

**Science Technology Group
Corporate Specialist Division**

Human Factors/Ergonomics Section

Ergonomic comment on need to provide seating at mobile blood collection sessions	
Name and address of organisation: National Blood Transplant Service	CSD4
	Ergonomics Section
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<p>This report provides a specialist ergonomic opinion as to whether or not seating should be provided for staff during mobile blood collections sessions. The request for this opinion was made as a result of a formal joint complaint made to the HSE by Trade Unions. This report is based on a review of papers supplied by the TU and a site visit to a mobile collection session.</p> <p>Suitable seating for the full range of tasks being carried out should be provided at the mobile collection sessions. There should be full staff involvement and trials to ensure that the most suitable seating is selected for the different tasks and at the collection sessions.</p> <p>NBTS should ensure that when designing any future changes to the collection process that a user centred approach is used.</p> <p>NBTS may find it helpful, and I believe this may already be under way, to improve the communication channels between senior management and local managers and staff. This should be aimed at helping to ensure that change programmes are able to be implemented flexibly in order to meet local environmental and staff issues as well as delivering the identified business changes.</p> <p>NBTS may wish to revisit the ergonomics report carried out in 2002 to review how the OTP process and the new collection chairs will impact on the donor collection tasks to ensure no new risks are being introduced with changes to equipment and practice.</p>	

1. Introduction

I have been asked by Ian Strudley, Band 2 Health and Social Care Unit (HSCU) to provide a specialist opinion as to whether or not seating should be provided for staff during mobile blood collections sessions. This request was made as a result of a formal joint complaint made to the HSCU units by Trade Unions. I based my opinion having reviewed papers supplied by Mr Bishop, Trade Union Representative, which included:

- OTP Risk Assessment
- H. R. guidance to managers -- removal of chairs from Pods
- COPE report on ergonomic assessment of blood donation activities
- NHSBT accident database reports
- Model Risk Assessment -- refreshment area. Original version
- Model Risk Assessment -- refreshment area. New version
- Health and Safety Department Ergonomic Report
- e-mail in response to the H&S Department report

I also visited a mobile donation session on the 17th of December 2008 in Chelmsford Village, Chelmsford. I did not carry out a detailed assessment or task analysis during that visit.

2. Background

The NBTS are constantly, understandably, striving to improve the throughput of donors and productivity whilst working within extremely tight clinical and product safety/quality control systems.

The NBTS commissioned an extensive ergonomics task analysis of the mobile donor collection activity in 2002. Recommendations were made in that report that a perch stool should be trialled to carry out the majority of tasks. Recommendation were also made that if reconciliation staff are sitting they should sit in a well set up adjustable chair, or if the staff stand to do this work the work surface is of an adequate height. During my visit Phil Tanner, National Health and Safety manager, stated that the actual collection activity has not changed, with the exception of an automatic agitator, which has eliminated the need for staff to crouch in order to agitate the blood bag during collection.

As part of the ongoing reviews of collection services, the NBTS has embarked on a programme called the OTP (Operational Transformation Programme). This is a fundamental change to the donation process, its intention to streamline and improve process flow and productivity. As part of this layout of the donation area has changed - from two bed pods to 6, 9 or 12 bed pod. Staffing levels on the beds have been modified slightly to deal with this. On average a 6 bed pod will have two designated members of staff in the pod area assisted by a half time member of staff as 'pod support'. The required movement of staff within the pod has led to staff chairs/stools being removed from the area.

Management guidance dealing with health issues states that:

'As part of the Operational Transformation Programme the pod system of donation beds does not include having staff chairs within the pod. The rationale for this is to allow for the smooth running and efficient working of the pod system, as well as due to the available space and removing possible trip/obstruction hazards from the pod. If there is a health issue arising as a result, of there being no chairs in the pod, the manager needs to carry out a review with the individual. Once this has taken place, and there is evidence of a

genuine health issue for the individual, a management referral to occupational health should be actioned'.

The guidance also suggests that

' it may also be possible or reasonable to place a chair inside the pod, as a short-term measure generally up to four weeks, to enable staff to return to work after a period of sickness absence'.

During my visit chairs were available for staff doing the health screening part of the process but not for any other staff.

Risk assessment number RA/GEN/0023 identifies associated hazards with removal of chairs from donation areas as:

- WRULD's from possibility of poor standing posture
- lower limb disorders
- possible increased fatigue linked to WRULD is from repetition of venepuncture and related tasks

A postural review was carried out in October 2008 as a result of that risk assessment.

3. Mobile blood transfusion collection activity

There appeared to be three key work activities during the collection session:

- Administration/health screening
- Blood collection
- Reconciliation

However, the donor collections staff activity spans more than just the collection session:

1. process starts with loading the van with required equipment for the collection session and driving to the collection point,
2. unloading equipment, setting the session room up,
3. carrying out the collection session,
4. packing up, returning to base and unloading vehicles.

During the visit on 17th of December 2008 there were no chairs available for any of the tasks with the exception of the health screening staff who were using chairs from the church hall. Staff reported that there was no room in the back of the vans to carry adjustable chairs.

The reconciliation tables had been raised on wooden blocks to allow staff to stand at them; however, staff appeared to be stooping over whilst reconciling the blood bags. Staff perception appeared to be that as a result of the implementation of OTP chairs were not allowed during the donation session at all, for any of the tasks.

4. Work and workstation design

When designing work tasks and workstations the main objective is to achieve the best possible match between the product (object, system or environment) and its users, in the context of the working task that is to be performed.

