Medical Device Training Coordination Summary Review 2022

Dr Graham Webb	Author
[redacted]	Outgoing Medical Device Training Coordinator (MDTC)
Date:	10 April 2022
Issue:	1.0

Outline

This report summarises information gained from the outgoing Medical Device Training Coordinator Malcom Mcguirk during the course of nine meetings with Graham Webb during February and March 2022.

Dr Graham Webb is a State Registered Clinical Scientist returning to the NHS on the temporary COVID-19 HCPC register (TCS19893). He is currently employed in the Royal Berkshire Hospital Trust as a Clinical Technologist. This work was conducted outside of that role at the request of the Head of Clinical Engineering in acknowledgment of the shortfalls inherited in medical device training provision. The remit of this activity was to support the transition and development of MDTC to a new member of staff.

Specific objectives were to understand the role of the Medical Device Training Coordinator; the local processes in use at the Royal Berkshire Hospital, and present the issues raised from [redacted]'s 19 years of experience in that role.

Contents

1. TRAINING NEEDS		3
1.1	Trust Structure	3
1.2	Staff Population	3
1.3	Medical Electronic Device Asset Inventory	5
1.4	Demarcation of Responsibility	5
2. FLOW OF TRAINING PROVISION		6
3. PREVIOUS PROVISION		**8**
3.1	Procedures	8
3.2	Training Material	10
3.3	Shortfalls in Previous Provision	12
4. OUTSTANDING ISSUES		15
4.1	Training Needs	15
4.2	Training Resources	15
4.3	IT Software (Databases and GUIs)	16
4.4	Provision	18
4.5	Reporting	18
4.6	Auditing, Policy, Review, Improvement	18
4.7	Standards of Conduct, Performance and Ethics	18
5. FUTURE SERVICE DEVELOPMENT		**19**

1. TRAINING NEEDS

1.1 Trust Structure

The Royal Berkshire NHS Foundation Trust contains one of the largest acute general hospitals in the UK. It has a seasonal maximum capacity of approximately 800 beds; 379 services (clinics, wards, and departments), and 4800 employees, of which 3342 work in clinical roles.

The Trust includes the following facilities. The largest of which is the Royal Berkshire Hospital (RBH), which is organised into three care groups, supported by a core corporate management tier, with support services positioned at various levels in the structure (figure 1).

- Royal Berkshire Hospital
- Dingley Child Development Centre
- Prince Charles eye Unit
- Windsor Dialysis Unit
- West Berkshire Community Hospital
- Townlands Memorial Hospital
- Bracknell Healthspace

1.2 Staff Population

• Clinical staff (Nursing, AHPs, HCAs, CSW)	**3342**
• Medical staff (HO, SHO, SPR, Consultants)	Not currently considered
• Staff with no-training requirement (e.g. Administration)	Not currently considered
• Agency staff	Not currently considered

Clinical – Nursing and Midwifery (inc. HCAs and CSWs)	**2765**
Staff Nurse	1073
Healthcare Assistant	653
Specialist Nurse Practitioner	336
Sister/Charge Nurse	170
Midwife	169
Assistant	100
Nurse Manager	53
Practitioner	52
12 other roles (with fewer than 30 incumbents each)	159

Clinical – AHPs	**577**
Radiographer - Diagnostic	112
Healthcare Science Practitioner	70
Physiotherapist Specialist Practitioner	64
Technician	55
Healthcare Science Assistant	41
Radiographer - Therapeutic	37
Occupational Therapist	35
Healthcare Scientist	31
Physiotherapist	28
23 other roles (with fewer than 30 incumbents each)	104

The post of Medical Device Training Coordinator was created in 2004 with the aim of meeting the regulatory requirements and quality management issues of the time.

