

Health Care Electronic Transaction Data Flow Analysis Report to CALINX

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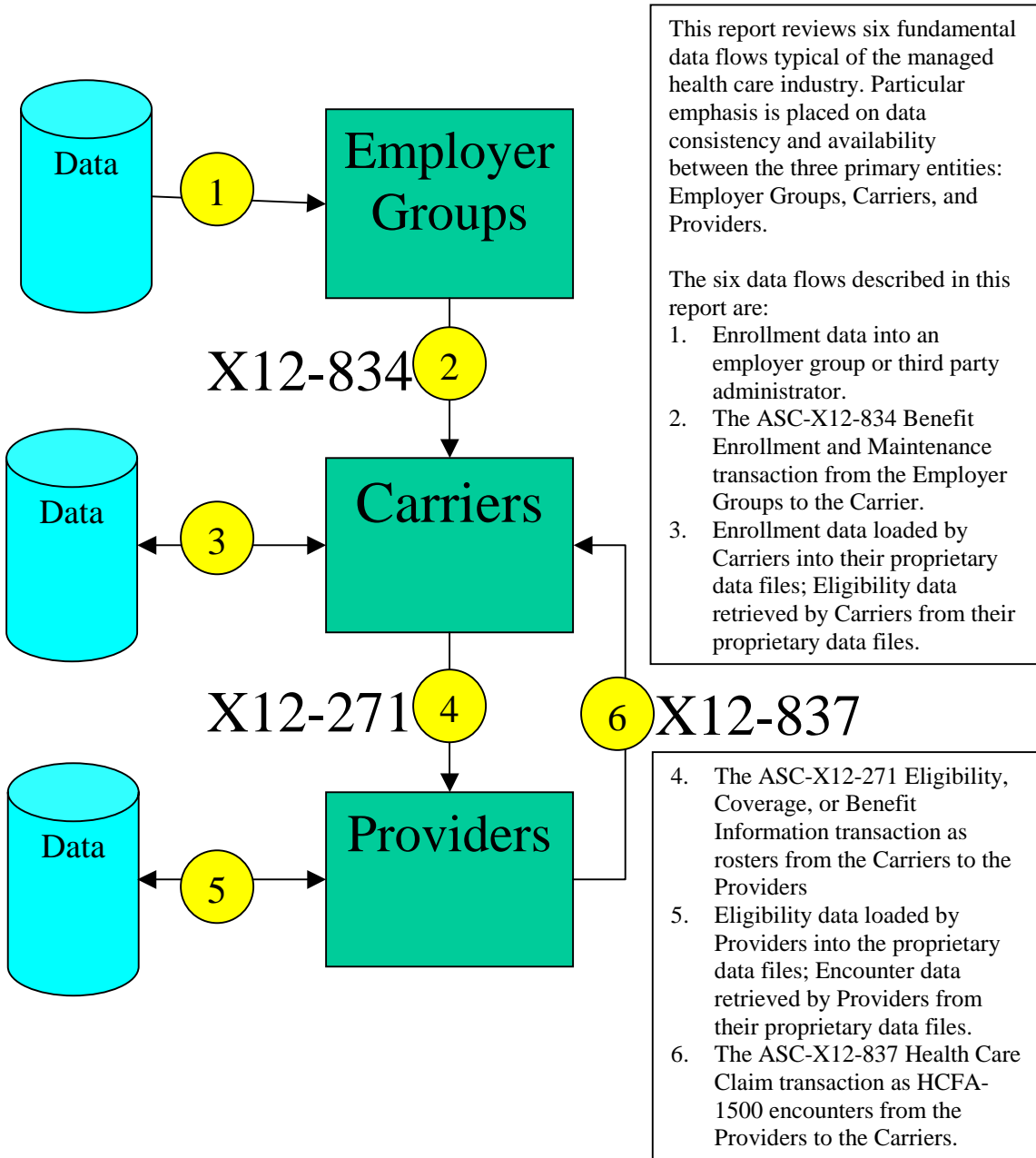
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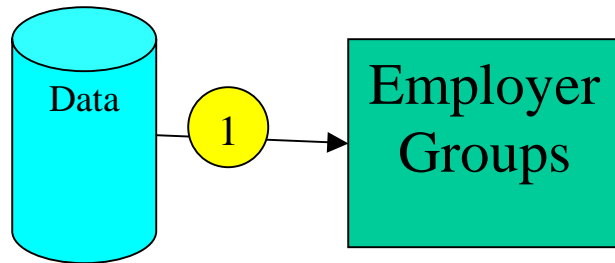
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Fundamental Data Flows





Enrollment Data at the Employer Group

Two business processes fundamental for a company's human resource (H/R) department are administration of benefits and the company's payroll. Some companies elect to perform one or both of these functions in-house, while other companies choose to outsource these processes. Regardless of which scenario a company elects, it is safe to say that many H/R departments are burdened with many clerical tasks. These tasks include processing changes to benefits, handling timesheets, reconciling payroll, etc. While accuracy is essential when administering this data, it is a virtual certainty that errors will creep into any clerical process. Such errors may find their way into the H/R department's data repository.

