Ergonomic Checkpoints in Health Care Work

Prepared by the Human Ergology Society
in collaboration with the International Ergonomics Association

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Background

• Success of the „Ergonomic checkpoints” (1996-)
• Participatory, action oriented methodology (Dr. Kazutaka Kogi)
• Co-operation of affiliated member society (the Human Ergology Society) and IEA
Principles

Positive (local good practices) and solution oriented

• Immediate
• Low-cost
• Multifaceted
• Stepwise
• Active co-operation
• Tailored

Ergonomic approach: safety – comfort – productivity

Acting on the lowest level possible
10 technical areas – 6 items in each (sum=60)

For each item

• One page text:
  – **Why**: the reason
  – **Risks/symptoms**: deleterious outcome
  – **How**: solutions
  – **Some more hints**: added information
  – **Points to remember**: essence

• One page **illustrations** showing good practice

• Answer options:
  – action proposed **NO**
  – action proposed **YES**
    • **PRIORITY**
Recommended use

1. Selection of checkpoints (locally adapted) “action checklist”
   Aim: readily practicable improvements on the spots
   (not a complete ergonomic appraisal)

2. Information sheets
   Supplemented by local good practices

3. Training workshop
   1-2 days: introductory presentation, group discussions, group presentations
How to use

1. Knowing the workplace
2. Defining the workplace to be checked
3. Initial walkthrough
4. Writing your check results
5. Selecting priorities
6. Group discussion about the checked results
Technical areas

1. Materials storage and handling
2. Machine and hand-tool safety
3. Safe patient handling
4. Workstations
5. Physical environment
6. Hazardous substances and agents
7. Infection control
8. Welfare facilities
9. Preparedness
10. Work organization and patient safety
CHECKPOINT 4
Use carts, hand-trucks, and other wheeled devices convenient for moving materials.

WHY
Health Care workers often move a variety of materials, equipment, and tools for conducting care work. Moving many items manually not only consumes a lot of effort and time, but also often leads to accidents. All this can be avoided by using "wheels."

By using carts, trolleys, and other mobile devices, the number of trips can be reduced. This can improve efficiency and safety.

Well-arranged trolleys or mobile devices help care workers sequence tasks efficiently and without mistakes.

RISKS / SYMPTOMS
- muscular strain
- low-back pain
- upper-limb disorder
- injuries at work
- damage of material of equipment

HOW
1. Examine tasks for moving materials, equipment, and tools in care work. Use appropriate carts, trolleys, or other moving devices for these tasks when they are conducted frequently.

2. Arrange the way that materials, equipment, and tools are placed on the carts, trolleys, or moving devices so that they are easy to locate and handle.

3. Use pallets, bins, or containers that can be loaded easily onto a cart, trolley, or mobile device. Design special ones for different purposes so that their contents are protected from damage and are easy to inspect and use.

4. Inspect each cart, trolley, or mobile device at regular intervals to ensure that necessary items are in place in sufficient numbers.

SOME MORE HINTS
- Make sure transport routes are clear and free from obstacles at all times. Clear transport routes are essential for moving around safely.

- Choose wheels of a larger diameter, especially when moving materials a long distance or on uneven surfaces. If possible, adopt rubber wheels or casters to reduce noise.

- Provide suitable stop mechanisms for each cart, trolley, or mobile device so that it is kept stable during care work.

- Attach labels of appropriate size to different items or groups of items to make it easy to identify them.

POINTS TO REMEMBER
Reduce the number of trips during care work by using carts, trolleys, or mobile devices. This makes work more efficient and safer.
CHECKPOINT 13
Establish safe and reliable procedures for transferring people.

WHY
Safe patient handling is an ordinary duty for health-care workers. For safe transferring of people, it is important to develop and share procedures with all members of the team. The established procedures should cover any situation that may arise in doing safe patient-handling tasks.

There are various forms of transfer work. Priority must be given to the safety and comfort of people being transferred and the prevention of health risks to care workers. Care workers may suffer musculoskeletal disorders and work stress if the transfer tasks cause excessive strain to them.

In establishing locally effective procedures, it is necessary to involve health-care workers who have experience and knowledge about existing transfer conditions.

RISKS / SYMPTOMS
• falls and serious injuries
• musculoskeletal disorders
• low-back pain
• stress at work
• discomfort for clients

HOW
1. Review the safe patient handling tasks done by care workers and discuss practical measures to minimize risks encountered during the transfer tasks. It is useful to learn good transfer practices from experienced workers.

2. Ensure that the transfer procedures listed below are well established and known to all workers engaged in transfer tasks.
• Clarify who does what
• Maintain the safety of patient handling during all stages of transfer
• Secure the comfort and cooperation of the person being transferred

• Avoid excessive strain on care workers particularly muscular/postural strains
• Ensure compliance with relevant regulations
• Use equipment safely and appropriately
• Be aware of changes in patient conditions
• Communicate with the person being transferred

3. These procedures include safe patient-handling techniques that are workable to avoid excessive musculoskeletal strains of care workers.

4. Offer appropriate support for both workers and managers, if necessary, with guidance from experts or assistance from co-workers.

5. Periodically discuss suggestions with workers and managers about improving transfer procedures. Based on the discussions, select the most practical and effective solutions.

SOME MORE HINTS
• Ensure that there is enough space to use the required equipment

• Improve tasks that may cause undue strains during transfer. Enforce the following of procedures even during minor emergencies, or if time is limited. Make modifications to the procedures whenever necessary.

• Encourage the person being transferred to assist care workers if they are able.

