



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Hywel Dda
University Health Board

Medical Device Management Policy

Policy Number:	467	Supersedes:		Classification	Clinical
Version No	Date of EqIA:	Approved by:	Date of Approval:	Date made Active:	Review Date:
V3	March 2021	Clinical Written Control Documentation Group	15/07/2021	07/03/2022	13/08/2024
		Extended pending new Chair Medical Devices Group and full review – CWCDG	20.6.2024 31.10.2024	20.6.2024 31.10.2024	31.12.2024 31.3.2025

Brief Summary of Document:	A policy for the effective lifecycle management of medical devices in support of safe and effective patient care
Scope:	This Policy applies to medical devices (single-use, single-patient use as well as re-usable) captured by the section 7 definitions and must be adhered to by all prescribers, users, managers, trainers and personnel involved in the procurement, use, maintenance, reprocessing, validation and performance testing, disposal and information governance for medical devices.
To be read in conjunction with:	011 - Incident and Hazard Reporting Policy 012 - Interventional Procedures Policy - Version 2 013 – NICE and other National Guidance Implementation Policy 015 – Risk Management 172 – Confidentiality Policy 199 - Risk Management Procedure 195 - Clinical Record Keeping Policy 217 - Ionising Radiation Safety Policy (currently in draft)

HYWEL DDA UNIVERSITY HEALTH BOARD

	224 – Data Protection Policy 268 - Medicines Policy 289 - Record Keeping for Nurses and Midwives Policy 329 – Point of Care Testing Policy 390 - Infection Prevention & Control Policy for the Cleaning & Decontamination of Equipment prior to Inspection, Servicing, Repair or Disposal 429 - Management & Distribution of Safety Alerts and Notices Policy FP/09/03 - Disposal of Surplus & Obsolete Furniture, Equipment, Sale of Scrap and Other Waste Materials Procedure 514 – Management & Investigations of Incidents Procedure Standard Financial Procedures
--	--

Owning Group	Medical Devices Group
--------------	-----------------------

Executive Director:	Allison Shakeshaft	Job Title	Executive Director of Therapies & Health Sciences
---------------------	--------------------	-----------	---

Reviews and updates		
Version no:	Summary of Amendments:	Date Approved:
1	New Policy	05/03/2018
2	Insertion of new Appendices – 733 – Medical Device Training, Safe Use and Operation Procedure, 735 – Purchase & Acquisition of Medical Devices Procedure, 736 – Medical Device Configuration Procedure.	17/03/2021
3	Minor changes only and also Operational, Quality, Safety & Experience Sub Committee	15/7/2021

Glossary of terms

Term	Definition
MHRA	Medicines and Healthcare products Regulatory Agency
MDSO	Medical Device Safety Officer
SMTL	Surgical Materials Testing Laboratory
CE	Clinical Engineering
NWSSP	NHS Wales Shared Services Partnership: Procurement Service
OQSESC	Operational, Quality, Safety & Experience Sub Committee

Keywords	Medical Device, Medical Equipment, Single Use Items
----------	---

HYWEL DDA UNIVERSITY HEALTH BOARD

Contents

1.	EXECUTIVE SUMMARY	5
2.	INTRODUCTION	5
3.	POLICY STATEMENT	6
4.	SCOPE	6
5.	AIM	6
6.	OBJECTIVES	6
7.	MEDICAL DEVICE: DEFINITION AND INTERPRETATION	6
8.	COMMITMENT TO MEET STANDARDS	8
8.1.	Legal Framework	8
8.1.1.	Statutory obligations	8
8.2.	Standards	8
8.2.1.	MHRA Bulletins and Guidance	8
8.2.2.	Health & Care Standard No. 2.9 – Medical Devices, Equipment and Diagnostic Systems	9
8.2.3.	National Institute for Health and Care Excellence (NICE)	9
8.2.4.	National Patient Safety Agency (NPSA)	9
9.	RISK MANAGEMENT	9
10.	MEDICAL DEVICES INVENTORY	9
11.	INCIDENT REPORTING	9
11.1.	Preservation of evidence	10
12.	GUIDANCE FOR USERS WHEN USING A MEDICAL DEVICE	10
13.	KEEPING OF RECORDS	11
14.	INTERNAL DEVICE OWNERSHIP	11
15.	SATISFYING CLINICAL GOVERNANCE STANDARDS PRIOR TO PURCHASING MEDICAL DEVICES	12
•	Medical device that has become technically and/or clinically obsolete;.....	12
* In this case	prior approval in support of the clinical intervention must be obtained from the Clinical Engineering, Innovation and Research team.	12
16.	MEDICAL DEVICES FINANCING	13
17.	SELECTION AND PROCUREMENT	14
18.	STANDARDISATION OF MEDICAL DEVICES	14
19.	ACCEPTANCE AND COMMISSIONING	14
20.	MEDICAL DEVICE CONFIGURATIONS	14
21.	MEDICAL DEVICES THAT ARE LOANED	14
22.	MODIFIED MEDICAL DEVICES OR MEDICAL DEVICES SUBJECT TO CHANGE OF USE – OFF LABEL USE	15
23.	SECOND HAND MEDICAL DEVICES ACQUISITIONS	15
24.	MAINTENANCE AND PERFORMANCE VALIDATION	16
25.	MEDICAL DEVICES LIBRARIES	16
26.	LOAN OF HYWEL DDA MEDICAL DEVICES	16
27.	END OF PRODUCT LIFE MANAGEMENT	16
27.1.	Disposal of medical devices.....	17
27.2.	Sale or donation as a usable asset.....	17
28.	RADIATION AND LASER PROTECTION	17
29.	TRAINING	17
30.	ROLES & RESPONSIBILITIES	18
30.1.	Chief Executive	18
30.2.	Nominated Lead Executive Director.....	18
30.3.	Director of Operations.....	18

HYWEL DDA UNIVERSITY HEALTH BOARD

30.4.	Medical Devices Group.....	18
30.5.	Operational Directors and Senior Managers.....	18
30.6.	Managers.....	19
30.7.	Prescribers of Medical Devices.....	19
30.8.	Users of Medical Devices	19
30.9.	Patient Users of Medical Devices	20
30.10.	Medical Device Coordinator	20
30.11.	Medical Device Safety Officer (MDSO).....	20
30.12.	Maintenance Contracts Coordinator	20
30.13.	Medical Device Trainer	20
30.14.	Radiation and Laser Protection Supervisors.....	20
30.15.	Maintenance Overseer.....	20
30.16.	Clinical Engineering Department.....	21
31.	FURTHER INFORMATION	21
32.	APPENDIX A – CLINICAL GOVERNANCE AND INFORMATION GOVERNANCE ASSURANCE.....	23
33.	APPENDIX B – ULTRASOUND CLINICAL GOVERNANCE IN WALES	24
34.	APPENDIX C – MEDICAL DEVICE TRAINING, SAFE USE AND OPERATION PROCEDURE.....	28
35.	APPENDIX D – MEDICAL DEVICE CONFIGURATION PROCEDURE.	29
36.	APPENDIX E – PURCHASE & ACQUISITION OF MEDICAL DEVICES PROCEDURE.....	30