When an employee first enrolls in a benefit plan, certain data must be sent to the entity responsible for administering the benefits. For example, pension and 401k election data is sent to a pension plan administrator. Health insurance selection information is sent to the contracted carrier. The importance of the employer group collecting and recording accurate benefit data should not be underestimated. Errors created here can compound themselves to a point where providers provide services and carriers pay claims for ineligible individuals.

For the health care industry, the employer groups' data repositories are the source of nearly all member data that passes through the health care delivery system. A member's enrollment information is provided to a carrier. The carrier notifies the provider of the member's eligibility for services. The provider renders a health care service and notifies the carrier through a claim or an encounter that the service was performed. The carrier adjudicates and pays the claim or records the encounter.

In health care electronic data interchange (EDI), there are certain expectations for the content, consistency, and availability of the member data. Therefore it is important to take a look at what member data is used in all of the relevant health care EDI transactions and whether or not this data is first available in the employer groups' repositories. It is also useful to assess the likelihood of errors for specific data elements at this stage of the health care delivery process. Table-1 reviews member data utilized by the ASC-X12-834 Benefit Enrollment and Maintenance transaction set. The author ascertains the likelihood that the data is available in the employer groups' data repositories then provides an opinion as to whether or not the data is more likely (as compared to other data) to contain undetected content errors if it were stored in the employer groups' data repositories. It must be noted that these opinions are based solely on the author's experience implementing large and small scale human resource and benefit tracking systems as well as experience implementing the ASC-X12-834 transaction set. In addition, the elements identified by the CALINX Agreements as "essential" are highlighted.

Recommendations

In reviewing Table-1, it is apparent that several data elements that are essential according to CALINX are not likely to be captured in the employer groups' data repositories. It is suggested that the CALINX enrollment work group survey employer groups to determine the actual availability of these essential data elements and/or gain an understanding of when or if these data elements will ever be captured. If such essential data is not available, business policy decisions must be made addressing this issue.

Table 1 Member Information in Employer Group Repositories

	DATA ELEMENT	Stored?	Errors?
1	Handicapped Identifier	D	L
2	Individual Relationship Code	D	L
3	Type of Changes to Benefit	D	M
4	Reason for a Change to Benefits	D	M
5	Status of the Benefits	Y	L
6	Medicare Plan	D	L
7	COBRA Indicator	D	L
8	Employment Status	Y	L
9	Student Status	D	M
10	Insured Individual Death Date	D	L
11	Subscriber Number	Y	L
12	Member Policy Number	D	L
13	Member Identification Number	Y	L
14	Enrollment/Disenrollment Dates	Y	L
15	Member's Name	Y	L
16	Member's Communication Number	D	M
17	Dependent Mailing Address	N	M
18	Member Residence Address	Y	M
19	Subscriber Birth Date	Y	L
20	Language Used by Member	D	L
21	Race or Ethnicity	D	L
22	Marital Status	D	L
23	Citizenship Status Code	D	L
24	Gender	Y	L
25	Member Mailing Address	N	M
26	Member Employer Name	Y	L
27	Employer Communication Number	Y	L
28	Employer Address	Y	L
29	Member School Name	N	M
30	School Communication Number	N	M
31	School Address	N	M
32	Custodial Parent Name	N	L
33	Custodial Parent SSN	N	M
34	Custodial Parent Member ID	N	L
35	Custodial Parent Number	N	M
36	Custodial Parent Communication #	N	M
37	Custodial Parent Address	N	M
38	Type of Disability	N	M
39	Medical Code	N	M
40	Disability Eligibility Dates	N	M
41	Type of Change Health Coverage	N	M
42	Line of Insurance	Y	L
43	Plan Coverage Description	D	L
44	Health Coverage Dates	Y	L
45	Health Coverage Policy Number	D	L
46	Coverage Level	D	L
47	Insured Group or Policy Number	D	L
48	ID Card Plan Coverage Description	D	L
49	Type of ID Card	D	L
50	Number of Cards	D	L
51	Reason for Card Request	D	M
52	Type of Provider	N	L
53	Provider Name	N	M
54	Provider Prefix and Suffix	N	M
55	Provider Identifier Number	N	M

Key to Table 1

Stored?

Y = Yes, it is likely that this element is stored in the employer group's data repository.
N = No, it is not likely that this element is stored in the employer group's data repository.
D = Depends on the practices of the employer group as to whether this data is stored or not.

Errors?

Answers the question: Is this data element more likely or less likely to contain an undetected content error?
L = Less likely
M = More likely

Elements identified by the CALINX Agreements as "essential" are **shaded**.

	DATA ELEMENT	Stored?	Errors?
56	Patient Relationship to Provider	N	M
57	Reason for PCP Change	N	M
58	Provider Effective Date	N	M
59	COB Payer Responsibility Seq.	N	M
60	COB Insured Group or Policy Nbr	N	L
61	COB Code	N	L
62	Additional COB Info. Numbers	N	L
63	COB Eligibility Dates	N	L
64	COB Other Insurance Co. Name	N	L

**Table 1 Member Information
in Employer Group
Repositories (continued)**

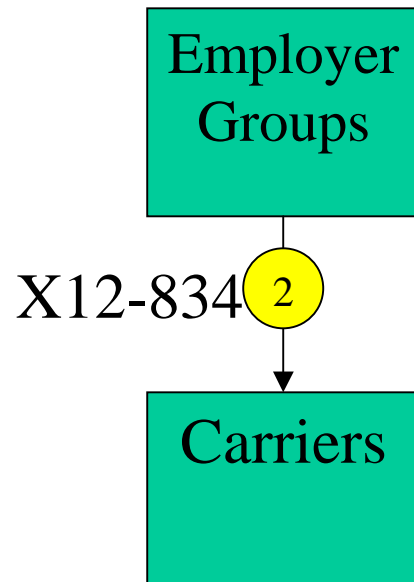
Note: The data elements identified in Table-1 were taken from the CALINX document titled *“Proposed CALINX Enrollment Data Elements and Format”*.