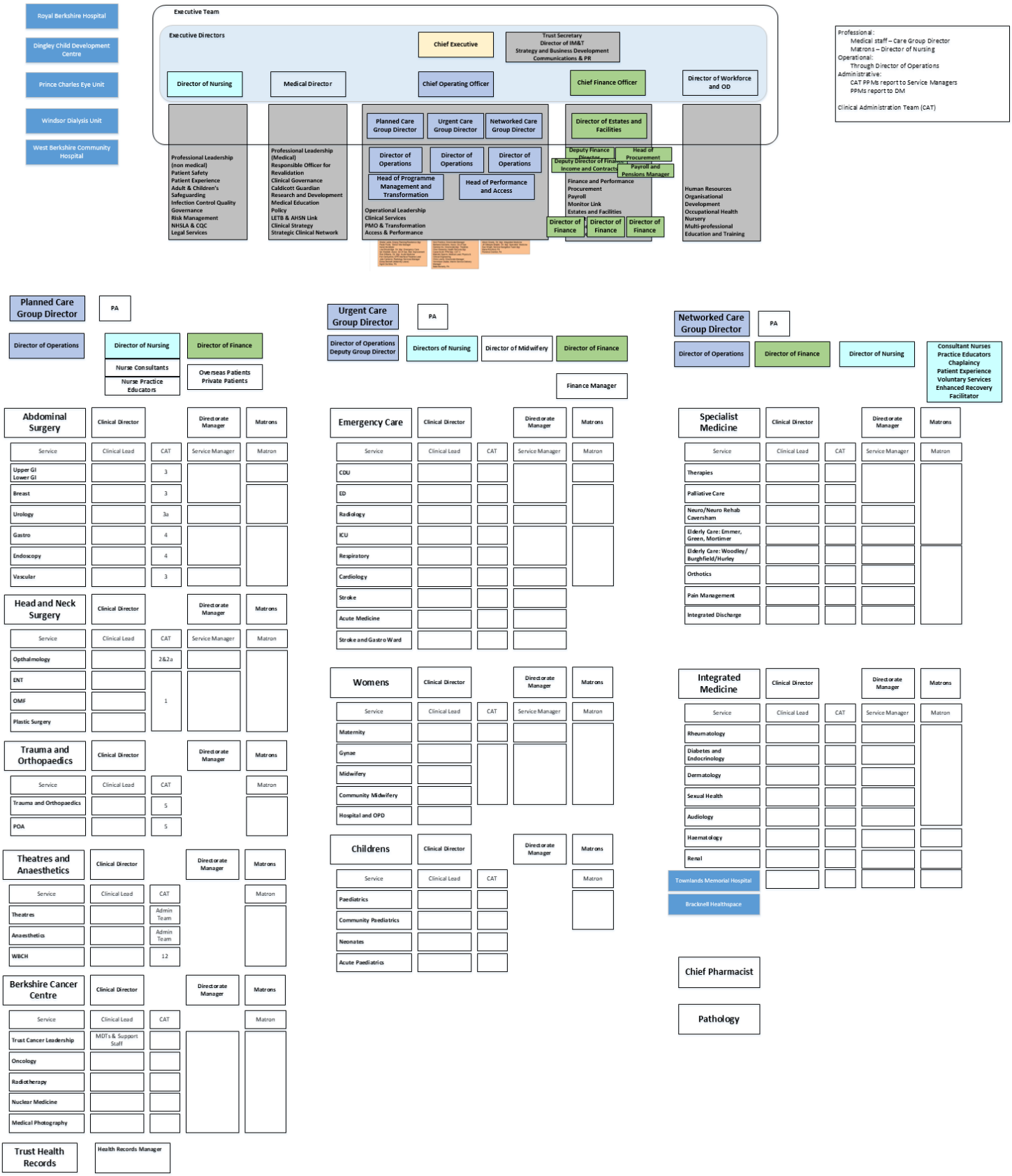


Figure 1 Royal Berkshire Hospital Trust Structure

1.3 Medical Electronic Device Asset Inventory

There are approximately 18426 devices in 857 locations across the Trust. By device model there is a requirement for potentially 2805 distinct training packages, not taking into account required level of staff expertise.

	All assets	**Categories**	**Brands**	**Models**
	18426	686	815 203 providers	2805
High risk	463	30	38	67
Medium risk	463	55	57	90
Low risk	968	31	28	40
Undefined risk*	16532	570	692	2608

*Data absent after import from Medusa(?)

1.4 Demarcation of Responsibility

The presence of multiple service providers in the Trust has historically led to confusion among all MDTC stakeholders about the responsibilities of the MDTC and other education providers in the Trust. Medical electronic device definitions are well established, but the following (figure 2) is presented from current understanding of the RBH, as a guide for discussion.

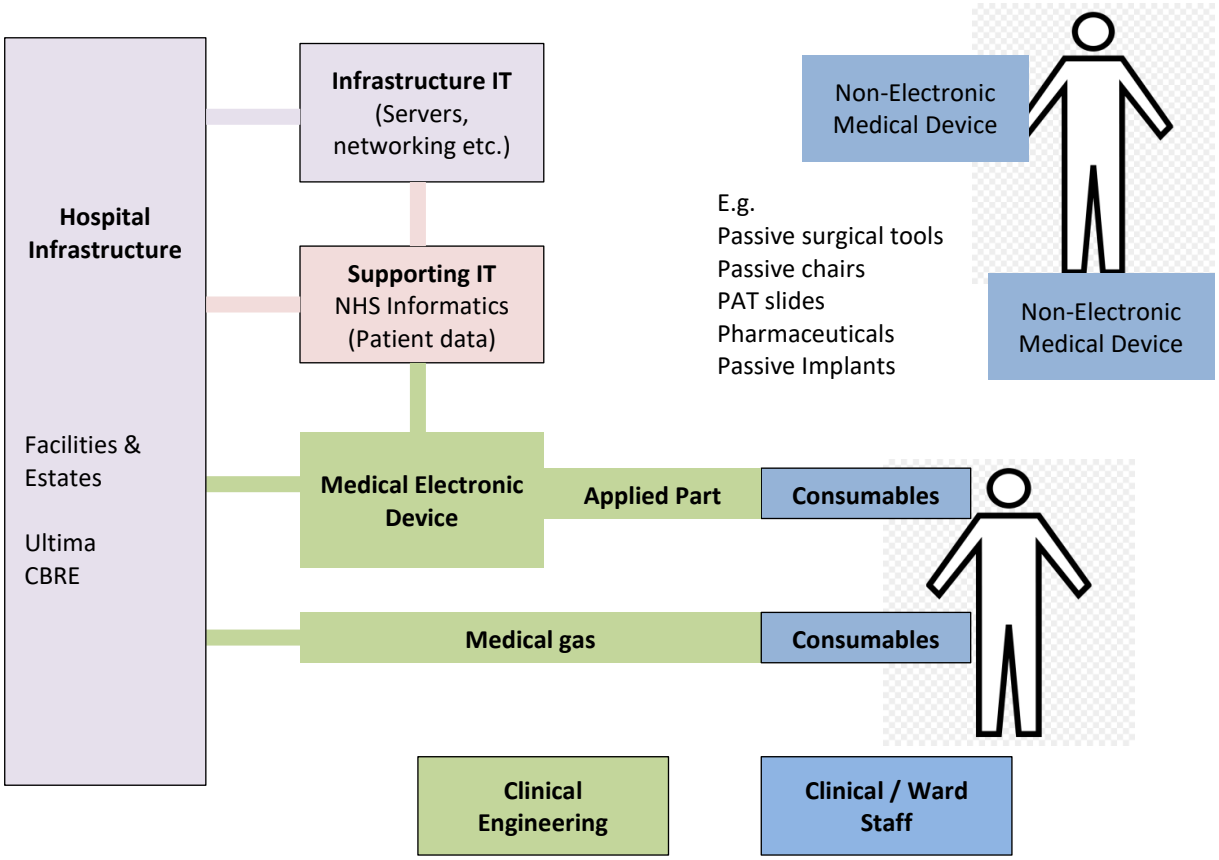


Figure 2 Demarcations of responsibility of medical devices

2. FLOW OF TRAINING PROVISION

To facilitate the discovery process the following template (figure 3 overleaf) was created to define the workflow of medical device training coordination in best case generic terms.

