EUROPEAN MULTIPLE SCLEROSIS PLATFORM
ANNUAL CONFERENCE
1-4 MAY 2003, MALTA

POST CONGRESS PAPERS
WEBSITE CONTACTS

European Multiple Sclerosis Platform

www.ms-in-europe.org

Multiple Sclerosis International Federation

www.msif.org

European Neurological Society

www.ensinfo.com

Neuron

www.neuron.org

RIMS

www.rims.be

Biogen

www.biogen.com

Pfizer

www.pfizer.com

Schering AG

www.schering.de
ABOUT THE EUROPEAN MS PLATFORM

European Multiple Sclerosis Platform Annual Conference

Quality of Life for Persons with Multiple Sclerosis

What Rehabilitation Can Really Do

The European Multiple Sclerosis Platform (EMSP) was formed in 1991 and has five main aims:

- To promote actively the interests of people affected by MS on an European level
- To act as a focal point of liaison with relevant EU bodies
- To facilitate joint programmes and skill shares between MS societies
- To procure and disseminate information being of interest for our members
- To encourage research related to MS both in medical and non-medical areas

We currently have members from 29 MS societies all over Europe – from Greece in the South to Iceland in the North – from Ireland in the West to Latvia in the East.

The conference this year focuses on rehabilitation and how it affects the quality of lives of persons with MS.

Its aim is to target people with MS and their spouses, carers (both professional and volunteers), MS nurses, social workers and other health care professionals from the MS Societies and MS centres (RIMS), medical experts (neurologists, psychologists and others).

To get in touch with us about any aspect of our work, please contact the President, Peter Kauffeldt or the Secretary General, Christoph Thalheim, at:

Christoph Thalheim
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BELGIUM
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Pharmacoeconomics of Disease Modifying Drugs in MS in the Czech Republic

Delegate List
CONGRESS PROGRAMME

Thursday 1st May 2003

16.00-17.0  Pharmacoeconomics of disease modifying
drugs in MS in Czech Republic  Eva Havrdova

17.00-18.30  Examples of “best practice” – How
MS Rehabilitation Centres were set
up in Estonia, Slovenia  Mateja de Reya
Katrin Gross

19:00  Welcome Reception

Friday 2nd May 2003

Topic of the Morning: What Rehabilitation in MS Really Means
Chair: Jurg Kesselring

09:45-10:00  Welcome and Official Opening  Peter Kauffeldt
Introduction to the European  Leslie Agius
Year of People with Disabilities  Ray Busuttil

10:00-11:00  What is Rehabilitation – How to
Measure its Success  Jurg Kesselring

11:00-11:45  Different stages of MS – What are
the appropriate rehabilitation measures
for “in-patients”, “out-patients” and
and at home  Pierre Ketelaer
12:00-12:30  A new way for young “newly diagnosed” people in Denmark – Empowerment instead of despair  Brita Loevendal

12:30-12:45  Introduction to parallel workshops  Alan Cook

Topic of the afternoon:  Practical Aspects of Rehabilitation

14:30-16.00

1. Managing Fatigue  Marijke Duportail  Belgium

2. MS and Emotional Problems: How to cope with These – What Kind of Support is Useful?  Marianne Bache  Denmark

3. Telecommunication as Means for self-help in MS  Pierre Ketelaer  Belgium

4. Communication Limitations: How to Detect and Fight Them  Guy Ganty  Belgium

5. “Uro-Rehabilitation” An important tool to treat urinary dysfunction  Maria Lopes de Carvalho  Italy

6. Innovative models for Physiotherapy in the UK  Jill Anderson  Tracey Mifflin  U.K.
17:30-18:30 How to make a workshop report lively and interesting for the plenary session – tips and hints for “rapporteurs”

Alan Cook

19.30 Gala Dinner

Saturday 3rd May 2003

Topic of the Morning: Report from the Workshops Chair: Alan Cook

09:00-09.20 Report from Russia Yan Vlasov
Igor Stolyarov

09.20 – 10.15 Reports from Workshop 1, 2 and 3 Plenary Discussion

10:45-12.00 Reports from Workshop 4, 5 and 6 Plenary Discussion

12.00 – 12.30 Summary of results of the Workshops “Take home messages”

12:45- 14.30 Lunch break – Kon Tiki Restaurant – 1st Floor

14.30-16.30 Further developments in the Field Of rehabilitation in Europe – what Persons with MS can expect from RIMS and EMSP on a political level Pierre Ketelaer
Peter Kauffeldt
Frans Nijhuis

17:30 Discover Malta tour

Sunday 4th May 2003 Departure Day
CONTACT DETAILS OF SPEAKERS AND FACILITATORS

Jill Anderson
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Jill has been working for the MS Society since August 2001. Prior to that she was working as a physiotherapist in a community neurological team. Jill qualified as a physiotherapist in 1986 and has been working in neurology for the past 10 years. She is responsible for managing the MS Society physiotherapy service development programme.

Marianne Bache
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Marianne is head of the Counselling Department of the Danish MS Society, consisting of 20 professionals and around 50 volunteer advisors. The department offers support for members and their families with respect to medical, psychological and social issues. Marianne is a psychologist specialised in organisational psychology and also works as a counsellor for persons with MS and their relatives.
Alan Cook
Facilitator
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Alan Cook runs Collaborate, which specialises in working creatively with people in organisations through dynamic and interactive approaches to training, coaching, teambuilding, facilitation and consulting. He also works for Edgecumbe Consulting Group and the TUC’s Partnership Institute as an associate, offering assessment and training in the areas of appraisal, management development, leadership, partnership working and business research. Prior to SDL Alan worked as an organisational development consultant within the NHS and other public sector areas, responsible for many years for top level management development programmes.

Mateja De Reya
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In 1996 Mateja De Reya was appointed as Secretary General of the Slovenian MS Society. As a legal adviser by education, her responsibilities as a senior fulltime staff member include execution of diverse social services for PwMS provided by the Slovenian MSS, management of rehabilitation for all PwMS regardless of their membership in the Slovenian MSS, management of human resources (employees and volunteers), preparation of plans and reports for diverse governmental and non-governmental Institutions who fund the Slovenian MSS.
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Marijke is currently Head of the Occupational Therapy Department in the rehabilitation department of The National MS Centre. She is specialised in home adaptations, adapted devices and energy conservation and has an advisory role to newly diagnosed persons with MS on these issues.

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Guy has been Head of the Speech Therapy Department at the National MS Centre since 1976. He is Chairman of the Clinical Care Committee on Communication and Swallowing Disorders for RIMS.

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Katrin is currently the head of the Estonian MS Centre. She was one of the founders of the Estonian MS Society in 1990 and also the founder of the Estonian MS Clinic in 1997 and MS Centre in Tallinn in 1999. She is especially interested in bladder dysfunction and depression in MS and of course, as a neurologist in new DMT in MS.
Katharina Grössing
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From Vienna, Austria.
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Katharina is a politics and theatre (film,media) student from Vienna. In the summer of 2002 she took a time-out from university and applied for an EVS volunteer project. On the 20th of July 2002 she started working for the EMSP-project of cybercafés in european MS-centres. Her project is situated in Italy in a hotel for PwMS, run by the Italian MS society, AISM. At her work place with Nia Sullivan (another volunteer) she instructs the guests how to use the internet, how to stay/build up social contacts (e-mail, chat) and to take advantage of Internet as a form of entertainment without barriers.

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After studying Neurology at Charles University, Prague, Eva Havrdova is now Head of the MS Centre there since 1996 and teaches Neurology and research work. She introduced DMDs to the Czech Republic.