ASC-X12-834 Benefit Enrollment and Maintenance Transaction Set

In the world of EDI, the transmission of transactions is generally considered to be more of a benefit to the recipient of the transaction rather than the sender. In the case of data flow #2, the 834 transaction set provides the carrier with a mechanism to receive enrollment transactions in a standardized format from many different employer groups. The carrier enjoys the benefits of eliminating data entry, increasing the accuracy and throughput of the member enrollment data.

Employer group administrators should not underestimate the benefits to themselves for this data flow. By using EDI, they may be able to negotiate performance agreements from the carriers such as faster ID card distribution, timely updates to rosters, etc. Employee satisfaction increases.

Key issues regarding the 834 data flow between employer groups and carriers center around the availability of essential data to the carriers, accuracy of data, and the timeliness of transaction transmissions.



Availability of Essential Data

The availability of essential data to the carriers is critical. As discussed in the previous section, certain data elements were identified by CALINX as essential to the health care industry and are to be transmitted in the 834 transaction set. As illustrated in Table-1, the probability of all of these essential data elements being captured by the employer groups, let alone stored and maintained, is questionable. Carriers must develop contingencies for when essential data is simply not available.

Interestingly enough, data which one may expect to be routinely available, such as information about dependents, cannot always be guaranteed to be available. Depending upon the business practices of the employer group, and the sophistication of their data processing systems, routine member data may not be available.

The issue of sending primary care physician data by employer groups to carriers remains a significant issue. Information about the member's primary care physician (PCP) is identified as essential by CALINX and, in fact, is necessary for many managed care carrier systems to automatically process membership enrollment and issue ID cards. However, several barriers exist which mitigate the carriers' ability to receive PCP data from employer groups. These barriers include:

- Inability of the employer group's application system to store or process PCP data.
- Reluctance by the employer group to request PCP data from their employees and enter it into the employer's benefit tracking system.
- Inefficient and inconsistent PCP identification methodologies between carriers.

Although discussion about these barriers and possible remediation methodologies is outside the scope of this report, it is the author's opinion that the PCP data issue will remain a problem for some time. However, this barrier should not prevent the implementation of the 834 transaction set between employer groups and carriers; the benefits of the EDI transaction outweigh the problems caused by the lack of PCP data.

Accuracy of Data

The implementation of the 834 transaction set should significantly improve the accuracy of data sent to carriers, at least in regards to the attributes of the data elements. It is reasonable to expect EDI systems to validate for the presence of data and the format of the data. With few exceptions, it is the responsibility of the legacy application system, in this case the carriers' business process system, to validate the content of data.

In tracing back the flow of data to the origin, the accuracy of data content for member data initially rests with the employer group. Poor quality data captured by the employer group will result in poor quality data sent to the carrier in an 834 transaction set. However, the carrier must also accept responsibility for performing appropriate data content validation audits and, if necessary, data cleanup before loading 834 transaction supplied data into the carrier's data repository.

Timeliness of Data

Closely related to data accuracy is the timeliness of the data. The sooner an event is recorded by an employer group and sent to a carrier, the more accurate the data. However, the inherent nature of benefit administration dictates that most implementations of the 834 transaction set between trading partners be established on batch schedule. Essentially, the employer group transmits 834 transactions to the carrier on a periodic basis, such as daily, weekly, monthly, quarterly, or annually. CALINX has studied this issue and made timeliness recommendations for trading partners to follow. The author encourages the adoption of these recommendations.

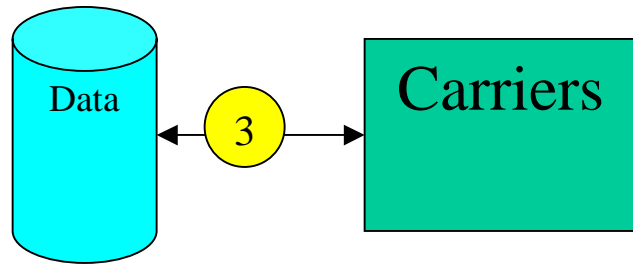
Also associated with timeliness of the data is the problem of data synchronization between trading partners. Employer groups that do not regularly provide carriers with timely 834 transaction sets run the risk of getting of synch with their carriers. And in all cases, carriers record modifications to data reported directly to them by members which may or may not be reported by the member to the member's employer. Most carriers, but not all carriers, adopt policies and procedures to feed enrollment data back to the employer groups, either electronically or via report. The author believes that it is incumbent upon the carriers and the employer groups to ensure that some kind of data synchronization process is in place.

