ClinicalNote FHIR Resource Proposal

- 1 ClinicalNote
  - 1.1 Owning committee name
  - 1.2 Committee Approval Date
  - 1.3 Contributing or Reviewing Work Groups
  - 1.4 FHIR Resource Development Project Insight ID
  - 1.5 Scope of coverage
  - 1.6 RIM scope
  - 1.7 Resource appropriateness
  - 1.8 Expected implementations
  - 1.9 Content sources
  - 1.10 Example Scenarios
  - 1.11 Resource Relationships
    - 1.11.1 Resources that will reference ClinicalNote
    - 1.11.2 ClinicalNote will reference resources
    - 1.11.3 Boundaries with existing resources
  - 1.12 Timelines
  - 1.13 gForge Users
  - 1.14 When Resource Proposal Is Complete

ClinicalNote

This proposal is on hold for potential future use.

Owning committee name

Patient_Care

Committee Approval Date

TBD

Contributing or Reviewing Work Groups

- Orders_&_Observations_WG -- as it pertains to Observation boundaries
- Structured_Documents as it pertains to Composition/DocumentReference boundaries

FHIR Resource Development Project Insight ID

Project 1128 [1]

Scope of coverage

Clinical Notes allow EHR users to view and enter textual information that is stored in the patient's chart.

Notes can be developed in many different ways:

- Text can be entered manually,
- Created from transcribed dictation, or
- Automatically generated based on other structured data in the patient's chart, which is subsequently annotated and/or summarized.
Clinical Notes could be as simple as a single sentence or as comprehensive as a History & Physical (H&P). Clinical Notes can range from pure narrative to partial narrative to fully encoded, but it is more commonly narrative and less commonly fully encoded (since it may not be efficient to do so). Often the structure of the narrative is just a bold piece of text signifying a section heading within the note. Clinical Notes can be authored by a physician, nurse, pharmacist, or any other practitioner. Note types, such as H&P, Consult Note, Progress Note, Operative Note, Nursing Note, Physician Communication, Pharmacy Intervention Note, Rehab Note, and Nutrition Therapy Note as well as date, author, status, and encounter help organize notes.

**RIM scope**
**Resource appropriateness**
**Expected implementations**
**Content sources**

### Example Scenarios

<table>
<thead>
<tr>
<th>Type</th>
<th>Contents</th>
<th>Author(s)</th>
<th>Context</th>
<th>Point in Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician Inpatient Expectation</td>
<td>CMS 2 midnight rule; physician attesting to why the patient needs to remain in the hospital (if no admitting order within 24 hours)</td>
<td>Physician</td>
<td>Encounter</td>
<td>Yes</td>
</tr>
<tr>
<td>Office Note or ED Note</td>
<td>Chief Complaint, HPI, Review of Systems, Physical Exam, Subjective/Constitutional, Assessment/Impression and Plan (orders), Follow-Up, Billing Notes, Chart data</td>
<td>Physician</td>
<td>Encounter</td>
<td>Yes</td>
</tr>
<tr>
<td>H&amp;P</td>
<td>Diagnosis/Chief Complaint, Advance Directive, HPI, Past Medical History, Family/Social History, Chart Data (allergies, meds), Review of System, Physical Exam, Assessment and Plan (more comprehensive than the Office Note)</td>
<td>Physician</td>
<td>Encounter</td>
<td>Yes</td>
</tr>
<tr>
<td>Consult Note</td>
<td>similar to H&amp;P, except only comprehensive within a given specialty</td>
<td>Physician</td>
<td>Encounter</td>
<td>Yes</td>
</tr>
<tr>
<td>Inpatient Progress Note</td>
<td>SOAP format or freetext format (used when something significant happens after the day's progress note was already written)</td>
<td>Physician</td>
<td>Encounter</td>
<td>Yes</td>
</tr>
<tr>
<td>Operative Note</td>
<td>Date of Surgery, Surgeon, Assistant, Pre-Op Dx, Post-Op Dx, Operation/procedure codes, Anesthesiologist, Anesthesia used, complications, estimated blood loss, specimens removed, description of surgery/findings (instruments used, etc.)</td>
<td>Physician</td>
<td>Procedure</td>
<td>Yes</td>
</tr>
<tr>
<td>Shift (Nursing Progress) Note</td>
<td>Major events of the shift, such as:</td>
<td>Nurse</td>
<td>Encounter</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>* patient ate well, so tube feeding decreased and scheduled insulin given*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>* patient general state, meds held, care provided, repositioned patient, fall precautions*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>* eye crusty and purulent, doctor paged, waiting for call back*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician Communication</td>
<td>Communication for various reasons, such as:</td>
<td>Anyone</td>
<td>Encounter</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>* clinical reason - lab result, patient status change (vomit, fever, etc)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>* family reason - family availability if doctor wanted to call family*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>* anesthesia or OR cancels surgery, need to notify physician*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy Intervention Note</td>
<td>Pharmacist reviews medications; found patient was on duplicate therapy or found cheaper therapy; actions the pharmacist took or is recommending; billing note about pharmacist time spent;</td>
<td>Pharmacist</td>
<td>Encounter</td>
<td>Yes</td>
</tr>
<tr>
<td>Pharmacy Monitoring Note</td>
<td>Anticoagulation (monitor labs, intervene if unsafe); Antibiotics</td>
<td>Pharmacist</td>
<td>Encounter</td>
<td>Yes</td>
</tr>
<tr>
<td>Rehab Notes (OT, Speech, PT)</td>
<td>Chief Complaint, HPI, Physical Therapy Assessment, Treatment, Plan, Goals, Billing</td>
<td>Rehab Services</td>
<td>Encounter</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Nutrition Therapy Note | general note, overall dietary note with tube feeding, amount taken orally, how doing with meals, estimated % of caloric intake or protein intake, admit weight to current weight comparison, labs, medications, nutrition diagnosis, RD recommendations, measurable goals | RD | Encounter | Yes

