

Trending Laboratory Tests

There is value in comparing the change of certain laboratory test result values over a period of time, better known as Trending. Most EMR's are capable of choosing particular tests and evaluating the change in the test result value over a period of time. Until recently, this has been relatively straight forward because the results in the EMR have typically come from one laboratory system.

In recent years, with the advancement of provincially based lab repositories, which store lab results from a variety of disparate lab systems, the process of trending laboratory tests needs to be re-evaluated. Laboratory providers need to ensure that similar tests are available to be trended together and similar sounding tests which are clinically different are not available to be trended together. There are many ways to resolve this issue technically; this paper does not address those resolutions.

The following table contains a list of commonly trended lab tests that was gathered from data that was collected from BC, SK, MB, ON and NB. These tests can be represented in a lab repository by a number of different LOINC codes. The list includes those LOINC codes that can be safely trended together. Where there is only one LOINC code present, it is the most commonly used code for that test. Multiple codes indicate a variety of different means to obtain the test result value, but all can safely be trended together. In the case of the ALT, there are different commonly used codes available but none should be trended together.

Lab Test	LOINC codes included in Trend
Hemoglobin A1c	4548-4, 17856-6, 17855-8
Hemoglobin	718-7, 30350-3, 20509-6, 30352-9
Leukocytes	26464-8, 12227-5, 6690-2, 804-5
Platelets	26515-7, 777-3, 778-1
INR	6301-6
Sodium	2951-2, 39791-9
Potassium	2823-3
Chloride	2075-0
Glucose Fasting	14771-0, 14770-2
Total Cholesterol	14647-2
HDL	14646-4
LDL	22748-8, 39469-2
Triglyceride	14927-8
Triglyceride Fasting	47210-0



Lab Test	LOINC codes included in Trend
Alanine Aminotransferase (ALT)	NA
Bilirubin	14631-6
Alkaline Phosphatase	6768-6
Gamma Glutamyl Transferase (GGT)	2324-2
Aspartate Aminotransferase (AST)	1920-8
Creatinine	14682-9