Recommendations

The author firmly believes that it is the industry's best interest to implement the ASC-X12-834 transaction set whenever possible, adopting version release 004010 and following the tenets prescribed by the federal Health Insurance Portability and Accountability Act (HIPAA). The availability of essential data will remain a significant issue; the author believes that viable workarounds can be developed between trading partners to get around the lack of essential data. Carriers should develop contingencies for when data is simply not available. Data accuracy is the responsibility of both the employer groups and the carriers. The employer groups must endeavor to collect and input accurate data; it may behoove the health care industry to educate groups on how vital their role is in the health care data flow process. Carriers should take an active role in auditing data before it is accepted into their systems. In addressing the timeliness of data, CALINX established guidelines which should be adopted by the industry. However, it is suggested that additional work be done in identifying workable methodologies for keeping data in synch between employer groups and carriers.

Carrier Processing of Membership Data

After enrollment data is received by the carriers, the onus is upon the carriers to update their data repositories on a timely basis. In practice, the majority of carriers do update their systems on a timely basis since failure to do so could result in ineligible people receiving services and eligible people being denied services. Some employer groups, recognizing the importance of timely updates, incorporate service level agreements into their contracts with their carriers.



Providers also have a vested interest in the carriers performing timely updates of enrollment data to the carriers' data repositories. Particularly in a managed care environment, capitated providers must have some assurance that a patient is their responsibility and not insured by another carrier. Therefore, the basis for member eligibility data supplied by the carrier to the provider community originates with the enrollment process.

Besides forming a basis for member eligibility data to providers, the enrollment data also serves as the foundation for capitation payments to providers. Therefore, lack of complete and accurate enrollment data from the employer group or inconsistent processing of enrollment data by the carrier can negatively impact a provider's capitation payment.

Enrollment data that carriers use to keep their repositories up to date comes from two primary sources. First, the data supplied to the carrier from the employer group through the enrollment process. However, a second important source of data should not be overlooked. In some instances, members will contact the carrier directly, bypassing their employer, to report changes to their membership information. It is reasonable to expect that employers will still receive demographic changes from their employees and report those to the carrier. However, information typically not captured by employers, such as primary care physician changes, dependent student certifications, etc. will more than likely bypass the employer and be reported by the member directly to the carrier. If an employer has a business need for this data, it is incumbent upon the employer to ensure that the carrier regularly provides this data back to the employer.

Recommendations

CALINX established new "Rules of Exchange" between trading partners which should be adopted by all trading partners in the enrollment process. Implementation of these rules will go a long way towards mitigating the timeliness problems identified in this report.

For those employers who maintain benefit information traditionally reported by members directly to carriers, it is suggested that these employers regularly request and receive audit files from their carriers.

ASC-X12-271 Eligibility Roster From the Carriers to the Providers

The next step in the enrollment process is to notify providers of the members' eligibility. Electronically, this is traditionally accomplished in one of two ways. Providers may interactively query a carrier about a given member's eligibility and receive a response from the carrier. Or the provider may periodically receive a membership roster from a carrier. This report addresses the roster scenario.

The importance of an accurate and timely roster cannot be understated. Providers depend upon the eligible membership data in the roster to determine which patients should receive services. However, in a managed care environment, providers need to track eligibility through yet another transaction, the capitation payment. As of this writing, there is no industry-wide standard for the electronic transmission of capitation payment data. Capitation payment data is currently sent to providers in a variety of formats, both paper and electronic.

Historically, rosters have been sent to providers on paper or through the use of proprietary electronic formats. Recently, an increasing number of carriers and providers are supporting the use of the ASC-X12-271 Health Care Eligibility / Benefit Information transaction set standard for transmission of roster data. CALINX endorsed this standard and is encouraging the standard's adoption throughout the health care industry.

Under the tenets of the Health Insurance Portability and Accountability Act (HIPAA) legislation, the managed care roster was inadvertently omitted from the administrative simplification list of transactions. It was suggested at a recent HCFA caucus that this omission may be addressed sometime in the future. However, the author suggests that such legislative changes will be a long time in coming.

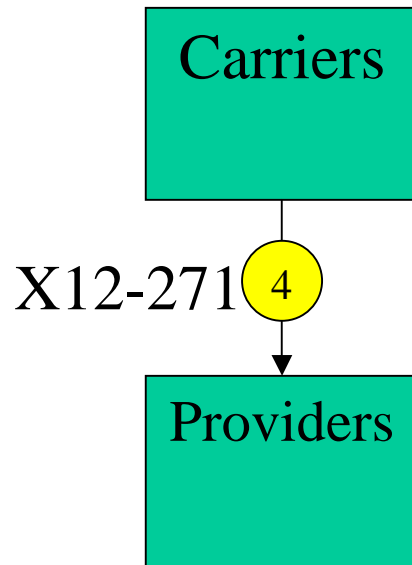
Through adoption of the 271 roster, carriers and providers gain the advantage of a single, standardized format for the managed care roster. In addition, by adopting the 271 roster, these entities may be in a better position to leverage their resources for incorporation of the ASC-X12-270/271 interactive eligibility transaction sets.

Issues between carriers and providers surrounding the roster are similar in nature to those issues arising between employer groups and carriers regarding enrollment data. In short, providers are concerned with the accuracy of the roster, availability of essential data, the timeliness of the data, and the ability to balance their capitation payments back to the roster.