Physician Clarification Request from Medical Records (HIM query) | example: Anemia Specificity; Coder will pull things out of chart and say I was confused by these facts....physician(s) reply by comments on the note or addendums on the note | Medic al Recor ds | Encounter | Yes

Resource Relationships

Resources that will reference ClinicalNote

TBD

ClinicalNote will reference resources

TBD

Boundaries with existing resources

The following describes limitations with using existing resources to convey Clinical Notes.

DocumentReference

DomainResource.text Narrative

For a subset of use cases, only when the clinical note type conveys that the contents are specific to a single resource, the resource-specific Narrative (DomainResource.text.div) was considered because the DomainResource.text Narrative [2] is a "human-readable narrative that contains a summary of the resource, and may be used to represent the content of the resource to a human. The narrative need not encode all the structured data, but is required to contain sufficient detail to make it "clinically safe" for a human to just read the narrative." The primary drawback to using resource-specific narrative is that it doesn't cover all use cases (when the content of the note spans multiple resources). Secondarily, it could prevent us from identifying the actual note body if the narrative also includes other attributes, such as author, date/time, etc. For example, the section "HPI" as a pure narrative, included in a composition 'Admission H&P' where:

- DomainResource.text.div might include the body of the note prefaced with identifying header text of the title (e.g. ‘HPI:’), dates, or authorship.
- By contrast, the body of the note is a subset of the DomainResource.text.div without the dates, author, or title (e.g. ‘This is a 57 year old man with history of xxx presenting with yyy for …’)

Clinical Impression

The ClinicalImpression [3] is a "record of a clinical assessment performed to determine what problem(s) may affect the patient and before planning the treatments or management strategies that are best to manage a patient's condition." However, a Clinical Note could have one or more Clinical Impressions, which are typically part of a section named "Assessment/Plan", but not all Clinical Notes contain Clinical Impressions. Because notes are a form of human communication, nearly anything can be described in the narrative of a clinical note. Regardless of this breadth, most EHR systems use the same workflow and user interface to capture the narrative. The clinical note narrative can be condition-oriented (e.g. SOAP) or more administrative in nature, such as communicating patient transportation arrangements, phone calls, or when the family members will be available to talk to physician, etc.

Composition

Because "a Composition [4] defines the structure, it does not actually contain the content" there is a need for a resource that defines the narrative content within a clinical note.

Observation

Although Observation could work, the distinction is more that Observation is not intuitive since these concepts are often treated separately in EHR workflows. Specifically, it is not intuitive that the note's title is representation as an Observation.code.text. Furthermore, a note could have other involved parties or actors, such as when the note is scribed or dictated whereas most Observations typically focus on a performer.

Annotation

Because Annotation is a data type, Annotations are not discoverable on their own. Workflow capabilities (e.g. read/unread, review/cosignature) are not features of an annotations. Furthermore, additional codified attributes, such as note type, are not available via Annotations. The FHIR Annotation [5] data type is meant to be a collection of "text note which also contains information about who made the statement and when" in context of another resource (e.g. AllergyIntolerance, Procedure, MedicationOrder, Encounter). As such, a benefit of using a separate resource for Clinical Note is that there could be users who have privileges to create a Clinical Note, but might not have privileges to modify the resource-specific annotation.
Timelines

gForge Users

Lloyd McKenzie and/or Michelle M Miller

When Resource Proposal Is Complete

When you have completed your proposal, please send an email to FMGcontact@HL7.org