

Excreta disposal for people with physical disabilities in emergencies

People with physical disabilities may find it difficult to use standard designs of latrines - there may not be enough space for a carer to enter the cubicle as well as the user, or enough room for a wheelchair to enter or manoeuvre, and there may be nothing for the person to hold onto to help with balance as they use the latrine. Elderly men and women with weak legs may also struggle to squat or rise from the squatting position when using a standard latrine and some people may be bed ridden, for example, in a hospital situation.

Effective sanitation in emergencies is important for human health but also for human dignity and this should not only be a right for non-disabled people but also for people with disabilities. In humanitarian situations there may also be increased numbers of people with physical disabilities, for example, from the destruction caused by an earthquake or a tsunami, or as the result of conflict or resulting unexploded landmines and ordnance.

With quite simple modifications, latrines can be made user friendly for people with physical disabilities, the elderly and those weakened through sickness. This Technical Brief highlights good practice in this area. It has drawn its information from OXFAM good practice in the field, including discussions with users who have disabilities, and from the research 'Water and Sanitation for Disabled People and Other Vulnerable Groups' (Jones and Reed, 2005).

Designing facilities with people with disabilities

Men, women and children with physical disabilities may find it difficult to use standard toilet and bathing facilities. The challenge for the designer is that the range of disabilities people have may vary greatly. For example, some people may have problems with their legs but are able to walk with crutches or they may need to use a wheelchair. They may have only one or no arms, they may be paraplegic or bed bound, or they may have sight impairment. Elderly women and men and people weakened, for example through sickness including through HIV/AIDS, may also appreciate adapted facilities.

The aim should be that the disabled person should as much as possible be able to be self reliant and access excreta disposal facilities independently. However, where this is not possible then the support and involvement of a carer will also be necessary. It is important to also involve the carer in discussions on their own needs to be able to assist the disabled person.

The most important principle is that the designer should ideally be designing with disabled people and their carers. The PHE and PHP teams should discuss the needs and preferences of the disabled people and their carers. People with disabilities are often the most marginalised and hidden within communities and in most situations are unlikely to demand or request specific help. The team will need to be pro-active in finding them within the affected communities to be able to discuss their needs. Disabled women will often be more hidden and have even less voice than disabled men.

When considering excreta disposal for camp environments there are some generalisations for good practice which can be followed when designing latrines for disabled access. This may mean including a seat, a handrail, providing additional space within a unit and ensuring an easy access pathway to the latrine. But the team should also be aware of the particular people in the particular vicinity who will be using the facilities and further adapt them to suit their specific needs where required.

Designing excreta disposal with people with disabilities

1. Use the PHP staff and health staff working in the camp or area to identify where the people with disabilities are living. They may be hidden from sight.
2. Ask people who have disabilities and their carers what facilities they need or would prefer.
3. Consider the provision of individual facilities such as bed pans, commode chairs, or individual latrine units, or consider designing in disabled units into blocks of latrines in camp settings.
4. The provision of easy access to water near to the latrine will also be helpful for a person who has difficulty with mobility.
5. Privacy and security are important for all people when using latrines or bathing. This is particularly important for women.

Types of excreta disposal

Commode chair

A 'commode chair' is a chair, often with a frame made out of wood or metal, which has a seat with a hole in it and a pot supported underneath the seat which can be removed for emptying and cleaning.



One model of the commode chairs provided to disabled people in the IDP camps in Pakistan

Photo: Saira Raza

Providing a commode chair to individual people with disabilities in a camp setting in Pakistan

Advantages:

1. More hygienic with only one user.
2. Much easier for the users and families as the disabled person could defecate / urinate inside the tent, and hence when they were immobile the family will not have to carry them to the latrines. Only the pot needed taking away for emptying and cleaning.
3. Users can take them with them when they leave.

Disadvantages:

1. Privacy inside the tents was limited. In Pakistan, if some disabled adults wanted to use their commodes then all members of the family had to leave the tent, except for one carer.
2. There are hygiene issues when people are living, eating, sleeping and going to the toilet in the same room of a tent.

Recommendations for improvement:

1. Provide a screen or separate screened area outside of the tent, so that the disabled person can have some privacy.
2. Commode chairs with wheels would be easier to manoeuvre (but would need locking mechanisms).
3. The chair and pan should have handles for easy use.
4. The pot should be sufficiently deep to prevent it over filling and preventing splash back.
5. The commode chair should be strong and not too slippery, so that the user can sit on it easily.

Ref: From discussions with users facilitated by Jamila Nawaz and Shamma Lal, Public Health Promotion Officers, OXFAM, Pakistan and from observations.

