizona Health Care Cost Containment System 2018). Each quarter, *Minnesota* sends managed care plans complete encounter data files (including those that have been voided) and tags errors that the state has identified so that plans can identify and correct erroneous or missing records.

- Each month, *Texas* requires managed care plans to compare their encounter data submissions to their adjudicated claims data (from their own claims system) to identify variances. The plans must then submit a report to the state identifying any variances found between the two data sources, including a detailed explanation for each variance (Texas HHSC 2018).

Exhibit VI.3. **Michigan's Encounter Quality Initiative**

In 2012, Michigan began contracting with an actuarial firm to reconcile encounter data in the state's data system with encounter reports submitted by managed care plans. Every month, Michigan's actuary receives a report of accepted encounter records from the state's data system. Every 4 months, the actuary compiles the most recent 16 months of the encounter data and compares them to reports submitted by the managed care plans.

Each plan has one month to complete a standard data report and return it to the state. The state verifies that the report is complete and forwards it to the actuarial contractor for comparison. The contractor then has one month to compare both data sets and report any variances. Afterwards, the contractor notifies the state, and each managed care plan can use the contractor's online tool to review their information and identified variances. The contractor provides an encrypted copy of each plan's encounter data from the state's data system, allowing the plan to drill down into the data used by the actuarial firm.

After being notified that the comparison information is available, plans have two months to review the findings and submit a reconciliation summary to the state. The summary must identify three key variances and provide a correction plan for each. The plans must also report three previously identified variances and describe how these variances have improved. The reconciliation template also gives plans the option to express any concerns with how the actuary processed the data.

During reconciliation, the state can review each plan's data using an online tool so that it can respond to questions from plans and research discrepancies that the actuary identifies. After the comparison process, the state receives comprehensive reports from the actuary that categorize data variances by rate cells or service categories.

Michigan's Encounter Quality Initiative process helps the state and managed care plans communicate about potential data issues and identify aspects of the reconciliation reports that require further research; plans can then void or replace encounter records as needed. Michigan has found that this process improves the quality of the encounter records in its data system, thereby increasing the accuracy of state rate setting and other program management decisions based on encounter data.

Source: Michigan Department of Health and Human Services. "Encounter Data Validation Forum #4: External Validation Approaches." Presentation for the Encounter Data Validation Forum Series, August 30, 2018.

Chapter VI References

Arizona Health Care Cost Containment System. "Amendment to Contract YH14-001 (Acute Care)." January 1, 2018. Available at https://www.azahcccs.gov/Resources/Downloads/ContractAmendments/AcuteCare/AcuteCareAmendment_010118_Final.pdf. Accessed October 23, 2018.

CMS. "EQR Protocol 4: Validation of Encounter Data Reported by the MCO: A Voluntary Protocol for External Quality Review (EQR)." September 2012. Available at https://www.medicaid.gov/medicaid/quality-of-care/medicaid-managed-care/external-quality-review/index.html. Accessed October 4, 2018.

Commonwealth of Virginia Department of Medical Assistance Services. "Medallion 3.0 Managed Care Contract." 2017–2018. Available at http://www.dmas.virginia.gov/files/links/774/Medallion%203.0%20Contract%202017-2018.pdf. Accessed October 16, 2018.

New Jersey Department of Human Services, Division of Medical Assistance and Health Services. "[Medicaid Managed Care] Contract to Provide Services." January 2018. Available at https://www.state.nj.us/humanservices/dmahs/info/resources/care/hmo-contract.pdf. Accessed October 23, 2018.

Texas HHSC. "Contractual Document (CD) Subject: Attachment A—Medicaid and CHIP Managed Care Services RFP, Uniform Managed Care Contract Terms and Conditions." September 2018. Available at https://hhs.texas.gov/sites/default/files/documents/services/health/medicaid-chip/programs/contracts/uniform-managed-care-contract.pdf. Accessed September 28, 2018.

Chapter VII:
Resources

This section provides a consolidated list of resources referenced in this toolkit, including contracts, webinars, and other publications. We encourage states to consult these resources for more information on encounter data validation.

A. State managed care contracts

The following states, which we interviewed to inform this toolkit, maintain current copies of their managed care contracts on their state Medicaid websites.[19] These publicly available contracts may be useful for states that are new to managed care or wish to see how other states present encounter data requirements in their contracts.

