Figure 30: H&P encompassingEncounter Example

```
<componentOf>
    <encompassingEncounter>
        <id extension="9937012" root="2.16.840.1.113883.19" />
        <code codeSystem="2.16.840.1.113883.6.12" codeSystemName="CPT-4"
            code="99213" displayName="Evaluation and Management" />
        <effectiveTime>
            <low value="20090227130000+0500" />
            <high value="20090227130000+0500" />
        </effectiveTime>
        <location>
            <healthCareFacility>
                <id root="2.16.540.1.113883.19.2" />
            </healthCareFacility>
        </location>
    </encompassingEncounter>
</componentOf>
```

1.1.14 Operative Note (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.7:2015-08-01 (open)]

Table 42: Operative Note (V3) Contexts

Contained By:	Contains:
	Operative Note Fluids Section (optional)
	Operative Note Surgical Procedure Section (optional)
	Surgical Drains Section (optional)
	Procedure Description Section (required)
	Procedure Disposition Section (optional)
	Procedure Estimated Blood Loss Section (required)
	Procedure Specimens Taken Section (required)
	Postoperative Diagnosis Section (required)
	Procedure Implants Section (optional)
	Plan of Treatment Section (V2) (optional)
	Anesthesia Section (V2) (required)
	Procedure Indications Section (V2) (optional)
	Planned Procedure Section (V2) (optional)
	US Realm Date and Time (DT.US.FIELDED) (required)
	Complications Section (V3) (required)
	Procedure Findings Section (V3) (required)
	Preoperative Diagnosis Section (V3) (required)

The Operative Note is a frequently used type of procedure note with specific requirements set forth by regulatory agencies.

The Operative Note is created immediately following a surgical or other high-risk procedure. It records the pre- and post-surgical diagnosis, pertinent events of the procedure, as well as the condition of the patient following the procedure. The report should be sufficiently detailed to support the diagnoses, justify the treatment, document the course of the procedure, and provide continuity of care.

Table 43: Operative Note (V3) Constraints Overview

XPath	Card.	Verb	Data Type	CONF#	Value
ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.7:2015-08-01)					
templateId	1..1	SHALL		1198-8483	
@root	1..1	SHALL		1198-10048	2.16.840.1.113883.10.20.22.1.7
@extension	1..1	SHALL		1198-32519	2015-08-01
code	1..1	SHALL		1198-17187	
@code	1..1	SHALL		1198-17188	urn:oid:2.16.840.1.113883.11.20.1.1 (SurgicalOperationNoteDocumentTypeCode)
documentationOf	1..*	SHALL		1198-8486	
serviceEvent	1..1	SHALL		1198-8493	
effectiveTime	1..1	SHALL		1198-8494	US Realm Date and Time (DT.US.FIELDED) (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3
performer	1..1	SHALL		1198-8489	
@typeCode	1..1	SHALL		1198-8495	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PPRF
functionCode	0..1	MAY		1198-32963	urn:oid:2.16.840.1.113762.1.4.1099.30 (Care Team Member Function)
assignedEntity	1..1	SHALL		1198-10917	
code	0..1	SHOULD		1198-8490	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider Taxonomy)
performer	0..*	MAY		1198-32736	
@typeCode	1..1	SHALL		1198-32738	urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = SPRF
functionCode	0..1	MAY		1198-32964	urn:oid:2.16.840.1.113762.1.4.1099.30 (Care Team Member Function)
assignedEntity	1..1	SHALL		1198-32737	
code	0..1	SHOULD		1198-32739	urn:oid:2.16.840.1.114222.4.11.1066 (Healthcare Provider

