

Thrombosis and Hemostasis Lab Reference Range Updates

Starting June 20, 2023, the Thrombosis and Hemostasis Laboratory at the University of Vermont Medical Center will implement new coagulation analyzers. This is an important update to our instrumentation and will include an automated track system capable of accessioning, centrifugation, and delivering patient samples directly to the instruments for appropriate testing. Additionally, the laboratory will have the capability to more closely control testing processes and monitor key quality metrics with integrated software. These new instruments will assess sample quality, including detection of pre-test fibrin clot formation and alert the technologists to unacceptable levels of hemolysis, icterus, and lipemia based on the coagulation testing ordered.

As part of this implementation, there will be updates to the reference ranges for our factor assays as well as to our PTT for pediatric patients.

Normal Reference Range Updates for Factor Assays

As part of the validation and verification process, we determined an update to our normal adult (18 years and older) reference ranges are required for certain factor assays:

Coagulation Factor Assay	Epic Code	Atlas Code	Mayo Access ID	Updated Reference Range	Current Reference Range
Factor 2 Assay	LAB303	FA2	FAH5276	79 – 131%	73-133%
Factor 5 Assay	LAB304	FA5	FAH245	62 – 139%	63-135%
Factor 7 Assay	LAB305	FA7	FAH5269	50 – 129%	51-161%
Factor 9 Assay	LAB308	FA9	FAH244	65 – 150%	75-150%
Factor 10 Assay	LAB758	FA10	FAH4905	77 – 131%	86-195%
Factor 11 Assay	LAB309	FA11	FAH4963	65 – 150%	62-145%

Newborn and Pediatric Activated Partial Thromboplastin Time (aPTT) Normal Reference Range Updates

Working closely with our Pediatric Hematology colleagues at the Medical Center, we reviewed peer-reviewed literature and concluded an update to our pediatric aPTT normal reference range is required. The following tables outline these changes:

Age	Old Range
0 day up to 5 days	31 - 55 sec.
5 days up to 30 days	25 - 60 sec.
30 days up to 91 days	32 - 55 sec.
91 days up to 183 days	29 - 50 sec.
183 days up to 1 year	28 - 43 sec.
1 year up to unspecified	26 - 37 sec.

Age	New Range
0 day	31 - 55 sec.
>0 days - 5 days	25 - 60 sec.
6 days - 14 days	32 - 55 sec.
15 days - 28 days	28 - 46 sec.
29 days - 11 months	25 - 41 sec.
1 year - 5 years	24 - 40 sec.
6 years - 10 years	27 - 39 sec.
11 years - 17 years	25 - 38 sec.
>=18 years	26 - 37 sec.

Legend

- Verified at UVMMC
- Toulon et al. Thrombosis and Haemostasis 2016; 116:9-15
- Hematology of Infancy and Childhood, 4th Edition. Vol. 1 page 119

We respectfully request your patience during our “Go-Live” the week of June 20th. If you have any questions, contact the Thrombosis and Hemostasis Laboratory at (802) 847-3567. This phone number will be the primary contact for all your coagulation testing inquires/needs.

PATHOLOGY & LABORATORY MEDICINE

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