- **Arizona:** https://www.azahcccs.gov/PlansProviders/HealthPlans/purchasing.html

- **Kentucky:** https://chfs.ky.gov/agencies/dms/dpqo/Pages/mco-contracts.aspx

- **Michigan:** https://www.michigan.gov/mdhhs/0,5885,7-339-71551_2945_42542_42544_42644-150910--,00.html

- **Minnesota:** https://mn.gov/dhs/partners-and-providers/news-initiatives-reports-workgroups/minnesota-health-care-programs/managed-care-reporting/contracts.jsp

- **New Jersey:** https://www.state.nj.us/humanservices/dmahs/info/resources/care/

- **Tennessee:** https://www.tn.gov/tenncare/providers/managed-care-organizations.html

- **Texas:** https://hhs.texas.gov/services/health/medicaid-chip/provider-information/managed-care-contracts-manuals

- **Virginia:**
  - Medallion 3.0 program: http://www.dmas.virginia.gov/#/med3programinfo
  - Medallion 4.0 program: http://www.dmas.virginia.gov/#/med4
  - Commonwealth Coordinated Care Plus program: http://www.dmas.virginia.gov/#/cccplusinformation

- **Washington:** https://www.hca.wa.gov/billers-providers-partners/programs-and-services/model-managed-care-contracts

B. Encounter data resources

1. Recorded webinars

- Improving the Quality of Medicaid Encounter Data, CMS Innovation Accelerator Program Webinar, October 12, 2017
  - Slides: https://www.medicaid.gov/state-resource-center/innovation-accelerator-program/iap-downloads/functional-areas/encounter-data-webinar.pdf
  - Transcript: https://www.medicaid.gov/state-resource-center/innovation-accelerator-program/iap-downloads/functional-areas/encounter-data-transcript.pdf
  - Recording: https://www.medicaid.gov/state-resource-center/innovation-accelerator-program/iap-downloads/functional-areas/encounter-data-audio.mp3

Chapter VII:
Resources

2. Publications

The following resources provide additional information for states on collecting, using, validating, and reporting encounter data:

- **Encounter Data Toolkit**, by Vivian Byrd, Jessica Nysenbaum, and Debra Lipson. Produced by Mathematica for the Centers for Medicare & Medicaid Services (CMS). November 2013. https://www.medicaid.gov/medicaid-chip-program-information/by-topics/delivery-systems/downloads/medicaid-encounter-data-toolkit.pdf.

- **Collecting, Using, and Reporting Medicaid Encounter Data: A Primer for States**, by Vivian Byrd and James Verdier. Produced by Mathematica for the Centers for Medicare & Medicaid Services, October 2011. https://www.mathematica-mpr.com/~/media/publications/pdfs/health/max_encounterdata.pdf

- **2012 External Quality Review (EQR) Protocols, EQR Protocol 4, Version 2.0: Validation of Encounter Data Reported by the MCO: A Voluntary Protocol for External Quality Review (EQR)**, by the Centers for Medicare & Medicaid Services, OMB Approval Number 0938-0786, September 2012. Available at https://www.medicaid.gov/medicaid/quality-of-care/medicaid-managed-care/external-quality-review/index.html.

