



Basic Level
WSTP
Training of
Trainers
Card Deck



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**World Health
Organization**

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This publication is made possible by the generous support of the United States Agency for International Development (USAID) under Cooperative Agreement No. AID-OAA-11-00015.

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Content has been developed based on the WHO Wheelchair Guidelines and the Wheelchair Service Training Package—Basic Level.



TECHNICAL SKILLS

1

What are the 8 key steps in wheelchair service delivery?



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1

8 key steps in wheelchair service delivery

REFER TO SECTION 3. A2 AND SECTION 3B.1-6 IN THE WSTP TRAINER'S MANUAL. ALSO REFER TO THE CLOZE EXERCISE.

- Step 1: Referral and appointment
- Step 2: Assessment
- Step 3: Prescription (selection)
- Step 4: Funding and ordering
- Step 5: Product (wheelchair) preparation
- Step 6: Fitting
- Step 7: User training
- Step 8: Maintenance, repairs and follow-up

TECHNICAL SKILLS

2

How can you tell if
a person is sitting
upright from the side
and from the front?



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2

How to tell if a person is sitting upright

■ From the side:

- ◆ pelvis upright
- ◆ trunk upright, back following the three natural curves
- ◆ hips flexed near 90 degrees
- ◆ knees and ankles flexed near 90 degrees
- ◆ knees directly below the knees or slightly forward or back
- ◆ feet flat on the floor or on footrests

■ From the front:

- ◆ pelvis level
- ◆ shoulders level, relaxed and arms free to move
- ◆ legs slightly open (abducted)
- ◆ head upright and balanced over the body

TECHNICAL SKILLS

3

There are four stages in the development of pressure sores, from mild to severe.

What advice must you give a wheelchair user with a pressure sore in each of these stages?



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Advice for a user with pressure sores in each stage

REFER TO SECTION 3, A5 AND SECTION B.13.3 IN THE WSTP TRAINER'S MANUAL

■ Stage 1

Remove pressure from area immediately and keep pressure off until skin has fully recovered. This may mean bed rest. Identify the cause of the pressure sore and address it. Teach the wheelchair user how pressure sores are formed and how to prevent them.

■ Stage 2 and 3

Same as above PLUS refer for treatment to an experienced health care worker. Open sores will need cleaning, dressing and close monitoring to avoid infection.

■ Stage 4

May require surgery.

TECHNICAL SKILLS

4

What are 8 ways to prevent pressure sores?



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8 things to prevent pressure sores

REFER TO CARD 22 AND CHAPTER 3.A6 IN WSTP TRAINER'S MANUAL

1. Use a pressure relief cushion
2. Sit upright
3. Use pressure relief techniques
4. Eat well and drink plenty of water
5. Avoid friction
6. Avoid moisture
7. Check skin every day
8. While lying down or sitting, change positions regularly

TECHNICAL SKILLS

5

What are 6 things
an assistant needs
to consider or do
before starting a
transfer?



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6 things to check before starting a transfer

REFER TO CHAPTER 3A.8 IN WSTP TRAINER'S MANUAL

1. Put the brakes on
2. Remove foot/arm rests that are in the way
3. Check where you are going—make sure nothing is in the way
4. Always lift. Bumping or dragging could cause skin damage leading to pressure sores
5. Make sure you can support the user's weight
6. Do not lift if you are pregnant or have a back problem

TECHNICAL SKILLS

6

What are 6 objectives of the Basic WSTP?



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6 objectives of the Basic WSTP

REFER TO THE INTRODUCTORY SECTION OF THE WSTP
BASIC LEVEL TRAINER'S MANUAL

- 1.** Increase the number of wheelchair users who receive a wheelchair which meets their needs.
- 2.** Increase the number of wheelchair users who receive training in the use and maintenance of wheelchair and how to stay healthy in a wheelchair.
- 3.** Increase the number of personnel trained in basic wheelchair service delivery.
- 4.** Improve the competencies of wheelchair service delivery personnel.
- 5.** Increase the quality of wheelchair service delivery.
- 6.** Achieve greater integration of wheelchair service delivery within rehabilitation services.

