

Date of Service Calculation in 837 Transactions

Praveen Kumar Vutukuri

Claim Intake Systems, Centene Corporation, Tampa, FL, USA

Email: [praveen524svec\[at\]gmail.com](mailto:praveen524svec[at]gmail.com)

Abstract: This article aims to better understanding how to calculate final Date of Service in 837 transaction is an electronic file that contains patient claim information. In the Electronic Data Interchange (EDI) process, the "Date of Service" (DOS) refers to the specific date (s) when healthcare services were provided to a patient. The DOS is a crucial piece of information in healthcare EDI transactions, particularly in claims processing (e. g., EDI 837), as it helps insurers and other payers to determine coverage and payment. The DOS is typically found in the service line details of an EDI file, such as the 837 Health Care Claim transaction set. It is usually denoted in segments like DTP (Date/Time Period) with a qualifier indicating the date type (e. g., "472" for Service Date. The DOS must be accurate and validated against other information in the claim, such as patient eligibility and provider contracts, to ensure proper processing.

Keywords: EDI (Electronic Data Interchange), HIPAA (Health Insurance Portability and Accountability Act), Date of Service (DOS), Transaction 837, Service Line, HIP (Health Information Processor), LOB (Line of Business)

1. Introduction

The purpose of this research is to how to read the transaction file and understand the calculation of Date Of service From Claim. Since of Date Of service is the core process which is involved whether the claim has to be accepted or not. Accurate DOS entries are essential for timely and correct reimbursement. Errors in DOS can lead to claim rejections or delays. Besides the 837 transactions, the DOS can also appear in other EDI transactions such as the 835 Health Care Claim Payment/Advice, 270/271 Eligibility Inquiry and Response, and others where service date verification is necessary. Understanding and correctly entering the Date of Service in EDI transactions is critical for the smooth functioning of healthcare billing and payment systems.

Design / methodology /approach: -

All the top Health Care systems follow this approach to determine the Date of Service before the claim adjudication process.

Findings:

When a business unit receives the claim, either claim can be Institutional or Professional claim Information. If a business receives the claim for adjudication, there are certain rules to validate the claim is valid or not. Once the claim is valid, then in the form of the claim information, we calculate the final date of service from multiple service lines. Each service line provides the information of kind of treatment provided with respective diagnostic code information and date of treatment which provided. Based on different entity's information of claim, we will calculate the final Date Of Service (DOS) and determine whether the claim has to be accepted for adjudication or not.

Original/value:

Current research has demystified the client experience in a current business environment and has identified the dimensions that greatly affect it and how they affect it.

Research limitations and outlook:

The limited external validity of qualitative research methods encourages us to pursue observations and corroborate results on the one hand. On the other hand, empirical testing would

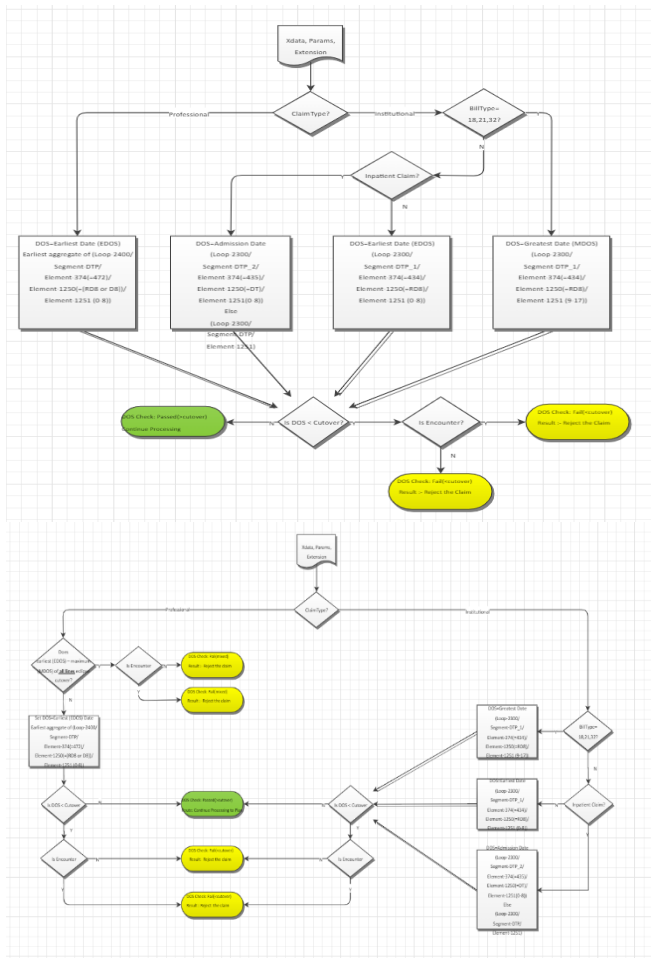
help to confirm the relationship between variables and their relevance in the area studied