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Peter has been CEO of the Danish MS Society since 1994. He was educated in shipping and industry including studies at Insead in France. The Danish MS Society enjoys the support of more than 50 000 members and regular donors. Main purposes are research, care and counselling for persons with MS and public information. The society manages two rehabilitation clinics for MS and a very accessible holiday centre.
Professor Jürg Kesselring is the Head of the Department of Neurology at the Rehabilitation Centre in Valens, Switzerland. He received his MD from University in Berne, Switzerland, after training in St. Gallen, Lübeck, Banbury, Oxford and Berlin. Professor Kesselring stayed several times as Senior Honorary Research Fellow at the Institute of Neurology, Queen Square, London. He is Chairman of the International Medical and Scientific Board (IMSB) of Multiple Sclerosis International Federation (MSIF) and of the WHO Working Group on Multiple Sclerosis and Vice-President of the Swiss MS Society after having been President of its Medical Advisory Board for 20 years. In 1999 he was awarded with the „Goldene Ehrennadel für Internationale Verdienste“ by the German MS Society.

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Pierre Ketelaer is the former Medical Director of the Rehabilitation Centre of The National MS Centre. He is specialised in neurology and rehabilitation and has been for the last 34 years active full-time in the field of MS Rehabilitation. He is, with Mario Battaglia, the co-founder of RIMS, the network of European MS Centres.
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Brita has since august 2002 been Director of the two Danish MS-hospitals. Before that she worked as counselling manager in the Danish MS-Society. Her professional background is Cultural Sociology (1978), Social Work (1982) and Social Science (1995). Keywords of interest are management, users influence, empowerment, organizational development and learning.

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Maria is a physiatrist (rehabilitation doctor) and has founded an uro-rehabilitation service in AISM Rehabilitation Centre of Genoa.

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Tracey is Superintendent 2 and is responsible for all general medical and neurological physiotherapy services in West Cumbria Primary Care Trust. Tracey qualified as a physiotherapist in 1986 and has specialised in neurological physiotherapy for the past 14 years. She is responsible for submitting the original proposal to develop the MS physiotherapy services in West Cumbria under the MS Society physiotherapy service development programme.
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Professor Dr. Frans J N Nijhuis is a Professor at the University of Maastricht in The Netherlands. He specialises in psychology of work and health with special attention to vocational rehabilitation. He is also Director of the Hoensbroeck Center for Vocational Rehabilitation.

Igor Stolyarov  
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Professor Dr. Igor Stolyarov has been Head of the Neuroimmunology Laboratory at the Institute of the Human Brain in St Petersburg, Russia since 1991. He is a member of the Board of Directors of the All-Russian Human Society of Disabled People and a member of the Board of Directors of the Federal Scientific Centre of Multiple Sclerosis.

Nia Rhiannon Sullivan  
European Volunteer  
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Nia is a Business Studies student from Wales. Currently on a year out from her studies she is working as an EVS volunteer on the European project "Cyber Cafés for PwMS" in a hotel of the Italian MS society in Tuscany. She teaches the guests at the hotel how to use the internet and take advantage of the opportunities internet can offer.
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Yan is director general of All Russian Public Organization of invalids with Multiple Sclerosis. He is a faculty member of neurology and neurosurgery chair, Samara State Medical University. His primary work approach is complex rehabilitation of Multiple Sclerosis patients and creation and development of rehabilitation programs and target groups of people.
SPONSOR ACKNOWLEDGEMENTS

We are delighted to acknowledge the sponsors for this year’s European Multiple Sclerosis Platform Congress.

The EMSP welcomes and is grateful towards all our Sponsors for their financial support. Without it this event would not be possible. However, this does not imply a preferential recommendation for any products which our sponsors may produce or distribute. The EMSP is not able to make any judgement or recommendation for treatment. Such recommendations can only be made by members of the Medical profession on an individual patient basis. Our sponsors accept and recognise this situation.

CORE FUNDING FOR THE WORK OF THE EMSP

SCHERING

SERONO

BIOGEN

PFIZER

TEVA

AVENTIS
Slide 1

**First pharmaco-economic data on treatment with disease modifying drugs in the Czech Republic**

Eva Havrdova

& co-workers from Czech MS Centres

Charles University, Praha, Palacky University, Olomouc

Slide 2

- Betaferon
- Rebif
- Avonex
- Copaxone

1.4.2003 - 1745 patients
Slide 3

Total MS costs per patient are not known in Czech Republic (CR)

Direct costs: drugs, health care
Indirect costs: national economic losses caused by MS: loss of working ability of MS patients, pensions, social care
Additional costs: loss of quality of life

Slide 4

- Where total MS costs were counted, indirect costs were the biggest part (always counted before DMD era)
- Costs increase with increasing EDSS (a disability measure score) and with increasing duration of the disease
- 80% of people with MS loose work within 10 years of MS onset
- Only every 6th MS patient is able to continue his job even when the disease progresses
Criteria of Czech Neurological Society for introducing DMD therapy and reimbursement

- Definite diagnosis of MS, relapsing type
  McDonald’s criteria 2001 (diagnosis may be made after one relapse)

- High activity of the disease
  2 attacks / year or 3 attacks / 2 years

- Relatively good clinical status
  EDSS \(\leq 4.5\)

EDSS scale
0 = no disability  7.5 = Wheelchair bound
MS Progression With No Treatment

Natural History: Time to Reach EDSS 6 (walking 100m with cane)

Conversion From RRMS to Progressive MS

<table>
<thead>
<tr>
<th>MS Duration (Years)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>11–15</td>
<td>57.6</td>
</tr>
</tbody>
</table>

Adapted by permission of Oxford University Press from Weinshenker BG et al. Brain 1989;112:133-146.

Slide 8

Results of DMD treatment in the first two years

- Relapse rate decreased by 69%
- Number of hospital admissions decreased by 80%
- Stable EDSS
Slide 9

We need to prove not only medical but also pharamaco-economic efficacy of DMD treatment for the whole society

Collection of data from MS patients treated > 3 years by DMDs in Czech MS Centres:

- Follow up of clinical status
- Follow up of disease activity (attacks and hospitalisations due to MS)
- Follow up of working ability and disability development

Slide 10

Unified protocol for follow up of DMD treated patients in Czech MS Centres

Problems: Unemployment in some regions is often solved by disability pension
### Slide 11

**RELAPSE RATE AND EDSS**

- Relapse rate **decreased by 78%** (from $1.87 \pm 0.65$ before DMD to $0.42 \pm 0.7$ after)
- EDSS before DMDs $2.6 \pm 1.1$, last EDSS $3.0 \pm 1.5$
- DMD significantly reduce relapse rate and slows down disability
- Results consistent with those after 2 yrs

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### Slide 12

- 45 % of patients fully working when therapy started
- All these patients had low entry EDSS $\leq 3.5$
- 27 % patients had disability pensions when therapy started
- Number of pensioned patients increased to 42 %
Slide 13

Gross domestic product (GDP) in purchase prices

\[ \text{GDP} = \text{Final consumption costs} + \text{Gross capital formation} + \text{Foreign trade earnings} \]

- Latest ČSÚ data: \( \text{GDP} = 2,294,624 \) million/year (74,020 mil. euro / year)
- Active working population: 4.8 mil.