XPath	Card.	Verb	Data Type	CONF#	Value
					Taxonomy)
authorization	0..1	MAY		[1198-32404](#)	
@typeCode	1..1	SHALL		[1198-32408](#)	urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = AUTH
consent	1..1	SHALL		[1198-32405](#)	
@classCode	1..1	SHALL		[1198-32409](#)	urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CONS
@moodCode	1..1	SHALL		[1198-32410](#)	urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN
statusCode	1..1	SHALL		[1198-32411](#)	
component	1..1	SHALL		[1198-9585](#)	
structuredBody	1..1	SHALL		[1198-30485](#)	
component	1..1	SHALL		[1198-30486](#)	
section	1..1	SHALL		[1198-30487](#)	Anesthesia Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.25:2014-06-09
component	1..1	SHALL		[1198-30488](#)	
section	1..1	SHALL		[1198-30489](#)	Complications Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.37:2015-08-01
component	1..1	SHALL		[1198-30490](#)	
section	1..1	SHALL		[1198-30491](#)	Preoperative Diagnosis Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.34:2015-08-01
component	1..1	SHALL		[1198-30492](#)	
section	1..1	SHALL		[1198-30493](#)	Procedure Estimated Blood Loss Section (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.9
component	1..1	SHALL		[1198-30494](#)	
section	1..1	SHALL		[1198-30495](#)	Procedure Findings Section (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.28:2015-08-01

XPath	Card.	Verb	Data Type	CONF#	Value
component	1..1	SHALL		1198-30496	
section	1..1	SHALL		1198-30497	Procedure Specimens Taken Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.31
component	1..1	SHALL		1198-30498	
section	1..1	SHALL		1198-30499	Procedure Description Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.27
component	1..1	SHALL		1198-30500	
section	1..1	SHALL		1198-30501	Postoperative Diagnosis Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.35
component	0..1	MAY		1198-30502	
section	1..1	SHALL		1198-30503	Procedure Implants Section (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.40
component	0..1	MAY		1198-30504	
section	1..1	SHALL		1198-30505	Operative Note Fluids Section (identifier: urn:oid:2.16.840.1.113883.10.20.7.12
component	0..1	MAY		1198-30506	
section	1..1	SHALL		1198-30507	Operative Note Surgical Procedure Section (identifier: urn:oid:2.16.840.1.113883.10.20.7.14
component	0..1	MAY		1198-30508	
section	1..1	SHALL		1198-30509	Plan of Treatment Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09
component	0..1	MAY		1198-30510	
section	1..1	SHALL		1198-30511	Planned Procedure Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.30:2014-06-09
component	0..1	MAY		1198-	

XPath	Card.	Verb	Data Type	CONF#	Value
				30512	
section	1..1	SHALL		1198-30513	Procedure Disposition Section (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.12
component	0..1	MAY		1198-30514	
section	1..1	SHALL		1198-30515	Procedure Indications Section (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.29:2014-06-09
component	0..1	MAY		1198-30516	
section	1..1	SHALL		1198-30517	Surgical Drains Section (identifier: urn:oid:2.16.840.1.113883.10.20.7.13

1.1.15 Properties

1. Conforms to **US Realm Header (V3)** template (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.1.1:2015-08-01).

2. **SHALL** contain exactly one [1..1] **templateId** (CONF:1198-8483) such that it
   a. **SHALL** contain exactly one [1..1] **@root**="2.16.840.1.113883.10.20.22.1.7" (CONF:1198-10048).
   b. **SHALL** contain exactly one [1..1] **@extension**="2015-08-01" (CONF:1198-32519).
   c. When asserting this templateId, all C-CDA 2.1 section and entry templates that had a previous version in C-CDA R1.1 **SHALL** include both the C-CDA 2.1 templateId and the C-CDA R1.1 templateId root without an extension. See C-CDA R2.1 Volume 1 - Design Considerations for additional detail (CONF:1198-32940).

The Operative Note recommends use of a single document type code, 11504-8 "Provider-unspecified Operation Note", with further specification provided by author or performer, setting, or specialty data in the CDA header. Some of the LOINC codes in the Surgical Operation Note Document Type Code table are pre-coordinated with the practice setting or the training or professional level of the author. Use of pre-coordinated codes is not recommended because of potential conflict with other information in the header. When these codes are used, any coded values describing the author or performer of the service act or the practice setting must be consistent with the LOINC document type.

