



World Health
Organization

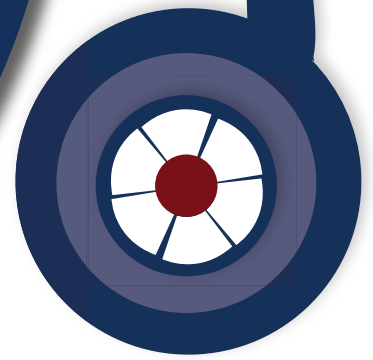


USAID
FROM THE AMERICAN PEOPLE

WHEELCHAIR SERVICE TRAINING PACKAGE

Trainer's Manual

INTERMEDIATE LEVEL





World Health
Organization

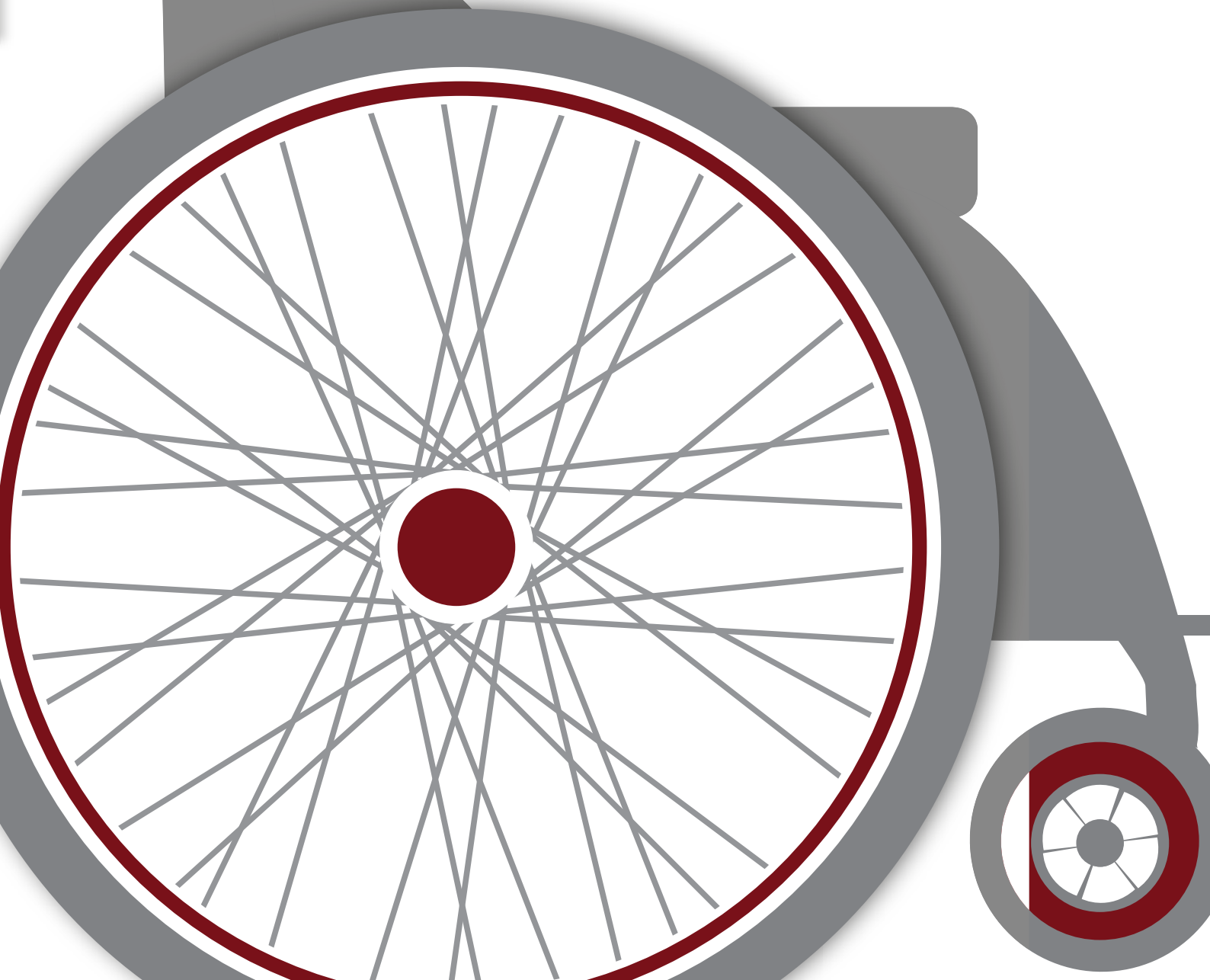


USAID
FROM THE AMERICAN PEOPLE

WHEELCHAIR SERVICE TRAINING PACKAGE

Trainer's Manual

INTERMEDIATE LEVEL



Contributors:

Editors:	Chapal Khasnabis and Kylie Mines
Authors:	Sarah Frost, Kylie Mines, Jamie Noon, Elsje Scheffler, and Rebecca Jackson Stoeckle
Peer reviewers:	Natasha Altin, Bill Armstrong, Johan Borg, Andrew Congdon, Nejla Essaafi Elkhadiri, Ritu Ghosh, Lauren Houppapa, R. Lee Kirby, Shona McDonald, Ray Mines, Alana Officer, Cher Smith, Mark Sullivan, and Diane E. Ward.
Illustrator:	Melissa Puust
Photo credits:	David Constantine, Jesse Moss, and Chapal Khasnabis
Video credits:	Chapal Khasnabis, Amanda McBaine, and Jesse Moss
Pilot trainers:	Andrew Congdon, Mirela Creanga, Nancy Mbugua, Charles Kanyi, Norah Keitany, Katharina Kiss, Seraphine Ongogo, Gabriela Raducan, and Andrew Rose
Financial support:	US Agency for International Development and Australian Agency for International Development
Partner organizations:	ASSERT East Timor, Association for the Physically Disabled of Kenya (APDK), Community Based Rehabilitation Unit of Solomon Islands Ministry of Health and Medical Services, Education Development Center (EDC), Handicap International, International Committee of the Red Cross (ICRC), International Society for Prosthetics and Orthotics (ISPO), Kilimanjaro Association of the Spinally Injured (KASI), Mobility India, Motivation Australia, Motivation Charitable Trust (Motivation), Motivation Romania, and Tanzania Training Centre for Orthopaedic Technologists (TATCOT)

WHO Library Cataloguing-in-Publication Data

Wheelchair service training package: intermediate level / edited by Chapal Khasnabis and Kylie Mines.

1. Wheelchairs – standards. 2. Disabled persons – rehabilitation. 3. Teaching materials. I. Khasnabis, Chapal. II. Mines, Kylie. III. World Health Organization.

