

POCT is a mode of testing in which the analysis is performed at the site where health care is provided close to the patient. A wide number of lab test are now available in different POC devices used for a broad spectrum of diagnostic applications. POCT devices are used for critical care testing in location such as ICU, surgical suite & emergency room. Frequently used POC testing instrument are glucometer, blood gas analyser, troponin, urine albumin, HCG, procalcitonin, neonatal bilirubin. The increase of POCT during the last 10 years has been made possible by a number of factors, including advances in computer technology. Several studies support POCT as an alternative to to laboratory reporting good concordance, while others find little discrepancy in comparisons.

Advantages of Point of care testing:

1. Reduced TAT
2. Improved patient management
3. Reduction in the administrative work associated with test requesting
4. Reduction of the risk of a disconnection before the process of testing and clinical decision making.

Factors that need to be considered in the implementation a POCT service:

1. Establishing need
2. Establishing a POCT testing policy & accountability
3. Training and certification of operators
4. Establishing QC , quality assurance & audit policy.
5. Establishing documentation.

The key points in maintenance and inventory control are to adhere to the recommend storage condition, be aware of the shelf life of the consumables, ensure that stocks are released in time. Issues that usually require particular vigilance include expiration date, bio-contamination, electrical safety & maintenance of optics.

Classically quantitative internal QC involve the analysis a sample for which the analyte concentration is known and the mean and range of result quoted for the method used. QC testing strategy that may be used — analyze a minimum of one QC sample per run during each shift. If testing is infrequent then another approach would be to analyse a QC sample whenever there is a change to the testing system, such as a different batch of testing material or a different operator.

There are hardly any specific literature based on Randomised control trial(RCT) and cost effectiveness study . Although POCT has the potential to provide beneficial patient outcome, further study may be required, especially for defining its real utility on clinical decision making.

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