7

How do the following conditions affect the choice of a wheelchair:

- Cerebral palsy
- Polio
- Spinal cord injury
- Stroke victims
- Double amputees
- Elder persons
- People with spasms



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Conditions that affect the choice of a wheelchair

REFER TO CHAPTER 3B.3 IN WSTP TRAINER'S MANUAL

- 1. People with cerebral palsy** usually need very good support. Refer anyone who needs extra support to someone with intermediate level skills.
- 2. People with poliomyelitis** may require a higher/thicker cushion.
- 3. People with spinal cord injury** are more likely to be at risk for developing a pressure sore. Always prescribe a pressure relief cushion.
- 4. People who have had a stroke** need good support. Moveable footrests are helpful if s/he can do a standing transfer.
- 5. Double amputees** are at risk of tipping their chair. Always be careful when an amputee first tries a wheelchair.
- 6. Elderly people** need good support and if they can do a standing transfer, moveable footrests.
- 7. People with spasms** may require safe back wheel position and straps to avoid tipping.
- 8. People with bowel or bladder control problems** may need more than one cushion with a waterproof cover if at all possible.

TECHNICAL SKILLS

8

What 4 physical abilities will affect how a wheelchair user pushes?



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4 physical abilities that affect how a user pushes

REFER TO CHAPTER 3B.4 IN WSTP TRAINER'S MANUAL

- 1. Strength and control of arms**
- 2. Strength and control of legs**
- 3. Ability to sit upright**
- 4. Overall stability and control**

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If a wheelchair user is going to be pushed by an assistant, how will this affect the choice of a wheelchair?

Describe the requirements for adults and children.



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How being pushed affects the choice of a wheelchair

REFER TO CHAPTER 3B.5 IN WSTP TRAINER'S MANUAL

- **For adults**

Strong push handles

- **For children**

High push handles, making it easier for adults to push them

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List 3 ways to lengthen
a seat

List 2 ways to shorten
a slung seat

List 2 ways to shorten
a rigid seat

■ Lengthen the seat

- ◆ Extend the seat rails
- ◆ Replace upholstery
- ◆ Add a rigid board with a cushion.

■ Shorten (slung seat)

- ◆ Mark the depth that is needed on the existing seat
- ◆ Remove the upholstery and shorten or replace it

■ Shorten (rigid seat)

- ◆ Remove the seat, shorten it and replace it
- ◆ Shorten the cushion to match the new depth

TECHNICAL SKILLS

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List 2 ways to adjust
a footrest that is
too low.

List 2 ways to adjust
a footrest that is
too high.



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■ Too low

- ◆ Shorten the footrest hanger
- ◆ Build up the footrests using wood or another sturdy material

■ Too high

- ◆ Lengthen the inner extension tube
- ◆ Increase the height of the cushion

NB: If you cannot do either, the wheelchair may not be suitable.

TECHNICAL SKILLS

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What are 4 things
you can do when
the user's legs roll
inwards or outwards?



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- 1. Use wedges to support the thighs in neutral**
- 2. Provide a contoured cushion**
- 3. Double check the footrests height and adjust if incorrect**
- 4. Check if the wheelchair is properly tensioned (a saggy seat will encourage the user's legs to roll inward)**

TECHNICAL SKILLS

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What are 3 ways
you can prevent
the user's feet
from sliding off the
footrests?



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- 1. Double check the footrests' height**
- 2. Adjust the footrests' angle**
- 3. Add a strap that can be easily reached and removed by the user**

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What can you do if
the wheelchair is
too wide?



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If the wheelchair is wide

REFER TO CHAPTER 3B.10.1 IN WSTP TRAINER'S MANUAL

- Use foam inserts or, in the case of a slung seat, tighten the fabric.

TECHNICAL SKILLS

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What are 7 skills
a new wheelchair user
has to learn?



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- 1. How to stop pressure sores from developing** (*See cards 3&4, 19-22*)
- 2. How to handle the wheelchair**
- 3. How to get in and out of the wheelchair**
- 4. How to move around in the wheelchair on different surfaces**
- 5. What to do if there is a problem with the wheelchair**
- 6. How to look after the wheelchair and cushion**
- 7. What organizations or services in the area may be helpful to them**

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What are 4 ways to
make follow-up more
likely to happen?