ISBN 978 92 4 150576 5 (NLM classification: WB 320)

© World Health Organization 2013

All rights reserved. Publications of the World Health Organization are available on the WHO web site (www.who.int) or can be purchased from WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel.: +41 22 791 3264; fax: +41 22 791 4857; e-mail: bookorders@who.int).

Requests for permission to reproduce or translate WHO publications –whether for sale or for non-commercial distribution– should be addressed to WHO Press through the WHO web site (www.who.int/about/licensing/copyright_form/en/index.html).

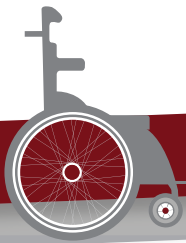
The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

Printed in Malta

Design by Inis Communication – www.iniscommunication.com



Terminology

The following terms used throughout the training package are defined below.

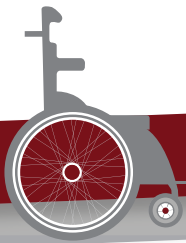
Appropriate wheelchair	A wheelchair that meets the user's needs and environmental conditions; provides proper fit and postural support; is safe and durable; is available in the country; and can be obtained and maintained and services sustained in the country at an affordable price.
Manual wheelchair	A wheelchair that is propelled by the user or pushed by another person.
Postural support device (PSD)	A physical device that provides additional postural support – an essential element of intermediate level wheelchair service.
Wheelchair	A device providing wheeled mobility and seating support for a person with difficulty in walking or moving around.
Wheelchair modification	A change made to a wheelchair.
Wheelchair provision	An overall term for wheelchair design, production, supply and service delivery.
Wheelchair service	That part of wheelchair provision concerned with providing wheelchair users with appropriate wheelchairs.
Wheelchair service personnel	Persons skilled in the provision of an appropriate wheelchair.
Wheelchair user	A person who has difficulty walking or moving around and uses a wheelchair for mobility.

