



Midland
Regional
Hospital
Tullamore

Midland Regional Hospital Tullamore Central Equipment Library



By Paul Rosney, Senior Clinical Engineering Technician and
John Adlington, Principal Clinical Engineering Technician



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Background

The comprehensive management of medical device equipment ensures fully operational devices are readily available for use in order to provide quality safe care for patients. The Clinical Engineering Department in the Midland Regional Hospital Tullamore identified that the introduction of a centralised equipment library would contribute considerably to achieving this.

Aims & Objectives

Central Equipment Library

- Create sufficient stock by centralising all equipment to maximise usage
- Reduce the workload of the Health Care Assistants cleaning equipment daily even if not used
- Create a safer environment for both patients & staff by limiting the equipment on wards
- Ensure all battery operated equipment is charged and ready for use

Preparation and Implementation

In early 2019, a proposal to convert an area that had been utilised for storage of broken and unwanted equipment since 2007 into a staffed Equipment Library was approved by the MRHT Senior Hospital Management.



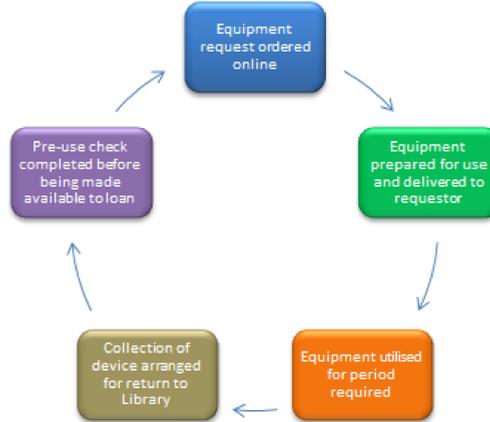
The renovation work included the creation of an integrated Clinical Engineering workshop and separate quarantine where equipment could be placed when not available/ready for issue.



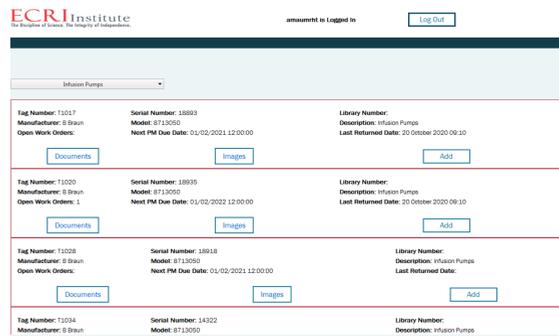
Daily Operation

An Operator is essential to distribute and control the equipment within the library Monday to Friday 9am-5pm and this is complemented by supervised out-of-hours access provided by the hospital's Security department.

The loan of equipment is facilitated as follows:



To record all movements of the library equipment, the Loan Store module of the National ERCI-AIMS system was utilised, with the associated EasyLib module assigned as an online booking system for the loans



The Equipment Library opened in September 2019 (initially as a pilot for three wards). The equipment re-assigned from these wards to the library was infusion pumps, nebulisers, hoists, and an Airvo with each device being labelled with a blue Equipment Library sticker which was distinctive from any other markings used in the hospital and clearly instructed the user how to return the device on completion of use.



The introduction of all other wards/departments was scheduled on a phased basis and by early March 2020 all areas had been provided with full access to the Library, with the exception of the ICU, CCU, Theatre and Emergency Department which unfortunately could not proceed due to the Covid-19 surge in Ireland.

Covid-19 Effect on Equipment Library

The Equipment Library became an essential and valuable resource in both the hospital and Clinical Engineering's response to Covid-19. Firstly, all equipment was relocated to the library that was no longer in use as a result of reduced/closed services to allow re-distribution as required. In addition, the hospital was issued with over 1,000 extra devices in response to Covid-19, which were also assigned to the Equipment Library for redistribution on request.

Along with medical equipment, PPE was also extremely limited in its availability. To ensure the appropriate distribution of this valuable resource, the issue of all PPE was only permitted from the Equipment Library and this ensured sufficient quantities of stock were maintained throughout the surge.



Equipment Available

The Equipment Library now has over 700 devices of various types available as detailed below:

Infusion Pumps	Syringe Pumps	Ambulatory Pumps
Bladder Scanners	Airvos	Ventilators
ECG Machines	Ultrasound Machines	Nebulisers
Pulse Oximeters	Hoists	Humidifiers
Sara Stedys	Scales	Patient Monitoring
AV Impulse Machines	Hypothermia Units	CRRT Machines
Portable RO Units	Microscopes	Suction Machines
Enteral Feed Pumps	Spinal Mattresses	Blanket Warmers
Bariatric Bed	Low-Low Beds	OT Cushions

The space has been fully utilised with equipment being arranged so it is easy to locate out of hours. Also a considerable number of power points have been added to ensure all battery operated devices remain charged.



Official Opening (July 2020)



Challenges

At an early stage, it was identified that the users had not anticipated waiting up to 30 minutes for the device to be delivered or for out-of-hours supervised access. Once communicated that the waiting time could not be reduced unless in an emergency, the clinical staff worked with the service and adjusted their practices accordingly so that they would request equipment as soon as they were aware it was required or considered moving equipment between patients when not in use and where there was no risk involved.

Delivering equipment without consumables also proved problematic for staff as they had to often contact other areas to obtain the items needed if not in their own stock, so it was decided to provide one consumable set per device for certain equipment

Conclusions

Based on usage to date, it is anticipated that there will be approximately 4,000 loans per annum and the following benefits have already been realised

- Releasing time for the health professionals to care for the patients.
- Provides a safer environment for the patients and staff by removing the equipment not in use.
- Reduces the time spent cleaning unused equipment on a daily basis.
- Equipment is easily located and in fully operational condition. This is extremely beneficial when there is only a limited amount of certain device types available in the hospital.
- Reduces unnecessary damage to the equipment as it is now properly stored/charged.
- Equipment is available to all areas within the hospital, where previously it might have only been assigned and/or utilised in one ward/department.
- Equipment is easier to locate by Clinical Engineering for corrective/preventative maintenance purposes.

The introduction of the Equipment Library has proven to be an effective quality improvement initiative with both the users and the Clinical Engineering team. All stakeholders are committed to the continuous improvement of the service to provide a comprehensive equipment management system

Acknowledgements

The Clinical Engineering/Equipment Library staff would like to acknowledge the users of this service who have fully engaged with this significant change in practice and contributed to its success, as well as Noreen Hynes, General Manager for supporting this initiative.