

Ergonomic/human factors approach to manual handling

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When considering risks arising from manual handling activities, it is important to ensure that an ergonomics/human factors (E/HF) approach is applied to the job or task design.

Ergonomics has been defined as:

“the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimise human well-being and overall system performance.” International Ergonomics Association (2020)

Key elements of ergonomics/human factors include:

Adopting a person-centred approach to everything that people need to interact with. This includes their environment, the systems they need to work within and how they affect themselves and others, the tasks they need to carry out and the equipment they are provided with to use.

Consideration of all factors affecting staff and patient health and wellbeing and the services they deliver. These include individual physical and psychological factors (what they are able to do and how they think), factors within the organisation (structure, priorities and culture) and factors associated with equipment (design, integrity, usability).

Applying the approach to all circumstances and scenarios.

All of these are important, as they work together to ensure a holistic approach with the aim of achieving the best levels of health and wellbeing for individuals and teams, thereby also enhancing the potential for optimal performance and outcomes in people’s roles and reducing the likelihood of errors.

Within manual handling tasks and particularly patient handling, people must interact with all of the factors to achieve successful outcomes. When people are put into the mix, the belief of what the systems and processes will achieve may not be what will happen in reality. Work as expected and work as done may be at odds. Individuals are all different. These differences may be physical, or psychological, related to knowledge and understanding, their experience, or to their social and domestic circumstances. These can all impact on how they interact with systems, processes and their environment, for good or bad.

A task refers to a goal-directed human activity, i.e., something people do in order to achieve a goal. Within manual handling, this could range from frequently carrying a laptop bag through to safely moving a seriously ill patient.

A task has a clearly defined goal as well as a start and an endpoint. A task may consist of a series of actions which would normally start with a high-level task being broken down into sub-tasks.

Some tasks can be predominantly physical in nature and actions being undertaken can be observed. An example of a physical task could be assisting a patient to stand. Other tasks can have a predominantly cognitive aspect which cannot be easily observed to understand what is going on. There are also tasks that require to be completed by a team, therefore a level of collaboration is required. An example of this is patient hoisting. The type of task will determine which task analysis approaches might be more suitable than others.

Before undertaking a manual handling task, it is important that the activity is developed to determine the safest method for those involved. The risk assessment should be done by individuals who have a good understanding of the physical demands of the task and the factors that influence those demands, knowledge of the work process, knowledge of equipment uses and limitations and are trained in risk assessment methods.