CONTENTS

1	About the Wheelchair Service Training Package: Intermediate Level
1	Introduction
2	Target audience
2	Purpose
3	Scope
3	Trainers
4	How to get started
5	1. Guidance notes for trainers
5	1.1 Training overview
6	1.2 Training package timetable and duration
6	1.3 Session plans
7	1.4 PowerPoint presentations
7	1.5 Observing/monitoring participants' progress
8	1.6 Evaluating the training programme after each delivery
8	1.7 Good practice training tips
10	2. How to prepare to deliver the training package
10	2.1 Know the participants' wheelchair service network
10	2.2 Clarify the participants' role in wheelchair service delivery
10	2.3 Review each session plan and adjust if necessary
11	2.4 Identify the wheelchairs, cushions and postural support devices that will be used
11	2.5 Invite wheelchair users for practical sessions
13	2.6 Plan groups for practical sessions
14	2.7 Prepare facilities
15	2.8 Prepare the training resources and materials

21	3. Detailed session plans
22	Introduction
29	A: Core knowledge
30	A.1: Wheelchair users who benefit from additional postural support
41	A.2: Children with disabilities
51	B: Wheelchair service steps
52	B.1: Assessment overview and assessment interview
60	B.2: Physical assessment – sitting posture without support
77	B.3: Physical assessment – pelvis and hip posture screen
96	B.4: Physical assessment – hand simulation
104	B.5: Physical assessment – taking measurements
114	B.6: Selecting wheelchairs and cushions
126	B.7: Prescription (selection) of Postural Support Devices (PSDs) – introduction
132	B.8: Prescription (selection) of PSDs – stabilizing the pelvis
147	B.9: Prescription (selection) of PSDs – supporting the hips
154	B.10: Prescription (selection) of PSDs – supporting the trunk
164	B.11: Prescription (selection) of PSDs – supporting the head, thighs and lower legs
176	Practical One: Assessment and prescription (selection)
180	B.12: Product (wheelchair) preparation
191	Practical Two: Product (wheelchair) preparation
194	B.13: Fitting
205	B.14: User training
212	Practical Three: Fitting and user training
217	B.15: Putting it all together
219	B.16: Maintenance, repairs and follow up
227	Practical Four: Assessment, prescription (selection), product (wheelchair) preparation, fitting and user training.
232	B.17: Trainer’s feedback, discussion and closing ceremony

235	Annexes
235	Annex 1: Timetable for intermediate wheelchair service training package
237	Annex 2: Intermediate Wheelchair Referral Form
238	Annex 3: Intermediate Wheelchair Assessment Form
243	Annex 4: Intermediate Wheelchair Prescription (Selection) Form
245	Annex 5: Intermediate Wheelchair Summary Form
246	Annex 6: Intermediate Wheelchair Safe and Ready Checklist
247	Annex 7: Intermediate Wheelchair Fitting Checklist
249	Annex 8: Intermediate Wheelchair User Training Checklist
251	Annex 9: Wheelchair Follow Up Form
252	Annex 10: Postural Support Device (PSD) Table
253	Annex 11: Wedges of firm foam
254	Annex 12: Wheelchair users list for practical sessions



About the Wheelchair Service Training Package: Intermediate Level

Introduction

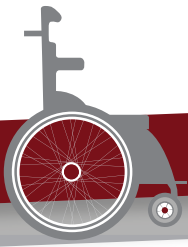
Following the release in 2008 of the **Guidelines on the provision of manual wheelchairs in less resourced settings**⁽¹⁾ and in 2012 of the **Wheelchair Service Training Package–Basic level (WSTP-B)**; the World Health Organisation (WHO) in partnership with United States Agency for International Development (USAID) has developed this **Wheelchair Service Training Package–Intermediate Level (WSTP-I)**. The WSTP Intermediate Level is the second part of the WHO **Wheelchair Service Training Package (WSTP)** series focussing more on addressing the needs of people who have severe difficulties in walking and moving around and also poor trunk control. While developing this training package, special attention was given on provision of appropriate wheelchair for children who have poor trunk control and cannot sit upright on their own.