GDP yield/day = 1906 CZK (approx 60 euros)

Slide 14

- GDP loss per one day off work = 1906 CZK (60.30 euros)
- GDP loss /year /one patient off work = 476 500 CZK (= 15,128 euros) represent an equivalent of one person’s individual contribution to the Czech economy per year

- Disability pension or sick note payments
- Other social benefits
- Loss of family care people’s working time
- Treatment, hospitalisation, rehabilitation
Slide 15

Other costs

- Comprehensive spa treatment: used once or repeatedly by 27% of patients on DMD
  Costs for a three-week spa stay: 30 000 CZK (approx 1000 euros)

- Other social benefits (petrol benefit, social benefits): 10% of patients on DMD

- Family care: temporarily during attacks used by 20% patients on DMD

Slide 16

- Only 39 attacks out of 370 needed hospitalisation

- 22 attacks needed no treatment

- 72 attacks were treated only by oral steroids

- 245 attacks were treated by SoluMedrol in outpatients departments
  (total costs of steroid treatment: 612 000 – 1 225 000 CZK) (19,400- 38,827 euros)
Reasons for increased effect of DMDs in CZ

- Combination therapy?
  DMDs + steroids + azathioprine

Initiation of a double blind study "ASA"
  - Avonex + steroids + azathioprine
  - 140 pts. enrolled till today
  - MRI every 8 weeks

  Promising results

Conclusions

- DMDs (maybe in combination with classical immunosuppression) are effective in slowing down the progression of MS

- If the treatment is started early in the course of the disease, no doubt they are able to maintain working ability of the patients for years
Slide 19

- The goal must be to start treatment as early as possible after diagnosing MS.
- Avonex is the only licensed indication.
- And thus decrease total costs of MS for the society even in not a very rich country.

Slide 20

- Treatment must be **continuous** throughout the course of the disease.
- There must be **no interruptions** (e.g., in Slovakia treatment often stops temporarily because of administration reasons).
- Because treatment is long-term the DMDs must have a **good efficacy, compliance balance**.
- The long-term objective of DMD therapy is to prevent disability therefore the DMD must have **long-term efficacy**.
EXAMPLES OF “BEST PRACTICE” – HOW MS REHABILITATION CENTRES WERE SET UP IN ESTONIA AND SLOVENIA

Mateja de Reya

Please look at the following websites for further information:

For Reha Centre La'ko http://www.zdravilisce-lasko.si/eset.htm
For Reha Centre Topol'ica http://www.t-topolsica.si/eng/inf.htm and for Mladika the actual MS Centre http://www.t-topolsica.si/cms.htm
EXAMPLES OF “BEST PRACTICE” – HOW MS REHABILITATION CENTRES WERE SET UP IN ESTONIA AND SLOVENIA

Katrin Gross

Slide 1

Development of system of care with / for PwMS in Estonia

K. Gross-Paju MD, PhD
Head of National MS Centre
Vice president of National MS Society

Slide 2

Issues and challenges in Estonia
achievements I

• 1990
• Our 4 stage model
  – Out the flat
    • what is wrong with me – information about the disease
  – Interesting world
  – We are citizens
  – We have to make changes…. 
Slide 3

MEDIA COVERAGE AND PUBLISHED PAMPHLETS ABOUT MS

Number of publications


10 8 6 4 2 0


MEDIA COVERAGE

BOOKS

FOUNDATION OF NATIONAL MS SOCIETY

Slide 4

Issues and challenges in Estonia

achievements II

• 1994 ESTABLISHED POSITION IN ESTONIA
• NEW GOALS?
• STRENGTHENING OF MS SOCIETY?
• SYSTEM OF CARE?
• LITERATURE?
Slide 5

**SYSTEM OF COMPREHENSIVE CARE**

- **1995 PECO-MARCH**
  - IDEA
    - COMPREHENSIVE CARE
    - TEAM WORK
- **1997 OPEN SOCIETY FOUNDATION**
  - STRENGTHENING OF SOCIETY
  - CREATION OF MS CLINIC
  - CREATION OF MULTIDISCIPLINARY TEAM
- **1998 PHARE WITH FINNISH MS SOCIETY**
- **2000 WEB PAGE**

Slide 6

**MS CLINICS SINCE 1996**

- **OUT-PATIENT**
- **TEAM**
  - NEUROLOGIST
  - NURSE
    - CONTINENCE ADVISOR
  - PHYSIOTHERAPIST
  - PSYCHOLOGIST
  - SOCIAL WORKER
Slide 7

MS INFORMATION DAYS IN ESTONIA 1997-2000

Slide 8

MEDIA COVERAGE AND PUBLISHED BOOKS ABOUT MS

FOUNDATION OF NATIONAL MS SOCIETY
Мочевой пузырь и рассеянный склероз

Европейское Общество Рассеянного Склероза
Slide 13

TEAM

- NEUROLOGIST
- NURSE-CONTINENCE ADVISOR
- PSYCHOLOGIST/NEUROPSYCHOLOGIST
- PHYSIOTHERAPISTS
- SOCIAL WORKER
- OUR NURSES/ASSISTANT NURSES
  - SKIN CARE, PRESSURE SORES
  - NUTRITION, SWALLOWING

Slide 14

Fowler’s algorithm

From: Fowler J Neurol Neurosurg Psychiatry, Volume 60(1), January 1996, 6-13
Slide 15

Fowler’s algorithm

Fowler’s algorithm
Applicable in 80%

Measure residual volume of urine + urinary analysis

OXYBUTYNIN 2.5 mg x 2

CIC

OXYBUTYNIN

81% significant positive effect

Slide 16

NEW TREATEMENTS –
β-interferons

• Rebif
• Betaferon
• 10% of population is 150 PwMS
• Treatment receives 40 ie 27%

N=21
Slide 17

NEW TREATEMENTS – Mitoxantrone

Number of relapses vs. number of PwMS before and during treatment.

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Slide 18

MS MANAGEMENT IN ESTONIA 2003

Map showing MS management centers in Estonia, Latvia, and Russia.
It gives me great pleasure to welcome all our distinguished guests from overseas to this EMSP Congress.

It is also an honour for us to have with us today Dr. Ray Busuttil the Director-General of Health. H. E. The President of the Republic would have wished to be with us this morning but a very heavy schedule unfortunately prevents him from doing so. Nevertheless he has made a very special effort to find the time to receive a small EMSP delegation later this morning. The Minister of Health too was planning to come and give a welcome address but as is bound to happen in the health sector, he felt unwell these past few days and is taking a rest. He had already written his speech which he has asked Dr. Busuttil to read on his behalf.

The holding of this Congress in Malta is significant for a number of reasons:

- firstly, this is the first European conference being held in Malta following Malta’s formal accession to the European Union only three weeks ago;

- secondly, this is the first time that our young Maltese MS Society, founded in 1997, plays host to an international MS conference

- thirdly, this meeting takes place during 2003, the European Year of the Disabled Persons.

I will start with this last point first.

It is very appropriate that Europe has dedicated this year to the Disabled Persons because Europe needs to focus in a more holistic manner on the needs of such persons.

We in Malta consider ourselves lucky in having a very active focal point for disability issues. This is the National Commission Persons with Disability, locally known by its Maltese initials, KNPD, which is under the able chairmanship of Mr. Joe Camilleri who would have liked to be with us but who has to travel.

Since its inception in 1987, KNPD has been at the forefront of the
struggle for the rights of Maltese disabled persons and has registered progress in various important areas, such as:

- putting disabled persons at the forefront of all decision-making processes;
- the introduction of anti-discriminatory legislation, namely the Equal Opportunities (Persons with Disability) Act of 2000;
- the introduction of the Social Model of Disability into all areas of activity related to this sector;
- changing the language used in relation to Disability and disabled persons from a language based on the Charity model, to language focused on civil rights and equal opportunities;
- the introduction of a national inclusive education policy;
- the vetting of new building projects and major modifications from the point of view of Design-for-All Guidelines;
- changing public attitudes regarding disabled persons especially by educating Maltese youngsters about various aspects of disability and
- research and publication of various reports and booklets relating to disability.