Single latrine

Where it is possible to provide household or family latrines this is usually the preferable option to ensure effective operation and maintenance. The family latrine can also be made with accessibility features for the specific needs of the disabled person(s) who will use it.

Latrine block

In camp situations however latrines are often provided in blocks, particularly in the early stages of an emergency where there is a need for speed in implementation and where there may be limited space for minimum distances between shelters and latrines. In a camp situation if the latrines are to be designed with accessibility features to allow people with disabilities to use them (versus providing individual support and facilities to the disabled person themselves), then examples of good practice as noted below should be incorporated into the design of the units.

Bedpan / potties

Bedpans or potties can be useful for people who are bed bound, either due to disability or being immobilised in hospital following an operation. Metal or plastic bed pans and urine containers can be useful and if these cannot be found, then children's potties can be used as an alternative. However, children's potties are not ideal for adults due to their height, their size and dignity related issues. For both options it will be important that the carers have somewhere to wash the bedpan or potty and for the carers and people with disabilities to have access to adequate hygiene cloths, water and soap to enable effective good hygiene practice.



Bedpan and male urine container -

Female urine containers were also available in Pakistan

Photos: Saira Raza



Excreta disposal for children with disabilities

Children with disabilities may need smaller sized facilities such as seats and handrails. Potties may be useful for small children. The parents or carers of children with disabilities should also be involved in discussions on the needs of the child for excreta disposal.

Design features of latrines for people with disabilities

Latrine design features

In general latrine units for people with disabilities should include the following features:

- Distances to facilities from the disabled persons home or shelter should be minimised.
- Easy access to the latrine should be ensured via well drained, compacted ground or a slope – which should ideally be <1 in 15 gradient (if steeper then the ramp should also be kept shorter) and a minimum of 150cm wide for a communal ramp.
- The entrance area to the latrine should be large enough to enable manoeuvring by a user of a wheelchair.
- Ensure that the door can be opened and closed by the user when the user is inside the latrine.
- Additional space should be provided inside to manoeuvre a wheelchair or for a carer to stand.
- Add a cleanable seat – fixed or moveable.
- Some form of handrail or rope for support when moving to and from the seat.

Approach and entry to the unit

The entrance pathway to the latrine should be smooth and compacted. If required to reach the latrine then a slope should be provided with handrails in preference to steps. Enough space should be made available at the top of the slope (and at intermediate points if the slope is long) for resting, manoeuvring and opening and closing doors.



Figure 5.9. Concrete ramp from house to bathing area and toilet.

This concrete ramp with edging to ensure the wheels of the wheelchair do not fall off of the edge has ensured a smooth access way for this child

Ref: Jones and Reed, 2005

Doors

- An entrance door should provide a minimum of 80cm clear space for wheelchair access.
- A door stop is useful which prevents the door from swinging too far if the door opens outwards.
- The user should be able to close the door to the latrine when inside the latrine. See the two examples below for alternative door closing aides.



Figure 5.21. Door-rail extending the full width of the door.

A hand-rail across the width of the door can be easier to hold onto than a single handle

Ref: Jones and Reed, 2005

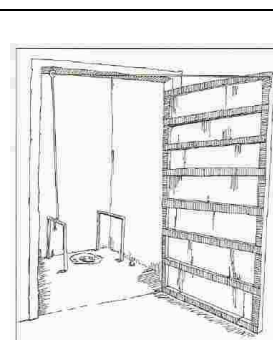


Figure 5.22. String attached to the door threads through a hook. User pulls the string to close the door and ties the end to the handrail.

A rope tied onto the handrail and fed through a pulley to the door, can be pulled by the user to close the door

Ref: Jones and Reed, 2005

Size of the unit

The internal size of the unit required will depend on the layout of the unit and which direction the user enters the latrine versus the position of the latrine itself, the users disability, and what uses the latrine will be used for (for example, just as a latrine, or for bathing or clothes washing as well). The general principle is the more space that can be provided the better.

Inside the unit there should be space:

1. To be able to shut the door when the user is inside.
2. To manoeuvre a wheelchair and move from the wheelchair to the latrine hole or seat.
3. For the carer to be able to assist where required.