The wheelchair is one of the most commonly used assistive devices for enabling personal mobility, but there are often very few training opportunities for service providers to ensure that wheelchair users can attain personal mobility with the greatest possible independence, be productive and enjoy a good quality of life.

The need for wheelchair personnel is universal. The **Wheelchair Service Training Package–Intermediate Level** is intended to support the training of personnel fulfilling the clinical and technical roles in a wheelchair service (see *Guidelines on the provision of manual wheelchairs in less resourced settings*, Table 4.2) at intermediate level. The Training Package supports the delivery of the theory and practice needed to begin working with wheelchair users who require additional postural support in order to be able to sit upright. The training package includes how to assess individual needs; assist in selecting and setting up the most appropriate wheelchair with additional postural support; train users and caregivers how to use and maintain their wheelchair and carry out follow up.

The training package can be delivered in 35–40 hours, although this period may be extended or reduced according to the specific needs and resources available in

¹ World Health Organization. *Guidelines on the provision of manual wheelchairs in less resourced settings*. Geneva, 2008 (<http://www.who.int/disabilities/publications/technology/wheelchairguidelines/en/index.html>, accessed 15 December 2011).



each context. Further practise with a mentor is encouraged to build competencies and enhanced capacity for independent work.

Wheelchair Service Training Package – Intermediate Level is intended to be delivered as a stand-alone short training programme for personnel already working in the field as well as integrated into the curricula of training programmes for health and rehabilitation personnel.

Target audience

This training package is for all personnel or volunteers working who are expected to carry out intermediate level wheelchair service delivery in their place of work. This may include health, rehabilitation or technical personnel, community health-care workers, community-based rehabilitation (CBR) workers, occupational therapists, physiotherapists, prosthetists, orthotists, local craftsmen, technicians and wheelchair users.

Previous experience in wheelchair service delivery is essential for participants to gain the most from this intermediate level training. The intermediate level training programme has been designed assuming that participants are able to demonstrate the competencies taught in the Wheelchair Service Training Package – Basic Level and have practical experience in basic level wheelchair service delivery.

Purpose

The Intermediate Level Training Package is designed to support the training of personnel or volunteers to provide an appropriate manual wheelchair and cushion for girls, boys, women and men *who need additional postural support to sit upright*.

The main purpose of this training package is to develop the skills and knowledge of personnel involved in wheelchair service delivery. Delivery of this training package will help to:

- increase the number of wheelchair users who receive a wheelchair, which meets their needs;
- increase the number of personnel trained in intermediate level wheelchair service delivery;
- improve the competencies of wheelchair service delivery personnel;
- increase the quality of wheelchair service delivery for people who need comparatively a higher level of intervention than basic level;

- include this training package in regular paramedical/rehabilitation training programmes and
- achieve greater integration of wheelchair service delivery within rehabilitation services.

Scope

The training package includes:

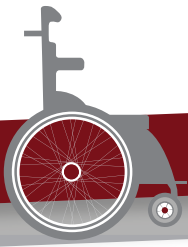
- how to assess mobility and posture support needs of children and adults who need wheelchair with additional postural support
- how to work with them to identify the best possible mobility solution;
- knowledge and practical tips necessary to provide a manual wheelchair with an appropriate cushion and additional postural support;
- training of wheelchair users and where appropriate their family members/ caregivers to make the best use of their wheelchair;
- following up wheelchair users to ensure that their wheelchair continues to meet their needs.

Trainers

Skills: Trainers delivering this training package should be skilled in the assessment and prescription of wheelchairs for people who need additional postural support. Trainers should also be able to carry out or direct the preparation of a manual wheelchair with postural support devices using locally available products, materials and tools. Trainers should have considerable clinical skills in the field of wheelchair service delivery themselves, enabling them to draw on their own practical experience in the delivery of this training. Previous experience as a trainer will also be beneficial.