3. **SHALL** contain exactly one [1..1] **code** (CONF:1198-17187).
   a. This code **SHALL** contain exactly one [1..1] **@code**, which **SHALL** be selected from ValueSet **SurgicalOperationNoteDocumentTypeCode** urn:oid:2.16.840.1.113883.11.20.1.1 **DYNAMIC** (CONF:1198-17188).

1.1.15.1 documentationOf

A serviceEvent represents the main act, such as a colonoscopy or an appendectomy, being documented. A serviceEvent can further specialize the act inherent in the ClinicalDocument/code, such as where the ClinicalDocument/code is simply "Surgical Operation Note" and the procedure is "Appendectomy." serviceEvent is required in the Operative Note and it must be equivalent to or further specialize the value inherent in the ClinicalDocument/code; it shall not conflict with the value inherent in the ClinicalDocument/code, as such a conflict would create ambiguity. serviceEvent/effectiveTime can be used to indicate the time the actual event (as opposed to the encounter surrounding the event) took place. If the date and the duration of the procedure is known, serviceEvent/effectiveTime/low is used with a width element that describes the duration; no high element is used. However, if only the date is known, the date is placed in both the low and high elements.

4. **SHALL** contain at least one [1..*] **documentationOf** (CONF:1198-8486).
   a. Such documentationOfs **SHALL** contain exactly one [1..1] **serviceEvent** (CONF:1198-8493).
      i. This serviceEvent **SHALL** contain exactly one [1..1] **US Realm Date and Time (DT.US.FIELDED)** (identifier: urn:oid:2.16.840.1.113883.10.20.22.5.3) (CONF:1198-8494).
         1. The serviceEvent/effectiveTime **SHALL** be present with effectiveTime/low (CONF:1198-8488).
         2. If a width is not present, the serviceEvent/effectiveTime **SHALL** include effectiveTime/high (CONF:1198-10058).
         3. When only the date and the length of the procedure are known a width element **SHALL** be present and the serviceEvent/effectiveTime/high **SHALL NOT** be present (CONF:1198-10060).

1.1.15.2 performer

This performer represents a clinicians who actually and principally carry out the serviceEvent. Typically, these are clinicians who have surgical privileges in their institutions such as Surgeons, Obstetrician/Gynecologists, and Family Practice Physicians. The performer may also be non-physician providers (NPPs) who have surgical privileges. There may be more than one primary performer in the case of complicated surgeries. There are occasionally co-surgeons. Usually they will be billing separately and will each dictate their own notes. An example may be spinal surgery , where a general surgeon and an orthopedic surgeon both are present and billing off the same Current Procedural Terminology (CPT) codes. Typically two Operative Notes are generated; however, each will list the other as a co-surgeon. Any assistants are identified as a secondary performer (SPRF) in a second performer participant.

      ii. This serviceEvent **SHALL** contain exactly one [1..1] **performer** (CONF:1198-8489) such that it
         1. **SHALL** contain exactly one [1..1] **@typeCode**="PPRF" Primary performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 **STATIC**) (CONF:1198-8495).
         2. **MAY** contain zero or one [0..1] **functionCode**, which **SHOULD** be selected from ValueSet **Care Team Member Function**

urn:oid:2.16.840.1.113762.1.4.1099.30 **DYNAMIC** (CONF:1198-32963).

   3. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-10917).

      a. This assignedEntity **SHOULD** contain zero or one [0..1] **code**, which **SHALL** be selected from ValueSet **Healthcare Provider Taxonomy** urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-8490).

1.1.15.3 performer

This performer represents any assistants.

   iii. This serviceEvent **MAY** contain zero or more [0..*] **performer** (CONF:1198-32736) such that it

     1. **SHALL** contain exactly one [1..1] **@typeCode**="SPRF" Secondary performer (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1198-32738).

     2. **MAY** contain zero or one [0..1] **functionCode**, which **SHOULD** be selected from ValueSet **Care Team Member Function** urn:oid:2.16.840.1.113762.1.4.1099.30 **DYNAMIC** (CONF:1198-32964).