For this year of the Disabled Persons KNPD has laid on an impressive and all-encompassing programme of activities which range from awareness-building to political lobbying, catering to disabled persons’ spiritual needs, education and research, empowerment of young people and women with disability, employment, and physical access to buildings. It would take me the best part of this morning to describe even briefly what each activity entails and I have no intention of doing that. I will just highlight the principal aims of these activities which are:

(a) firstly, so that all members of Maltese society have a clear idea of what disability entails;

(b) secondly, the message that disabled persons can make a useful contribution to Society and;

(c) finally, that there is the need for a national action plan which should be realised and implemented with the full participation of disabled persons.

From the foregoing you will understand why Malta is so proud of its KNPD and why our Society treasures the advice and support received by KNPD and from Mr. Camilleri personally.
The MS Society of Malta is one of the youngest MS Societies in the world and probably also the smallest. This is because MS is not a high-incidence condition in our country. As we all know MS is generally more closely associated with climates colder than those enjoyed in the Mediterranean area.

Having said that we are witnessing an increasing number of MS cases in Malta. This is due to two factors: better diagnostic facilities particularly MRI and more neurology experts with specialisation in MS.

Although small our Society prides itself in being very active. Hardly a month passes by that we do not organise an activity, be it of a medical or a social nature, for our members. The participation rate at these meetings is high and is a source of great encouragement to us.

Our work is made considerably easier by the help we receive from various sources. The welfare state in Malta is highly developed and provides a solid safety net for persons who encounter serious health problems. The system provides not only free medical testing and hospital care but also free medicines and other assistance, some of it means-tested, other not. Through KNPD persons with disability can have regular home help, the services of a handyman when required, assistance to install a stair lift, blue stickers for parking, free car road licence. Even the ferry crossing to the sister island Gozo is offered free of charge to persons with disability.

In cases where the government safety net cannot provide the necessary support the community at large steps in to fill in the void. The Community Chest Fund is the biggest charity in Malta and is headed by the President of the Republic, Prof. De Marco, ably assisted by the indefatigable Mrs. De Marco. Together they work unstintingly to raise funds, to identify needs among the community and to help persons in need in whatever way the can.

It is natural for a small association in a small island to look beyond its shores for international linkages which will help it develop. This is what we have done in the few years we have been in existence and this is why EMSP is here today. EMSP has been most supportive towards us and I should like to thanks Peter Kauffeldt and Christoph Thalheim for their support. We are sure that the presence of so many distinguished personalities from so many countries will help us establish contacts and friendships which will prove beneficial to our membership. Now that
Malta will shortly be a full member of the European Union we intend to be more active members, especially insofar as European programmes are concerned. I am pleased to note here that we will be making a start within the next couple of months when through the invitation made to us by EMSP to participate in a European volunteer programme, we shall be receiving volunteers from Europe who will set up a Cybercafe project to help not only persons with MS but also other persons with a disability who may wish to be involved. We shall be setting up this Cybercafe facility at the Park of Friendship Malta’s leading facility for disabled persons whose management we thank for their cooperation.

This is but a start.

We are confident that in the months and years ahead there will many other projects – hopefully also medical research projects – in which we could collaborate with EMSP. All I can say is that we shall spare no effort to making our collaboration a very successful one.

The theme of this year’s conference ‘Rehabilitation’ is one of great interest to all those interested in MS. Rehabilitation has a special interest to us in Malta since this is the area that we are concentrating on. Already for the past two years we have been offering our members a subsidised physiotherapy service at home and we have just started a group psychotherapy service both for persons with MS and for their carers. We look forward to getting some new ideas from this conference about new approaches and additional services that we may offer our members.

May I conclude by saying how grateful I am to Christoph Thalheim and to Rebecca Jestico for making my task in Malta a lot easier through their professional help and advice and by expressing our delight that you have made it to Malta. We hope that we will live up to your expectations, and that the quality of the interventions and debate at the conference will in the tradition of EMSP, be of the highest quality. May I also express the hope that you will visit us again some time in the future you will always we welcome. Thank you.
Ladies and Gentlemen: it is indeed my great pleasure to welcome you all to Malta and to this meeting on “Quality of Life for People with Multiple Sclerosis – what Rehabilitation can do” which is being held in Malta under the auspices of the European Multiple Sclerosis Platform.

Though Multiple Sclerosis has a worldwide distribution and in the European scene it is especially common in Northern Europe, in Malta it has always been recognized that the disease had a low prevalence. Indeed as a medical student I very well remember the late Professor Walter Ganado, who was Professor of Medicine and the first Maltese physician to have a special interest in Neurology, claiming that the disease was uncommon and that during his practice of over 30 years, he had seen only around 15 cases of MS and all of these were cases of progressive disease which led to chronic disability. This low prevalence in Malta is borne out by a recent study published in the September 2002 issue of the journal of neurology, neurosurgery and psychiatry by Geoffrey Dean and all the Maltese neurologists. This study reports a prevalence of 13.2/100,000 of clinically definite cases, even lower than surrounding Mediterranean countries. However since the introduction of MRI, an earlier diagnosis and a number of milder cases who live self-sufficient and productive lives is being diagnosed. As you know the distressing fact about MS is that there is no curative treatment though the present medication may hopefully reduce the relapse rate. However I understand that there may be some light at the end of the tunnel. I was intrigued by a paper in the April 2003 issue of the prestigious journal Nature where researchers from the San Raffaele Institute in Milan reported that in mice, the injection of adult brain stem cells could achieve significant clinical benefit in multiple sclerosis syndromes; indeed they went on to suggest that their research opened new opportunities for the clinical use of stem-cell based therapies to treat hitherto incurable diseases in humans.

Looking at your programme, it is obvious that you are dealing with the situation of MS as it presents now. In the next two days, you will be concentrating on issues of rehabilitation and how these could greatly benefit those sufferers of MS who had progressed to chronic disability. These are the patients who greatly benefit from the support of the appropriate multi-disciplinary team made up of neurologists, nurses,
physiotherapists, occupational therapists and social workers. As in other chronic conditions, these teams have to liaise with patients and their carers. The activities of support groups such as NGOs are of immense value and I am delighted that in Malta, we have such a group represented by the Malta Multiple Sclerosis Society. I can assure you that the NGOs in the healthcare field can count on the support of my Ministry and the Government.

This multidisciplinary approach to management is very much the basis of modern medical practice. We in Malta are very conscious and proud of our long tradition of service in the health care field. Though we are a small island nation, which on the 1st of May 2004 will become a full member of the European Union, we have had a Medical School since 1676. This dates back to the time when the first Chair of Anatomy and Surgery was established at the Sacra Infermeria during the reign of Grandmaster Nicola Cottoner. At that time, the Sacra Infermeria was one of the top hospitals in Europe. Just over 300 years later, since the present Government was elected for first time in 1987, my Government has embarked on an on-going reform of the Health sector. The objectives of our reforms are to decentralize and devolve the provision of services at both the community and hospital level. We want to provide and improve the quality of services; services that are responsive to patients’ requirements. As part of this exercise, over the last 5 years, we have been constructing a new 825 bedded hospital, the Mater Dei Hospital, with state of the art facilities. This new teaching hospital will cater for the needs of our population and we intend to make it a centre of excellence in the Mediterranean region. This is our aim and this is our mission.

Finally, ladies and gentlemen, I would like to congratulate the Organizing Committee for holding this meeting in Malta. The outcome of your deliberations will result in an improvement in the quality of life of those who suffer from the disabling effects of multiple sclerosis. On my own personal behalf and on behalf of the Maltese Government, I wish you all a very successful meeting. I also wish our overseas guests a very pleasant stay in Malta.