Wheelchair users: Inclusion of a wheelchair user on the training team is highly recommended. Wheelchair users are able to draw on their own experiences to teach others with similar disabilities. Being trained by a wheelchair user will help the participants to appreciate the central role that wheelchair users play in the selection of their own wheelchair.

Number of trainers: It is recommended that there are two trainers for every 8–10 participants. This ratio is particularly important for practical sessions, so that trainers can give participants good support and feedback and ensure that all involved can practise safely. Having an experienced wheelchair user, who knows the subject and training package well, can be an asset during the training programme.



Technical support: In order to manage the practical sessions that are an important component of this course, trainers are encouraged to have at least one wheelchair technician experienced at intermediate level available to assist during practical sessions.

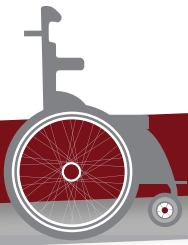
How to get started

1. Copy the disc (inside the folder) to the hard drive of the computer to be used during training. At least 6GB of free storage space is needed on the hard drive.
2. Click on the file titled 'START'. From here, trainers can navigate to the different WSTP Intermediate resources. Trainers may also access the same resources through the folder hierarchy.
3. Open the Trainer's Manual
 - 3.1 Read the sections About the Wheelchair Service Training Package and Guidance Notes for Trainers and
 - 3.2 Order or print and bind one copy of the Trainer's Manual for each trainer (where printed copies are not already available).
4. Open the timetable and click the hyperlinks of each session, to access the session presentations and videos. Review each session working through the presentation and session plan (trainer's manual) to become very familiar with the content, resources and methodology.
5. Follow the guidance notes in the section 'How to prepare to deliver the training package' to ensure that all necessary preparations are made well in advance of delivering the training. Prepare all training resources and materials, as suggested in the section "How to Prepare to Deliver the Training Package".
6. The best way to deliver the training is to proceed through the lessons in sequential order respecting time allotted for each session as much as possible.
7. At the beginning of the training – give the participants a full set of training materials including: the Reference Manual (1 per participant), Participant's Workbook (1 per participant) and a set of posters (1 set per participant). If you do not have these in stock, they can be printed from the disc.

I. Guidance notes for trainers

I.1 Training overview

			Minutes	Day	
Welcome, introduction and overview		Introduction	60	One	
A: Core knowledge					
Sessions , which give participants the background knowledge needed to undertake the wheelchair service step sessions.	A.1	Wheelchair users who benefit from additional postural support	60		
	A.2	Children with disabilities	60		
B: Wheelchair service steps				Two	
Assessment	B.1	Assessment overview and assessment interview	90		
	B.2	Physical assessment – sitting posture without support	90		
	B.3	Physical assessment – pelvis and hip posture screen	120		
	B.4	Physical assessment – hand simulation	60		
	B.5	Physical Assessment – taking measurements	60		
Prescription (selection)	B.6	Selecting of wheelchairs and cushions	60	Two	
	B.7	Prescription (selection) of PSDs – introduction	30		
	B.8	Prescription (selection) of PSDs – stabilizing the pelvis	90		
	B.10	B.9	Prescription (selection) of PSDs – supporting the hips	45	Three
		B.10	Prescription (selection) of PSDs – supporting the trunk	105	
		B.10	Prescription (selection) of PSDs – supporting the trunk	45	
B.11	Prescription (selection) of PSDs – supporting the head, thighs and lower legs	120			
Practical One: Assessment and prescription (selection)			120	Three	
Product (wheelchair) preparation	B.12	Product (wheelchair) preparation	60	Four	
Practical Two: Product (wheelchair) preparation			150		
Fitting	B.13	Fitting	60		
User training	B.14	User training	60	Four	
Practical Three: Fitting and user training			150		
	B.15	Putting it all together	120	Five	
Maintenance, repairs and follow up	B.16	Maintenance, repairs and follow up	60		
Practical Four: Assessment, prescription (selection), product (wheelchair) preparation, fitting and user training			300		
	B.17	Trainer's feedback, discussion and closing ceremony	60		



1.2 Training package timetable and duration

This training package may be delivered on consecutive days or in blocks over a period of time. The minimum length of time needed to teach the complete intermediate level training package is 35–40 hours. An estimate of the time needed to teach each session is included in the session plan.