Training needs arise from the commissioning process of new medical electronic devices, new requests from clinical education providers, ad-hoc requests from members of staff, adverse incidents, and routine requirements through a Training Needs Analysis.

Resources (including user manuals, quick reference guides and delivery material) may initially be requested through discussion with manufacturers at the pre-procurement stage, obtained from manufacturers' websites, or prepared in-house. They then may be adapted for the local requirement and are stored online for local delivery.

IT Includes the means to store active training and support material, track staff competence, the equipment inventory and staff population, and facility to produce training status reports.

Provision of training is the semi-autonomous logistics process of resource scheduling, delivery, outcome recording and responding to feedback.

Reporting the status of departmental staff training is provided monthly to Ward managers and Matrons, or on request, and more compressively through engagement with stakeholders through the Medical Device User Working Group.

Auditing the provision of training is a multi-layer process that previously involved Senior Managers within Clinical Engineering.

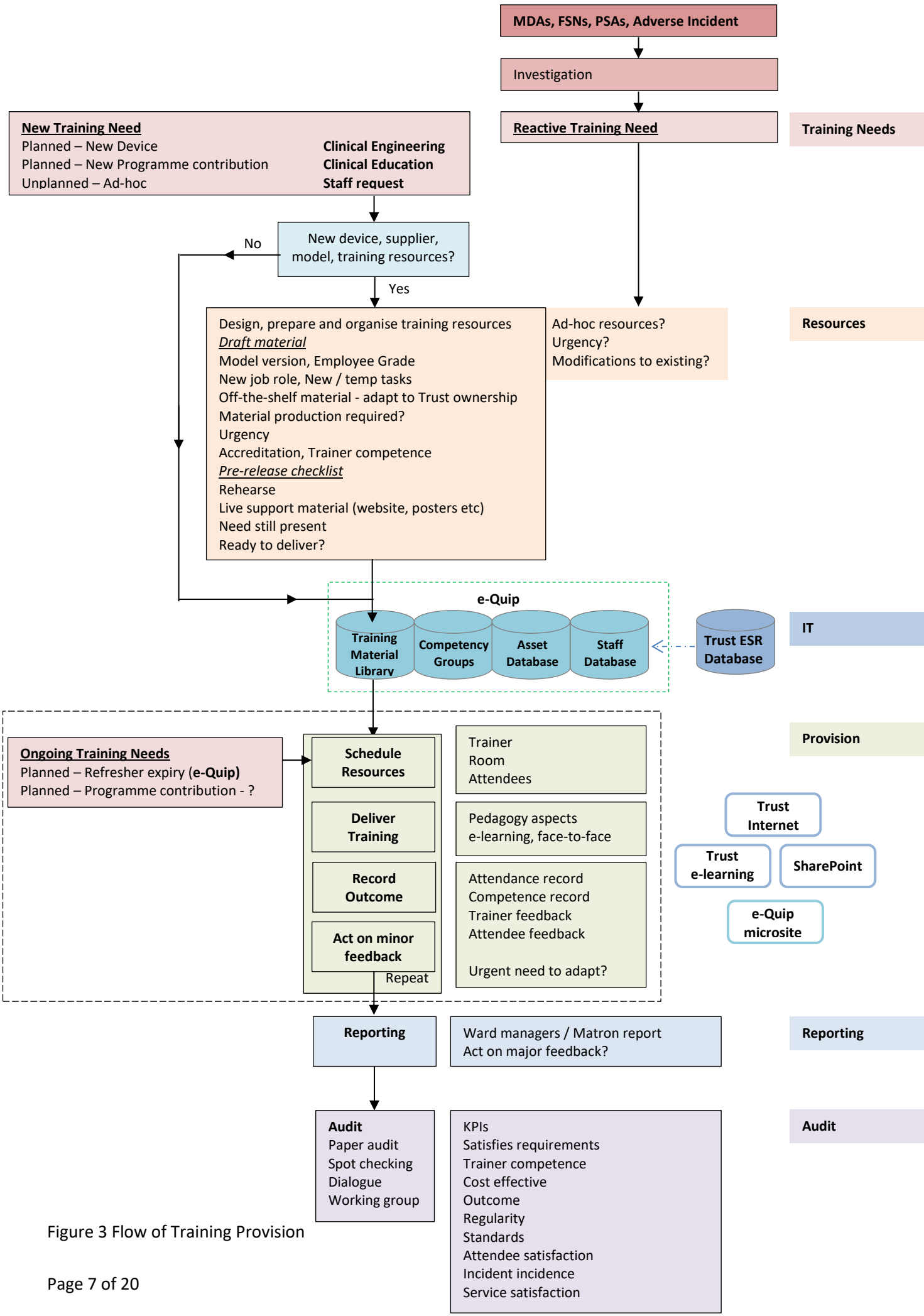


Figure 3 Flow of Training Provision

3. PREVIOUS PROVISION

3.1 Procedures

The following procedures were in place for the delivery of training coordination, as defined by the outgoing MDTC. Due to the high volumes and fast pace of changing staff and assets, and the absence of a medical device training team and support available, the production and administration of standard operating procedure documentation was not time efficient.

"Induction Training – Nursing and Midwifery

Plan programmes with Heads of Specialities and Practice Development Team.