Thank you.
WHAT IS REHABILITATION – HOW TO MEASURE ITS SUCCESS

Jurg Kesselring

Slide 1

Rehabilitation: definition

- an active process of education and enablement
- focused on the proper management of disability
- and the minimisation of handicap
- with the goal to achieve a full recovery

or when a full recovery is not possible (as in MS):

- realise the optimal physical, mental and social potential
- in order to remain (or become) integrated into the most appropriate environment.
### Slide 3

<table>
<thead>
<tr>
<th>„Typical“ Symptoms in MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fatigue, temperature lability</td>
</tr>
<tr>
<td>• Bladder/bowel/sexual dysfunction („pelvic MS“)</td>
</tr>
<tr>
<td>• Poor dexterity - weakness, tremor, sensory disturbance</td>
</tr>
<tr>
<td>• Poor mobility - weakness, spasticity, ataxia</td>
</tr>
<tr>
<td>• Cognitive dysfunction</td>
</tr>
<tr>
<td>• Dizziness</td>
</tr>
<tr>
<td>• Visual disturbances</td>
</tr>
<tr>
<td>• Speech/swallowing disturbances</td>
</tr>
<tr>
<td>• Pain</td>
</tr>
</tbody>
</table>

### Slide 4

**Fatigue: pathogenesis**

- **Poor sleep pattern** (nocturia, pain, spasticity)
- **Immunological** (cytokines, hypothalamic axis, reduced cerebral metabolism)
- **Medications** (interferons, antispastics)
- **Motor** (maximal force decay, motor unit firing rate ↓, inadequate motor recruitment, drive to motor cortex ↑)
Slide 5

Fatigue: treatment

- Identification as relevant and disabling
- Graded exercise program
- Behaviour modification therapy
- Medication (amantadine, pemoline, modafinil, 4-Aminopyridine, 3, 4-Di-Aminopyridine)

Slide 6

Disturbed micturition control

- Urgency: detrusor hyperreflexia
- Frequency: reduced bladder capacity
  
  \[\text{„A combination means that many patients are reluctant to be far away from easy access to a toilet” Claire Fowler 99}\]
- Hesitancy: inability
  - to initiate micturition
  - to empty completely
  - to interrupt stream
Slide 7

**Detrusor hyperactivity: treatment**

- Bladder training (micturition protocol)
- Medications:
  - Tolterodine (Detrusitol®) 2 x 1 - 2 mg
  - Trospiumchloride (Spasmo-Urgenin®) 3-5 x 5 mg
  - Emepromium chloride (Cetiprin®) 3-4 x 200 mg
  - Oxybutinin (Ditropan®) 3-5 x 5 mg
  - Flavoxat (Urispas®) 3-4 x 200 mg
  - Imipramin (Tofranil®) 2 x 25 mg
- BoTox® injection into detrusor muscle [Schürch et al J Urol 2000]
- Electrostimulation (anal or vaginal)
  - Stimulation of pudendal nerves ⇒ inhibition of detrusor hyperactivity

Slide 8

**Detrusor-sphincter-dyssynergia: treatment**

1) Medications
   - Tolterodine (Detrusitol®) 2 x 1 - 2 mg
   - Oxybutinine (Ditropan®) 2 x 2.5 - 5 mg
   - Emepromiumbromide (Cetiprine®) 2 - 4 x 200 mg
2) Clean intermittent self catheterization
3) Condom catheter (Urinal®)
4) Permanent indwelling catheter (suprapubic)
MS: Sexual dysfunctions

- Reduced interest  29 - 86%
- Reduced sensation  43 - 62%
- Reduced orgasmic capacity  24 - 58%
- Vaginal dryness  12 - 40%
- Dyspareunia  6 - 40%

Ghezzi A, Sexuality and multiple sclerosis

Sexual dysfunction in MS: treatment

- Psychological counselling
- Oral medication
  - Sildenafil (Viagra®)
- Intraurethral pharmacotherapy
  - Alprostadil (MUSE®)
- Vacuum constrictor devices
- Intracavernous injection
- Penile prosthesis implantation
Slide 11

Chronic constipation: definition
(„Rome criteria“: GUT 1999; 45 Suppl II: 1117 - 1124)

1) Voiding with pressure
2) Hard stool
3) Feeling of incomplete voiding
4) Feeling of ano-rectal blockade
5) Voiding only with manual help
6) < 3 voidings/ week
   constipation during 12 weeks over the past 12 months
   > 2 symptoms at > 25% of voidings

Slide 12

Chronic constipation: due to medications

- Laxatives
- Antacids (Aluminium)
- Anticholinergics
- Antidepressants
- Anticonvulsants
- Analgesics
- Antihypertensives
- Anti-Parkinson drugs
- Diuretics
- Ganglia blockers
- Opiates
- Iron preparations
- oral anticonceptives
Slide 13

Chronic constipation: treatment

- Unspecific measures
  - Movement, body fitness
  - Diet, drinking, fibres, avoid e.g. chocolate
  - stressfree visit to the toilet in the morning
- Tumefactants
  - Brans, flax-seed, linseed, Karaya-rubber
- Purificants
  - Mineral oils
- Ballast agents
- Osmotic laxatives
- Motility enhancing and secretory substances

Slide 14

Clinical Neuropsychology in MS

- The „premorbid personality“
- Psychological reactions
- Cognitive dysfunctions
- Affective and emotional disturbances
  (Depression, euphoria, pathological laughing and crying, emotional lability)

Kesselring J, Klement U: Cognitive and affective disturbances in multiple sclerosis
J Neurol 2001; 248: 180-183
MS: adjustment process to unpredictability and uncertainty

- Denial
- Grief (crying, anger, fear, hopelessness)
- Feeling of loss-of-control
- Adaptation (psychotherapy)


Cognitive deficits in MS patients

40 - 65 % of patients with MS show cognitive deficits in different degrees

- **memory:**
  - working- and long-term memory impaired
  - short-term and implicit memory mostly unimpaired
- **attention:**
  - impaired alertness
  - divided and selective attention
- **slow:ing of mental processing speed**
- **reduced executive functions and planning skills**
- **problems in visuospatial perception tasks**

**MS and depression: prevalence and association to disease duration**

- Lifetime prevalence 25 - 50% (= 3 times more than in general population) [Feinstein A 1999]
- 73% difficulties controlling emotions, irritability 57%, crying 40%, sadness 36%, major depression 17%, low mood 64%, anger 64% [Feinstein&Feinstein 2001]
- Positive association between depression and physical disability [Whitlock & Siskind 1980, McIvor et al 1984]
- No relationship between depression [Minden et al 1987] and emotional dysfunction [Rabins et al 1986, Ron & Logsdail 1987]

**MS - emotional lability**

- 10 % of MS patients
- no family history or mental illness
- no gender prevalence
- longstanding disease (> 10 years)
- progressive disability
- uncontrollable crying more common than laughing

Feinstein et al: The prevalence of neurobehavioral correlates of pathological laughing and crying in multiple sclerosis
Arch Neurol 1997; 54: 1116 - 21
Slide 19

Spasticity: treatment

• Oral drugs
  – Tizanidine (MR)
  – Baclofen
  – (Diazepam)
  – (Dantrolene)
• Intrathecal baclofen (Medtronic™-pump)

Slide 20

Pain

• directly disease-related
  – Trigeminal neuralgia (1% of MS over time, 1% of TN due to MS)
  – Tonic seizures
  – Paroxysmal pain syndromes
• indirectly disease-related
  – Flexor spasms
  – Contractures
• related to disability and treatment
  – Neck pain in wheelchair users
  – Osteoporosis
  – Peripheral nerve lesions
Slide 21