Useful dimensions (Jones and Reed, 2005):

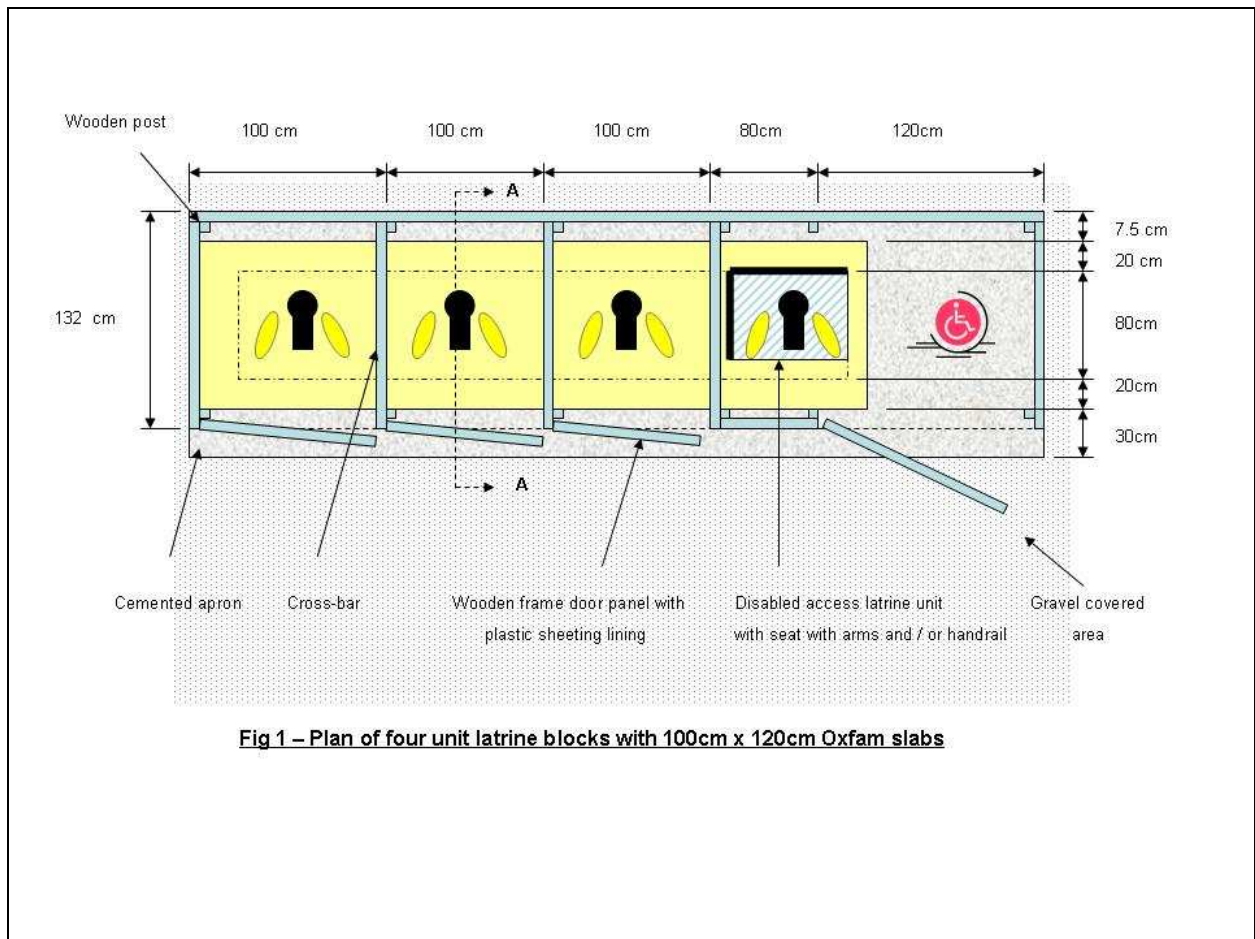
- User and carer by their side - allow 120cm
- Length of wheelchair and carer – max 130cm
- Turning circle for a wheelchair – 150cm diameter

If there are men, women or children who are wheelchair users, then ask one of them to help assist you to physically determining the required sizes and design by asking their advice and manoeuvring in their wheelchair to mark out the area on the ground.



Floor surface

The floor surface of the latrine should be firm and non-slip with good drainage, and also be cleanable. Painting concrete can make it resistant to moisture. A slightly rough surface is helpful for people who use crutches, but it should not be too rough for those who crawl (Jones and Reed, 2005).



Seat or squat plate

People who are unable to walk or who have weak legs, including elderly people, can find seats helpful. Seats can either be fixed or moveable and can come in a range of sizes and shapes. Things to consider when designing a seat:

1. It should not be porous and should be easy to clean.
2. It should be strong enough to support the person's weight.
3. It should not slip, so use locating holes for the legs or bracings to support the seat if this is a risk.
4. The user needs to be able to manoeuvre from either standing position or from a seated position from a wheelchair onto the seat. Make sure this is possible and there is enough space.
5. A solid surface to prevent 'splash back' can be added between the squat hole and the users legs.