Accuracy of the Roster

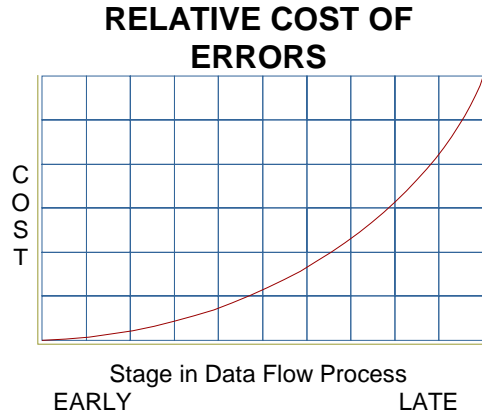
The implementation of the 271 transaction set as a roster should significantly improve the accuracy of data sent to carriers, at least in regards to the attributes of the data elements. However, at this stage of the health care data process, it is important to remember that the roster is fourth in the hierarchy of this report's information processing flow:

1. **Employer gathers enrollment data.**
2. **Employer periodically transmits enrollment data to the carrier.**
3. **Carrier receives and processes enrollment data.**
4. **Carrier periodically creates and transmits eligibility rosters to the provider.**



As the fourth level of processing in the data flow, the roster is subject to errors introduced earlier in the process. Most of these types of errors are errors with data content or the lack of essential information. Few errors are likely due to inconsistencies in the format, or attributes, of the data. This supposition is made based on the use of X12 transaction standards; the X12 insurance subcommittee has a special work group whose task is to ensure consistency of data usage across health care transactions.

Although the use of recognized transaction standards mitigates the problem of data attribute errors, it does little to resolve problems with data content errors. Data content errors compound themselves at each stage of the transaction flow process; the cost and effect of a data content error is lowest at the beginning of the data flow and significantly increases at later stages in the data flow.



Through judicious use of data quality audits, carriers can resolve many data content errors in their eligibility rosters. However, it is the author's opinion that the quality of a carrier's membership data is only as good as what is supplied to the carrier. Through the efforts of CALINX, and initiatives set by carriers and some employer groups, there is more attention being paid to the membership data before it arrives in the carriers' repositories. Clean data coming in to the process equates to an increased probability that provider rosters will be accurate.

Carriers must also ensure that they are correctly determining a member's eligibility status before sending the member on a roster to a provider. In the author's opinion, this is a much bigger potential problem than data content errors. It is true that the quality of data going in to the carriers' algorithms used to determine eligibility impacts the quality of the eligibility assessment process. However, the determination of eligibility at a given point in time can be a complex matter. The use of the ASC-X12-271 standard roster and a reasonable assurance of good quality data can help improve this process.

Availability of Essential Data

Regardless of the format of the roster, paper or electronic, providers must deal with the lack of essential data on some carriers' rosters along with data errors. The CALINX eligibility work group came to consensus on what they believe constitutes essential roster data. Table-2 reviews the data elements inherent to a typical implementation of the ASC-X12-271 electronic roster. In this table, the author ascertains the probability that a given data element is likely to be available, the expected source of the data, and the likelihood the data element contains an undetected data content error.

Timeliness of Data

The timeliness of rosters continues to be a significant issue in the provider community. Rosters are out-of-date shortly after they are created. At best, they provide an accurate snapshot of a given carrier's membership community for a particular provider. At worst, they are so out-of-date once a provider receives them as to make the rosters worthless.

The use of the ASC-X12-271 roster transaction will not, in and of itself, resolve this issue. However, by implementing an electronic roster, as opposed to a paper roster, providers will gain some improvements with regard to timeliness of the roster data.

CALINX recently issued its "rules of exchange" which addresses the issue of timeliness. Whether or not these rules can be successfully adopted by all carriers remains to be seen. The author expects that adoption of these rules will significantly improve the timeliness of roster delivery to providers.

Balancing Capitation Payments

Because there is no electronic standard for the delivery of capitation payment data to providers, many providers use their electronic rosters as a starting point for reconciling their capitation payments. More often than not, this ends up causing problems for the provider. Addressing this issue is beyond the scope of this report, but the author suggests that interested parties lobby the ASC-X12 committee for the development of a capitation transaction or a capitation payment implementation guide for one of the existing X12 transaction sets.

Recommendations

The author firmly believes that it is the industry's best interest to implement the ASC-X12-271 roster transaction whenever possible, adopting version release 004010. Although the roster is not covered by the HIPAA legislation, it is reasonable to expect that eventually the roster will be added to the list of covered transactions.

As with the other data flows, the accuracy and availability of data is an issue. Carriers would do well to adopt data quality control measures, if they haven't done so already, to increase the accuracy of roster data. Since the majority of the roster data ultimately arose from the employer group, carriers and employer groups should work together to improve the accuracy of enrollment data.

For those providers challenged with reconciling their capitation payments, the author suggests working with the carriers to develop a mutually agreeable methodology for handling this process. For example, it may be feasible to send the provider's capitation report in a proprietary electronic format so that the provider can load it into their practice management system. Educating providers on how a given carriers' capitation and eligibility process works, since each carrier does it differently, may also help.

Again, the CALINX rules of exchange initiative should be adopted by all entities in the data flow process.