Note: The actual time taken to teach each session will vary depending on the following factors:

- the experience and skills of participants;
- the overall number of participants;
- the number of locally available wheelchairs;
- the amount of time required to adjust and prepare wheelchairs;
- whether there is a need for translation during sessions; and
- whether additional material is included.

Depending on these factors more or less time may be needed to complete the training programme.

A sample five day timetable is provided in Annex I. This timetable and a blank timetable template are also available on the DVD.

Trainers are strongly encouraged to adapt and modify the timetable to suit the local context and the learning needs of participants. For example:

- sessions from the training package may be incorporated into existing health or rehabilitation programmes;
- wherever rehabilitation personnel already have training in some aspects of the training programme, the corresponding sessions may not be required;
- where preparation of wheelchairs requires additional time (for example full assembly is required) it may be necessary to reduce the number of wheelchair users seen in the practical sessions or increase the time allowed.

1.3 Session plans

For each session there is a session plan, which guides trainers in delivering the session. At the beginning of each session plan is the following information:

- **Objectives:** what the participant should be able to do at the end of the session;
- **Resources:** what resources are needed for the session;
- **Context and prior learning:** how the session may need to be adapted for different contexts (or situations) and what prior learning or competencies are expected of participants;

- **To prepare:** how to prepare for the session;
- **Outline:** an outline of the main parts of the session.

The rest of the session plan is divided into topics. For each topic, the session plan gives instructions on how to teach the information for that topic. Note:

- words in bold are actions for the trainer (for example: **ask, demonstrate, explain, show DVD**)
- shaded boxes give answers to questions asked by the trainer – encourage participants to think of the answers themselves.

At the end of every session plan is a summary of the key points. Instead of reading the key points, trainers may ask participants questions to encourage them to identify the key points.

By following the session plans carefully, trainers will be able to teach each session well and on time. Session plans provide all of the necessary key points and practical skills that should be covered. Trainers are encouraged to bring their own knowledge, skills and style to the session.

1.4 PowerPoint presentations

There are PowerPoint (PPT) slide presentations for almost every session. Trainers should note that only the key points are written on the slides. Trainers should provide the information given next to each slide in the Trainer's Manual to make sure that every point is covered. Try to avoid reading out the slides. Instead refer to the Trainer's Manual.

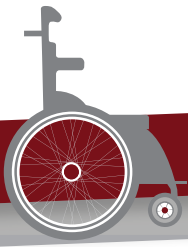
1.5 Observing/monitoring participants' progress

Trainers should monitor closely the progress of each participant. The best opportunity to observe progress is during practical sessions.

A trainer's observation checklist for each practical session can be found on the DVD.

Trainers should use this checklist to:

- Help them observe the progress of each group of participants during each practical session;
- Record examples of good practice and practice needing improvement – to be discussed during each feedback session.



The Trainer's observation checklist may be modified and/or further developed by trainers wishing to gather more detailed information about the progress of each participant.

1.6 Evaluating the training programme after each delivery

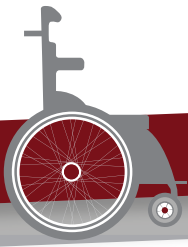
It is a good practice to evaluate the training programme after it has been delivered. Trainers can gather feedback from participants regularly throughout the training programme. Trainers may also record their own thoughts about the training programme as it is delivered. This information can help them to evaluate the training programme at the end, including identifying strengths and weaknesses. This will help trainers to improve both the training package itself and their own skills for delivery in their context for the future.

Training programme evaluation forms are available on the DVD. Trainers may wish to adapt or build on these forms in order to meet their needs.