- **2012 EQR Protocols, Appendix V: Information System Capabilities Assessment— Activity Required for Multiple Protocols**, by the Centers for Medicare & Medicaid Services. September 2012. Available at https://www.medicaid.gov/medicaid/quality-of-care/medicaid-managed-care/external-quality-review/index.html.
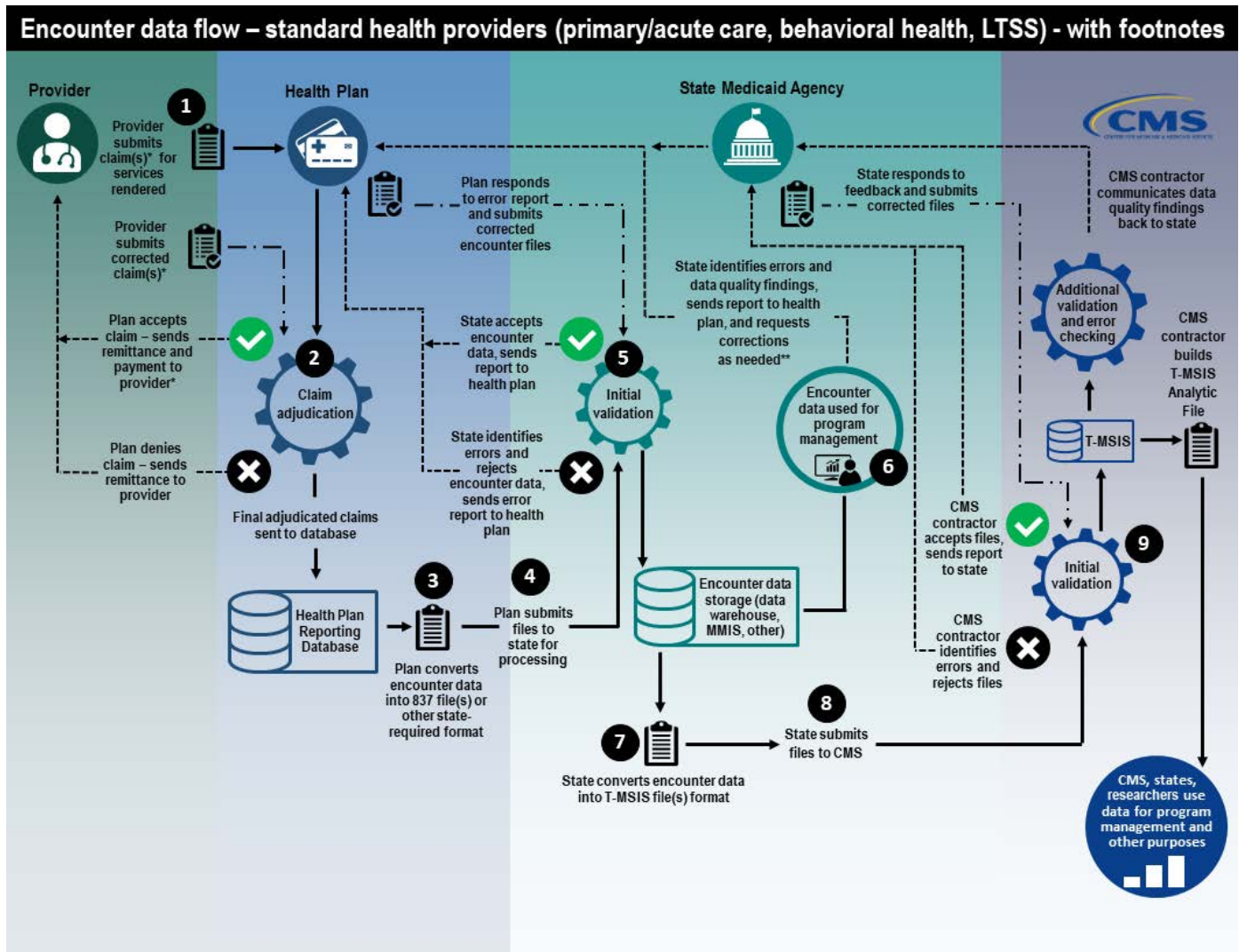
The following issue briefs compare the completeness, quality, and usability of encounter data across the 50 U.S. states by service type:

- **Assessing the Usability of Encounter Data for Enrollees in Comprehensive Managed Care, 2010–2011**, by Vivian Byrd and Allison Hedley Dodd. Produced by Mathematica for the Centers for Medicare & Medicaid Services, Medicaid Policy Brief #22, August 2015. https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/Downloads/MAX_Encounter_Brief_2010_2011.pdf.

- **The Availability and Usability of Behavioral Health Organization (BHO) Encounter Data in MAX 2009**, by Jessica Nysenbaum, Ellen Bouchery, and Rosalie Malsberger. Produced by Mathematica for the Centers for Medicare & Medicaid Services, Medicaid Policy Brief #14, July 2013. https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/Downloads/MAX_IB14_BHO.pdf

- **Assessing the Usability of Encounter Data for Enrollees in Comprehensive Managed Care Across MAX 2007–2009**, by Vivian Byrd and Allison Hedley Dodd. Produced by Mathematica for the Centers for Medicare & Medicaid Services, Medicaid Policy Brief #15, December 2012. https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/Downloads/MAX_IB_15_AssessingUsability.pdf

- **Assessing the Usability of MAX 2008 Encounter Data for Enrollees in Comprehensive Managed Care (for Physician, Clinic, and Outpatient Services)**, by Vivian Byrd, Allison Hedley Dodd, Rosalie Malsberger, and Ashley Zlatinov. Produced by Mathematica for the Centers for Medicare & Medicaid Services, Medicaid Policy Brief #7, July 2012. https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/Downloads/MAX_IB7_EncounterData_071312.pdf

- **Assessing the Usability of the MAX 2007 Inpatient and Prescription Encounter Data for Enrollees in Comprehensive Managed Care**, by Allison Hedley Dodd, Jessica Nysenbaum, and Ashley Zlatinov. Produced by Mathematica for the Centers for Medicare & Medicaid Services, Medicaid Policy Brief #5, April 2012. https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/Downloads/MAXTA_Usability_MAX_2007_IP_and_RX_EncounterData.pdf

Appendix I: Simplified encounter data flow chart

Encounter data flow – standard health providers (primary/acute care, behavioral health, LTSS) - with footnotes

*This flow chart displays provider/health plan data exchange under fee-for-service payment arrangements between Medicaid managed care plans and providers. When managed care plans execute capitated contracts with providers or utilize value-based or incentive-based payments, the data flow looks similar to the flow represented here, but providers submit encounter records instead of claims, and payment may not be connected to submission of individual encounters.