**Table 2 Eligibility Data Elements Relative to the 271 Transaction Set –
Proposed Full Roster**

	DATA ELEMENT	Source?	Avail?	Errors?
1	Member Last Name	E	Y	L
2	Member First Name	E	Y	L
3	Member Middle Name	E	M	M
4	Member Name Suffix	E	M	M
5	Member Identification Number	C	Y	L
6	Social Security Number	E	M	L
7	Member Address	E	Y	M
8	City	E	Y	M
9	State	E	Y	M
10	Postal Zone or ZIP Code	E	Y	M
11	Home Phone	E	Y	M
12	Work Phone	E	Y	M
13	Date of Birth	E	Y	L
14	Gender	E	Y	L
15	Individual Relationship Code	E	Y	L
16	Subscriber Name	E	Y	L
17	Subscriber SSN	E	M	L
18	Subscriber Member ID Number	C	Y	L
19	Health Plan Payer Name	C	Y	L
20	Health Plan Payer Identification Cd	C	Y	L
21	Subscriber/Member Effective Date	E	Y	L
22	Benefit Code	C	Y	L
23	Medical Group Name	C	M	M
24	IPA Name	C	M	M
25	Medical Group / IPA Number	C	Y	M
26	Subscriber/Member Effective Date	C	Y	L
27	Provider Name	C	Y	M
28	Provider Code #	C	Y	M
29	Subscriber/Member Effective Date	C	Y	L
30	Group Number (Employer)	C	Y	L
31	Employer Name	E	Y	M
32	Employer Address/City/State/ZIP	E	Y	M
33	Activity Code	C	M	M

Key to Table 2

Source?

C = Carrier: The element is created and maintained by the carrier as a result of its internal business processes.

E = Employer: The element originated from the employer as part of the enrollment process.

Available?

Y = Yes, it can be expected that the carrier has this data.

N = No, it should not be expected that the carrier has this data.

M = The carrier may or may not have this data depending upon the carrier's business practices.

Errors?

Answers the question: Is this data element more likely or less likely to contain an undetected content error?

L = Less likely

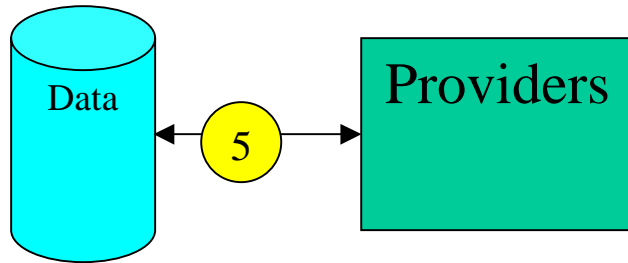
M = More likely

Elements identified by the CALINX Agreements as "essential" are **shaded**.

Note: The data elements identified in Table-2 were taken from the CALINX document titled "Proposed CALINX Eligibility Data Elements and Format Draft 4/12/99".

Provider Processing of Carrier Eligibility Data

Once a provider has obtained the eligibility information from the carrier through the electronic 271 roster, the provider needs to process the roster data into the provider's business system. The sooner a provider is able to accomplish this task, the sooner the provider is able to query this data to answer questions about patients seeking care: "It this person enrolled in a valid plan?" and "Is the required service a covered benefit?" Even with a timely and accurate roster, it is still challenging to answer these questions due to the inherent complexity of many benefit plans such as traditional HMO, point-of-service, PPO, indemnity, etc. However, the consistent use of the electronic eligibility roster ASC-X12-271 transaction does reduce issues caused by inconsistent data format and content, leaving the provider to focus on interpreting the data itself.



For those providers that are computerized, many use popular practice management software systems such as EZ-Cap™ to run their business. Products like this provide standardized eligibility roster interfaces which take in roster data to populate the system's data repository. Many of these products, however, do not directly support the ASC-X12-271 format, preferring to import data in their own proprietary format. In these cases, providers will need to find resources to map the carrier supplied 271 formatted roster into their practice management system's import format.

Once the roster data is loaded into the provider's repository, the provider can query it to determine eligibility. It is also used as a foundation for preparation of encounters, which are discussed in the next topic.

Recommendations

It may be useful for the CALINX organization to work closely with the provider community to identify popular practice management software systems and survey these systems for their EDI capability. This information could then be used to lobby the software system developers to add EDI capability to their systems as well as provide useful information to providers contemplating a purchase of a new package.

ASC-X12-837 Encounters – Submission of Professional Encounter Data From Providers to Carriers

The health care encounter is the last document in the data flow process examined in this report. For purposes of this report, the author only reviews the data content of the professional encounter. However, there are many similarities in this data flow that can be incorporated into the institutional encounter submission process.

Prior to capitation, health care claims were the principle documents exchanged between carriers and providers. The volume of electronic claims has been increasing over the years as more providers and carriers realize the benefits of electronic claim submission. Fortunately, many of the same processes used in electronic claim submission can be leveraged by these trading partners for the exchange of encounter data in a managed care environment.

However, there is a fundamental difference between the encounter and the claim which must be taken into consideration. A claim is a request by a provider to a carrier for payment of a rendered service; the provider is expecting a financial return for submitting the claim. An encounter is a report by a provider to a carrier that a service was rendered under the terms of the provider's capitation agreement; the payment was already made to the provider in the form of the provider's periodic capitation check. This difference between a claim and an encounter historically has caused providers to be less enthusiastic about submitting encounters compared to claims.