Face to Face:

Book company trainers and internal trainers
Book additional rooms when numbers increased
Prepare paperwork – attendance sheets and self-assessment / competency sheets
Liaise with trainers on Induction Training Day
Conduct training on equipment you know
Check and use AV equipment
Process medical gas attendance sheets
Keep evidence of training attendance

Online:

Provide Practice Development Teams list of equipment with links to training videos, user manuals and self-assessment / competency sheets

Adverse Incidents

Read all
Investigate anything that may be equipment related
Provide / coordinate follow-up training where necessary
Design 'flyers' to remind staff of small aspect of training; send to wards and departments
Check to see if ward/department managers have already conducted follow-up training
Email Handler via Datix the outcome, i.e. no training, local and/or trustwide training
Write report to MDUTWG

MDAs, FSNs and PSAs

Read all
Investigate anything that may be equipment related
Check to see if ward/department managers have already conducted follow-up training
Provide / coordinate follow-up training where necessary
Design 'flyers' to remind staff of small aspect of training; send to wards and departments

Training Website

Sharepoint site in development
Manage website
Upload user manuals, Quick Reference Guides, training videos or links, Competency sheets
Input training session availability booking calendar (to be added)
Process booking requests (to be added)

Requisitions

On hold at the moment. I will be told if training is required?

Meetings

POCT, MDUTWG, NAMDET (Paul Lee, Wales)
Medical Physics Clinical Governance when required/invited. i-Passport

Training Requests

Answer requests and investigate who is best to provide training
Liaise with suppliers and manufacturers about requests
Liaise with staff
Answer queries and advise on existing equipment and usage

Mandatory Training

Provide manual handling training on inanimate objects and DSE to Medical Physics staff
Process associated paperwork

Rollout Training

Liaise, plan and coordinate rollout training with suppliers and manufacturers, training managers, trainers and account managers
Liaise with Clinical Engineering about planned deliveries, acceptance testing and equipment configuration
Liaise with clinical staff, Matrons and Directors of Nursing
Book rooms
Organise supply of equipment and disposables for training
Ensure product codes are given to Procurement

Videos

Search manufacturer's websites for training videos
Liaise with users, suppliers and manufacturers to plan content of video
Liaise with Medical Photography Team
Read User Manuals
Write script
Book rooms and obtain equipment for filming
Direct video shoot and assist in video editing
Provide voice over
Record videos to disk or server
Liaise with Communications Team to upload videos to Youtube

Competencies

Obtain competency from suppliers and manufacturers
Produce competencies in conjunction with users, manufacturers and suppliers
Reference individual competencies to user manuals, hospital policies and protocols

Evaluate Equipment

Evaluate equipment from training perspective
Evaluate potential training packages from the suppliers and manufacturers

Doctor Training

TBC

IT Issues

Find solutions to IT issues

Policy

Review Medical Devices Training policy and procedural documents

Development

Look at ways to improve the service
Organisation membership – National Association of Medical Device Educators and Trainers (NAMDET), Society for Critical Care Technicians

eLearning

TBC
Develop packages

Contributions

Clinical Engineering Newsletter
MEMC – Clinical Engineering Annual Report

e-Quip

Assist in developing Training Module
Write up How to Guides

Equipment Trials

Discuss training requirements with users and company
Insist on full training"

3.2 Training Material

Clinical Users interact with the MDTC through the MDTC email address, a pager and telephone, and three websites or portals through which access to training material and records are made available.

3.2.1 "Royal Berkshire Hospital – e-Quip Dashboard"

The e-Quip microsite, where clinical users raise requests with Clinical Engineering:

Medical Device Training - Equipment user form
Report a Fault - Equipment user form (maintenance alert to clinical engineering)
Ward Users - Asset and job (maintenance request to clinical engineering)

3.2.2 Medical Device Training SharePoint Site

A SharePoint site contains a repository of training material clinical users can access at any time pre-/post-training. Material has been transferred from a previous version and currently contains the following:

Heading	No. of docs.	Contents
1 – User Guide	1	Instructions to ward staff to help Clinical Engineering complete an equipment and staff audit
2 – Names and Devices	1	The equipment and staff audit document
Shared with us	0	Empty
User Manuals	932	932 Device user manuals
Guidelines	4	2 copies of the "Differences between Fresenius Kabi Agilia injectomat pump version 1 and 2" Document from Lancashire Cardiac Network "How to obtain a good quality ECG" Procurement Guidelines, May 2010
Quick Reference Guides	25	25x Manufacturers Quick Reference Guides
Flyers	24	24x 1-page bulletins on various topics from 2010 – 2022, in response to safety alerts where full training is not required
Competencies	77	77x Training outcomes checklists and Record of self-assessment
Risk Assessments	108	108x risk assessments from 2015 onwards, assessor Andy Smith (no reviewer stated)
Training Videos	48	48x links to external video streaming websites (including manufacturer sites and YouTube)
Site contents	0	Content list
Useful Links	1	Broken link to Trust Intranet
Recycle bin	0	Empty

3.2.3 The Trust Internet: Contains a landing page to direct staff to the SharePoint and e-Quip dashboard.

3.2.4 Other: A wide range of web services is currently in use across the Trust (and in the NHS) which hosts training material and tools to assist staff in managing their training and personal development.