     3. **SHALL** contain exactly one [1..1] **assignedEntity** (CONF:1198-32737).

       a. This assignedEntity **SHOULD** contain zero or one [0..1] **code**, which **SHALL** be selected from ValueSet **Healthcare Provider Taxonomy** urn:oid:2.16.840.1.114222.4.11.1066 **DYNAMIC** (CONF:1198-32739).

   iv. The value of serviceEvent/code **SHALL** be from ICD9 CM Procedures (CodeSystem 2.16.840.1.113883.6.104), CPT-4 (CodeSystem 2.16.840.1.113883.6.12), or values descending from 71388002 (Procedure) from the SNOMED CT (CodeSystem 2.16.840.1.113883.6.96) ValueSet Procedure 2.16.840.1.113883.3.88.12.80.28 *DYNAMIC* (CONF:1198-8487).

Authorization represents consent. Consent, if present, shall be represented by authorization/consent.

5. **MAY** contain zero or one [0..1] **authorization** (CONF:1198-32404).

   a. The authorization, if present, **SHALL** contain exactly one [1..1] **@typeCode**="AUTH" authorized by (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1198-32408).

   b. The authorization, if present, **SHALL** contain exactly one [1..1] **consent** (CONF:1198-32405).

     i. This consent **SHALL** contain exactly one [1..1] **@classCode**="CONS" consent (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1198-32409).

ii. This consent **SHALL** contain exactly one [1..1] **@moodCode**="EVN" event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1198-32410).

iii. This consent **SHALL** contain exactly one [1..1] **statusCode** (CONF:1198-32411).

1.1.15.4 component

6. **SHALL** contain exactly one [1..1] **component** (CONF:1198-9585).

    a. This component **SHALL** contain exactly one [1..1] **structuredBody** (CONF:1198-30485).

        i. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30486) such that it

            1. **SHALL** contain exactly one [1..1] **Anesthesia Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.25:2014-06-09) (CONF:1198-30487).

        ii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30488) such that it

            1. **SHALL** contain exactly one [1..1] **Complications Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.37:2015-08-01) (CONF:1198-30489).

        iii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30490) such that it

            1. **SHALL** contain exactly one [1..1] **Preoperative Diagnosis Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.34:2015-08-01) (CONF:1198-30491).

        iv. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30492) such that it

            1. **SHALL** contain exactly one [1..1] **Procedure Estimated Blood Loss Section** (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.9) (CONF:1198-30493).

        v. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30494) such that it

            1. **SHALL** contain exactly one [1..1] **Procedure Findings Section (V3)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.28:2015-08-01) (CONF:1198-30495).

        vi. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30496) such that it

            1. **SHALL** contain exactly one [1..1] **Procedure Specimens Taken Section** (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.31) (CONF:1198-30497).

        vii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30498) such that it

1. **SHALL** contain exactly one [1..1] **Procedure Description Section** (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.27) (CONF:1198-30499).

viii. This structuredBody **SHALL** contain exactly one [1..1] **component** (CONF:1198-30500) such that it

    1. **SHALL** contain exactly one [1..1] **Postoperative Diagnosis Section** (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.35) (CONF:1198-30501).

ix. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30502) such that it

    1. **SHALL** contain exactly one [1..1] **Procedure Implants Section** (identifier: urn:oid:2.16.840.1.113883.10.20.22.2.40) (CONF:1198-30503).

x. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30504) such that it

    1. **SHALL** contain exactly one [1..1] **Operative Note Fluids Section** (identifier: urn:oid:2.16.840.1.113883.10.20.7.12) (CONF:1198-30505).

xi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30506) such that it

    1. **SHALL** contain exactly one [1..1] **Operative Note Surgical Procedure Section** (identifier: urn:oid:2.16.840.1.113883.10.20.7.14) (CONF:1198-30507).

xii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30508) such that it

    1. **SHALL** contain exactly one [1..1] **Plan of Treatment Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.10:2014-06-09) (CONF:1198-30509).