Carriers need the provider encounter data in order to perform managed care data analysis and reporting, for example medical outcome reporting, HEDIS reporting, utilization management, etc. Encounter data is very valuable to the carriers. Carriers use a variety of "carrot and stick" methods to incent their providers to submit encounters, preferably electronically. These incentives and disincentives have varying degrees of success. The issue of provider compliance with encounter submission is outside the scope of this report. However, the author wishes to communicate that adoption of the ASC-X12-837 transaction set as the encounter format will do little to nothing to solve the compliance problem.

When providers submit their encounter data to carriers, the quality of the data itself is often questioned. Besides data quality, the timeliness of the encounter submission and the availability of required data fields can also be issues. Implementation of the ASC-X12-837 transaction set and adoption of the CALINX rule of exchange between trading partners will help mitigate these issues.

Table-3 examines the encounter transaction, reviews the CALINX requirements for data exchange, identifies the source of the data elements, and comments on the data element's relative error expectation. Most of the data elements used in the encounter transaction originate from the employer enrollment process (member demographics) or from the provider's business practice (supplying a service to a patient). This truism reinforces the need to have good, clean data flowing into the system from the employer since ultimately some of this data forms the basis of eligibility verification and the service encounter.

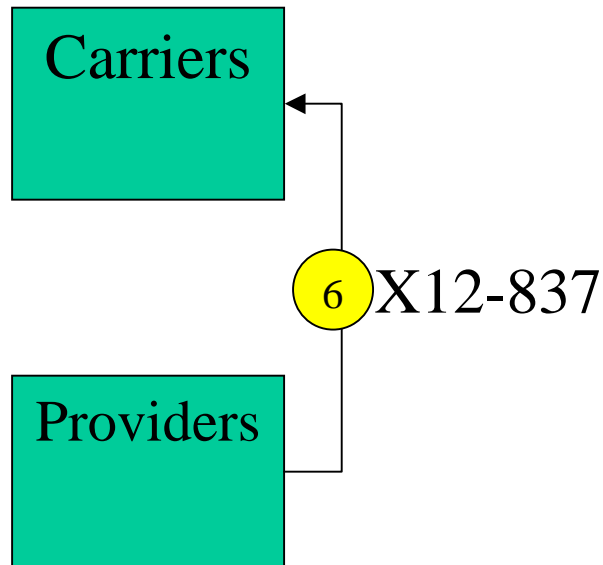


Table 3 Managed Care Encounter – ASC-X12-837 CALINX Agreement

	DATA ELEMENT	Source?	Avail?	Errors?
1a	Insurance Type	P	Y	L
1b	Insured's ID Number	C	Y	L
2	Patient's Name	E	Y	L
3	Patient's Birth Date	E	Y	L
4	Insured's Name	E	M	L
5	Patient's Address	E	Y	M
6	Patient's Relationship to Insured	E	M	L
7	Insured's Address	E	M	L
8	Patient Status	E	M	M
9	Other Insured's Name	E	M	M
10	Is Patient Condition Related to?	P	M	M
10d	Reserved for Local Use	-	-	-
11	Insured Policy Group or FECA Nbr	C	Y	L
12	Patient/Auth Person's Signature	P	Y	L
13	Insured/Auth Person's Signature	P	Y	L
14	Date of Current Illness...	P	Y	L
15	First Date of Illness	P	M	M
16	Dates Patient Unable to Work	P	M	M
17	Name of Referring Physician	P	Y	M
17a	ID Number of Referring Physician	P	M	L
18	Hospitalization Dates-Current Svc	P	Y	L
19	Reserved for Local Use	-	-	-
20	Outside Lab	P	M	L
21	Diganosis or Nature of Illness...	P	Y	M
22	Medicaid Resubmission Code	P	M	M
23	Prior Authorization Number	P	Y	L
24a	Dates of Service	P	Y	L
24b	Place of Service	P	Y	L
24c	Type of Service	P	Y	L
24d	Procedure, Services, or Supplies	P	Y	M
24e	Diagnosis Code	P	Y	M
24f	\$ Charges	P	Y	M
24g	Days or Units	P	Y	M
24h	ESPDY Family Plan	P	M	L
24I	EMG	P	M	L
24j	COB	C	M	M
24k	Reserved for Local Use	-	-	-
25	Federal Tax ID Number	P	Y	L
26	Patient's Account Number	P	M	L
27	Accept Assignment	P	M	L
28	Total Charge	P	Y	M
29	Amount Paid	P	M	M
30	Balance Due	P	M	M
31	Signature of Physician or Supplier	P	Y	L
32	Name and Address of Facility...	P	Y	M
33	Physician's Supplier Billing Name.	P	Y	M

Key to Table 3

Source?

C = Carrier: The element originated from the carrier as part of the eligibility reporting process.

E = Employer: The element originated from the employer as part of the enrollment process which subsequently was passed to the carrier then sent to the provider as part of eligibility reporting.

P = Provider: The element is created and maintained as part of the provider's business process.

Available?

Y = Yes, it can be expected that the provider has this data.