HYWEL DDA UNIVERSITY HEALTH BOARD

1. EXECUTIVE SUMMARY

- Patients of Hywel Dda University Health Board undergoing diagnosis, treatment or alleviation of condition will invariably come into direct contact with medical devices as they progress along their care pathway.
- The Health Board holds a legal duty of care to ensure medical devices used in the diagnosis, treatment or alleviation of condition are fit for purpose, acceptance tested, suitably reprocessed, maintained and; validated and performance tested, and that confidential, personal information is stored and managed securely and staff using these devices are trained and maintain their competency.
- A medical device for the purposes of this policy is defined as any piece of equipment that comes into contact with a patient and has diagnosis, treatment or alleviation of condition as its purpose, including the software that controls the functionality and/or secondary items connected to such devices.
- For medical devices management to be successful the organisation needs to promote a culture of co-operation and co-ordination across planning, risk management and operational priorities such that the stages of selection and procurement, acceptance and commissioning, operational use (including information governance) and maintenance (including cleaning and disinfection) and training can be effectively managed.
- The management processes for effective medical devices management are clearly laid down in guidance produced by Medicines and Healthcare products Regulatory Agency (MHRA).
- Executive Board level accountability for medical devices management rests with the nominated executive director as defined by the scheme of delegation.
- It is an absolute responsibility of medical devices users and their managers to manage all aspects of the medical device during its operational life.
- For the purpose of this policy the term lifecycle refers to the period between the medical device being introduced into service until it is withdrawn and includes processes such as reprocessing, maintaining, validation and performance testing which occur in between periods of operation of the medical device.

2. INTRODUCTION

Medical devices are a vital component of modern day healthcare delivery and it is difficult to imagine a single patient pathway where a medical device is not involved at some stage. Rapidly advancing technologies mean devices are becoming more and more complex and hence it is imperative to have a robust clinical governance framework underpinning a sound management system for medical devices.

The Health Board holds a legal duty of care (refer to section 8.1.1) to ensure that a medical device used in the diagnosis, treatment or alleviation of a condition is suitable for its intended purpose, suitably reprocessed, maintained, repaired, validated and performance tested, and that confidential, personal information is stored and managed securely and staff engaged in using these devices are trained and maintain their competency.

The field of medical devices is extremely broad and multifarious and ranges from a simple bandage to a complex MRI scanner. Such is the breadth of this field it is essential that a robust clinical governance framework exists which underpins the management of medical devices in order that care can be provided to the highest standards and be supported by sound governance and assurance arrangements.

HYWEL DDA UNIVERSITY HEALTH BOARD

This policy therefore sets out the Health Board's approach and commitment to achieving a safe and assured system for medical devices management.

3. POLICY STATEMENT

This Policy offers a platform for the continued development of a mature management system to support medical devices management that will in turn improve and maintain standards of clinical governance and hence patient safety and patient outcomes where medical devices are used.

4. SCOPE

This Policy applies to medical devices (single-use, single-patient use and re-usable) captured by the section 7 definitions and must be adhered to by all prescribers, users, managers, trainers and personnel involved in the procurement, use, maintenance, reprocessing, repairing, validation and performance testing, disposal and information governance for medical devices.

Whilst the Medical Devices Directive includes in vitro diagnostic medical devices, these are governed by standard laboratory standards and therefore fall outside of the scope of this policy.

5. AIM

This Policy aims to set out the Health Board's commitment to medical devices management and provides clear direction and guidance to all involved in the procurement, management, use and upkeep of medical devices with the intention of controlling risk and delivering safe patient care.

6. OBJECTIVES

The aim of the Policy will be achieved by ensuring:

- That there is a robust inventory of all reusable medical devices;
- That there are effective risk management processes in place to support the deployment of medical devices;
- That there are adequate and effective programmes of training and staff are competent and maintain their competency;
- That there are prudent and effective selection and procurement processes in place when acquiring new and replacement medical devices;
- That there are adequate support mechanisms to ensure medical devices are and remain fit for purpose throughout their lifecycle;
- That there are adequate arrangements in place for the secure management and storage of confidential personal information associated with the use of medical devices, in line with HDUHB Policies
- That compliance with relevant standards is achieved and where exceptions exist they are escalated to the Operational Quality, Safety & Experience Sub Committee (OQSESC);
- That there are effective processes in place to learn from incidents and safety notices;
- That disposal at end of life is executed safely and with due diligence.

7. MEDICAL DEVICE: DEFINITION AND INTERPRETATION

In line with UK legislation the Health Board defines a medical device as any instrument, apparatus, appliance, material or other article whether used alone or in combination,

HYWEL DDA UNIVERSITY HEALTH BOARD

including the software necessary for delivering the correct functionality as intended by the manufacturer, to be used by human beings for the purposes of:

- Diagnosis, prevention, monitoring, treatment or alleviation of disease;
- Diagnosis, monitoring, treatment, alleviation of or compensation for an injury or handicap;
- Investigation, replacement or modification of the anatomy or of a physiological process;
- Control of conception;
- And which does not achieve its principal intended action in or on the human body by pharmacological, immunological or metabolic means, but may be assisted in its function by such means.

By way of interpretation the Health Board therefore considers a medical device to be any piece of equipment that comes into contact with a patient and has diagnosis, treatment or alleviation of condition as its purpose, including software that controls the functionality of such devices, and secondary items connected to the medical device. This will include equipment not owned by the organization such as that which has been loaned from another healthcare provider or used as part of a clinical evaluation of equipment and loaned by a manufacturer.

There are 3 categories of medical devices:

- Single-use items: A single-use medical device must only be used on an individual patient during a single procedure and then be discarded. It must not be reprocessed and used again, even on the same patient. It will have this symbol on the packaging or the device;



A few single-use devices are marketed as non-sterile. These may require processing, in line with the manufacturer's instructions, to make them sterile and ready for use. These must not be re-sterilized again.

- Single-patient use items: A single-patient use medical device may be used for more than one episode of use but on one patient only; the device may undergo some form of reprocessing between each use.
- Re-usable items: A re-usable medical device is a device that undergoes lifecycle processes which means the device can be re-used on multiple patients. The lifecycle processes include reprocessing, maintaining and; validation and performance testing which occur in between periods of operation of the medical device.
The reprocessing of a medical device for re-use may involve any or a combination of the following processes:
 - Cleaning
 - Disinfection/decontamination
 - Sterilization
 - Refurbishment
 - Repackaging

HYWEL DDA UNIVERSITY HEALTH BOARD

The manufacturer of re-usable medical devices should provide validated reprocessing instructions along with the device.

8. COMMITMENT TO MEET STANDARDS

The Health Board undertakes to comply with all published statutory and implied statutory standards listed in this section. The Medical Devices Group, will on behalf of the QQSESC:

- Ensure that the clinical governance framework for medical devices is in place and remains fit for purpose by incorporating medical device alerts, field safety notices, and all other alerts into the framework.
- Receive reports from the service via the Operational Quality, Safety and Experience Sub-Committees on non-compliance and/or seek assurance from the service that the non-compliance is being managed appropriately; and/or confirm that the clinical governance framework is still fit for purpose and action as appropriate.
- Escalate unresolved non-compliance to the QQSESC.