2. Literature Review

As part of the standard process, providers of health care products or services may include entities such as physicians, dentists, hospitals, pharmacies, other medical facilities or suppliers, and entities providing medical information to meet regulatory requirements.

The payer is a third party entity that pays claims or administers the insurance product or benefit, or both. For example, a payer may be an insurance company, health maintenance organization (HMO), preferred provider organization (PPO), government agency (Medicare, Medicaid, TRICARE, etc.) or an entity such as a third party administrator (TPA), or third party organization (TPO) that may be contracted by one of those groups. A regulatory agency is an entity responsible, by law or rule, for administering and monitoring a statutory benefits program or a specific segment of the health care/insurance industry.

The transaction defined by this implementation guide is intended to originate with the health care provider or the health care provider's designated agent. In some instances, a health care payer may originate an 837 to report a health care encounter to another payer or sponsoring organization. The 837 Transaction provides all necessary information to allow the destination payer to at least begin to adjudicate the claim.



o In this implementation, Date Of Service (DOS) implemented as an API, as this logic works as part of claim validation on acceptance and this API not only returns the decision of acceptance, and additionally it returns what is the final consideration of Date Of service for that claim as well.

o If you see in the above flow chart, based on the different claim properties/inputs it will make a decision on process it provides the Earliest Date/ Greatest Date/ Admission Date as final Date Of Service.

o So, for example, if I'm doing Member Validation logic, this API will be executed to make sure the claim is valid and gets the date of service has to be considered.

3. DOS Calculation

3.1 XDATA Based Process:

XData is nothing but Transaction 837, and it will be in XML format.

3.2 Control Number Based Process:

Since insurance companies work as payers, as soon as we receive the claim, companies will store the claim in the database and generate one unique identifier for further processing reference.

So, applications can request the claim's date of service using the control number. Based on the control number, API has the

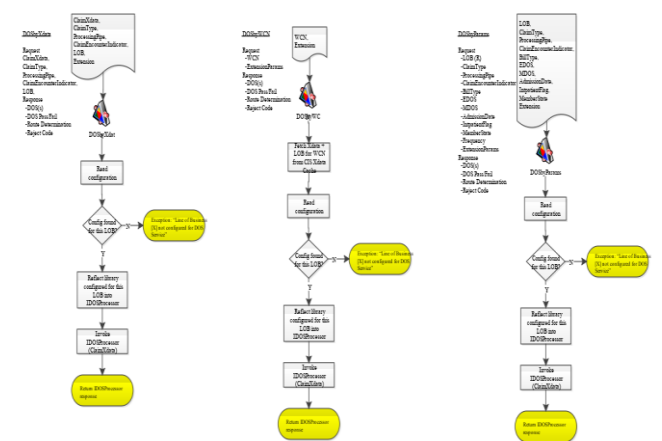
capability to interact with databases, get the claim information, and process the date of service logic.

3.3 Parameters Based Process:

Date of service can provide the output/response using parameterized instances as well.

In this case, the application will interact with parameters format, but the calling application will analyze all the claim data, and it just provides the input in the format of parameters.

These parameters include claim type, claim bill type, Line of Business (LOB), Earliest Date Of service, Greatest Date Of Service, Admission Date, Member State and Frequency etc.