3.2.5 Clinical Engineering Shared Drive

The folder “G:\MedEquip\Medical Device Training” contains the following:

Equip	e-Quip EQPT - Roll-out trial
	e-Quip How To - In-house and Integra user guides
	e-Quip Instructions - In-house user instructions
ESR	Previous project to integrate training database
MD inc	Device incident reports from August 2021
MPCE	Business impact analysis from MDTC’s departure from post (07/21)
SOPs	Standard operating procedures
Spec GRPs DRs STRs	Specialist Groups of Doctors Summary Training Records
STR	Summary Training Records
Training	The main repository of resources used by the MDTC during the process of designing training material. This is not controlled or live material

3.3 Shortfalls in Previous Provision

3.3.1 Training needs

There were no requests for new training during this process. The commissioning process of new equipment has historically not fully involved the MDTC, or has only involved the MDTC post-purchase. Involvement with clinical education providers has been poorly understood or supported by previous Clinical Engineering and Directorate level management, particularly with regard to induction training. Adverse incident response from the MDTC perspective was historically a collaborative activity on a reactive case by case basis with a Deputy Head of Clinical Engineering. Routine (rolling) training was requested by changing clinical staff with varying levels of engagement dependent on clinical demands, based on a risk-based Training Needs Analysis.

Staff: Medical Device Training in the Trust has historically focused on the clinical staff population. Medical staff training was handled on an ad-hoc basis. The different staff groups highlight the need to accommodate varying degrees of expertise and levels of knowledge, and hence defining competency records. Some administrative and corporate staff required medical device training for contingency activities (such as pandemics). Other complexities include: Provision of training for agency staff, tracking staff on maternity leave and clinical placements intra-/inter-Trust, and determining the responsible people for mobile and distributed workforces (such as the communities and physiotherapy teams). Meeting the needs of the required level of complexity was deemed unachievable with the resources made available to the MDTC. As such and in the absence of leadership support a reactive approach evolved.

Risk-based TNA: The training needs of staff include the frequency and level of training required, which are closely associated with risk. Training risk has not been defined.

Three definitions of risk have been described:

Engineering Risk: Risks from an engineering perspective. Understood to currently be associated with the operational need to ensure the availability of a working device; consumables and the supporting infrastructure. Engineering risks are responsible for incidents which arise due to equipment (absence of equipment, equipment and IT systems failure).

User Risk: Risks from a user perspective. Risks associated with the operation of the device (including data handling). E.g. The inclusion of users, staff, patients and visitors. User risks are interpreted as local clinical procedural risks. The presence and authors of those risk assessments are not known to the MDTC.

Training Risk: An index is potentially required to determine the frequency and level of training required for the TNA. It is understood that engineering risks are being defined and have been proposed as a baseline with which to define training risk.

Q. Is the use of 'Engineering Risk' an appropriate use for that definition? Continuity Risk is suggested as a higher level category associated with the continued use of a device in operation. To include business, engineering and user aspects: appropriateness, availability and reliability of equipment, user competence and support continuity.

Q. To define training risk, what level of incident (severity and likelihood) is a user capable of causing with any piece of equipment? This becomes complex because frequency of use, competence and engineering risk are separate factors. For example a seldom used low engineering risk device may result in a severe incident through poor handling, data management or over-confidence for example. Similarly the severity of an incident from a frequently used high engineering risk device may be mitigated by staff familiarity with the device. Good practice and competence cannot be assumed to be portable across Trusts.

Response to Adverse Incident User Error: has historically been considered too poorly defined to guide the provision of training in response to an adverse incident. Breaking down user error to include human error provides some definitions to guide future discussion on user error and training risk.

Designated user:	Patient, clinician, carer
Unplanned intervener:	Patient, visitor, family, staff, member of the public
Knowledge:	Theoretical understanding: Of principles, appropriateness, correct operation, hazards, data, change - (good understanding)
Skill:	Ability to apply knowledge: Select, use, interpret, manage, identify, respond, raise alarm - (good practice)
Competence:	Application of standardised Knowledge and Skill
Experience:	Continuous updating of standardised knowledge and skill
Familiarity:	Self-directed learning diluted by cascaded poor understanding and bad practice
Habits (poor):	Gradual drift from standards through lack of diligence
Training :	Aim to provide knowledge through structured training, opportunity to develop skill and good practice, and reduce/correct poor habits
Negligence:	Act of omission that leads to harm
Malpractice:	Knowledgeable negligence

Consideration of other human factors in development of medical device user competence may include stress, time, poor decision making, over and under-confidence.

3.3.2 Resources

Maintaining up-to-date contact lists of stakeholders was not viable, due to the high number of individuals involved, high staff turnover and lack of up-to-date information on the Trust internal telephone directory. Internal points of contact therefore relied on personal relationships developed over the years between the outgoing MDTC and ward staff. A major challenge for the role was maintaining an accurate reflection of staff in the Trust. Similarly for manufacturers the initial points of contact were the company websites. Medical device user manuals are held in a number of locations within Clinical Engineering, duplicated across the shared drive and on SharePoint. The absence of a document control method for administering version changes and addendum releases by manufacturers compounded the challenge of presenting training material. The time required to develop, update and audit training material exceeded the time required to coordinate training delivery. Consequently material became out of date, uncontrolled, and quality assurance was reliant on external stakeholders - to the extent that external manufacturers now deliver training and determine the quality benchmarks.

3.3.3 IT

The requirement to move away from the use of spreadsheets to databases to support medical device training has historically been recognised by NAMDET as an issue requiring action typically lacking Trust-level support. Inclusion of Medical Device Training on the intranet page was the result of years of campaigning by the MDTC at Directorate level. The MDTC held no administrative access

to make changes to MDTC content on the Intranet or SharePoint sites. There has historically been limited forward planning in the integration of IT systems with training, which has led to multiple overlapping software solutions now being used in staff development.

3.3.4 Provision

In the absence of a medical device training team, resource scheduling relied heavily on the good will of local clinical staff through relationships built with the MDTC. Currently and more frequently manufacturers are invited to deliver their training content directly to the requester. The NHS periodically roll-out schemes that define voluntary secondary roles for nursing staff, to facilitate additional Trust-wide ward responsibilities. Such as "Wellbeing Champions", "Practice Educators", "Equipment Facilitators". These have increased the demands on nursing staff. As such nursing managers are acutely aware of and attempt to stem the tendency for responsibility creep.