The Operational Quality, Safety and Experience Sub-Committees will monitor compliance and will report any non-conformities giving rise to significant risk as they arise to the Quality, Safety and Experience Assurance Committee as part of standard reporting.

8.1. Legal Framework

8.1.1. Statutory obligations

Legislatively the Medical Devices Regulations 2002 (SI 2002 No 618, as amended) (UK MDR 2002) and Electrical Equipment (Safety) Regulations 1994 made under the Consumer Protection Act of 1987 aim to control the manufacture and supply of medical devices. Given the business functions of the Health Board do not extend to the manufacture of medical products and the Health Board will always procure such products in accordance with NHS procurement rules these regulations will hold little in the way of further notable obligations.

The main legal obligations made under the Health and Safety at Work etc Act 1974 that the Health Board is cognisant of and will comply with in respect to medical devices management are contained in the Management of Health and Safety at Work Regulations 1999, Provision and Use of Work Equipment Regulations 1998, Electricity at Work Regulations 1989 and Ionising Radiation Regulations 1999. These Regulations being largely non-specific to medical devices rely on bespoke guidance to support safe working definitions and interpretations and these are available via specific guidance covered in the section immediately below.

8.2. Standards

8.2.1. MHRA Bulletins and Guidance

The principal source of medical devices management reference for users/keepers and their managers is the Medicines and Healthcare products Regulatory Agency (MHRA). The MHRA's documentation resource contains many device bulletins issued to the health service which are based on industry best practice and draw on evidence from the wider experiences of the NHS.

Although not strictly mandatory the guidance contained in MHRA device bulletins stands alone as the only published best practice to inform many aspects of medical devices management and as such the Health Board will take all reasonable steps to comply with the advice and guidance issued by MHRA in line with HDUHB Policy 429 - Management & Distribution of Safety Alerts and Notices.

HYWEL DDA UNIVERSITY HEALTH BOARD

8.2.2. Health & Care Standard No. 2.9 – Medical Devices, Equipment and Diagnostic Systems

Internally, governance of medical devices management will be framed around and monitored by way of Health & Care Standard No 2.9.

8.2.3. National Institute for Health and Care Excellence (NICE)

Technical appraisals and other guidance issued by NICE will be implemented by the Health Board in line with HDUHB Policy 013 – NICE/and other National Guidance Implementation.

8.2.4. National Patient Safety Agency (NPSA)

Previous alerts and safe practice notes issued by the former National Patient Safety Agency remain actively relevant and hence the Health Board will continue in its commitment to meet these requirements on an ongoing basis, in line with HDUHB Policy 429 - Management and Distribution of Safety Alerts and Notices.

8.3 Safety Notices

Safety notices and alerts issued by medical device manufacturers (Field Safety Notices) and Medical Device Alerts issued by MHRA will be acted on without undue delay in line with HDUHB Policy 429 – Management and Distribution of Safety Alerts and Notices.

9. RISK MANAGEMENT

Any risks associated with medical devices will be assessed, managed and escalated in line with HDUHB Procedure 015 - Risk Management.

Medical devices, which are re-usable, are subject to lifecycle processes (related to the reprocessing, maintenance, repair, validation and performance testing) and are subject to the risk management processes detailed in this policy.

Medical devices which are for single-use or single-patient use are disposed of immediately after use and do not undergo reprocessing, therefore the application of the full risk management processes for reusable medical devices would be disproportionate and not cost-effective for these items.

10. MEDICAL DEVICES INVENTORY

To ensure clinical and information governance requirements are met effectively, the Health Board requires wards/services/departments to ensure they compile and maintain a comprehensive record of their re-usable medical devices on the Health Board inventory. Managed and maintained by the Clinical Engineering department, the inventory identifies the management and maintenance responsibilities (Maintenance Overseer) for each device.

Responsibility for the compiling and maintaining of inventories rests with the relevant directorate working with Clinical Engineering, as defined under the responsibilities section of this Policy.

11. INCIDENT REPORTING

When an incident involving a medical device occurs, in addition to submitting a Datix in accordance with HDUHB Policy 514 - Management & investigations of incidents procedure, the Health Board is required to collaborate with MHRA and the Surgical Materials and

HYWEL DDA UNIVERSITY HEALTH BOARD

Testing Laboratory (SMTL) by sharing relevant incident details for the purposes of collective NHS benefit.

If it is suspected or confirmed that a device is implicated in an incident then together with any associated consumables it should be immediately and securely quarantined as potential evidence and Clinical Engineering notified. The device/s should not be cleaned or subjected to alteration of its settings or programmes as detailed in HDUHB Policy 514 - Management & investigations of incidents procedure

11.1. Preservation of evidence

In addition to reporting the incident, the device, together with any associated accessories and consumables (including packaging if available), must be immediately and securely quarantined as potential evidence to facilitate internal and/or external investigation. Not only is this vital to the Health Board's efforts to co-operate with MHRA and SMTL and in the case of a serious incident with enforcing authorities, but also to support opportunities to learn from incidents. This duty extends to decontamination processes which must not be carried out when a device is involved in an incident where enforcing authority investigation is likely to follow. In these circumstances the advice of the appropriate Clinical Engineering/Maintenance Overseer/HSDU team is to be taken on appropriate measures to best preserve evidence.

12. GUIDANCE FOR USERS WHEN USING A MEDICAL DEVICE

The decision to use one device over another or use a medical device in the first place is a matter of clinical judgement and hence must be taken by the relevant healthcare professional who carries the responsibility for care of the patient.

How such decisions might be arrived at are beyond the scope of this policy and the clinical prescriber and user may be one and the same person whilst on other occasions the prescriber may pass these duties onto another.

Whether the prescriber fulfils the role of user or delegates the duties to use a medical device for diagnosis, treatment or alleviation of condition, the user must satisfy themselves of the following:

- Appendix C: Medical Device Training, Safe Use and Operation Procedure 733 has been followed;
- That it is the right medical device for the required procedure and will be used in accordance with manufacturer's instructions on the right patient;
- That they are competent to use the medical device inclusive of its software and accessories;
- That the medical device is clean in line with HDUHB Policy 390 - Cleaning and Decontamination of Equipment prior to Inspection, Servicing, Repair or Disposal;
- That the medical device shows no signs of damage or disrepair;
- Where applicable, that all records of use are completed e.g. an infusion monitoring chart, and stored in line with HDUHB Policies 195 - Clinical Record Keeping and 289 – Record Keeping for Nurses and Midwives;
- Where applicable, that the medical device bears a next test due date which is in the future;
- That they are aware and act upon any specific instructions or limitations of use instructions that originate from an alert or safety notice;

HYWEL DDA UNIVERSITY HEALTH BOARD

- That they follow user checking procedures for the specific device;
- That the patient will be adequately monitored whilst connected to or in contact with the prescribed medical device;
- That battery packs are sufficiently charged and capable of delivering the function of the device.

13. KEEPING OF RECORDS

The Health Board expects all of its medical devices users/keepers and their managers to exercise due diligence where keeping of records is required in support of medical device use (including staff competency), reprocessing, repairing, maintaining, validation and performance testing.

