



The roles of HCS in a surge

A description of what roles healthcare scientists performed in the first surge and details around role responsibilities.

NHS England and NHS Improvement



Healthcare scientists

- HCS are well placed to keep routine services running and may have opportunity to take on responsibilities from medics/nurses/AHP if staffing is reduced.
- The group is too varied to consider as one
 - Laboratory sciences
 - Physiological sciences – likely to be routinely very clinical in their work
 - Best considered as either RSC or NRSS perhaps with some niche functions depending on background e.g. cardiac scientists, vascular scientists.
 - Bioinformatics
 - Physical sciences – divide into two routes
 - Route 1 – redeployed to support clinical engineering services
 - Route 2 – redeployed into a safety/QA/educational role within ICU

Three key areas we can support

- ***Clinical engineering support***

- Equipment maintenance demands are high, many new pieces of equipment have been introduced in the past year.
- HCS can, and did, support these teams – either picking up BAU tasks or helping with commissioning, testing of new kit.

- ***ICU tech support***

- Supporting the technical teams within ICU with some BAU tasks as well as COVID specific tasks
- Different in different trusts depending on the structure and management – some good case studies here.

- ***Nightingale floating Clinical scientist team*** (mainly clinical engineers, some other HCS and medical physicists)

- Rapid re-training – NHSE funded
 - Divided the group into clinical engineering support and ‘clinical’ clinical scientists¹³

Medical equipment safety/QA officer role (Potential role for redeployed HCS)

- **Quality assurance**
 - Collaborate and verify SOP's and protocols relating to equipment use, including responding to national guidance.
 - *Data management and re-representation of data– to be defined in collaboration with medical and nursing colleagues.*
 - Evaluation of trends in management in the unit – generating evidence base for system level decision making.
- **Safety**
 - Ensure equipment is being used correctly and efficiently, calibration and routine safety checks are carried out.
 - Support nursing staff in monitoring patient ventilation parameters for safety concerns – reporting to doctors in charge.
 - Support staff in reporting of incidents and support clinical engineering in rapid incident investigation, ensuring rapid dissemination of findings.
 - First line trouble shooting, maintenance and repair of equipment.
- **Education/training**
 - Clinical bedside educator for medical equipment +/- IT systems.
 - Model specific device training at the bedside.
 - Support trust wide medical equipment training programmes.
- **Additional assistance**
 - Where other staff groups are understaffed, assist in patient transfers, breathing circuit checks, ventilator swaps, proning etc. when there is a staffing need to do so.
 - Support/conduct beside and bed bay safety checks.

Skills matrix

- Three different roles/functions identified and a board set of skills associated to each role
- Mapping to HCS competencies from different disciplines
- In time learner and trainer resources will be mapped
- Significant portion of the challenge in HCS is identifying the requirements /skills as the roles are less well defined than other professions

A	B	C	D	E	F	G
Category	Sub-category	Learning Objectives	EBME support role	ICU tech support role	Safety/Risk Management role	Mapping to HCS competencies
Equipment		Explain the risks and limitations associated with a wide range of medical	Essential	Essential	Essential	(DFM1) 1,2
		Explain how to recognise faulty medical device and the process of removing it from medical practice	Essential	Essential	Essential	(DFM1) 3
		Be able to explain the sources of patient safety information	Essential	Essential	Essential	(DFM1) 4
		Be able to describe the key processes to managing safety alerts	Desirable	Essential	Essential	(DFM1) 4
		Be able to investigate patient incidents involving medical devices	Not applicable	Desirable	Essential	(DFM1) 4
		Explain how to identify and navigate the standards that underpin the local strategy for medical device management and service delivery arrangements for life cycle management	Not applicable	Desirable	Desirable	(DFM1) 5
		Describe how to implement, develop and validate quality assurance regimens for a range of medical devices	Not applicable	Desirable	Essential	(DFM2)2
		Explain how to advise on the minimisation of risks associated with device	Desirable	Desirable	Essential	(DFM2) 3
		Explain how to manage and deal with safety alert standards according to	Not applicable	Desirable	Essential	(DFM4) 5
		Demonstrates an ability to act on notices and identify corrective actions to	Not applicable	Desirable	Essential	(DFM4) 1,3
		Explain how to investigate incidents using root cause analysis, or equivalent, methodologies in accordance to local guidelines	Not applicable	Desirable	Essential	(DFM4) 1
		Explain how to advise on policy development to assist clinical governance and patient safety within the organisation	Not applicable	Not applicable	Desirable	(DFM4) 5
		Explain how to develop risk management strategies within the organisation	Not applicable	Not applicable	Desirable	(DFM7) 1
		Describe how to articulate risk issues, their severity and the steps to mitigate	Desirable	Desirable	Essential	(DFM7)2,3
		Explain how to minimise the risks associated with modifying medical	Desirable	Desirable	Essential	(DFM7) 3
		Describe the national standards for healthcare relating to medical device management and life cycle management	Desirable	Not applicable	Essential	(DFM1) 5
		Explain the legal and statutory requirements for medical device management and life cycle management	Desirable	Desirable	Essential	(DFM1) 5
		Risk management and governance		Describe the local electro-medical safety standards	Desirable	Desirable
Describe the local quality management standards	Desirable			Desirable	Essential	(DFM1) 5
Describe the local risk management standards	Desirable			Desirable	Essential	(DFM1) 5
Describe the local best practice standards	Desirable			Desirable	Essential	(DFM1) 5
Be able to describe and implement organisational policies and procedures together with medical workshop - specific procedures	Desirable			Desirable	Desirable	(DFM1) 5
	Desirable			Desirable	Desirable	(DFM1) 5

London Transformation and Learning Collaborative (LTLC)
Critical Care programme

Broadening the skill base of our NHS workforce
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Health Education England

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