***Staff availability, timing and rooms*:** Including those on night shifts has led to the creation of a range of methods to deliver training, including: flyers, posters, quick reference guides, access to manuals, e-learning, through to face-to-face sessions. The limited floor space suitable for training has compounded this challenge.

Cascade training: Is typically used to trickle down training in large staff populations, but can have disadvantages that impact quality (British Council 2018):

- Dilution - a 'Chinese whisper' effect – increases with the number of steps in the chain
- Quality assurance is reliant on trainer selection and trainer training
- Monitoring and evaluation is often given insufficient attention
- Language and translation is often overlooked (style of language - comprehension)
- Cultural considerations are often overlooked (native language and cultural sensitivity)

Competence: Provision relied on local referrals, self-assessment, and local administration, all of which were known to have varying levels of compliance. Note: Training standards were not addressed during the discussions with the MDTC.

3.3.5 Reporting

Dashboard style status updates were provided regularly to Ward managers and Matrons, and further details on request by the MDTC. Recently engagement has begun with stakeholders through the Medical Device Training User Working Group.

3.3.6 Auditing

Auditing the provision of training is a multi-layer process that previously involved Managers within Clinical Engineering and across the Trust with varying levels of support. It is unclear how or if the loops were closed.

3.3.7 General

Medical Device Training has historically and increasingly been viewed as a risk mitigation activity rather than one of staff development and education. This was perceived as an inevitable victim of budget tightening, which was damaging to the role and increased the risks. The previous MDTC actively campaigned at Directorate level for role to be recognised as having a Trust-level safety impact.

British Council (2018) "*Train the Trainers & Cascade Models: A Practical Guide and toolkit*", Workshop presentation at the British Council, Spring Gardens, London

4. OUTSTANDING ISSUES

In addition to the issues raised in Section 3.3, the following specific tasks are identified or suggested.

4.1 Training Needs

The following require greater clarity and definition:

- The training request process
- Integration of the MDTC function in the equipment commissioning process
- The adverse incident pathway that leads to training provision and subsequent follow-up
- Clearer understanding of the training pathways, standards, and professional responsibilities
- Greater clarity on the demarcation of responsibilities
- Training Risk and how that drives the Training Needs Analysis

4.2 Training Resources

Following a policy decision about the source and control of training material, the following may be beneficial:

- Collect and de-clutter existing training material
- Establish a document control system. It is suggested this includes a method of administering version and addendum releases, and potentially future scope for a training material cataloguing taxonomy (figure 4)

Terminology / Material numbering	
Programme 1	e.g. **Yr1 HCA**
Course 1	[topic].[level]
Training material 1.1	[device model].basic
Training material 2.1	[device model].basic
Course 2	[topic].[level]
Training material 3.1	[device model].basic
Training material 5.2	[device model].intermediate
Programme 2	e.g. **Senior ODP**
Course 3	[topic].[level]
Training material 1.2	[device model].intermediate
Training material 2.3	[device model].advanced
Course 5	[topic].[level]
Training material 7.1	[device model].basic
Training material 8.1	[device model].basic
Training material 9.3	[device model].advanced

Figure 4 Sample cataloguing taxonomy

- Review the suitability and quality of existing training material and source updated material
- Provide clear indications to users about the status of the resources, or a mechanism to ensure only controlled material is live and accessible.

4.3 IT Software (Databases and GUIs)

4.3.1 Database requirements

The following requirements for a new database were defined and submitted by the MDTC in July 2020:

"Introduction:

These are the basic requirements for the training module set up:
Automatically update equipment from the asset management system
Automatically update staff from ESR via an application

Individuals:

To be able to only see the equipment they are expected to use and training status for each
Self-verify on low and medium risk equipment to be able to change training status
Self-verify on high risk equipment with ward/department manager, deputies or practice educators to fully verify to change training status

Ward/Department Managers and Deputies:

To be able to only see the equipment they are expected to use and training status for each
Self-verify on low and medium risk equipment to be able to change training status
Self-verify on high risk equipment with ward/department manager, deputies or practice educators to fully verify to change training status
See whole ward/department and be able to fully verify high risk equipment for individuals
Automatically flag up to ward/department manager there are high risk verifications to do
Be able to change status for all staff on ward/department on new equipment or for updating equipment training after refresher training

Matrons:

Be able to see all wards and departments under their area of responsibility
To be able to only see the equipment they are expected to use and training status for each
Self-verify on low and medium risk equipment to be able to change training status
Self-verify on high risk equipment with ward/department manager, deputies or practice educators to fully verify to change training status

Practice Educators:

To be able to only see the equipment they are expected to use and training status for each
Self-verify on low and medium risk equipment to be able to change training status
Self-verify on high risk equipment with ward/department manager, deputies or other practice educators to fully verify to change training status
Be able to see all wards and departments under their area of responsibility
Be able to fully verify high risk equipment for individuals

Reports:

Sent to ward/department managers and matrons on monthly basis
Administrator to be able to pull reports when requested
Dash board for each ward/department, matron's area and Clinical Group

Alerts:

Individuals to receive alerts that training is due

Help:

A "Help" button applicable to the view on the screen

Future developments:

A link from each piece of equipment to competency information to help standardise training
A link from each piece of equipment to eLearning which, when completed, updates the training status
A means of booking training by all"

4.3.2 Database population

The Medical Device Asset Management Software "e-Quip" (Integra) has been chosen for use in Clinical Engineering, which contains a training module known to have been successfully integrated in other Trusts. Staff have been allocated to transfer existing data from the Medusa to e-Quip and roll-out the software to the Trust.

