Potential Use Cases/Work Flows/Scenarios for HL7 Immunization Functional Profile
DRAFT – 11 July 2017

Notes from recent discussions follow. All items deferred for now, except those denoted
<mark>NOW</mark>.

1. EHR-S manages mass vaccination/inoculation programs: e.g., schools, military,
epidemic response
> (Reference IIP Scenarios 2.x)
> Capture mass patient registration
> Capture mass immunization administration event
> With/without transmission to IIS

2. EHR-S manages inventory for mass immunization programs
> (Reference IIP Scenarios 4.1-4.5)

- Floyd Eisenberg, MD, comment on #1 and #2: "Public Health clearly has a need to
manage mass registration and immunization programs, often as part of managing
new, emerging hazards. It seems excessive to expect an EHR designed for a
practice setting or, even for an enterprise to manage such a project. In most such
cases, Public Health has disaster management programs to manage such
processes and, often the information does not transmit to the IIS. If the EHR can
allow documentation of each immunization and report on the cohort immunized or
not immunized, the EHR has served its purpose (and that is already in the
requirements). Mass and quick registration is a general requirement for an EHR and
not specific to immunizations. The inventory function in the IIP should be sufficient -
note IIS' have inventory function as well."
- Discussed potential to develop Disaster Management DAM (beyond the current
project)
- Discussed whether to include in this project but with SHOULD/MAY conformance
criteria.
- Discussed whether mass immunization requirements might be handled in a separate
system then exchanged via interface to EHR System.
- Agreed to defer #1 and #2 beyond current project.

3. EHR-S uses Clinical Decision Support engine or other algorithm to generate own
Immunization forecast/recommendations
> (Reference IIP Scenario 2.2)
> Import forecast guidelines/rules: from IIS or other external source
> <mark>NOW:</mark> Configure forecast guidelines/rules within EHR System
> <mark>NOW:</mark> Determine (per patient) forecast/recommendation
>> SHALL: based on age, previous doses, gender
>> SHOULD: based on medications, medical conditions, allergies, prior
>> adverse reactions, occupational risks, other risks
>> MAY: based on travel plans

- Floyd Eisenberg, MD, comment on #3: "The IIP is purposefully silent on where the CDS engine resides. The intent was to allow the EHR to provide its own forecasting engine or to use an external one. So I don't see what is missing. Please clarify. CDS should clearly be based on gender and age, and also take into account other medications and conditions (in addition to allergies and prior adverse reactions). Some addition language is reasonable here. Note that IIS' do not manage travel vaccinations so that may be excessive to ask an EHR."
- Based on discussion, changed SHALL/SHOULD and MAY criteria as noted above.
- Noted need to include reconciliation if variance between EHR and IIS immunization history (as basis for new forecast). Deferred for now.
- Agreed to remove reference to IIS in IIP Scenario 2.2. Or create alternative Scenario.

4. EHR-S determines patient eligibility
   (Reference IIP Scenario 4.1)
   For Guarantee Program
   For Private Stock

- Floyd Eisenberg, MD, comment on #4: "I believe this is already included in the IIP requirement. The biggest challenge we experienced is the lack of a central source for information about regional requirements to determine guarantee program eligibility. The provider community sees eligibility as a benefit decision and the IIP community see it as an eligibility decision to be determined by the provider based on local/regional rules. Until that issue is sorted out implementation will be challenging."
- Discussion noted that determination will vary based on state or local rules and may require variant sets of data points for determination. Also noted lack of central (or other) source for this information, including rule algorithms.
- Agreed to defer #4 for now.

5. EHR-S manages patient educational materials (information statements)
   e.g., US Vaccine Information Statement(s) (VISs)
   (Reference IIP Scenario 5.1)
   Import VISs: from IIS or other external source
   Configure VISs, guidelines/rules, effective dates in EHR System
   NOW: Manage VIS:
       SHALL/SHOULD: what VIS (doc ID), implicit with doc ID are effective dates, to whom (patient/guardian), when, how rendered (paper pamphlet, displayed, printed, provided via link to source) – check current v2 message
       MAY (deferred): how to determine/render based language preference (US is typically English/Spanish)

- Floyd Eisenberg, MD, comment on #5: "We had a lot of discussions about this requirement. There is no central electronic source of VIS's with notification to providers when the statements are updated. We considered requiring such details but until there is a source for the information (including a source for all the different

languages required - not just English and Spanish), additional requirements seemed excessive."
- Discussion noted challenge of central source to capture VISs and obtaining VISs based on preferred language.
- Agreed to include the "Manage VIS" SHALL/SHOULD criteria for #5 now (see above), and defer everything else.

6. EHR-S manages vaccination/inoculation for travel
   (Possible addition to IIP Scenarios 1-8)
   Import travel/destination guidelines/rules: from IIS or other external source
   Configure travel/destination guidelines/rules in EHR System
   Determine travel-related immunizations: based on destination
   Capture travel-related immunization events: current and historical

- Floyd Eisenberg, MD, comment on #6: "Interesting option. I believe the requirement to capture all information about each vaccine administered can accommodate entry of travel vaccines (and all but 2 IIS's accept adult vaccination data). The challenge is that the CDS rules must be available and updated as soon as travel recommendations change (which can happen frequently). There is a CDC travel site (https://wwwnc.cdc.gov/travel/destinations/list) that can help guide clinicians to recommend the correct travel prevention advice, including vaccines. However, except for providing a stable URL to the clinician, can we really expect an EHR to provide such CDS logic?"
- Discussion noted challenge of capturing travel guidelines from central source, then building in CDS rules.
- Agreed to defer #6 for now.