Planning and implementation the Individualized Quality Control Plan for Coagulation Testing done in Critical Care area in KFSHRC

Najwa Adlan¹, Tarek Owaidah¹, Nasir Bakshi¹

Abstract:
POC coagulation in Cardiac Critical care is a vital testing for patient; there is two major consideration for this testing in cardiac critical care settings:

1. The need to immediate monitoring of the Hemostasis condition of the patient to prevent Occurrence of life threatening event
2. The need of a Frequent monitoring for the patient

Hemochron Elite from Accriva diagnostic is used in KFSHRC for onsite results of anticoagulation status to measure:

1. ACT: for monitoring moderate or high heparin doses frequently associated with procedures such as cardiac surgeries, cardiac ICU’s, catheterization, Extracorporeal Membrane Oxygenation (ECMO), and Percutaneous Transluminal Coronary Angioplasty (PTCA).
2. PT/INR: It is used as a quantitative, one stage assay for monitoring oral anticoagulation effects by hemostasis assessment. It is used during procedures and therapeutic interventions that require monitoring of oral anticoagulants and for hemostasis assessment before or after blood transfusions.

New Regulations mandate establishing an Individualized quality control plan (IQCP) as a customized quality control plan to mitigate risks and potential sources of errors in the pre-analytical, analytical and post analytical phases within the unique environment of KFSHRC.

The risk assessments will allow the determination of appropriate and comprehensive Quality Control plan with frequency and types of controls (liquid based, internal, and electronic). It will also aid to determine other Practices to be performed to minimize the potential for errors in patient results.

The study for IQCP should start with RISK ASSESSMENT. Risk assessment is a serious of analysis of data related to the testing activities of actual practice while performing testing. The analysis is needed to identify the potential errors in all process of testing in all area’s pertained to testing starting from Specimen, Test System, Reagents, Environment & ending with Testing personnel with concentration on the effect of all throughout the testing phases.

The result of the extensive data analysis of risk factors and risk mitigation will assess in building a customized Quality Control Plan which should include frequency, type, levels and limits of acceptability criteria for the quality control performance.

Finally the plan should define the frequency and the mean of regular review and the annual reassessment to monitor the effectiveness of plan.

1 Point Of Care Testing Section; Department Of Pathology and Laboratory Medicine
King Faisal Specialist Hospital & Research Center
Riyadh/Saudi

nagwa@kfshrc.edu.sa
Najwa_kka@hotmail.com