N = No, it should not be expected that the provider has this data.

M = The provider may or may not have this data depending upon the provider's business practices.

Errors?

Answers the question: Is this data element more likely or less likely to contain an undetected content error?

L = Less likely

M = More likely

Elements identified by the CALINX Agreements as "essential" are **shaded**.

Note: The data elements identified in Table-3 were taken from the CALINX document titled "Cross-walk between HCFA-1500 and 837 Professional /CALINX Agreements".

Recommendations

In order to increase the volume and accuracy of encounters, carriers and providers will need to work together to overcome barriers which limit encounter submission. Simplification of the electronic encounter submission process, as supported by the CALINX initiatives, will help. Adoption of a single, uniform encounter format, such as the ASC-X12-837 transaction set, will help. And continuous, open dialog between all parties in the transaction flow process (providers, carriers, and employer groups) to ensure collection and delivery of consistent, quality data will help.

CONCLUSIONS

The report's author, working in conjunction with Pacific Business Group on Health, identified and examined a data flow used between employer groups, carriers, and providers in the health care industry. This data flow is particularly germane to the managed care health care environment typical of California today.

Starting with the enrollment of an employee and an employee's dependents, the data flow traced the benefit enrollment information sent to carriers via the ASC-X12-834 transaction set. The author then postulated, based on his experience, what carriers do with this information prior to preparing eligibility rosters. The eligibility roster, sent to providers via the ASC-X12-271 transaction set, was then examined. The author then discussed business practices typical of providers with respect to the roster. Finally, the last piece of the data flow, the managed health care encounter, was reviewed. The encounters, transmitted to carriers via the ASC-X12-837 transaction set, closes the data flow.

The author draws the following conclusions after completing the analysis of this data flow:

1. There should be little concern about consistency between data elements within health care transaction sets. The ASC-X12 standards committee does a fairly good job of ensuring consistency. Furthermore, the insurance subcommittee of X12 put into place, as a result of the HIPAA legislation, a special work group whose task it is ensure consistency of data element attributes and usage between health care transaction sets and HIPAA implementation guides.
2. There is nothing inherent in any of the transaction sets which stops or delays the flow of any given data element through the entire business process scenario. All data elements are accounted for and can be traced back to their logical point of origin in the process.
3. Problems due to data attributes will be mitigated by the adoption of the ASC-X12 standards and the judicious adherence to those standards.
4. Problems due to data content will continue to exist, even after adoption of the ASC-X12 standards and CALINX rules of exchange. The author defines data content to address the presence or absence of data as well as the quality of the data itself.
5. The timeliness of data will probably remain an issue, although adoption of the CALINX rules of exchange should help mitigate this problem.
6. There are barriers which inhibit exchange of certain data elements, some of which have been identified as required by CALINX. These barriers will continue to exist, even after full adoption of the ASC-X12 and the CALINX rules of exchange by trading partners.
7. Despite some problems that will remain, the benefits of full implementation of standard electronic data interchange between the entities identified in this report will be significant.

SUMMARY OF RECOMMENDATIONS

1. Survey employer groups to determine actual availability of CALINX data elements identified as essential.
2. Be prepared to make business policy decisions relevant to the unavailability of essential data elements; what will a trading partner need to do if relevant data is simply not available? Suggestions include developing workarounds or contingency plans.
3. Implement the ASC-X12-834 transaction set as soon as possible, adopting version release 004010 of the X12 standards and following the guidelines for implementation suggested by the HIPAA legislation.
4. Educate employer groups on how important their role is in supplying accurate data to the health care industry.
5. Employer groups and carriers take joint responsibility for accuracy of enrollment data.
6. Carriers should actively audit enrollment data before accepting it into their business systems.
7. All trading partners should adopt the CALINX guidelines / rules of exchange.
8. Employer groups and carriers should develop methodologies for keeping data in synch between themselves.
9. Employers should request and receive regular audit files of enrollment data from their carriers.
10. Implement the ASC-X12-271 transaction set as soon as possible, adopting version release 004010 of the X12 standards and following the guidelines for implementation suggested by the X12 work group responsible for developing a roster implementation guide.
11. Providers and carriers should work together to develop a standard methodology and transaction for handling capitation payments and reconciliation.
12. Lobby the X12 committee for a transaction that supports the industry's capitation needs.
13. Increase provider education about carriers capitation practices.
14. Carriers should incorporate the use of data quality control measures to increase the accuracy of roster data.
15. Identify popular practice management software systems; survey these systems for EDI capability and make this information available to providers contemplating the purchase of a new system.
16. Lobby developers of popular practice management software systems to add EDI capability to their systems.
17. Carriers and providers should work together to overcome barriers which limit encounter submission.
18. Implement the ASC-X12-837 transaction set as soon as possible, adopting version release 004010 of the X12 standards and following the guidelines for implementation suggested by the X12 work group responsible for developing an encounter implementation guide.
19. Establish and maintain a regular, open dialog between all parties in the transaction flow process (providers, carriers, and employer groups) to ensure collection and delivery of consistent, quality data using the X12 standards as a transmission vehicle.
20. As soon as possible, all parties should adopt X12 standards, in parallel with efforts between trading partners to address issues of data content, timeliness, and other remaining barriers.