**States may also impose penalties on managed care plans for data errors, omissions, or non-compliance with encounter data reporting requirements.

Legend: Encounter data flow – standard health providers	
File – original submission	
File – corrected submission	
Database/system	
Process	
Decision – accept	
Decision – rejection or warning	
Required data pathway	
Communication pathway (may or may not involve data flow)	
Data pathway used for resubmitting claims/encounters	
Major data flow milestones	#

Endnotes

1 New Jersey contracts with Molina Healthcare for its Medicaid Management Information System.

2 For more information on HIPAA standards and operating rules, see https://www.cms.gov/Regulations-and-Guidance/Administrative-Simplification/HIPAA-ACA/AdoptedStandardsandOperatingRules.html.

3 For more information on the National Correct Coding Initiative in Medicaid, see https://www.medicaid.gov/medicaid/program-integrity/ncci/index.html.

4 The T-MSIS data dictionary can be accessed from CMS's T-MSIS web page at https://www.medicaid.gov/medicaid/data-and-systems/macbis/tmsis/index.html.

5 States can perform this activity themselves or contract with an EQRO or other entity to do so. States that contract with a qualified EQRO to conduct EQR-related activities for an MCO are eligible for a 75 percent match rate, compared with the usual 50 percent match rate.

6 States may wish to conduct clinical record comparisons as part of the encounter data audit required per 42 CFR §438.602(e). Audit requirements and the corresponding audit protocol are forthcoming.

7 As noted above, states can perform this activity themselves or contract with an EQRO or other entity to do so. States that contract with a qualified EQRO to conduct EQR-related activities for an MCO are eligible for a 75 percent match rate, instead of the usual 50 percent match rate.

8 For a description of the clinical record review conducted by Maryland's EQRO for calendar year 2017, see pages IV-5 to IV-18 in the Maryland HealthChoice Medicaid Managed Care Organization CY2017 Technical Report: https://mmcp.health.maryland.gov/healthchoice/Documents/ CY%202017%20Annual%20Technical%20Report.pdf.

9 Actuarial standard of practice (ASOP) 23 guides actuaries generally in their use and review of data. This ASOP may be of use to states intending to involve actuaries in encounter data validation practices: http://www.actuarialstandardsboard.org/asops/data-quality/.

10 In lieu of a contractual requirement mandating managed care plans to submit encounter records within a certain time frame from the date of service, some states issue general timely filing requirements for providers that specify the amount of time providers have to submit claims (or encounter records) to plans. Standard timely filing requirements that apply to all providers in a state can be used to achieve the same goal as requirements mandating data submission within a certain period from the date of service.

11 T-MSIS Coding Blog guidance on submitting accurate and complete encounter data for managed care is available at https://www.medicaid.gov/medicaid/data-and-systems/macbis/tmsis/tmsis-blog/?entry=47579

12 T-MSIS Coding Blog guidance on submitting provider payment amounts is available at https://www.medicaid.gov/medicaid/data-and-systems/macbis/tmsis/tmsis-blog/?entry=47543

13 The T-MSIS data dictionary, as well as coding memos providing additional guidance, is available at https://www.medicaid.gov/medicaid/data-and-systems/macbis/tmsis/index.html

14 In addition to encounter records for services rendered, plans in New Jersey are required to submit capitation detail records that show which beneficiaries have received services from providers involved in managed care sub-capitation arrangements. New Jersey applies the same 2 percent threshold for errors and the same penalties as it uses with encounter records.

[15] Kick payments are typically one-time payments of fixed amounts used to reimburse managed care plans for particular services. States often use kick payments to prevent plans from carrying the financial risk associated with providing these services. Kick payments for maternity services, for example, prevent plans from taking on the cost of a birth when a beneficiary becomes eligible for Medicaid or changes health plans late in a pregnancy.

[16] Factors included in Arizona's auto-assignment algorithm are listed on page 2 of the state's auto-assignment algorithm policy: https://www.azahcccs.gov/shared/Downloads/ACOM/PolicyFiles/300/314.pdf.

[17] Medicaid EQR protocols provide guidance for completing mandatory and optional EQR activities. EQR Protocol 4 describes the process for validating managed care plans' encounter data. All protocol documents are available at https://www.medicaid.gov/medicaid/quality-of-care/medicaid-managed-care/external-quality-review/index.html.

[18] Ibid.

[19] Maryland, Nevada, and Oregon were also interviewed, but do not currently have copies of their Medicaid managed care contracts publicly available on their state websites.