Adopters guidance

General staff training and product-specific user training for digital healthcare technologies

This is best practice guidance

Although not legally required, it's an essential activity.

This Guide covers:

- Great Britain (England, Scotland, Wales)

From:

- Medicines and Healthcare products Regulatory Agency (MHRA)
- NHS England

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There are 2 levels of training adopters need to consider for digital healthcare technologies: general training for all staff so they understand how to implement, use and govern technologies and product-specific user training so they can use specific technologies.

General staff training in digital healthcare technologies

General user training should be part of broader education and training for all staff about digital healthcare technologies. This includes foundational training in digital technology principles and advanced training for specific roles and responsibilities.

Health Education England has researched the different knowledge, skills and capabilities required for different NHS staff groups to be confident using AI. A lot of these would also apply to other digital healthcare technologies. Read the HEE's report on understanding healthcare workers' confidence in AI (part 1) for more information. HEE has also proposed AI-related learning and skills for specific staff roles in the health and social care system. It's report on developing healthcare workers' confidence in AI (part 2) will help you understand what training and upskilling you might need yourself or to provide for others in your organisation.

HEE also delivers Digital, Artificial Intelligence and Robotics Technologies in Education (DART-Ed). This explores the educational needs of health and care workers. It can help you understand the impact of digital healthcare technologies on education and training needs.

Product-specific user training for digital healthcare technologies

Without product-specific user training, you might face challenges implementing new digital technologies and the safety and performance of your service could be at risk. This is particularly relevant to technologies classified as medical devices.

For medical devices, there is not a direct legal requirement for training under UK Medical Device Regulations (2002). But if the developer determines that training of intended users is required for the device to meet safety requirements, you are legally required to do this under health and safety legislation on training and competence.

For further information on training requirements for medical devices, see the MHRA's guidance on managing medical devices.

Why is product-specific user training important?

Product-specific user training is the training needed to use a specific digital healthcare technology safely and effectively.

Lack of understanding of new digital technologies, and lack of appropriate confidence in using them, can be barriers to successful implementation. This can lead to wasted resources, workflow inefficiencies and substandard patient care. It could lead to disparities in who gets to benefit from digital technologies, which may be unethical.

What product-specific user training is needed when integrating a technology?

The aim of product-specific training for users is to help them use the technology to its maximum potential. This includes making clinical decisions with appropriate confidence and awareness of the abilities and limitations of the technology.

The training is usually based on information provided by the developer. But you may need to tailor it to the users and clinical setting in which the technology is being deployed.

Developing product-specific user training involves:

Understanding the clinical context and users' experience levels

You need to think about:

- how the technology will be used, who by and with what degree of human oversight
- whether the users will be clinical experts
- whether users have experience using other digital healthcare technologies in similar or different contexts
- how the level of clinical and service risk affects users' confidence in decision making

Designing training

When designing the training, you need to:

- agree training requirements and required information in collaboration with the developer (or vendor) to develop knowledge and appropriate confidence in using the technology
- consider the social factors that could affect implementation including users' attitudes and concerns, resistance and workarounds, expectations, benefits, values and motivations
- engage with users and ask for their input in design, training, support, identification of champions and integration with existing work practices
- select existing resources or develop new resources with the developer to inform your training materials
- consider how to provide product-specific information for patients in clear English, so they understand the digital technology and how it might affect them
- consider how to educate staff to communicate with patients, so they can help them understand the digital technology and inform them about its risks and benefits

Delivering training

Consider options for:

- in-person or virtual delivery of the training
- internal or external support for queries and further information

Evaluating training

Evaluate users' knowledge and confidence using the technology clinically, using tools such as:

- surveys
- written feedback

Example: one type of training and information you may require is understanding the characteristics of the technology and how it will be integrated

The developer should provide you with the characteristics of the digital technology. You need to consider how the technology will be integrated into the clinical workflow. Your considerations will be specific to the technology, but could include:

- the intended purpose and scope of use
- information about training and validation datasets including their size, demographics and impact on fairness and confidence
- information on potential biases and algorithmic errors that require risk management, including information on performance for subgroups in the target population
- details of explainability and transparency features and their intended use, if appropriate
- processes required for recording errors and reporting adverse incidents