Ataxia: treatment

- Practical management
- Medications:
  - Isoniazide (+pyridoxine) (Hallett 1985)
  - Carbamazepine (Sechi 1989)
  - Busiprone (Lou 1995)
  - Ondansetron (Rice 1997)
- Surgical treatment
  - thalamotomy (VIM) (Jancovic 1995)
  - gamma-knife (Friehs 1995)
  - thalamic stimulation (Nguyen 1996)

Slide 22

Evaluating Neurorehabilitation: Problems

- Standardization of input
e.g. location/duration/intensity
- Reluctance to use control group
- Difficulty with blinding
- Lack of consensus on outcome
- Variable choice of measures
Slide 23

What to measure in neurorehab - and how

- Impairment
- Disability and handicap
- Quality of life
- Goal achievement
- Coping skills
- Self efficacy

- Clinically useful
- Scientifically sound
  (reliable, valid and responsive)
- Acceptable
  (appropriate to sample)

Slide 24

Measuring effectiveness in neurorehabilitation


- 764 consecutive in-patients to Rehabilitation Centre Valens, Switzerland
- multidisciplinary rehabilitation programme
- Extended Barthel Index (EBI) [0 - 64 points] at entry and at discharge
- Mean duration of treatment: 27.5 (11 - 92) days
- MS subgroup (N = 286, F 196 / M 90
  age: 51 (23-76) years
  - exclusion of patients with acute relapse (<3 mo),
  maximal EBI score (ceiling effect) (n=52)
Slide 25

![Graph showing EBI at entry vs EBI score at entry](image)

Slide 26

**Stefan Mostert, Jürg Kesselring**

*Effects of a short term exercise training program on aerobic fitness, fatigue, health perception and activity level of subjects with multiple sclerosis.*

Multiple Sclerosis 2002;8: 161 - 168

- 37 MS patients, 5*30 min sessions per week of bicycle exercise with individualised intensity. Graded maximal exercise test with measurement of gas exchange and a lung function test before and after 4 weeks of aerobic exercise training,

- Results:
  - significant rightward placement of the aerobic threshold (VO2 +13%; work rate +11%)
  - improvement of health perception (vitality +46%; social interaction +36%)
  - increase of activity level (+17%)
  - tendency to less fatigue.
Neurorehabilitation Service:
Benefits

- functional benefit
- reduction of complications
- co-ordination and use of resources
- reduction of crisis admissions to hospitals
- lessened handicap
- cost effective
- education and teaching
- research
- point of contact

EFNS task force on standards in neurorehabilitation

Summary

- Benefit of rehabilitation measures in MS
  - improvement of disability/handicap/QoL/wellbeing by multidisciplinary inpatient rehabilitation
  - benefit of physiotherapy (inpatient/outpatient) on disability
  - benefit of other specific components
- Long-term effects
  - benefits outlasting treatment period after inpatient rehabilitation, cognitive training (?)
  - short-term effect of outpatient physiotherapy
  - no influence on disease activity/progression
DIFFERENT STAGES OF MS – WHAT ARE THE APPROPRIATE REHABILITATION MEASURES FOR “IN-PATIENTS”, “OUT-PATIENTS” AND AT HOME

Pierre Ketelaer

Slide 1

Different stages of MS - What are the appropriate rehabilitation measures for “in-patients, “out-patients and at home

Pierre Ketelaer, M.D.
National MS Centre, Melsbroek (B)

Slide 2

• Report "Standards of healthcare for people with MS » from the MS Society of UK & NI in collaboration with the National Hospital of Neurology and Neurosurgery London.

• Services delivery for Persons with MS (PwMS) : in-patient care, out-patient care and Community care.

• Alleviating the physical, psychological and social burden of the MS caregiver.
Slide 3

Management of MS at different stages

- DSS 0-2: minimal disability 35%
- DSS 3-5: moderate disability 24%
- DSS 6-7: requiring assistance, use of wheelchair 23%
- DSS 8-9: confined to chair, bed or totally helpless 18%

Slide 4

Aims

- PWMS and family are central and the structures have to be adapted to the need
- Intention to influence the course of the illness, possibly to reduce the progression and its consequences
- To relieve and limit the resulting impairment, disability and handicap (promote participation in social life).

Methods

- Teamwork
- Networking in all its forms has to be developed between all partners, professional (formal care) and non-professional (informal care)
- Registration of minimal clinical data (MGK), minimal nursing data (MVG) and minimal rehabilitation data (MRG).
Slide 5

Management of MS at different stages

I- Early stage of MS (DSS 0-2)

Key themes are:
- provision of a clear and certain diagnosis,
- support including counselling at the time of diagnosis,
- access to information about the disease, its affects and potential impact on the individual (micro), the family (meso) and the social environment (macro-level),
- continuing education to enable knowledge and experience of life with MS to be gained from professionals and others affected by MS.

Slide 6

Management of MS at different stages

MS Clinics - MS Societies

• Early treatment:
  – immuno-modulation to influence the natural course
  – rehabilitation

• The network:
  – pass over information between the MS Clinic, MS Societies, Community
  – follow through by clinical parameters and the treatment

• Information, education and counselling:
  – the "MS School for early MS patients and their partner”, in collaboration with the MS Society.
  – The yearly "Adaptation Training” program
  – Free telephone line
  – Informal meeting with peers
Slide 7

**Management of MS at different stages**

II- PwMS with moderate disability (DSS 3-5)

- These people form a still active, good social and family and partly professionally integrated part of the patients.
- Key themes are:
  - continuity in service provision
  - provision of support and informed advice about relationships, employment, symptoms and impairment, housing and financial planning
  - access to appropriate treatment and management options

---

Slide 8

**Assessment**

- Clinical scales
  - impairment
  - activities/disability
  - participation
- Integrated Care Pathways
- Questionnaire: fulfilment of expectations
Slide 9

Clinical scales
- Clinical neurological examination
- Functional Independence Measure
- MS Composite Score
- Roa Neuropsychological Battery
- UK Neurological Disability Scale
- Mental Health Inventory (MS QOL)
- (Expanded Disability Status Scale)

Slide 10

Integrated Care Pathways (ICP/RAP)
- Patient’s description of needs and goals
- Therapist’s functional description of problems
  (mobility, self care-ADL, communication, daily occupation, social interaction)
- Interdisciplinary goal setting
- Assessment of goal achievement
Slide 11

Management of MS at different stages

- General situation
- Medical complications
- Speech, swallowing
- Dexterity, mobility
- Chronic fatigue
- Bladder/bowel, sexuality
- Cognition
- Soc. relationship

- Information
- Treatment, Medication
- Involvement
- Advice on wheelchair
- Group therapy, outings
- (Psych.) support
- Soc. services
- Adaptations at home

Slide 12

Questionnaire fulfilment of expectations

- General situation
- Medical complications
- Speech, swallowing
- Dexterity, mobility
- Chronic fatigue
- Bladder/bowel, sexuality
- Cognition
- Soc. relationship

- Information
- Treatment, Medication
- Involvement
- Advice on wheelchair
- Group therapy, outings
- (Psych.) support
- Soc. services
- Adaptations at home

% of response:
0% 20% 40% 60% 80% 100%

better than expected
as expected
almost well satisfied
almost not satisfied
not at all satisfied
no response

67
Slide 13

**Selection for rehabilitation programmes**

<table>
<thead>
<tr>
<th>Persons with MS or chronic demyelinating disease</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recent physical or psycho-social deterioration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possibility of socio-familial reintegration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair prognosis of functional improvement</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Long-stay programme / day clinic</td>
<td>0.5 - 1.5 hour / day</td>
<td></td>
</tr>
<tr>
<td>Intensive programme 4 hours / day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance programme 2.5 hours / day</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Content of rehabilitation programmes**

*Multidisciplinary / Interdisciplinary*

- Medical follow-up
- Functional rehabilitation (PT, OT, Sp.T)
- Psycho-social guidance, counselling, psychology and neuropsychology
- Rehabilitative nursing
Follow through by the MS Clinic/MS Society

- Immuno-modulation and immuno-suppression therapy, symptomatic and rehabilitation treatment
- Guidance and follow through
  - Tracking related to employment for persons with MS: application of work improving regulations
  - Energy management
  - Counselling: feelings of mourning, anger and fury, repeated exploration of the possibilities of future life.
  - Family counselling

III- The severely disabled PwMS (DSS 6-7)

In the third stage, characterized by a more developed disability.