Criteria that are commonly important in achieving a successful match include the following:

- functional efficiency (as measured by productivity, task performance etc)
- ease-of-use
- comfort
- health and safety
- quality of working life

The ergonomic approach is to consider all relevant criteria, not simply to design for one criterion at the expense of others. Fitting the job to the worker involves consideration of health and quality of working life just as much as of productivity, and efficiency and quality of performance are influenced by all three. There are many sources of advice for employers when designing work tasks and workstations, a useful checklist is provided at appendix 1.

Generally people find it more comfortable to sit rather than stand whilst working, unless the type of work requires constant stretching or twisting to reach to lift objects. Standing or sitting for long periods can lead to discomfort and may result in long-term health problems so it is important that workers have the opportunity to change position, stand up and move around.

When designing or redesigning the task to be carried out an employer, as part of the process, needs to consider the need for seating during the work activity with the assumption that seating will be provided unless there is a valid reason not to do so. HSE provides guidance on seating at work in guidance document HSG57.

5. Comment

It would appear that during the design of the OTP way of working a user centred approach was not used and I understand that a review of the 2002 ergonomics report was not carried out ahead of the roll-out of the OTP. I understand that staff were involved during the design of the OTP however the process does not appear to have been well communicated to donor teams and the concerns of staff, in particular around seating, do not appear to have been adequately addressed or resolved.

As the daily collection activities have not changed since the ergonomics report carried out in 2002, which recommended seating, it is not clear why the seating has been removed. Mention is made in various management documents that chairs are a possible trip/obstruction hazard within the pod, however, chairs are not mentioned as a potential hazard in the ergonomics report of 2002 and the activity has not changed significantly since that report.

The analysis report carried out in October 2008 does not specifically address the issue of seating. It seems to suggest that seating would be there "to 'rest' on during 'quiet' or 'tired' times" rather than for use when staff are performing collection duties.

Management guidance states that if a health issue arises as a result of a there being no chairs in the pod, then a management review must be carried out. NBTS should be operating more proactive management in order to prevent ill-health occurring rather than reacting to it when it does occur. I would of course expect occupational health to be involved as soon as an ill-health issue arises to ensure individuals receive the most appropriate treatment and equipment as soon as possible to enable them to remain a work.

There also appears to be an issue around communication of the OTP down to local teams. Management guidance does say that chairs should be removed from pods upon roll out of the OTP; it does not state that chairs should not be available for other tasks. However, the perception of the staff I spoke to was that no chairs were allowed during the donor sessions. This then meant staff carrying out the reconciliation task and some administration functions were routinely standing rather than sitting.

The Workplace Health, Safety and Welfare Regulations 1992, Regulation 11 (3) states that:

a suitable seat shall be provided for each person at work in the workplace whose work includes operations of a kind that the work (or a substantial part of it) can or must be done sitting.

The expectation is that people will sit to work rather than stand when working. Whilst the donor collection task is not being carried out at what would typically be thought of as a workstation such as a bench activity or production line, when the donor collector is carrying out the collection task, the donor chair/bed, table and agitator are effectively their workstation.

6. Opinion

It is understandable for the NBTS to constantly review and improve their service to donors. However, I consider it is important that when redesigning a process that they use a more user centred approach than appears to have been done with the OTP process and subsequent removal of seating.

I do not believe that the provision of seating is an ill-health issue; the expectation should be that staff are able to sit when carrying out their work tasks as a matter of course.

Suitable seating should be made available for those staff completing the reconciliation task and for the administration functions that are carried out during the session. Managers should ensure that the seating is available and is being used correctly by staff.

Suitable seating should also be made available for those staff working in the pod collection area if they should choose to sit down. I do not believe that a seat needs to be available for every donor chair but staff should be able to bring a seat into the area if they feel they wish to sit down for certain tasks.

7. Recommendations

7.1. Suitable seating for the full range of tasks being carried out should be provided at the mobile collection sessions. There should be full staff involvement and trials to ensure that the most suitable seating is selected for the different tasks at the collection sessions.

7.2. NBTS should ensure that when designing any future changes to the collection process that a user centred approach is used.

7.3. NBTS may find it helpful, and I believe this may already be under way, to improve the communication channels between senior management and local managers and staff. This should be aimed at helping to ensure that change programmes are able to be implemented flexibly in order to meet local environmental and staff issues as well as delivering the identified business changes.

7.4. NBTS may wish to revisit the ergonomics report carried out in 2002 to review how the OTP process and the new collection chairs will impact on the donor collection tasks to ensure no new risks are being introduced with changes to equipment and practice.

Appendix 1: User centred design, key features information

- *User centred design is empirical*
 - It seeks to base the decisions of the design process upon hard data concerning the physical and mental characteristics of human beings, their observed behaviour and their reported experiences. It is distrustful both of grand theories and intuitive judgements, except in so much as these may be used as the starting points for empirical studies.

- *User centred design is iterative*
 - It is a cyclic process in which a research phase of empirical studies is followed by a design phase, in which solutions are generated which can in turn be evaluated empirically

- *User centred design is participative*
 - It seeks to enrol the end-user of the product as an active participant in the design process.

- *User centred design is non-Procrustean*
 - It deals with people as they are rather than as they might be; it aims to fit the product to the user rather than vice versa.

- *User centred design takes due account of human diversity*
 - It aims to achieve the best possible match for the greatest possible number of people.

- *User centred design takes due account of the user's task*
 - It recognizes that the match between product end-user is commonly task specific

- *User centred design is systems orientated*
 - It recognizes that the interaction between product end-users takes place in the context of a bigger socio-technical system, which in turn operates within the context of economic and political systems, environmental ecosystems and so on.

- *User centred design is pragmatic*
 - It recognizes that there may be limits to what is reasonably practicable in any particular case and seeks to reach the best possible outcome within the constraints imposed by these limits.

(Pheasant 2006)