Users/keepers or their managers are required to maintain suitable and sufficient records of any actions of relevance taken through the medical devices' operational life which might assist the Health Board and other agencies in identifying incident root causes and to aid any investigations that are commissioned subsequently. These will include but not be limited to:

- Purchasing records
- Commissioning records
- Decontamination and sterilisation records
- Maintenance and repair records
- Calibration, Performance validation and/or Quality Assurance records
- Software and Configuration settings – see Appendix D Medical Device Configuration Procedure
- Records of special safety inspections; for example those required for medical devices subject to ionising radiation requirements
- Records of any approved modifications carried out (refer to section 22)
- Patient identifiable traceability of usage (where applicable)
- Training and maintaining of competency records
- Decommissioning and disposal records
- Risk assessments

It is the responsibility of users/keepers or their managers to ensure that such records are available for inspection at any point or to have arrangements with supporting teams to maintain such records on their behalf through the device Maintenance Overseer. The default responsibility will however always remain with the users/keepers or their managers.

14. INTERNAL DEVICE OWNERSHIP

Howsoever acquired, all medical devices that are the property of Hywel Dda University Health Board can be redeployed to any part of the organisation on a temporary or longer term basis as deemed necessary by the needs of the service. The Director of Operations will be the final arbiter of such redeployment decisions. However, the clinical and information governance responsibilities must be agreed between the donating and recipient departments.

In addition, the relevant Clinical Engineering department and/or Maintenance Overseer must be notified of the equipment transfer to ensure arrangements are made for future reprocessing, repairing, maintaining and; validation and performance testing.

HYWEL DDA UNIVERSITY HEALTH BOARD

15. SATISFYING CLINICAL GOVERNANCE STANDARDS PRIOR TO PURCHASING MEDICAL DEVICES

For the majority of cases, the need to purchase a medical device will originate from any one of three distinct possibilities (see Appendix A: Clinical Governance & Information Governance Assurance):

- New medical device required to support new clinical interventions;
- Replace a medical device that has become technically and/or clinically obsolete; A medical device already in service that has become unserviceable (technically obsolete) or no longer fulfils what could be considered reasonable contemporaneous technological performance (clinically obsolete) may justify a case for replacement provided recent utilisation evidence supports an on-going need for the medical device.
- Increasing the quantity of a medical device already in service; A medical device that is presently in service but is not available in sufficient quantity to meet the needs of the service; it may be justified to purchase additional stock but a business case including how the existing stock is used is required.

15.1 New Medical Devices

The majority of medical devices purchased will not have been used before. However, there are occasions that the Health Board will purchase second hand equipment (see Section 23) or borrow equipment from other health providers or manufacturers. The latter is dealt with further on in the Policy.

A medical device is considered to be new when:

- Appearing for the first time in a service;
- Supporting a new clinical intervention in a service*;
- Replacing a medical device which offers substantial technological enhancement;
- A significant quantity of a medical device, from the same manufacturer, is introduced in a short space of time;
- The standardisation profile of a type of medical device is affected (organisation-wide).

* In this case prior approval in support of the clinical intervention must be obtained from the Clinical Engineering Department.

15.2 Specific Types of Medical Devices

The purchase of some genre of specialist medical devices are covered by separate governance arrangements including those as set out in:

- Ultrasound Clinical Governance in Wales (Refer to Appendix B).
- HDUHB Policy 329 – Point of Care Testing.
- HDUHB Policy 217 – Ionising and non-ionising.

15.3 Pre-purchase process

Before progressing with the purchase of a medical device as defined in 15.1 and 15.2, both the Maintenance Overseer & the Clinical Engineering Departments for that genre of device will, on behalf of the Health Board, need to satisfy themselves that the necessary clinical and information governance arrangements and required support are in place to safely introduce and maintain the medical device prior to giving final approval to proceed to purchase.

Irrespective of the financing route (e.g. departmental funds, capital bids or charitable funds) the requirement to justify clinically and gain approval, prior to purchase, from both the Maintenance Overseer & the Clinical Engineering Departments is required.

HYWEL DDA UNIVERSITY HEALTH BOARD

In order for the service to establish pre-purchase approval from the Maintenance Overseer & Clinical Engineering Department, the following questions must be addressed:

- Is the proposed acquisition likely to affect clinical practice to any significant degree?
- Does the proposed acquisition conflict with any declared strategy aimed at delivering improved standardisation across the medical device type in question?
- If a replacement, does the proposed acquisition bring with it a significant advancement in medical devices' technology?
- Are there any new hazards created by introducing this medical device e.g. ionising or non-ionising radiation, medical gases, manual handling, IT security?
- Are there likely to be any associated consumables product changes brought about through acquiring this medical device?
- For replacement medical devices are lifecycle* costs greater than the pre-existing devices?
- Are any difficulties likely to arise in decontaminating and cleaning the medical device between patient episodes?
- Will the acquisition of the medical device place an increased demand on training resources from that which was evident previously?
- Will the acquisition of the medical device follow an arranged clinical trial?
- Will the acquisition involve using Patient Identifiable Information (PII) in a new way involving the collection, and storage of information?
- Will the new acquisition involve using new technology that individuals may find intrusive to their privacy?
- Will the acquisition involve making automated decisions about an individual's care i.e. where a decision is made without involving a human being?

* The term lifecycle refers to the period between the medical device being introduced into service, until it is withdrawn and includes processes such as reprocessing, maintaining and; validation and performance testing which occur in between periods of operation of the medical device.

If the response to any of the questions above is positive, then a Statement Of Need form (refer to Appendix E – Purchase & Acquisition of Medical Devices Procedure) and a finance proforma (Capital, Charitable funds etc.) will need to be completed and approved by the Head of Clinical Engineering, prior to submitting to the appropriate financing body and/or procurement.

This Statement of Need form combines the clinical governance standards and the cost of the item and the financial impact likely in respect of maintenance, decontamination, training and consumables costs.

16. MEDICAL DEVICES FINANCING

Medical device purchases can draw on a number of funding options and it is expected that these options are considered during purchase planning. All medical devices procurements will be undertaken in accordance with the Health Board's - [Standing Financial Instructions](#) and inherent procurement procedures including Appendix E: Purchase & Acquisition of Medical Devices Procedure (735).

The most frequently used routes to funding medical devices purchases include:

HYWEL DDA UNIVERSITY HEALTH BOARD

- Outright purchase using capital or revenue resources as is appropriate to the specific procurement case;
 - A sub set of this option is the use of charitable donated funds and for the purposes of interpretation and application of the commitments of this policy no difference shall exist between the use of donated sums of any financial magnitude and exchequer funding;
- Lease arrangements;
- Amortised purchasing arrangements.

17. SELECTION AND PROCUREMENT

To avoid abortive purchases and unnecessary risk escalation it is essential that due process is applied to the selection and procurement of medical devices purchases. When medical devices procurement planning aligns with risk mitigation plans then equipment standardisation can be extended and hence patient safety and outcomes improved. Equally medical devices that are not sourced through proper channels can sometimes be found to be incompatible with associated systems and equipment in use across Health Board.

To this end the Health Board does not allow the sourcing of medical devices from suppliers other than those that are included on approved lists held and accessible by NWSSP - Procurement Services. When a medical device is sourced through the proper channels then pre-purchase qualification tests are applied and this process helps reduce risk and can save money through the avoidance of abortive purchases.