- Multidisciplinary approach aiming to the possible reduction of symptoms, disability, handicap and the improvement in the quality of life.
- The adaptation process, such as learning to cope with increasing limitations and disability, as well as learning to live with outside assistance is for many MS patients a difficult task.
- Not only to medical aspects, but also to social and society problems of the direct environment of the person with MS (the carer).
The key themes are:
- responsiveness to need in relation to significant changes in ability and accrued impairments
- access to and the location of professional services
- access to multidisciplinary expertise in symptom and disability management and treatment
- communication and co-ordination between service providers and care agencies
- empowerment of people with MS and their carers to enable them to take a partnership role in the disease management and treatment

Handicap/Participation

- Americans with Disabilities Act (ADA)
  - employment
  - transportation
- Assistive Technology (A.T.)
- Financial decline
  - disability insurance vs. minimal allowance
  - extra expenses
### Slide 19

**Community Services**

- Services: nursing, physiotherapy, speech therapy, medical surveillance and domestic help
- Housing
  - home
  - ADL home
  - 24 h./24 h. personal assistance
- Personal Assistance Budget (PAB).

### Slide 20

**IV- Very severely disabled PwMS (DSS 8-9)**

- broad range of complex needs of the patient,
- important involvement of the family in taking care
- dependent on mobility and for most ADL activities and thus needs a lot of support, even somewhat constant supervision.
- therapy is most often limited to treatment and/or preventing secondary complications and reactivation.
- requires mobilization of the services of several institutions, professionals, volunteer helpers and others, depending on whether the person lives at home or in an institution; formal/informal care)
The key themes are:
- provision of appropriate respite care and short breaks for both the carer and PwMS,
- provision of appropriate long term facilities
- access to information about support services and community care resources
- expertise in caring for people severely disabled with MS
- co-ordination of all services
- adequate and appropriate community care services including home adaptations, mobility equipment and aids, health services
- transport and community mobility facilities
- appropriate and knowledgeable palliative care.

Community Care
- Formal care: nursing, G.P, physiotherapy, occupational therapy, speech therapy, social services
- Need of household help, care and nursing.
- >80% is being done by volunteer carers.
  - can not have a personal life
  - become dependent on help constant care
  - some relations can also break down
Management of MS at different stages

Available services

- In-patient services: respite care
  - Nursing homes, long stay hospital
- Out-patient services
  - Recreation & surveillance
  - Advantages:
    - Remaining in the community: social integration
    - Better quality of life
    - Cost efficiency
- Community services

Comparative cost

- Home
- Residential homes for aging people
- Nursing home
- Long stay in a long term hospital.
  - >60% of DSS 8-9 are hospitalised for about 53 days a year.
- The average yearly cost of care:
  - At home: 8,000 Euro
  - In a residential home: 26,000 Euro.
  - In a long term hospital: 48,000 Euro.
Management of MS at different stages

Organisation of Health Care Services in MS

- Home
- Community services
- MS Clinic
- Out-patient NR Services
- Day Centre
- In-patient NR Services
- ADL home
- Home Care
- Community services
- Day Centre
- Long-term
- Nursing home

EDSS
0 2 3 5 6 7 8 9

Flexibility
Collaboration

Malta, EPMSS Meeting 5/8/03 8:58:11 AM
WORKSHOP 1
MANAGING FATIGUE
Marijke Duportail

Slide 1

Management of limited energy in daily life

Marijke Duportail, Head Occupational Therapy,
National MS Centre, Melsbroek, Belgium

Slide 2

Energy management

- Introduction
  - the expert
    - of the limited energy
  - the partner and the family
    - dealing with a partner with limited energy
  - the professional
    - try to image the particular fatigue level
    - accompagnement and education
Slide 3

Energymanagement

- The approach of Fatigue management, was the main topic in the first issue of 2003 of "MS in focus" the review of the multiple sclerosis international federation.
- The presentations give a good overview of the different approaches in "dealing with Fatigue".
- Fatigue management - dealing with fatigue - versus management of limited energy - Energymanagement?
- But what means fatigue in daily life to you, what are the strategies you apply, what do you integrate already, what’s missing for you?

Slide 4

Intervention in rehabilitation

Education is multidisciplinary

- medical
- pharmacological
- nursing
- sleep pattern, urinary problems, diary
- physiotherapist
- comfortable postures, aerobic physical exercises
- psychologist
- stress management and relaxation
- occupational therapist
- prioritising, compensation and adaptation, energy conservation strategies.
Slide 5

Intervention in rehabilitation

- Education
  - awareness of daily routines
  - energy conservation
  - stress management and relaxation
  - modification
  - compensation
  - physical exercises

Slide 6

ENERGYMANAGEMENT

- Diary log
  - Diary of fatigue is asked to fill in different days, within different circumstances.
    - in rehab centre
    - at home
    - the job
  - Realise a personalised image of the fatigue during the day
Slide 9

Intervention in rehabilitation

The Energy Management Programme

an example of a multidisciplinary education programme in the Melsbroek rehab centre

Slide 10

ENERGYMANAGEMENT

★ Energymanagement group sessions during 5 weeks
  ★ first session - introduction
  ★ assessment of fatigue
  ★ how to fill in the diary
  ★ what means the degree of fatigue to me
  ★ 3 courses (2 h)
  ★ medical and pharmaceutical issues
  ★ psycho-social impact of fatigue
  ★ ergonomic principles and the integration of labour-saving devices in daily life
  ★ evaluation session
**Slide 11**

**ENERGYMANAGEMENT**

* Participants
  - hospitalised or ambulant PwMS of the MS Centre
  - recent diagnosed PwMs
  - fatigue is one of the most disabling factor in daily life
  - motivation to change and adapt the lifestyle

---

**Slide 12**

**ENERGYMANAGEMENT**

Secondary effects of the group sessions

- learning from each other
- working in group and self-help
- comparing self-management strategies
- discussions on the personal way of dealing with fatigue - the “own story”
Principles of energy management

- Heat can adversely affect fatigue
- Encourage a healthy lifestyle
  - Try to keep as fit as possible with sensible rest, sufficient exercise and a well balanced diet
  - Training relaxation techniques can be useful, avoid stress and tension
  - Physical exercise is important
- Implement ergonomic principles
Slide 15

Ergonomic principles (1)

- improvement of work methods and planning ahead
- Encourage the use of a diary to make daily or weekly schedules to use the limited energy effectively
- Distribute evenly heavier and lighter tasks throughout the day, planning heavy tasks on moments the individual has more energy
- Set priorities and take sufficient rest periods

Slide 16

Ergonomic principles (2)

encourage dynamic movement and avoid prolonged static contractions

use labour-saving devices to prevent this prolonged static muscle contractions

focus on the adjusted, personal working posture
Ergonomic principles (3)

