Areg Boyamyan and Jim Timmons

FOUNDATION LABORATORY

Corporate Office: 1716 W. Holt Ave. Pomona, CA 91768. Tel: (909) 623-9301 Fax: (909) 623-9306

Questions from the HIT Policy Committee / Information Exchange Workgroup:

1) Technology impediments for electronic exchange of lab data can vary depending on each implementation of an electronic interface. Virtual Private Networks (VPNs) are one of the most important parts of the exchange setup. Hardware variations and versions can pose problems during the initial phases of the setup. HL7 versions that different EMR or LIS vendors support can have substantial impact during the developmental stages.

2) Business case impediments for electronic exchange of lab data are mainly related to the cost associated with the implementation process with EMR and LIS vendors. Currently and typically, the laboratories pay not only the LIS portion of the cost structure but in addition, laboratories are expected to pay the portion associated with the EMR vendor. We feel that the end user should have some financial obligation in this process considering that the end user is the entity deciding which EMR vendor to utilize. It is worth noting that if all the interfaces were mandated to be based off a similar specification this would substantial change the cost structure of an EMR and laboratory data exchange implementation process.

3) Operational impediments for data exchange can vary from a technical standpoint of hardware interoperability, VPN stability, SSL Certificate expiration, ISP uptime/downtime, etc. Programming changes that may be required for the electronic exchange of data can become additional operational impediments. Specifically, changes or new features that may be required during the implementation time or in the future may take weeks or months for the EMR and/or LIS vendors to program.

4) The responsibility of the laboratory, in conjunction with the LIS and EMR vendor, is to assure that there is a secure exchange of data between all the systems. This includes the proper installation of security measures, which are too broad and encompassing to discuss. The end user is ultimately required to make sure that the data is not shared with unauthorized entities.

5) The low-hanging fruit in an electronic data exchange may come in many different varieties. The immediate benefits are substantial and can range from better patient care to achieving greater operational efficiencies to limiting the number of repetitive testing for a particular patient. In addition, electronic data exchange will greatly improve the delivery of lab results to clinicians and will help reduce processing and data entry related errors. Last but not least, an immediate benefit of any electronic exchange is the elimination of paper and the immediate availability of the information that was previously provided on paper.

6) The number one priority to facilitate easier/broader electronic exchange of lab data would be the standardization of HL7 language for ordering and resulting, in the similar fashion as ELINCS HL7 2.5 R1 is the standardization lab result transmission. In addition, better incentives for doctors, clinics, and diagnostic testing facilities to adopt an electronic data exchange would in-turn improve the general architecture of our health care system as it pertains to patient care and cost of care.

7) The primary best practice would be the standardization of the general electronic data exchange industry.

8) As mentioned above, creating translation tables in order to establish proper communication between the LIS and EMR software is the biggest challenge during the developmental and implementation phases. Having existing translation tables and programming and implementation procedures will assist matters marginally and would be considered a possible work-around. However, have standardizations such as HL7 2.5 R1, which uses Loinc values for test mapping, greatly improves on the developmental and implementation processes.

9) There has been no limitation of being able to exchange lab data electronically because of the State's definition of an "authorized person".

10) To verify that data has been exchanged correctly, according to 42 C.F.R. § 493.1291, the laboratory, in conjunction with the LIS and EMR vendor, during the initial phase of the interface setup, compare and cross reference the data sent or received by the Laboratory LIS system to the data sent or received by the EMR system. This process is repeated until the data exchange is 100% validated.

11) Final report destination is interpreted by the acknowledgement that EMR software has received the transmission from our LIS system. This interpretation does not hinder the electronic exchange of lab data between the Lab and the EMR.

12) The adoption of a universal compendium/dictionary will greatly improve electronic exchange and reduce costs related to the implementation. However, differing methodologies and technologies in the laboratory industry would make it very difficult to have one universal compendium. We consider using LOINC values as an alternative and better solution.

13) The creation and maintenance of a universal compendium should be under the CMS umbrella.

14) Transmission standards for electronic data should all be based on HL7 languages. Perhaps the HL7 2.5 R1 (ELINCS) should be the basis of the Outgoing electronic data from Laboratory to the EMR/EHR. We would recommend that a similar language be adopted for Incoming electronic data from the EMR/HER to the Laboratory.

15) To ensure lab data is transmitted securely and confidentially Foundation Laboratory and its partners use a combination of SSL based VPN's, secured sockets transfers and secure FTP transmissions so that patient data is not compromised during the electronic transfer of the data.

16) According to CLIA regulation 493.1193 lab data is only to be sent to the authorized recipient. In most cases, the authorized recipient is the ordering clinician or the ordering facility. The results are shared with the patient according to the ordering entity's rules and regulations pertaining to the usage of lab data.