



CALINX vs. ELINCS:



What's the Difference?

The California HealthCare Foundation has funded two initiatives to promote the electronic transfer of laboratory results data to clinical settings: CALINX and ELINCS (<http://elincs.chcf.org>). This document provides answers for common questions about how the two initiatives relate.

Why are there two different messaging standards for communicating lab results?

Two standards are needed to handle two different "use cases" for reporting lab results. ELINCS handles the immediate test-by-test reporting of lab results to physicians' electronic medical record systems; it is intended to support direct patient care and to replace the paper-based reporting of lab results. CALINX handles the periodic retrospective batch reporting of lab results to populate data warehouses and disease registries; it is intended to support population-based quality-improvement programs and to supplement the paper-based reporting of lab results. The different features of CALINX and ELINCS are required to handle these different use cases effectively.

What are the differences between CALINX and ELINCS?

There are numerous differences at both the general and detail levels between CALINX and ELINCS. Some of the most notable differences are:

CALINX	ELINCS
Defines a single message type to communicate retrospectively the final results of tests	Defines three message types to communicate in real time various types of lab information--the status of tests still in the lab (including cancellations), the results of completed tests, and corrections to previously reported results
Designed for use primarily in CA and certain features are specific to CA	Designed for use anywhere in the United States
Does not require receivers to acknowledge the receipt of messages; labs assume that messages were received unless notified otherwise	Requires receivers to acknowledge the receipt of each message; labs assume that messages were not received unless notified otherwise
Allows laboratories to optionally populate HL7 segments and fields that are not designated as "required"	Prohibits the population of most HL7 segments and fields that are not designated as "required"
Requires that LOINC codes are used in reporting lab tests related to HEDIS quality measures (such as LDL-cholesterol, urine protein, and Chlamydia)	Requires that LOINC codes are used in reporting the most frequently reported lab results (such as CBCs, urinalyses, and metabolic panels)
Includes explicit support for transmitting batches of many result messages across many patients in a single file	Allows batching, but does not explicitly support it, because most ELINCS messages are transmitted in near-real time, as individual result messages

What do CALINX and ELINCS have in common?

- Both are intended to communicate the results of lab tests in a tightly defined message format that allows significant automated processing. For example, both specifications require that the identities of certain tests be reported using the standard LOINC coding system.
- Both are message specifications based on the HL7 v2.4 ORU message type. CALINX and ELINCS use this message definition as a foundation and add additional constraints regarding required segments, fields, and data encoding.
- Both were developed under the auspices of the California HealthCare Foundation with input and support from many industry stakeholders.
- Both are freely available for use.

Should my organization use CALINX or ELINCS or both?

Certain organizations may benefit from using both ELINCS and CALINX.

Organizations may wish to use ELINCS if many providers in the organization use an electronic medical record system; if this system includes an interface for receiving HL7-based messages; and if the clinical laboratory that is used can transmit lab results electronically in real-time or near-real-time.

Organizations may wish to use CALINX if the organization aggregates clinical data in a disease registry or data warehouse on behalf of its providers; if these data are used primarily to support retrospective analyses for quality measurement or quality improvement; and if its labs and contracted health plans are located in California.

If our organization uses CALINX for batch processing, will it be possible to switch to ELINCS later for real-time results reporting?

Some applications (such as some disease registries products) are capable of receiving and loading both batch lab results and real-time lab results. If your organization is using CALINX for receiving batches, you may decide later to upgrade your interface to ELINCS to receive lab results in a timely (real or near-real time) basis. Alternative strategies include using both CALINX and ELINCS concurrently, each for its designated purpose.

It will be possible and relatively straightforward for labs and provider organizations to switch from CALINX to ELINCS in the future because both specifications are based on the HL7 v2.4 ORU message type and require many of the same segments, fields, and data encodings. Nevertheless, because the interaction model of ELINCS is more complex, requiring support for three message types and explicit message acknowledgements, such a switch will not be trivial and should be planned and executed carefully. Additionally, because the features of CALINX and ELINCS support different use cases, one should ensure that switching from CALINX to ELINCS will continue to support all of one's business requirements.