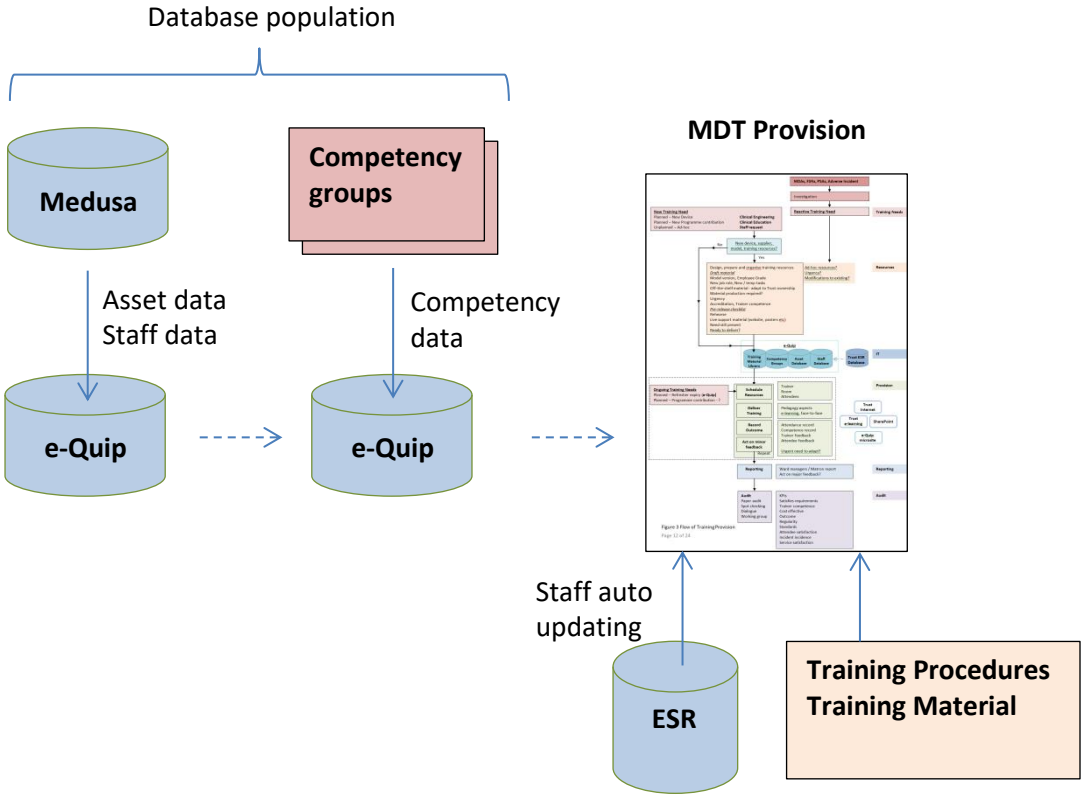


Figure 4 e-Quip integration

4.3.3 Data management

The following is the current understanding of the tasks required to complete the data management pathways:

- Complete the population of staff and asset data into e-Quip
- Automate the update of staff data (note: ESR does not provide physical location)
- Automate the update of device location
- Identify and automate the update of responsible persons

- Populate e-Quip with the training material
- Establish an address book of manufacturer points of contact
- Integrate e-Quip and Sharepoint and the signposting via the Intranet
- Future integration with Trust e-learning software

Competency groups

- Define and produce competencies in conjunction with users and manufacturers
- Demonstrate the links between national standards, quality standards and competency down to specific items of content

4.4 Provision

The mechanisms of provision are under review with engagement with the MDT User Working Group.

Issues of provision may include local responsibilities, scheduling, room bookings, communications, sources of material, calendar management, trainer and trainer-trainer competence, method of delivery, user support, use of signposting, self-assessment and e-Learning.

4.5 Reporting

What are the key performance indicators relevant to each stakeholder? These may include:

- Compliance
- Competence
- Cost
- Availability of structured training
- Opportunities to develop skills and good practice
- Utilisation of resources
- Satisfaction of users, trainers, supervisors, and other stakeholders
- Incidence of human error-related adverse incidents
- Other impact measures?

What outcome measures are to used or to be used to assess the KPIs?

4.6 Auditing, Policy, Review, Improvement

Distributed coordination of a risk-based service, where staff and assets are moving and updating in a system prone to mission creep and changing priorities requires careful consideration of consistent methods of audit. From the outside in, external auditing is required to mitigate against longer-term pitfalls arising from outside the Trust. Members of NAMDET are best placed to provide this function collaboratively. Internal objective auditing may be performed by members of staff with no interaction with medical device training. To ensure the output of that work is heeded by Trust senior leadership, there is a requirement for Trust Senior leadership involvement in either of those loops.

To prevent future issues with MDT it is important to understand the mechanisms through which a Trust-wide service deteriorates. The NHS is a national network of expertise, available at the point of need.

4.7 Standards of Conduct, Performance and Ethics

As a Trust-wide role the MDTC function interfaces with staff at all levels. Every member of staff in the Trust involved in the development, management, coordination and delivery of patient services operates within an interlocking framework of codes of professional ethical standards associated with their job function and level. For successful implementation of the training coordination function it is imperative to understand and respect the National Standards of Conduct, Performance and Ethics, and how the governing ethos of the Regulatory Bodies each staff member is regulated by drives staff actions towards the benefit of the patient.