Line of Business (LOB) Cut Over Date

- One more major inspection in this process of considering the Line of Business cut over date.
- The system is designed to consider the claim's LOB and find the cut - off date, as a payer if we receive a claim on out of cut over date, the claim will be forwarded to the respective administration department and claim admin will interact with the provider for further action.
- While processing Date of Service logic, the service will read the claim's LOB and based on that it gets the Cut over date for Date of Service Comparison.
- These Cutover Dates are going to be stored in a static system file, if any line of business cutover date needs to be updated, can simply apply the modification on configuration change.

```

<?xml version="1.0" encoding="utf-8" ?>
<config>
  <CutOverDate>
    <RMR>20180101</RMR>
    <UAR>20190101</UAR>
    <UFR>20190101</UFR>
    <UPR>20190101</UPR>
    <USR>20190101</USR>
    <UKR>20190101</UKR>
    <AMD>20210401</AMD>
    <ADD>20200101</ADD>
    <AZR>20190101</AZR>
    <GMD>20200501</GMD>
    <GFP>20200501</GFP>
    <SMD>20200501</SMD>
    <AOR>20190101</AOR>
    <QTRDUAL>20210501</QTRDUAL>
    <MRDUAL>20210101</MRDUAL>
    <MTRDUAL>20210701</MTRDUAL>
    <RRDUAL>20230101</RRDUAL>
  </CutOverDate>
  <DynamicAssemblyDefinitions>
    <ECDOSHandler path="bin\CISDOS.ECDOSHandler.dll" lobs="RMR" />
    <UAMDOSHandler path="bin\CISDOS.UAMDOSHandler.dll" lobs="UAR,UFR,UMR,UPR,USR,UKR" />
    <CFDOSHandler path="bin\CISDOS.Care1stDOSHandler.dll" lobs="AZR,AMD,ADD,AOR" />
    <CNCDOSHandler path="bin\CISDOS.CNCDOSHandler.dll" lobs="GMD,GFP,SMD" />
    <UKDOSHandler path="bin\CISDOS.UKDOSHandler.dll" lobs="UKR" />
    <QTRDUALHandler path="bin\CISDOS.QTRDUALHandler.dll" lobs="QTRDUAL" />
    <MRDUALHandler path="bin\CISDOS.MRDUALHandler.dll" lobs="MRDUAL" />
    <MTRDUALHandler path="bin\CISDOS.MTRDUALHandler.dll" lobs="MTRDUAL" />
    <RRDUALHandler path="bin\CISDOS.RRDUALHandler.dll" lobs="RRDUAL" />
  </DynamicAssemblyDefinitions>
  <LOB_MEDICARE>AZR,AOR</LOB_MEDICARE>
  <LOB_MEDICAID>AMD,ADD</LOB_MEDICAID>
</config>

```

- [4] CMS is a federal agency that administers programs such as Medicare and Medicaid. Their website may have information on EDI standards and healthcare transactions. [https://www.cms.gov/]
- [5] CAQH CORE develops operating rules to streamline administrative processes in healthcare. Their website may provide resources related to EDI standards. [https://www.caqh.org/core]
- [6] EDI Healthcare provides information and resources on EDI in healthcare, including transaction sets like 837. They may offer guides and tools for EDI implementation. [https://www.edihealthcare.com/]

4. Conclusion

Date Of Service is an essential element in Transaction 837 and it plays the major key role in electronic data interchange (EDI) for the process of submission in health care claims. In industry terms the date of service is a medical service date or procedure service taken by patient. It can be multiple in a file since each medical service or treatment is taken as a service line for a claim.

But for a payer calculating the final date of service for a claim should process for claim submission and adjudication. As you can see each API returns different entity results based on their business logic execution.

Each organization follows the different standard process to identify the Date of Service and calculate the claim validation to adjudicate the claim. As part of the Centene implementation, claim goes through the steps like initial review, eligibility verification, benefit verification, medical codes necessity review, duplicates check, pricing, and payment determination, claim adjudication, payment processing and final resolution after claim submission. This process is a part of the claim adjudication step.

References

- [1] "26, 100, 1715, 66/38, 235/CH, 955/SP" Data Element/Code References, Codes for Representation of Names of Countries, ISO 3166 - (Latest Release) Codes for Representation of Currencies and Funds, ISO 4217 - (Latest Release). American National Standards Institute 25 West 43rd Street, 4th Floor, New York, NY 10036
- [2] Healthcare Common Procedural Coding System, "235/HC, 1270/BO, 1270/BP" Element/Code References. Centers for Medicare & Medicaid Services, 7500 Security Boulevard, Baltimore, MD 21244
- [3] The Accredited Standards Committee (ASC) X12 develops and maintains EDI standards, including those for healthcare transactions. The official website may provide access to the latest versions of implementation guides. [https://x12.org/]