18. STANDARDISATION OF MEDICAL DEVICES

Under this Policy the Health Board commits to embrace an appropriate degree of standardisation of medical devices in service where risk considerations overall render it prudent. This however, shall not be at the expense of introducing added risk as a result of overdependence on one supplier.

19. ACCEPTANCE AND COMMISSIONING

All re-usable medical devices must be formally acceptance tested and certified as fit for use prior to going into clinical service. This is achieved through and coordinated by the Maintenance Overseer & the Clinical Engineering departments and also device suppliers. MHRA Device Bulletin – Managing Medical Devices provides an overview of acceptance testing and commissioning procedures which local teams should enhance and apply as necessary for incorporation into their written procedures. In addition the Medical Devices Co-ordinator can be contacted for advice.

20. MEDICAL DEVICE CONFIGURATIONS

Along with the formalised acceptance process described above some medical devices may also need to be appropriately configured prior to going into clinical use. The process of medical device configuration involves making hardware and software choices which will be embedded into the medical device and will fundamentally influence the manner in which the medical device responds to user instructions. Configurations must be developed with the involvement of the Maintenance Overseer, Clinical Engineering Department and other stakeholders – refer to Appendix D – Medical Device Configuration Procedure.

21. MEDICAL DEVICES THAT ARE LOANED

It may, on occasion become necessary to put into clinical use medical devices that are loaned from another health provider or in the case of a trial, a medical device manufacturer

HYWEL DDA UNIVERSITY HEALTH BOARD

or distributor. Trials can take the form of research and development trials (clinical trials or medical devices trials) or equipment evaluation trials prior to procurement of a medical device – regardless of the trial/device type, the same safeguards must be in place. In either scenario the user/keeper and their manager of the medical device must ensure all acceptance checks are in place after consulting with both the Maintenance Overseer & Clinical Engineering Departments. Additionally, in the case of medical devices provided for clinical trials, users/keepers and their managers must ensure all indemnity documentation and written agreements are in place and an application to MHRA is sought through the Clinical Engineering Department in order that the Health Board's interests are protected and liabilities minimised; this must take place before the trial can begin. In the event of uncertainty in this area the Health Board's local Clinical Engineering Department will be at hand to offer advice and guidance.

Medical devices left by company representatives shall not be put into clinical service without first being approved by the relevant Maintenance Overseer & Clinical Engineering Departments in line with their adherence to the Medical Industry Accreditation Scheme.

22. MODIFIED MEDICAL DEVICES OR MEDICAL DEVICES SUBJECT TO CHANGE OF USE – OFF LABEL USE

Medical devices that are subject to modification will effectively lose the CE marking status they carry as a statutory measure under the Medical Devices Directive. In the eyes of the law the device will in all likelihood be seen as new piece of equipment and hence the manufacturer's product liability will be limited or removed and that liability will be partly or wholly transferred to the Health Board or to the person making the modifications on its behalf and/or the directing mind. The Health Board will only support the modification of medical devices when patient safety is at risk and the provision of care is placed in jeopardy as a consequence of removal of the unmodified device and all other possible solutions have been given prior consideration and the recommendation to modify (which is accompanied by a detailed risk assessment, in line with HDUHB Procedure 015 – Risk Management) remains the only reasonable and sensible course of action.

Medical devices that are subject to a change of use which go beyond the scope of application, as intended by the manufacturer, will be effectively classified as modified and the above will therefore apply.

Further information regarding off label use of medical devices can be obtained at www.gov.uk/government/publications/medical-devices-off-label-use

The Medical Devices Group will seek assurance from the QQSESC on all episodes of device modification or change of use and refer to the appropriate specialities as appropriate.

23. SECOND HAND MEDICAL DEVICES ACQUISITIONS

Ordinarily the Health Board will not procure or receive second hand medical devices for patient care use. If however in exceptional circumstances a situation emerges where second hand medical devices purchase is recommended as a reasonable course to take, then the medical device must be accompanied by lifecycle records including commissioning and acceptance data, service reports, parts replaced, usage data, fault logs and a record of contamination status (as relevant). The Medical Devices Group must give QQSESC the

HYWEL DDA UNIVERSITY HEALTH BOARD

assurance that the necessary safeguards (as listed above) are in place prior to proceeding with acquisition.

24. MAINTENANCE AND PERFORMANCE VALIDATION

Maintenance and performance validation testing is an important safety measure aimed at ensuring that medical devices continue to perform in the way the manufacturer intended and the user expects and hence are safe to be used. As with acceptance and commissioning procedures, these are provided/coordinated by the in-house Maintenance Overseer & Clinical Engineering Departments along with others including devices manufacturers or their agents. There must be regular reporting from Maintenance Overseers & Clinical Engineering Departments to the OQSESC as well as a monthly report on maintenance performance and compliance status together with related safety information to Medical Devices Group.

It is sometimes the case that decisions can be taken to forego maintenance or performance validation programmes and this situation can be found when a medical device is of low replacement cost and it is considered more cost effective to replace the item outright rather than incur lifecycle servicing costs. The medical devices that fall into this category are expected to be low risk so far as patients' safety and critical dependency is concerned. In such cases the risk considerations presenting will be documented in accordance with HDUHB procedure 199-Risk Management and reported by the OQSESC and assurance provided to the Medical Devices Group.

25. MEDICAL DEVICES LIBRARIES

The Clinical Engineering medical device libraries present economic opportunities if properly resourced and operated. The facilities provided at all four acute sites offer ready access to a range of devices for the wards and departments at each hospital.

For the Clinical Engineering medical device libraries to be effective co-operation between staff who use and those who support the facilities is essential. The procedures for booking out of medical devices and the prompt return once finished in a clean and serviceable state is therefore a basic requirement. Staff are required to observe the local medical devices' library procedures for booking out and return of stock at every episode.

26. LOAN OF HYWEL DDA MEDICAL DEVICES

Ordinarily the Health Board does not permit its' medical devices to be used for purposes not directly related to Hywel Dda activity, this includes;

- The removal of any medical devices off Health Board premises for;
 - Clinical use in other NHS organisations;
 - Clinical use in non-NHS organisations;
 - Clinical use on non-Hywel Dda patients;
 - Use by non-Hywel Dda staff.

In exceptional circumstances, permission may be granted via an application to the Chair of the Medical Devices Group who shall evaluate each case on its own merits.

27. END OF PRODUCT LIFE MANAGEMENT

The Health Board has a duty of care to ensure that medical devices are disposed of safely and with due diligence. The Health Board's actions at the end of a medical device's life should not create unnecessary hazards that could compromise the safety of the public or patients or harm the environment. Equally any medical device that has facility to store PH

HYWEL DDA UNIVERSITY HEALTH BOARD

Personal Identifiable Information (PII) must have that data securely erased to an appropriate standard (BS ISO/IEC 15408 [24] and British HMG Infosec Standard 5 or IS5 [25]).

Prior to disposal, appropriate steps should be taken so as to ascertain whether a need exists elsewhere within the Health Board and whether redeployment is feasible and/or appropriate.