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- 1. Make a follow-up appointment** when the user first receives the wheelchair
- 2. Visit the user at home** for follow-up if you can
- 3. Make follow-up visits part of routine** visits to communities by community-based personnel who have been trained to carry out follow-up
- 4. Arrange a follow-up phone call** where transport is difficult and the wheelchair user has access to a phone

TECHNICAL SKILLS

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Name the 3
movements of the
pelvis



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- forward pelvic tilt
- backward pelvic tilt
- lateral tilt and rotation

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What are the
4 characteristics
of an appropriate
wheelchair?



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- 1. It meets the user's need and environmental conditions**
- 2. It provides proper fit and postural support**
- 3. It is safe and durable**
- 4. It can be locally obtained, maintained and serviced in a sustainable manner at the most affordable and economic price**

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List the 3 causes of pressure sores and explain each



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■ Pressure

is caused by pressure on skin from sitting or lying in the same position without moving

■ Shear

is when the skin stays still and is stretched or pinched as muscles or bones move

■ Friction

is constant rubbing on the skin

TECHNICAL SKILLS

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List 6 parts
of the body where
pressure sores
are most often seen.



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1. Seat bones
2. Tail bone (coccyx)
3. Base of spine (sacrum)
4. Hip bones
5. Shoulder blades
6. Spine

TECHNICAL SKILLS

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List 10 risk factors
that contribute to
pressure sores.



1. Cannot feel or move
2. Moisture from sweat, water, incontinence
3. Poor diet, not drinking enough water
4. Aging
5. Weight (under- or overweight)
6. Poor posture
7. Previous or current pressure sore
8. Trauma, bumps or knocks
9. Heat/fever
10. Insect bite

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List 2 safe methods
of pressure relief for
wheelchair users



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■ Bend forward

Use this method frequently during the day. People with good balance and strength can do this on their own; those with poor balance and strength will need someone to help them.

■ Side to side leaning

For users with limited strength and balance, hook arm around push handle for extra support.

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Once a wheelchair
is ready
(safe to use and all
parts are working),
what other 4 things
do you need to
check?



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1. Size and adjustments
2. Posture
3. Pressure
4. Fit when in motion

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List 4 different ways of transfer (including conditions for independent transfers).



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- **Independent transfer through sitting (wheelchair to bed/floor to wheelchair)**
User can lift weight upward by pushing with arms.
- **Independent transfer through standing**
User can stand up and take own weight through the legs.
- **Assisted transfer through sitting with transfer board (wheelchair to bed)**
- **Assisted standing transfer (bed to wheelchair).**

25

Explain how you will do the finger pressure test to see if a pressure relief cushion is working and explain the 3 possible findings (levels).

- 1. Explain to the user what you are going to do.**
- 2. Sit behind the wheelchair and ask the user to push up or lean forward so you can put your finger tips under their left or right seat bone (palm up) and then ask them to sit down on your fingers, sitting upright, face forward with hands on thighs.**
- 3. Identify pressure by level:**
 - ◆ **Level 1=safe**
(fingers can wiggle 5mm up or down)
 - ◆ **Level 2=warning**
(fingers cannot wiggle but can easily slide out)
 - ◆ **Level 3=unsafe**
(fingers are squeezed firmly, hard to slide out).

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What are 3 features
of a pressure care
cushion?



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1. **A firm and stable base** that matches the size of the seat and doesn't slide.
2. A top layer (one or more) of **softer foam** that allows seat bones to sink into it.
3. **Shaping** (contours) provides a well for sit bones and a shelf in front of the sit bones and supports (grooves) for the thigh bones.

TECHNICAL SKILLS

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For wheelchair fitting, what 5 measurements do you need to take and why?



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■ Hipwidth

(or widest part of thighs) to determine width of seat

■ Back of pelvis to back of knee

Subtract 30-55 mm to get seat depth.

■ Back of the knee to base of the heel

to determine seat height

■ Seat to bottom of rib cage

to determine height of backrest for users who are fit and active and can sit upright easily with good balance

■ Seat to bottom of shoulder blade

to determine height of backrest for users who tire easily and have difficulty sitting upright.