

Training And Competency Assessment Of Non-Laboratory Healthcare Professionals For Point-Of-Care-Testing

(POCT) Services In A Large Academic Teaching Hospital

– Compliance With International Standard ISO 15189

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Introduction

ISO15189/22870 Section 5.1 details the requirements for quality and competence particular to medical laboratories and forms the basis for national systems of medical laboratory accreditation. While ISO15189 accreditation is deep-rooted in relation to centralised laboratory services, the application of this standard to the realm of POCT is less well established in both the UK and Ireland, We outline the comprehensive approach adopted to training and competency to ensure accreditation of POCT services in a large Irish academic teaching hospital.

St. James's Hospital, Dublin has a capacity of 1,020 beds and manage over 350,000 patients annually.



POCT in the hospital includes 115 glucose meters (GM), 10 Blood Gas Analysers (BGA), 24 meters for urinalysis/HCG measurement, 22 Ketone meters (Ket), 4 Toxicology Meters (Tox) and a DCA Vantage Analyser for HbA1C in its scope. There are over 3,000 POCT operators at present with most operators requiring training and access on at least three POCT device .BGA, GM and HCG testing were selected for inclusion in the scope in ISO15189 accreditation inspection by INAB in 2014/2015/2016.

Management of Training.

Training in St James Hospital consists of a mixture of Supplier training and Cascade training at local level.

Supplier Training

Training is provided by the supplier of each POCT device as part of the contract between the supplier and the hospital. It is important to have a good working relationship with the supplier to ensure training is managed as a partnership with the POCT team. The training session will cover the following competencies:

Introduction to the Device:

- Key components of the device
- Log On procedure
- Clinical relevance of the test, purpose of the examination,
- Principle of the test.

Pre Analytics

- Patient preparation, identification, contraindications
- Sample collection, preparation and identification
- How to use associated strips/cassettes
- Storage requirements of strip/cassettes
- Data entry
- Knowledge of potential sampling errors.

Analytics

- Ability to perform the test as per Standard Operating Procedure – this must be witnessed and documented
- Knowledge of any Calibration and Quality Control (QC) procedures
- Importance of traceability and accountability and associated audit trail

Post Analytics and Reporting

- Appropriate response to out of range results
- Significance of abnormal, unexpected and inconsistent results.
- Correct recording of results
- Correct follow through to clinical team

Cascade Training

Training is also supplied on the wards by Cascade Trainers. Any competent staff member can train as a trainer and we have obtained CPD points for this process as an incentive for staff members to undertake this position.

Cascade trainers are regularly audited to assess their competency as trainers and to ensure that the quality of training is the same all over the hospital.

Cascade trainers are supplied with a training pack which covers all the procedures listed previously .This pack is available on the hospital intranet to ensure easy access for all trainers.

E- learning

E- learning modules are now an essential part of the training programme .They are available from most suppliers as part of their contract. They usually consist of a video/still photos associated with a quiz at the end of the presentation . There will be a set no of mandatory questions and the trainee must achieve an agreed score to pass. The e- learning system is linked to the competency module remotely and updates the operators training certificate automatically for an agreed length of time. All operators must complete the e-learning programme as well as training on the device itself

In addition, SJH has developed a bespoke training model for all POCT operators which covers the various aspects of a quality POCT system including Audits, Non Conformances and Corrective and Preventative Actions. This is a requirement of ISO15189 which ensures that all operators have an understanding not just of the devices but all aspects of a POCT Quality Management System.

Underpinning the e -learning system is a robust connectivity and data management system

Training Schedules

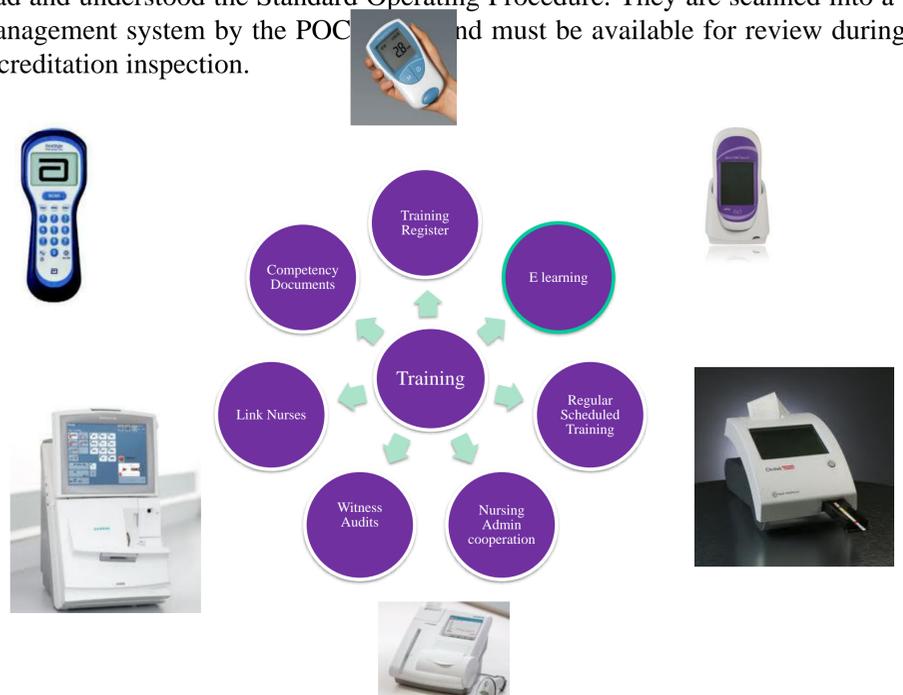
- The training schedule is set at the beginning of the year but is open to change depending on demand and workload in the relevant clinical areas.
- Retraining and reassessment occurs at appropriate intervals.
- Prospective trainees are contacted through email and the hospital intranet and may in some cases be alerted on the POCT device that training is due.

Training Documentation

There is a requirement that all training must be documented. This includes;

- Training programmes
- Training registers,
- Competency documents.

The competency of each person to perform the assigned tasks must be assessed following training and periodically thereafter. All competency documents are designed to reflect the areas covered during training and all operators must also have read and understood the Standard Operating Procedure. They are scanned into a data management system by the POCT and must be available for review during the accreditation inspection.



Quality Training and Competency systems in St James Hospital entailed the development of bespoke e-learning modules for POCT operators. A robust connectivity system was essential for providing an audit trail for competency and training with diverse POCT devices and operators who have a mixed skill set. A co-operative working relationship between all stake holders was essential and primarily facilitated by extensive and dedicated teamwork, IT support and well formulated training and competency systems