27.1. Disposal of medical devices

The removal from service of medical devices that have been declared obsolete is coordinated by both the Maintenance Overseer & Clinical Engineering Departments and disposed of in line with the HDUHB Financial Procedure /09/03 - Disposal of surplus and obsolete furniture, equipment, sale of scrap and other waste materials, with any PII information fully removed and rendered forensically irrecoverable. The Maintenance Overseer shall inform the Clinical Engineering Department of the actions taken such that the Health Board inventory is updated accordingly.

27.2. Sale or donation as a usable asset

The Health Board recognises that any onward sale or donation of used medical devices requires its compliance with the obligations set out in the Consumer Protection Act, the Sale and Supply of Goods Act, the Health and Safety at Work Act, the Trade Descriptions Act, the Electrical Equipment (Safety) Regulations and the Unfair Contract Terms Act. Given the potential for ongoing and not insignificant liabilities arising from the onward sale or donation of medical devices, specific advice on a case by case basis should be taken from colleagues in NWSSP - Procurement before any irreversible action is taken. Before any used medical devices are donated or sold, assurance must be sought that all PII has been permanently removed from the device prior to any transfer taking place.

28. RADIATION AND LASER PROTECTION

There are several examples when medical devices used or intended for use at the Health Board will incorporate ionising and non-ionising types of radiation. All acquisition and in-service issues arising in respect to both types of medical devices must be predicated on the advice of a designated specialist in line with general obligations and HDUHB Policy 217 – Ionising Radiation Safety.

In the case of medical lasers the Laser Protection Adviser working out of the Radiation Protection Team at Swansea Bay Health Board should be consulted. Access to this person should be through Hywel Dda University Health Board's Laser Protection Supervisor(s).

For all other radiation protection issues the Radiation Protection Adviser working out of the same Radiation Protection Team should be consulted and access to this person should be through Hywel Dda University Health Board's Radiation Protection Supervisor(s).

29. TRAINING

All healthcare professionals carry a responsibility for their practice and decisions and for delegation of certain aspects of care to others. There is therefore a general onus on healthcare professionals, particularly in cases where less complex medical devices are applied that the generally embedded professional training and learning will cover many aspects of their training need. Staff should never feel coerced into using medical devices if they are not or do not feel competent to do so, however they are expected to seek out training at the earliest opportunity.

HYWEL DDA UNIVERSITY HEALTH BOARD

With more complex 'higher risk' devices, training is provided in a number of ways (please refer to Appendix C: Medical Device Training, Safe Use and Operation Procedure). The Health Board employs a dedicated in-house medical device trainer who follows a pre-planned schedule of training and retraining aimed at covering all staff needing to maintain competence. In other instances it is usually the case that on purchase of a specific device, a training package will be procured along with the asset particularly with larger items such as major diagnostic equipment. Managers must continuously apprise themselves of which staff are, as well as which staff are not permitted to use specific medical devices and use this information to inform their job and skill-mix planning.

30. ROLES & RESPONSIBILITIES

The scheme of delegation as it relates to medical devices management is as follows:

30.1. Chief Executive

The Chief Executive carries ultimate accountability for all risk matters arising within the Hywel Dda University Health Board including those relating to medical devices management.

30.2. Nominated Lead Executive Director

The Nominated Lead Executive Director holds accountability for the executive portfolio for the clinical governance of medical devices including implementation of this Policy. This accountability will be enacted through the Medical Devices Group.

30.3. Director of Operations

The Director of Operations, will make the necessary provisions for adequate information exchange and escalation of risk matters as necessary as it relates to medical devices and to apprise Quality, Safety and Experience Assurance Committee of risks arising and other salient issues

30.4. Medical Devices Group

The purpose of the Medical Devices Group is to:

- Ensure that the clinical governance framework for medical devices is in place and remains fit for purpose by incorporating alerts, field safety notices, etc. into the framework.
- Receive reports from the service via the Operational Quality, Safety and Experience Sub-Committees on non-compliance and/or seek assurance from the service that the non-compliance is being managed appropriately; and/or confirm that the clinical governance framework is still fit for purpose and action as appropriately.
- Escalate unresolved non-compliance to the Operational Quality, Safety and Experience Sub Committee.

30.5. Operational Directors and Senior Managers

Operational management of medical devices is vested with operational directors and senior managers who will in the majority of cases ultimately report to the Director of Operations. Operational directors and senior managers will invariably carry direct or indirect line management responsibility for users of medical devices and will control budgets that can influence the duties they are expected to fulfil. The Health Board places the obligation to compile and maintain local inventories of re-usable medical devices used in the course of

HYWEL DDA UNIVERSITY HEALTH BOARD

delivering front line patient care services which is delegated to the operational management teams.

30.6. **Managers**

Although users will always retain responsibility for their front line application decisions, a number of management duties will remain with managers and include procurement, maintenance of the medical devices inventory, maintenance, servicing, calibration and testing arrangements as well as risk management of medical devices. Such duties will apply to a portfolio of medical devices used in the provision of care within the respective clinical service area.

- Ensure sound clinical and information governance, and maintain a local inventory of medical devices under one's control;
- Inform Clinical Engineering Department of the acquisition/arrival of new devices into their clinical services area – regardless of the ownership status;
- Ensure that their staff are suitably trained (with records available) on the medical devices they are expected to encounter as part of their duties;
- Ensure devices are presented for service in good time;
- Have readily available manufacturers' instructions for medical devices in local use;
- Ensure medical devices are cleaned and disinfected after use and a certificate of contamination status filled out and is available to servicing personnel with the medical devices in line with HDUHB Policy 390 - Infection Prevention & Control Policy for the Cleaning & Decontamination of Equipment prior to Inspection, Servicing, Repair or Disposal;
- Respond to safety alerts and notices relative to their medical device portfolio through the ECRI system;
- Compile and maintain a medical devices inventory of existing medical devices and link it with other records related to reprocessing, maintenance, repair, validation, performance testing and user competency. In addition, a duty exists to maintain an inventory for medical devices which have been removed from service.

30.7. **Prescribers of Medical Devices**

Authority to prescribe the application of a medical device on a patient is limited to prescribing registered healthcare professionals. When prescribing the use of a medical device, the prescribing healthcare professional must only do so on devices on which they are fully conversant with the intended application and any associated issues/implications of its use.

30.8. **Users of Medical Devices**

A pivotal role in the management of medical devices is that of the user, who will be operationally responsible for ensuring that medical devices used in the diagnosis, treatment, and alleviation of a condition are right for the job, properly validated and commissioned, serviced, maintained and cleaned and are safe to use and that information governance arrangements are in place and that they are competent to use that device in clinical service. Examples of staff groups which might include users are registered nurses, doctors, dentists, chiropodists, midwives, physiotherapists, radiographers, plaster technicians, phlebotomy staff, audiology staff, occupational therapists, optometrists.

Users are often referred to as having their 'finger on the button' and hence fulfil a crucial final assurance gateway check that all is in order before the medical device is operated or applied in clinical use. Users must follow the diagnostic or treatment instructions set out by

HYWEL DDA UNIVERSITY HEALTH BOARD

registered prescribing practitioners and ensure the right device is used on the right patient commensurate with its design purpose.