1.7 Good practice training tips

Be prepared	<ul style="list-style-type: none">• read each session plan carefully before training starts;• make sure you are confident of the material you are delivering;• gather training resources and prepare the training room well.
Model good practice for a wheelchair service	<ul style="list-style-type: none">• respect for participants and wheelchair users;• show care in your work;• be aware at all times of safety in the training room;• be punctual and run sessions according to the timetable.
Present information clearly	<ul style="list-style-type: none">• speak clearly and calmly;• check to make sure everyone in the training room can hear you;• ask questions to check that you have been understood;• make sure your writing on the whiteboard can be read by everyone;• repeat important points to reinforce them.
Manage session time	<ul style="list-style-type: none">• note the time allowed for each session and work to keep to time;• if it is likely that additional time will be needed, plan for this at the beginning;• be sure to complete all the sessions planned for a given day.
Give clear and careful demonstrations	<ul style="list-style-type: none">• make sure everyone can see clearly;• explain what will happen and describe what you are going to do;• demonstrate slowly and repeat if necessary.

Build participants' skills	<ul style="list-style-type: none"> • always follow demonstrations with an opportunity for participants to practise; • remember that new learners need time to understand new information.
Build success in the small group activities	<ul style="list-style-type: none"> • observe group activities closely and give help if needed; • ensure that you circulate between the small groups and check the progress of each group.
Be aware of language differences	<ul style="list-style-type: none"> • if participants are learning in their second language, check they understand – slow down if necessary; • be aware of language differences among wheelchair users and their caregivers; • use interpreters where necessary.
Encourage participants to be active and engaged throughout the training	<ul style="list-style-type: none"> • use the different training styles and methods given in the session plans; • avoid talking too much – encourage participants to speak and discuss themselves; • ask questions to encourage participants to think about the answers themselves, rather than always telling them the answer; • encourage everyone to speak, don't let one participant dominate; • praise good work from participants and give positive feedback; • let participants know they can ask questions at any time; • link learning to real examples that the participants will recognize; • keep the training fun!
Use short "warm up" activities/games	<ul style="list-style-type: none"> • Use short warm-up activities (5–10 minutes) to help focus attention. Use activities that are inclusive of participants with disabilities.
Consider the needs of people with different abilities	<ul style="list-style-type: none"> • Think about the needs of any participants with visual, hearing or mobility differences. Some activities and teaching approaches may need to be adapted accordingly.



2. How to prepare to deliver the training package

2.1 Know the participants' wheelchair service network

Trainers need to be familiar with the wheelchair provision system at their place of work. This includes:

- the types of wheelchairs, cushions and postural support devices (PSDs) available locally and who supplies them;
- the materials, tools and facilities available for preparing wheelchairs and making PSDs;
- the wheelchair services in the area including the level of service they offer;
- referral networks in the area;
- resource personnel in the area, including wheelchair users who can assist in delivering the training;
- other rehabilitation services to which wheelchair service personnel may refer wheelchair users as required.

2.2 Clarify the participants' role in wheelchair service delivery

Find out how wheelchair service delivery fits within the participants' overall duties at their place of work. For example, will participants be working only in wheelchair service delivery, or do they have other duties as well?

Define the role participants will play in wheelchair service delivery. For example, some personnel may be required to carry out only the clinical or technical aspects covered in the training. Others may fulfil both the clinical and technical roles.

The expected role should be clear before training begins. Trainers can then relate the training directly to the duties expected of participants. Prior to delivering the training, local trainers may need to adapt the training to fit the role participants will carry out within their wheelchair service.

2.3 Review each session plan and adjust if necessary

Review each session plan and allocate a lead trainer for each session.

A number of the training sessions may need to be adjusted to suit the local context. Suggestions for adjusting sessions to different contexts are provided at the beginning of each session plan under the heading 'Context'.

Thank You for previewing this eBook

You can read the full version of this eBook in different formats:

- HTML (Free /Available to everyone)
- PDF / TXT (Available to V.I.P. members. Free Standard members can access up to 5 PDF/TXT eBooks per month each month)
- Epub & Mobipocket (Exclusive to V.I.P. members)

To download this full book, simply select the format you desire below

