

SEGMENT WITHOUT ELEMENTS

REQUEST

Issue: A segment is received without any elements. (Assume the segment has no mandatory elements.)

Question: Should a 997 'standard' error be returned? If so, should an AK3 and/or AK4 be generated; and what syntax error codes should be used?

Segment example:

PAT segment, 2000B loop – subscriber Hierarchical level.

Segment is Optional at Standard.

Elements PAT01 – PAT09 are either Optional or Relational.

There are no Mandatory elements in the segment.

File example:

```
HL*2*1 *22*0~
```

```
SBR*P*18*GROUP NO*MEDICARE*****MA~
```

```
PAT~
```

```
NM1 *IL*1*DOE*WALTER*W***MI*219609991A~
```

Two opinions have been discussed:

Unless a mandatory segment/element is missing, a compliance error will not be generated. This segment has no missing mandatory elements, so in this case the file contains no error.

Based on Appendix A.1.3.3 of the 837 Institutional guide, 'A data segment consists of a segment identifier; one or more composite data structures...ending with a segment terminator'. Therefore, there must be at least one data element present within a segment for the segment to be valid. In this case, the file should reject with a negative 997.

Advise whether a segment without elements is valid; and if segment is not valid, what syntax error codes should be resumed on the 997. (Note: The standard used in the business case is ASC X12N 837 004010X096) Health Care Claim – Institutional, May 2000 printing; however, the question could apply to any guide.

INTERPRETATION

Conformance to X12 syntax unequivocally requires that at least one non-empty data element be present in every segment instance.

In your letter requesting the interpretation, you make specific reference to the PAT segment, 2000B loop, and provide an example in which the PAT

segment identifier is immediately followed by the segment terminator character (in the example, a tilde '~' character) The PAT in this example does not conform to X12 syntax.

RATIONAL

In developing this interpretation, X12 Subcommittee C reviewed the following document:

X12 Standard X12.6, Version 4 Release 1, which defines X12 syntax.

X12.6 Section 3.2 unequivocally states that the syntax is defined by the Backus Naur Form (BNF) constructs in X12.6. BNF notation is described in X12.6 Section 3.2.1 through 3.2.8. This section further states:

“In some cases actual use (the actual data stream) of an X12 structure may not be the same as the definition. These instances are caused by the optional nature of some structures. Where such structures occur in this document, two representations of the BNF are presented, labeled “definition” and “use” respectively.”

The BNF in X12.6 Section 3.7 Data Segment includes a “use” BNF representation. That representation requires the presence of a “data_segment_unit”, which in turn requires the presence of either a “repeating_simple_data_element” or a “repeating_composite_data_structure”. Each of these structures have separate “use” definitions within the “use” BNF of 3.7 Data Segment.

The “repeating_simple_data_element” structure requires the presence of a “simple_data_element”. As there is no “use” BNF in 3.7 Data Segment for this structure, the BNF in 3.5 Data Element applies. That BNF requires the presence of a “data_element”.

The “repeating_composite_data_structure” requires the presence of a “composite_data_structure”. As there is no “use” BNF in 3.7 Data Segment for this structure, the BNF in 3.6 Composite Data Structure applies. In that section, there is a “use” BNF for “composite_data_structre”, and that BNF requires the presence of a “component_data_element”. As there is no “use” BNF provided for “component_data_element”, the BNF in 3.5 Data Element applies. That BNF requires the presence of a “data_element”

To summarize the above analysis, the segment terminator must be preceded by a “data_element”.

Section 3.5 Data Element BNF defines “data_element” as a choice among several BNF constructs. Each of these constructs is defined in 3.5.1 Data Element Types, and each of these constructs requires the presence of at least one character. All of these types except ‘binary’ and ‘fixed_length_string’ further require the presence of a non-blank character.

ADVICE

Non-Normative Advice on Reporting Error on invalid segment usage.

It is recommended that segment AK3 be used to identify the segment in error, and that DE 720 report the error as Segment Has Data Element Errors (code 8).

It is acceptable to further report, in segment AK4, "Conditional required data element missing", since the segment use BNF establishes an implied condition that at least one of the elements comprising the segment must be present.