30.9. **Patient Users of Medical Devices**

Occasionally patients will also be the users of medical devices and in such cases a small number of the duties ordinarily expected of users will not be expected of the patient user. However in such situations the majority of duties particularly those relating to the selection and preparation of the device prior being put to use and the delivery of suitable and sufficient instruction and information to the patient user will remain a key responsibility of the prescribing healthcare professional.

30.10. **Medical Device Coordinator**

The Medical Devices Co-ordinator will be responsible for the operational management and optimisation agenda for medical devices across the Health Board. They shall provide guidance and advise operational teams in all aspects of medical device acquisition, commissioning, clinical governance, information governance, operational management and control.

30.11. **Medical Device Safety Officer (MDSO)**

As stipulated under MHRA guidance the Health Board should have access to suitable and sufficient human resource in order that it may effectively discharge the duties and functions of Medical Device Safety Officer. This function is presently provided through the Head of Clinical Engineering and includes duties such as review of alerts and safety notices reconciling against the procurement database and distributing as necessary, produce and provide reports to MHRA and SMTL on relevant incidents arising and acting as the principal liaison point between the Health Board and MHRA/SMTL.

30.12. **Maintenance Contracts Coordinator**

Within the Clinical Engineering Department, the Maintenance Contracts Coordinator role is to ensure devices maintained externally by third parties are on contracts that provide an appropriate level of cover while offering the Health Board optimum value for money.

30.13. **Medical Device Trainer**

The Health Board's Clinical Engineering department employs a medical device trainer who has a training role applicable to a wide range of higher risk medical devices.

30.14. **Radiation and Laser Protection Supervisors**

The Health Board has allocated responsibilities to staff in relation to radiation and laser protection as it relates to medical devices; these staff carry the supplementary titles of Radiation Protection Supervisor and Laser Protection Supervisor. These persons are not professional advisers but moreover fulfil a liaison role between the Radiation Protection Service that is provided by Swansea Bay University Health Board. All decisions relating to acquisition, in-service life and use and disposal of such medical devices must be supported by the advice of the Radiation Protection Adviser or Laser Protection Adviser.

30.15. **Maintenance Overseer**

Due to the plethora of device types that fall within the definition of a reusable medical device, it follows that there are range of different departments that are best equipped to manage the maintenance requirements of these – thus the medical device Maintenance

HYWEL DDA UNIVERSITY HEALTH BOARD

Overseer. The Maintenance Overseer for individual devices on the Health Board inventory is identified within each device record.

The duties of the Maintenance Overseer shall include:

- For those devices for which they have responsibility, ensure that all facets of maintenance meet the minimum regulatory requirements;
- Ensure appropriate acceptance procedures including the installation of agreed configuration sets (see Appendix D – Medical Device Configuration Procedure) are followed prior to clinical deployment;
- Ensure appropriate and adequate maintenance arrangements (including QA, performance verification, calibration, electrical safety testing etc.) are in place and undertaken in a timely manner to a level commensurate with the inherent function and nature of the device;
- Provide monthly reports to the Medical Device Group on maintenance performance;
- Ensure episodes of repair/unexpected performance are investigated with remedial action undertaken by appropriately trained, skilled and authorised engineers;
- When devices are decommissioned, it is done so following Health Board and nationally accepted policies/guidelines for devices of that nature;
- Robust records are maintained as detailed in Section 13 for a period no less than 11 years following decommissioning;
- Assist the service in identifying surplus devices and/or those approaching the end of their life cycle;
- At least annually, communicate any changes to their portfolio to the Clinical Engineering Department so as to allow the Health Board inventory to be updated.
- Take a lead role in incident investigation.

30.16. Clinical Engineering Department

In addition to being the Health Boards primary Maintenance Overseer, the Clinical Engineering Department shall;

- On behalf of the Health Board, develop and maintain the inventory of reusable medical device and in so doing, assign the role of Maintenance Overseer to each uniquely catalogued device;
- At least annually, provide details taken from the Health Board inventory to other Maintenance Overseers for the devices for which they have responsibility;
- Provide advice and guidance to users of medical devices;
- Promote the practices within this policy.

31. FURTHER INFORMATION

- Medical devices regulation and safety - <https://www.gov.uk/topic/medicines-medical-devices-blood/medical-devices-regulation-safety>
- BS ISO/IEC 15408 - <https://www.iso.org/standard/50341.html>
- Ultrasound Clinical Governance in Wales – Welsh Scientific Advisory Committee – 2012
- Hywel Dda University Health Board Procurement Guide for Staff (developed in conjunction with NHS Wales Shared Services Partnership – Procurement Service
- Procurement Processes – Quick Guide
- Health Board Standing Orders and Standing Financial Instructions
- Medical Industry Accreditation Scheme.

HYWEL DDA UNIVERSITY HEALTH BOARD

- MHRA Medical Device Bulletin: Managing Medical Devices - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/421028/Managing_medical_devices_-_Apr_2015.pdf
- Medical Industry Accreditation Scheme - <https://www.miaweb.co.uk/>
- Medical Devices Amendment Regulations 2003 - <http://www.legislation.gov.uk/uksi/2003/1697/made>
- British HMG InfoSec Standard 5 or IS5
https://www.ncsc.gov.uk/content/files/scheme_downloads/CAS%20service%20requirement%20sanitisation.pdf

HYWEL DDA UNIVERSITY HEALTH BOARD

32. APPENDIX A – CLINICAL GOVERNANCE AND INFORMATION GOVERNANCE ASSURANCE.

1. Describe the maintenance and support arrangements in place for the medical device.
2. Describe the details of where the medical device is to be used, storage arrangements,
3. Describe the Information Governance arrangements that are in place related to the medical device and the outcome of any Privacy Impact Assessment undertaken
4. Describe the infection prevention & control arrangements required as agreed by the Infection Prevention & Control Team.
5. Where applicable, confirm that the HSDU manager has confirmed that the department is able to re-process the medical device or consumables used with the medical device in the decontaminating machinery they have available.
6. Describe the arrangement in place to ensure the ongoing competency of the user(s) in the use of the medical device.
7. Where applicable, that any special advice from a Radiation Protection Adviser or Laser Protection Adviser has been taken and their recommendations have been implemented or there are clear plans to do so.
8. Confirm that there are no extant MHRA device alerts that would give rise to unacceptable risk should the medical device be put into service.

33. APPENDIX B ULTRASOUND CLINICAL GOVERNANCE IN WALES

Ultrasound Clinical Governance in Wales

Foreword

This guidance on Ultrasound Clinical Governance in Wales is derived from that produced in England in 2008 by National Ultrasound Steering Group (NUSG) of the English National Diagnostic Imaging Board¹; this guidance is identical to the English guidance, except in reflecting the different organisational structures of the NHS in Wales. The Medical Imaging Sub-Committee (MISC) of the Welsh Scientific Advisory Committee is grateful to the National Imaging Board for agreeing that MISC guidance may be based on the English document.

Ultrasound imaging when performed by the right person in the right clinical setting and at the right time will enhance patients care, will reduce clinical risk and will be clinically and cost effective. MISC recommends that Healthcare Governance Committees of the new Local Health Boards (LHBs) and Trusts in Wales adopt this policy and incorporate it into their governance policies.

Background

Ultrasound (US) is used widely as a diagnostic test and for guidance of many interventional procedures. The wide application of US is reflected in the number of different professional groups who now undertake US examinations and the increasing number of environments in which ultrasound equipment is deployed.

