

Response to Request for Comments from the NC HIE (RFC #201101-01)

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Firstly, I would like to commend the NC HIE Clinical and Technical Operations Work Group for the efforts they have made and the clarity with which the RFC document itself discusses many complex concepts.

My comments go to the list of candidate services on page 1-4. Specifically, **Clinical Function 1 – Incorporate essential data from external systems.**

Radiology Ordering

It is noted that included in the list of services are lab ordering (1.1) and lab results delivery (1.2). However, although Radiology results delivery is shown (1.4), Radiology ordering is not. Therefore I would like to propose an additional HIE service:

1.x Radiology Ordering –

A service to facilitate the ordering of radiological tests

1. **Provider creates a radiology order in EHR:**
 - 1.1. **Patient demographics**
 - 1.2. **Insurance information including pre-authorization number if needed**
 - 1.3. **Requested exam(s) (CPT codes?)**
 - 1.4. **Patient History and diagnosis (ICD Codes)**
 - 1.5. **Rendering facility**
 - 1.6. **Desired date/time/location**
 - 1.7. **“Copy to” provider list**
 - 1.8. **Electronic signature**
2. **Order is pushed to HIE, HIE routes order to rendering facility**
3. **(optional) Rendering facility sends confirmation to EHR:**
 - 3.1. **Receipt of order**
 - 3.2. **Confirmed exam date/time/location**
 - 3.3. **Patient preparation instructions**

Radiology Results Delivery

The following is some suggested text to expand upon the functionality description:

1.4 Radiology results delivery –

A service that facilitates the pushing of signed radiology reports from rendering facilities to the ordering provider and any “copy to” providers on the report. HIE service determines EHR used by provider and routes accordingly. Delivery confirmations flow back to rendering facility.

Radiology Image Delivery

HIE service **1.5 – Radiology or other diagnostic image delivery** has been designated for implementation in a Phase II round of enhancements.

I submit that it is not necessary to wait for a later phase to implement a form of this functionality, and that there is a benefit in addressing this in an earlier timeframe.

One of the problems that the HIE has been promoted as addressing is a reduction in the number of repeated radiological tests undertaken as a patient moves from provider to provider or hospital to hospital. Although the HIE will make the reports of prior exams more readily available, it can be argued that the number of repeated exams would be reduced even further, perhaps significantly so, if the images from the prior exams were available to the clinician as well as the radiologist’s report.

To this end, I would urge the NC HIE Clinical and Technical Operations Work Group to consider an approach that has been successfully adopted by the Rochester RHIO, among others, and which solves a number of issues related to the transmission, storage and display of large image sets.

In this approach, all rendering facilities participating send newly acquired exam images (full DICOM sets) to a central imaging “cache” server. Exam images would remain on the server for (say) 30 days. Any request for images older than 30 days will be satisfied by the cache server requesting a resend from the rendering facility (DICOM Query/Retrieve).

Radiology reports pushed to the ordering and copy providers’ EHR from participating rendering facilities will contain an embedded link. When the provider selects this link, the cache server will display the exam images using an appropriate “lightweight” web viewer. This viewer would use wavelet compression or other technologies to minimize the network traffic required. The option will be available to download the full DICOM data set to facilitate importing them to another PACS system for side-by-side comparison purposes.

Thank you for allowing us to submit these comments.