• If speed is essential as in an evacuation, use common sense to minimize risks of injury, e.g., by dragging and pulling rather than lifting.

POINTS TO REMEMBER
In establishing transfer procedures to prevent risks and excessive strains, involve care workers in identifying any potential risks of injury to clients or themselves.

Figure 13a. Provide regular training on procedures relating to people-handling.

Figure 13b. Share information regarding devised methods of appropriate handling of the individual patient.
CHECKPOINT 33
Protect workers from chemical risks so that they can perform their work safely and efficiently.

WHY
Care workers may deal with various chemicals for examinations and treatments that may possibly cause serious injuries and diseases.

It is important to understand the specific hazards of chemicals and to assess the risks of injury and disease that may be caused by them. Appropriate steps must be taken for preventing potential risks.

Common examples include antiseptics, detergents, solvents, toxic gases, and test agents. To prevent injury and disease, you must have precise information about the risks and necessary countermeasures.

RISKS / SYMPTOMS
- acute intoxication
- chemical burn
- irritation
- allergic disorders
- large-scale casualties

HOW
1. Make up a list of hazardous chemicals being used for care work tasks and a list of care workers exposed to them.

2. Discuss priorities of countermeasures to hazardous chemicals for preventing significant risks for care workers and their clients.

3. Provide each person working with hazardous chemicals with written, illustrated instructions about their safe use.

4. Provide training to workers using hazardous chemicals. Training should include precautions to be taken in their use and monitoring of health hazards.

5. If possible, enclose the source of hazardous chemicals so that workers and clients are not exposed to the chemicals or locate the care workstation as far away as possible from the sources. Where needed, install ventilation systems that can avoid unnecessary exposures.

6. If needed, provide workers with sufficient personal protective equipment (such as protective clothing, goggles, gloves, and respirators).

SOME MORE HINTS
- Assign the task of managing chemical risks to staff members knowledgeable about protective measures.

- Inform care workers and management about the latest laws and regulations regarding the use of chemicals in the workplace.

- Modification of hazardous tasks, such as using improved apparatuses for drawing blood, provision of handling manuals and labels on the equipment, and installation of personal protective equipment, can be effective in reducing risks.

- Training workers to improve skills and regular assessment of work situations are also necessary.

- Establish clear procedures for supplying and storing hazardous chemicals and drugs so as to prevent inappropriate use and unexpected loss.

POINTS TO REMEMBER
Certain dangerous chemical risks cannot be detected by human senses. Inform workers of these risks and train them about precautions. Protective measures are much less costly than compensation costs resulting from exposures.

Figure 33a. Use local ventilation systems installed near a washing machine for endoscopes.

Figure 33b. Use a draft safety chamber for mixing procedures dealing with anti-cancer drugs.
CHECKPOINT 44
Provide drinking facilities and hygienic eating areas.

WHY
Good drinking facilities and hygienic eating spaces are essential, because they can do much to prevent fatigue and maintain workers' health. Health care workers particularly appreciate these facilities.

Especially in a hot or cold environment, facilities for refreshing drinks help workers prevent fatigue and recover from work.

Private spaces appropriately located in the workplaces may also need to be provided for women who are breastfeeding.

RISKS / SYMPTOMS
- poor mental and physical health
- excessive fatigue
- lack of communication
- increased risks of infectious disease
- exposure to hazardous chemicals

HOW
1. Provide drinking facilities near each workplace for health care workers, away from places where water or beverages may be contaminated by dust, chemicals or infectious agents (e.g., not in washrooms or toilets).

2. Provide an eating area or room where workers can eat food in a comfortable, relaxing atmosphere. It should be placed away from their workstations and free from disturbances such as noise, dust, chemicals, or infectious agents.

3. Keep hygienic conditions in all these facilities. In an eating space, provide easy access to clean water for washing and drinking. Conveniently located waste bins are also helpful.

4. A clean, quiet, and private area should be provided in the workplace when women are breastfeeding.

SOME MORE HINTS
- Both cool and hot water and beverages can refresh health care workers greatly. If a water-cooling device is not available, set water containers in cooler places in the working areas.

- It is helpful to reduce fatigue, if you can have warm meals and snacks during breaks. For health care workers, it is advisable to set up the eating area or room in such a way that it can be upgraded to contain kitchen facilities where workers can prepare drinks or heat food by themselves.

- There are various inexpensive ways of providing drinking facilities and eating areas. Solutions suited to the workplace could be found by group discussion among workers.

- If workers share the space by eating in different sittings, a 25 m² room for 50 workers is sufficient to set up an eating area.

- Putting bright paint on the walls and setting up some green plants and flowers near drinking facilities or eating areas can produce a good atmosphere.

POINTS TO REMEMBER
Choose types of arrangements suited to your workplace for drinking and eating for all health care workers. This greatly helps to reduce fatigue, increase productivity, and promote good health conditions.
Annexes

1. Using Ergonomic checkpoints in Health Care work in participatory training
   – How to organise a training
2. Workplace checklist in Health Care work
   – Sample checklist of 33 items
3. Examples of improving Health Care work
   – Photos from Viet Nam, Japan, Uganda
Ideas for use in Hungary

• Translation
• Supplementing with national legislation and good practices
• Mainstreaming among health care professionals (with the help of the chamber?)
• Target group: employee OSH representatives in health care facilities
• Required: financial and human resources
Thank you for the attention and for ILO-DWT/CO’s kind hospitality

Köszönöm a figyelmet és az ILO Budapesti irodájának a vendégszeretetét!