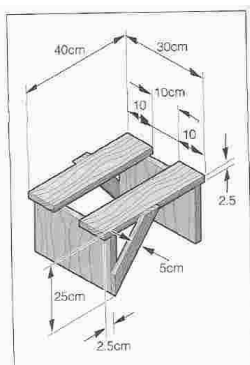


This is a small stool which has been placed over the latrine hole. It does not have a splash guard.

Ref: Jones and Reed, 2005



This wooden seat was used in a unit for disabled persons (one for male and for one female) in a medical camp in response to the Pakistan earthquake. It was varnished for easy cleaning and had strong arms and back. The users reported finding it easy to use.



This small stool can be used by children to place over the latrine hole. If the child sits with his or her legs by the side of the solid wood then this will act as a splash guard.

Ref: Jones and Reed, 2005

Handrails or rope

One of the most useful additions to latrine units is handrails. These can be used to help the user move towards the entrance to the latrine, enter the latrine, move from the standing to squatting position (and vice versa), and for added stability when squatting or sitting. Alternatives to handrails include vertical poles and a rope suspended from a strong beam (see photos).



Figure 7.9. Single horizontal bamboo rail in front of latrine.

A simple bamboo handrail to help with bending for squatting

Ref: Jones and Reed, 2005



Figure 7.11. Two vertical bamboo support poles one on each side of latrine.

Two vertical bamboo poles which can be used for stability when squatting and for assistance when moving from the standing to squatting position

Ref: Jones and Reed, 2005



Figure 7.7. Painted rail fixed to floor and walls.

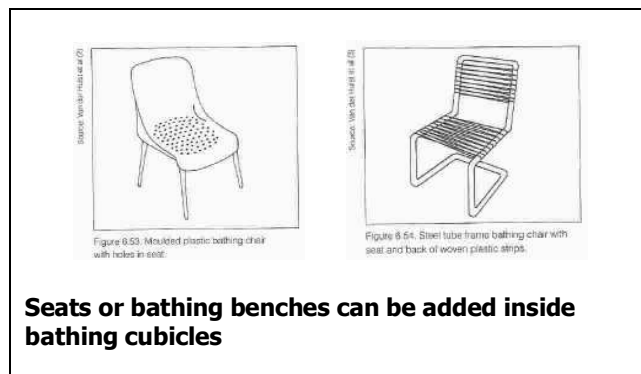
Simple painted metal handrails fixed into the concrete floor and walls. GI / GS pipes and fittings or rolled hollow sections could be used

Ref: Jones and Reed, 2005



A knotted rope suspended from a secure beam and used for balancing and assistance when moving between standing and squatting position

Ref: Jones and Reed, 2005



Seats or bathing benches can be added inside bathing cubicles

Public health promotion

Public health promotion should be an integral part of any excreta disposal programme. Particular attention should be given to the following when the PHP is related to facilities or equipment for use by people with disabilities:

1. Particular attention should be made to ensuring the cleanliness of the floor of the units and the seat as some people may find it difficult to manoeuvre around faeces on the floor, or may have to move along the floor. They will also need to sit directly on the seat.
2. If people are paid to clean the units then they should be trained to be aware of the particular cleanliness needs of these units. If they are family latrines then particular PHP efforts should be made with the family members to ensure cleanliness.
3. Where users are bed-bound the carers may have additional needs for water containers, bowls, cloths and soap. Discuss with them their needs.



Hand-washing and bathing facilities

Hand-washing facilities

Hand-washing facilities provided by the latrines should be at a height and location which is easily accessible to both adults and children who have physical disabilities as well as other users.

Bathing facilities

Bathing facilities should be provided as well as latrines, ideally near to the latrines. To make these facilities user friendly for people with disabilities, adding in a washable and easily draining chair or bench (possibly a painted metal frame with woven plastic or rubber strips) can be beneficial as well as ensuring adequate space for the carer to also be present inside the bathing unit.

Bathing facilities should be designed with the same features for accessibility as latrines – easy access, room to manoeuvre and enough room for a carer to stand.

Further information

Jones, H and Reed, R.A. (2005) Water and sanitation for disabled people and other vulnerable groups, WEDC, UK

Werner, D (1998) Nothing about us without us; developing innovative technologies for, by and with disabled persons, Healthwrights, Palo Alto, CA, USA,

<http://www.healthwrights.org/books/nothingabout.htm>