xiii. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30510) such that it

    1. **SHALL** contain exactly one [1..1] **Planned Procedure Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.30:2014-06-09) (CONF:1198-30511).

xiv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30512) such that it

    1. **SHALL** contain exactly one [1..1] **Procedure Disposition Section** (identifier: urn:oid:2.16.840.1.113883.10.20.18.2.12) (CONF:1198-30513).

xv. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30514) such that it

    1. **SHALL** contain exactly one [1..1] **Procedure Indications Section (V2)** (identifier: urn:hl7ii:2.16.840.1.113883.10.20.22.2.29:2014-06-09) (CONF:1198-30515).

xvi. This structuredBody **MAY** contain zero or one [0..1] **component** (CONF:1198-30516) such that it

1. **SHALL** contain exactly one [1..1] **Surgical Drains Section** (identifier: urn:oid:2.16.840.1.113883.10.20.7.13) (CONF:1198-30517).

Table 44: SurgicalOperationNoteDocumentTypeCode

Value Set: SurgicalOperationNoteDocumentTypeCode urn:oid:2.16.840.1.113883.11.20.1.1
(Clinical Focus: Surgical operation note kind classified by author specialization),(Data Element Scope:),(Inclusion Criteria:),(Exclusion Criteria:)

This value set was imported on 6/29/2019 with a version of 20190516.
Value Set Source:
https://vsac.nlm.nih.gov/valueset/2.16.840.1.113883.11.20.1.1/expansion

Code	Code System	Code System OID	Print Name
11504-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Surgical operation note
28573-4	LOINC	urn:oid:2.16.840.1.113883.6.1	Physician, Operation note
28583-3	LOINC	urn:oid:2.16.840.1.113883.6.1	Dentist Operation note
28624-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Podiatry Operation note
34137-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Outpatient Surgical operation note
34818-5	LOINC	urn:oid:2.16.840.1.113883.6.1	Otolaryngology Surgical operation note
34868-0	LOINC	urn:oid:2.16.840.1.113883.6.1	Orthopaedic surgery Surgical operation note
34870-6	LOINC	urn:oid:2.16.840.1.113883.6.1	Plastic surgery Surgical operation note
34874-8	LOINC	urn:oid:2.16.840.1.113883.6.1	Surgery Surgical operation note
34877-1	LOINC	urn:oid:2.16.840.1.113883.6.1	Urology Surgical operation note
...			

Figure 31: Operative Note performer Example

```
  <performer typeCode="PPRF">
     <assignedEntity>
        <id extension="1" root="2.16.840.1.113883.19" />
        <code code="2086S0120X" codeSystem="2.16.840.1.113883.6.101" codeSystemName="NUCC"
displayName="Pediatric Surgeon" />
        <addr>
           <streetAddressLine>1013 Healthcare Drive</streetAddressLine>
           <city>Ann Arbor</city>
           <state>MI</state>
           <postalCode>99999</postalCode>
           <country>US</country>
        </addr>
        <telecom value="tel:(555)555-1013" />
        <assignedPerson>
           <name>
              <prefix>Dr.</prefix>
              <given>Carl</given>
              <family>Cutter</family>
           </name>
        </assignedPerson>
     </assignedEntity>
  </performer>
```

Figure 32: Operative Note serviceEvent Example

```
<serviceEvent classCode="PROC">
    <code code="801460020" codeSystem="2.16.840.1.113883.6.96" codeSystemName="SNOMED CT"
displayName="Laparoscopic Appendectomy" />
    <effectiveTime>
        <low value="201003292240" />
        <width value="15" unit="m" />
    </effectiveTime>
    ...

</serviceEvent>
```

1.1.16 Procedure Note (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.22.1.6:2015-08-01 (open)]

Table 45: Procedure Note (V3) Contexts

Contained By:	Contains:
	Assessment Section (optional)
	Review of Systems Section (optional)
	Chief Complaint Section (optional)
	Reason for Visit Section (optional)
	Chief Complaint and Reason for Visit Section (optional)