US equipment is relatively cheap and the technique involves no ionising radiation nor significant patient or practitioner risk. Proper use of US has the potential to improve the quality of care in a safe and cost effective manner across a broad range of specialties.

The rapid proliferation of US equipment and the increasing numbers of individuals using US present a number of challenges to ensure that equipment purchase and deployment is sensibly managed, that the introduction of new services is evidence based and that training and assessment of individuals in the use of US conforms to national standards as defined by the relevant College where available and where not available in accordance with the RCR document 'Ultrasound Training Recommendations for Medical and Surgical Specialties' (2005)².

The uncontrolled expansion of the use of US represents a significant clinical risk if

- examinations are undertaken by untrained or poorly trained individuals
- equipment is poorly specified or poorly maintained
- it is undertaken in the absence of clinical audit of performance.

Furthermore, if equipment purchase and deployment is not based on a thorough assessment of cost effectiveness and/or service improvement, the cost to the NHS can be significant without commensurate gain.

Advice

MISC recommends the establishment of an US Clinical Governance Board by each LHB and Trust. The responsibility for clinical governance should lie within each clinical directorate using US. Where this was previously established in some acute

HYWEL DDA UNIVERSITY HEALTH BOARD

Trusts, it has proved effective in the governance of US procurement and training across clinical disciplines.

The structure and remit of such a Board would necessarily be decided locally. MISC suggests the following terms of reference as guidance and recommend the compliance checklist, described below, as a useful aide memoire to guide such a Board's activities.

The Board would oversee the procurement, maintenance and replacement of equipment, the establishment and maintenance of service standards and the processes of training, supervision and audit, thus assuring the achievement and maintenance of high levels of competence, performance and patient safety

Outline Governance Board Membership

It is suggested that the board consists of:-

Lead US Radiologist

Superintendent Sonographer

A clinical lead for each department using diagnostic US to represent their specialty on the Board. For example

- Obstetrics and Gynaecology
- Vascular imaging
- Cardiac imaging
- Emergency department
- Anaesthetics
- Child health
- Primary Care

Medical Physics Representative

Clinical Risk Manager

Service Improvement Manager

Procurement Manager

Director of Clinical Governance

Finance Director or Senior Finance Manager

Recommendations

1. The LHB or Trust should develop a robust policy to provide prompt and accurate US services for/within the whole local health care economy.

2. Equipment Usage

The LHB or Trust should develop criteria for evaluation of bids for US equipment based on

- a. clinical need
- b. estimated intensity of use
- c. need for equipment availability in an emergency
- d. the availability of skilled operators within the proposed clinical area
- e. availability of existing similar equipment which could be shared
- f. cost of maintenance
- g. an equipment replacement programme.

3. Where a bid proposal is to replace an existing service this should be identified and the

clinical advantages made explicit. The LHB or Trust will need to consider whether the service improvement is justified and whether cost savings can be made by the transfer of the service.

HYWEL DDA UNIVERSITY HEALTH BOARD

4. Recording of data

- a. There should be a permanent electronic record of all imaging studies. All US images must contain the patient's name, unique identifier and date.
 - b. All imaging studies should be accompanied by an electronic report available with the images.
 - c. The electronic images and the report should be available to all those with a bona fide requirement for image review.
 - d. Where US is being used to guide a procedure (biopsy/injection/venous access etc) image storage may not be necessary. This should be determined by the Clinical Governance board of the LHB.
 - e. Highly portable handheld devices may not produce a hard copy image that can be permanently archived; nonetheless there must be a record of such examinations, identifying the date and time, operator and findings.
5. The practice of US is a clinical skill that must be governed by professional standards equivalent to those issued by the GMC who recommend that doctors 'recognise and work within the limits of your competence.'
6. All practitioners should ensure that their frequency of practice affords the maintenance of skill levels. This should reflect relevant College advice.
7. It is anticipated that there will be ongoing US technical developments and new indications for clinical use of US. The LHB/Trust policy should specify the criteria for US use with new developments.

Compliance Checklist

MISC recommends the adoption of the following compliance checklist as a method of ensuring high quality standards for the procurement, use and maintenance of US equipment.

Equipment

1. identify and list all US equipment in use in each department throughout the hospital
2. identify what each machine is used for.
3. identify how many sessions per week the equipment is used.
4. provide data on the numbers of examinations performed per machine per session.
5. provide the schedule of QA and electrical safety testing for each machine, including transducers.
6. provide details of the maintenance contract for each machine.
7. provide details of the PACS connectivity of the equipment.
8. provide details of plans to achieve PACS connectivity where this is not already achieved.
9. provide details of measures for infection control

US users

1. each LHB or Trust should hold a register of US practitioners.
2. each department (including primary care) should identify all users of US equipment and their professional grade, their qualifications in relation to US and the conferring body.

HYWEL DDA UNIVERSITY HEALTH BOARD

3. where there are no formal qualifications, describe the nature of training and the processes of assessment of competence
4. describe the mechanisms whereby patients are given information about the examination. These should include, where available, patient information sheets..
5. where US is delegated to a non medical member of staff, describe the governance arrangements of the process of delegation.
6. where the US is performed by a doctor (or sonographer) in training describe the arrangements for professional supervision.
7. describe the arrangements for obtaining informed consent from the patient
8. where the US examination is performed by a trainee describe the process of informing the patient and eliciting consent
9. what arrangements are in place for CPD in US.
10. what arrangements are in place for regular audit of US practice for each user.
11. what is the frequency of US practice and does it comply with national recommendations (at least one session per week).
12. describe the arrangements for ensuring that all staff are aware of US bio-effects and strategies to minimise these.

Documentation and communication of results

1. describe how records of imaging studies are currently stored and the availability of images for subsequent review for purposes of clinical management and audit.
2. describe security arrangements for access to images and other patient data.
3. describe how the results of imaging studies are recorded and communicated
 - a. within the notes
 - b. within a departmental computer database
 - c. within the RIS
 - d. within another data storage system available to all other bona fide practitioners.
4. describe how and when the results of imaging studies are communicated to the patient.
5. describe the mechanisms for booking patients and outline the minimum standards for booking and report turnaround times (RTT's)
6. for any instances where it becomes known that a scan has taken place and not been documented a clinical risk form should be completed and acted upon by the clinical risk department.

References

1. Ultrasound Clinical Governance
National Diagnostic Imaging Board, Department of Health, LONDON (2008)
<http://www.18weeks.nhs.uk/Content.aspx?path=/achieve-and-sustain/Diagnostics/Imaging>.
2. 'Ultrasound Training Recommendations for Medical and Surgical Specialties'
RCR REF BFCR(05)2 The Royal College of Radiologists LONDON (2005)

HYWEL DDA UNIVERSITY HEALTH BOARD

34. **APPENDIX C – [MEDICAL DEVICE TRAINING, SAFE USE AND OPERATION PROCEDURE \(733\).](#)**

35. **APPENDIX D – [MEDICAL DEVICE CONFIGURATION PROCEDURE \(736\).](#)**

36. **APPENDIX E – [PURCHASE & ACQUISITION OF MEDICAL DEVICES PROCEDURE \(735\).](#)**