5. FUTURE SERVICE DEVELOPMENT

5.1 Vision

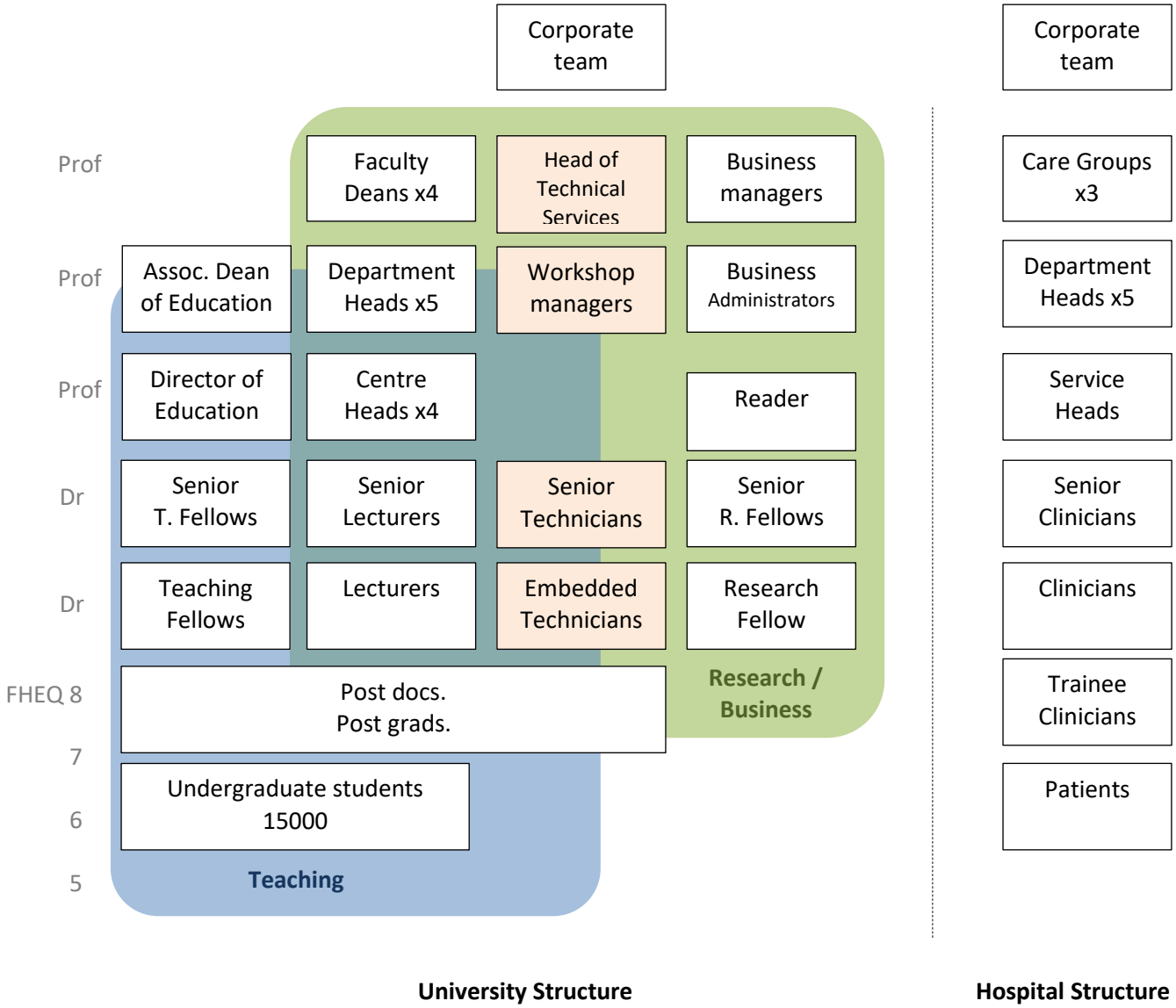
What are the current and future aspirations for Medical Device Training at the Royal Berkshire? The follow activities are presented to guide the question of where the bar is to be set, from locally reactive to internationally inspiring.

Ambition	Focus	Activity	Benefits for the Trust
Increase involvement of clinical engineering in international development	Outreach	Vision setting Public Relations	Vision Demonstrating standards Staff engagement, attraction and retention
Increase involvement of clinical engineering in national forums	Outreach	Improving professional relations and standards	Setting standards
Increase involvement of clinical engineering in the community	Outreach	Public Relations	Recruitment, engagement
Increase recruitment of quality applicants into clinical engineering	Outreach	Public Relations	Recruitment, job satisfaction, setting standards
Increase clinical engineering's involvement in corporate decisions	Business development	Awareness - Relationship building	More efficient service delivery
Improve relationship between staff and clinical engineering	Customer service	Awareness - Relationship building	More efficient service delivery
Improve staff understanding of clinical engineering	Staff development	Awareness - Provide education	More efficient service delivery
Improve staff understanding of medical equipment	Staff development	Awareness - Provide education	Raising standards, recruitment, retention, job satisfaction
Improve staff confidence to use equipment	Staff development	Provide education	Smoother clinical procedures
Ensure staff are competent to use equipment	Staff development	Provide proactive support post-training delivery	Smoother clinical procedures
Legal requirement to ensure staff have received training	Risk management	Provide access to training Self-directed learning Cascade learning	Not getting sued
Reduce incidence of equipment user-related incidents	Risk management	Responsive	Not getting sued

5.2 The position of support services in the Trust

It may be beneficial to compare the position in the Trust of different roles in Clinical Engineering with those in a typical University, as is the case with alignment of staff across some University Teaching Hospital partnerships.

In general terms the technical services of each organisation support thousands of members of staff engaged in a range of varying risk multi-million pound activities.



From the MDTC perspective there are 2805 unique models of medical device. A much larger quantity of training material is generated when taking into account user level of specialism. Whilst degree modules are more content heavy than medical device training material, the communications and scheduling demands present a similar need for tightly defined paths of professional responsibility. Since a medical electronic device is a tool to perform a job, and in the absence of a medical device training team, embedding the MDTC function directly into Clinical Education may be a viable alternative in the short-term. This approach has the advantages of capitalising existing skills, resources and networks in the Trust, and raising the visibility of Clinical Engineering staff within the organisation. Choosing the functions of training provision to be sourced internally within the NHS or contracted out remains an internal policy decision.