



## Guide to Vendor Assisted NPI Solutions January 8, 2007

### Introduction

To comply with the Health Insurance Portability and Accountability Act of 1996 (HIPAA), healthcare providers must obtain a National Provider Identifier (NPI) by May 23, 2007. The Centers for Medicare and Medicaid Services (CMS) recommend that providers should be testing and using their NPI by January 31, 2007. Providers own their NPIs and are responsible for sharing their respective NPI with other providers, health plans, and clearinghouses in order to facilitate electronic transaction exchange.

### COTS NPI Solutions Available on the Market:

In the market today, there exist several commercial off-the-shelf (COTS) NPI solutions offered by a variety of information technology (IT) vendors. This type of packaged solution is an option for providers for supporting NPI compliance in lieu of creating internal solutions from scratch. These solutions solve the technical issues surrounding NPI compliance, validation, cross-walking, and acquisition for providers.

COTS NPI solutions can be categorized by:

- NPI Compliance
- NPI Validation
- NPI Cross-Walking

The following is a brief description of each of these NPI solution types.

### NPI Compliance:

Solutions provided in this area address the matter of determining if the NPI contained within a transaction is, in fact, a valid number. In both cases, the compliance check does not prove that the NPI is the one that is associated with the provider. Compliance simply proves that the NPI meets basic formatting criteria to be considered a valid identifier.

- **A – Basic compliance:** Checks to make sure the identifier is a 10-digit numeric identifier with a 10<sup>th</sup> position check digit. The method applies a numeric formula to validate the check digit.
- **B – Lookup compliance:** Queries an external database to find the NPI in a pre-existing table.
  - This might be the National Plan and Provider Enumeration System (NPPES) system or another database maintained by the covered entity.

### NPI Validation:

Once an NPI is considered to be compliant in format, it moves on to the next level of checking, that is, validation. Validation ensures that the NPI belongs to the associated provider on the transaction. It is possible that a submitting provider or primary health plan may transmit a perfectly compliant number (10-digit and a correct check digit) but the number is erroneously associated with the wrong provider. Or, conversely, the number is correct but the name and other associated provider information is incorrect.

**Validation** queries an external database to find the NPI and looks for several other identifying pieces of data (e.g., provider's name, address, and taxonomy code(s)) to ensure that the NPI is associated with the correct provider.

- **A – “Manual” Validation:** If the NPI can't be validated by comparing it to a pre-existing table, then the transaction must be manually reviewed to ascertain the validity of the enumerator. This would call for a process that can split a batch of transactions, separating the good from the bad and forcing the bad into a manual workflow process where the NPI can be reviewed.
- **B – “Simple” Validation:** In a simple validation process, code is written to compare the NPI and several predetermined pieces of data (name, address, etc.) to a table that also contains this information. If there a direct match is found, then the validation is deemed successful. If not, the bad transaction would either be forced into manual review or would simply be rejected.
- **C – “Complex” Validation:** In this process, probabilistic or “fuzzy” logic is applied to the validation. Predetermined pieces of data are not required to make a direct association, instead an algorithm is applied to compare the NPI to an external database and a probabilistic match is made. Once again, if validation cannot be determined, then the transaction would either be forced into manual review or would be rejected outright.

#### **NPI Cross-walking:**

After the NPI has been determined to be both compliant in format and valid in content, the next step may be to crosswalk the NPI to a legacy number or vice versa. The legacy number is an identifier used by the payer to internally identify the provider. Many payers will continue to assign and use legacy numbers long after the NPI compliance date due to the fact their backend adjudication process is predicated upon its use.

**Cross-walking tables** – In most cases, this is an internal database used by the payer that contains the provider's known NPI and their associated legacy number(s). In the simplest example, there is a one-to-one correlation between the provider's NPI and the payer's legacy number. However, it is known that this example may be the exception and not the rule. Payers may have assigned multiple legacy numbers to providers to use under different circumstances (place of service, tax identification number (ID) the provider is billing under, etc.). When this situation arises, the cross-walking table becomes more complex since a single NPI may result in a match to multiple legacy numbers. When this occurs there are several options to remedy the situation.

- **A – Manual processing:** If a proper NPI to legacy number cannot be determined, then the transaction would “fall out” of the automated process and would be flagged for manual review. It would be up to a person to determine how to crosswalk the NPI to the legacy ID.
- **B – Deterministic matching:** In this method, code is written to link NPIs to legacy IDs based upon an exact match of data elements. The magnitude of crosswalk permutations may reach into the thousands or hundreds of thousands depending upon the number of provider enumerators. This method is intolerant of inexact matches and will force a manual review if no match can be found. This Coding must be maintained throughout the life of the system due to the requirement to maintain the link of the NPI to the Legacy numbers(s.)
- **C – Probabilistic matching:** Instead of a crosswalk table with table searches, a sophisticated matching algorithm is applied to the matching process. This method seeks to link NPIs to legacy IDs based on a probabilistic (fuzzy) match of data elements. This method is tolerant of data errors and data variation (for example, (variations of the spelling of a provider's name can still be matched) the provider's name can be spelled with variations and a match can still be made). Since the matching process it is based on a COTS algorithm, code does not need to be revised or maintained throughout the life of system.

#### **Acquiring and Sharing NPIs:**

Since healthcare providers are responsible for applying for and receiving their own NPI, one of the obstacles facing many healthcare entities is how to actually obtain the NPI from each of their providers after the NPI has been assigned. There are three options available for acquiring the NPI from the provider.

- 1<sup>st</sup> Option: The NPI can be obtained by having providers “register” their NPI with the entities that require that information.

- 2<sup>nd</sup> Option: One attempts to capture the NPI “on the fly” as it arrives in a transaction.
- 3<sup>rd</sup> Option: An organization may query the NPPES database to pull down NPIs that are relevant to their provider community.

In lieu of the three options above, the following may also provide a solution for acquiring and sharing NPIs.

**Pre-Register the NPI:** Entities may set up a website or manual process to allow their providers to self register and supply their NPIs. Payers and hospitals may be candidates to host these types of websites.

**Capture the NPI within a submitted transaction:** Find, capture, and insert the NPI that is found in the transaction into an external database. Insert other associated data related to this NPI into the database (provider’s name, address, etc.). This allows an NPI database to be created on the fly.

## NPPES

### ***What is NPPES or the National Plan and Provider Enumeration System?***

The Administrative Simplification provisions of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) mandated the adoption of standard unique identifiers for health care providers, as well as the adoption of standard unique identifiers for health plans. The purpose of these provisions is to improve the efficiency and effectiveness of the electronic transmission of health information. The Centers for Medicare & Medicaid Services (CMS) has developed the National Plan and Provider Enumeration System (NPPES) to assign these unique identifiers.

How can the NPPES work for you? Below are two options that may be utilized to leverage the NPPES.

- **A - Query NPPES:** Once a dissemination notice is published, it may be possible to query the NPPES database and do a look up from the NPPES website and obtain individual NPIs during the processing of the transaction.
- **B- Download and create duplicate NPPES database on a regular basis:** Once a dissemination notice is published, it may be possible to access the NPPES database and conduct a full download of the data base and create a duplicate database to be used for internal query and processes. Due to the size of the database, this process may occur only on an occasional basis.

### Resources:

- **CMS NPI Resource:** <http://www.cms.hhs.gov/NationalProvdentStand/>: Contains final rule, FAQs, fact sheets, tips, etc.
- **CMS NPI Enumerator website:** <http://hypes.cms.hhs.gov/NPPES/Wecome.do>  
Location to enter NPI application

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