- encourage correct postures while working
- use adaptive devices or equipment
- equipment must be at recommended heights
- the workplace is adequately organised, materials and equipment are easily in reach

Fatigue is one of the most disabling symptoms of MS

Introduction of ergonomics in daily life is important

assistive devices and home adaptation
### Slide 19

**Advice?**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>In bath</td>
<td>- handrail</td>
</tr>
<tr>
<td></td>
<td>- shower instead of bath</td>
</tr>
<tr>
<td>Stairs</td>
<td>- stairlift or rearrangement of bedroom</td>
</tr>
<tr>
<td>Raising up</td>
<td>- Raising the bed</td>
</tr>
<tr>
<td></td>
<td>- Other techniques to come up?</td>
</tr>
<tr>
<td>Differences</td>
<td>- Take away the carpets</td>
</tr>
</tbody>
</table>

### Slide 20

Energy management is achieved by a process of assessment, education and advice (1):

- Identifying the impact of the fatigue, PwMs and carers becomes aware of the influencing factors of fatigue and how to deal with them.
- Discussing energy-saving principles including time management and prioritising.
Energy management is achieved by a process of assessment, education and advice (2)

- advice on ergonomic principles and adapting the environment
- practice different methods and/or equipment
1. What are the most common emotional problems for PwMS?
   - brainstorm – suggestions from the participants

2. Summary of common emotional problems

   You can divide them into:

   a) EP related to getting the diagnosis and living with a chronic and progressive disease

   General problems (also other similar diseases)
   - grieving the loss
     - of being a healthy person, losing one’s good health of invulnerability
     - of control over one’s life
     - of the planned / projected future – the dreams and life perspective is shattered

   grieving a loss is a complex and highly individual process – time is needed to come to terms with the losses – “holding on” and “letting go” as part of this – denial/acceptance of the disease - the importance of respecting the individual’s own pace with the disease must be balanced with the preventing effect of early support.

   - anger (can transform into bitterness)
     - at fate, God, for being hit by this, “this is not fair”
     - at the healthy persons
     - at being dependent

   - anxiety – about one’s future life

   - searching for meaning – why did this happen to me? If I can only find a reason, a meaning I may be able to control it / the future
• searching for regaining control of the disease, of the future – “bargaining” – trying to live as normally as possible, denying the disease

• searching for a new identity – who am I now? Who is this person who is ill? Changing one’s story about one-self.

These three items are not feelings/emotions. They are a kind of “tasks”, problems that the PwMS is trying to solve and find answers to. They create confusion, tension, pain, changing moods, malaise. A kind of “emotional rollercoaster”.

• feelings of meaninglessness and hopelessness
  - depression, suicidal thoughts

Specific problems due to the nature of MS
• uncertainty and unpredictability

• grieving repeated losses as the disease worsen

• anxiety of being affected intellectually or of changing as a person

It is not possible to present figures for the extent of these emotional problems. Most PwMS will experience some of them.

b) EP related to the impact of the disease – in the form of plaques – in certain centres of the brain

• Depression
  - sadness, despair
  - diminished interest in activities
  - changes in appetite
  - sleep disturbances
  - restlessness
  - fatigue, loss of energy
  - feelings of worthlessness and guilt
  - thought of death, suicide

50 % experience depression at some point, the prevalence of depression is estimated to be 25-55 %
Studies document that antidepressant drugs and psychotherapy have a positive effect on depression

- *Emotional outbursts, ”short fuse”, increased irritability*

- *Emotional lability,*
  - changing moods
  - *laughing and crying without apparent reason*
    medication may have an effect
  - *euphoria*
    cheerfulness, optimism

It is difficult to distinguish precisely whether emotional problems are psychological or caused by damages in CNS.

Emotional problems are not necessarily related to duration of disease or degree of disability.

Emotional problems may be a result of or worsened by other symptoms of MS, for instance fatigue, pain, the fact that daily life activities are energy consuming

3. How to deal with emotional problems related to MS in the best way?

**Personal reflection:**

- List 3 things that have been useful for you / the PwMS in dealing with emotional problems.

**Small group discussion:**

- Interview each other about the ways of coping with EP that you have found useful. Take turns

  For instance ask for each of the problems:
  - For what kind of EP was it helpful?
  - What did you do?
  - Who was involved in the process?
  - Why do you think this was helpful?
  - Would it be helpful for others too?
  - Looking at it today, would you have done anything differently? If so, what and how?
4. Plenary:

The suggested means for coping with emotional problems were shared, and the following day they were summarised by two rapporteurs:

Rolande Cutner gave a personal and breathtaking presentation and live demonstration of some of the emotional problems that the group had discussed: Rage and anger, grief, depression, mood swings, envy, isolation, helplessness and feeling useless.

Janos Nadaban summarised the plenary discussion of ways to deal with EP:

“We had to list 3 things that we found useful for dealing with EPs and then discuss our opinions in groups of 3 or 4. This was a great idea and I found this small team-work very effective and useful. Presenting our conclusions afterwards in the plenary resulted in findings of great value:

First in the long list was to think positive instead of negative. Try to find new ways of doing things and try to find new things to do and delete the expression: "I AM NOT ABLE" from our dictionary! Having MS changes the life of people showing new directions to go which are not necessarily worse than those before, but sometimes only different. Because of this change you yourselves need some change which will surely help finding new alternatives.

It was indeed very astonishing for me to hear a gentleman tell that his wheelchair meant that he gotten new friends, because he met people he would never have met, if he had not been forced to use a wheelchair. This was another great example of seeing the bright side of life and thus thinking positively.

The second point is maybe even more important and that is communication. It is of high importance to find somebody to talk to, who, however, should not be anyone, but someone who cares and knows what MS means. So, in other words, you must make sure you are talking to the right person. At this point a lady from Britain added that sometimes this person will not be the one closest to you (so s/he might not in all instances be your wife/husband). It does not always seem enough to find the right person to talk to, it is also a key thing to find the appropriate time and place for talking.
We also found that dedicating ourselves to something helps and that we all - and not only PwMS or with any other chronic disease! - should do things that bring us joy and pleasure, neutralising the bad effects we encounter. Now here the ladies of our workshop suggested - I think - the most expensive kind of treatment in history which was retail-therapy. Being a simple man, I cannot explain the philosophy and the source of joy behind mere shopping. I do apologise for that!

Talking about different EPs, we also found - based on individual experiences - that for example in the case of long-lasting and deep depression only proper medication can help. So that is the point where health professionals enter the scene with their help.

One group came up with a fairly unexpected structure as the group consisted of 3 people with 3 different aspects:
1. One was patient-to-patient advice on what could help coping with EPs containing:
   - Gathering all the available information on MS, to know EXACTLY what one must face
   - Achieving the acceptance of the family, one of the most important (if not the most important) part of our lives
   - Using the MS societies of which a newly diagnosed should learn as soon as possible, since those are the places where they can get help and where they can belong and thus feel useful and important.

2. The other one was the friend-to-patient-level advice where communication, the need for a change in the environment (holidays, recreation etc.) and appropriate professional therapy were stressed.

3. Finally, a new problem-solution-structure arose when we got to the level of self-help:
   - Problem1: Anxiety of losing intellectual capability
     Solution1: Keep the brain active and work with it!
   - Problem2: Feeling isolated
     Solution2: Be nice and friendly to others and they will be nice to you too. Smile and the world will smile back at you!
   - Problem3: Managing difficulties
     Solution3: Do not hesitate to call for help! People are usually willing to help, but know not how to do it. Tell them exactly what you need and they will be glad to help you. However, - as an advice from a strong-hearted lady in a wheelchair - if no one helps, do it yourself!
Despite talking about EPs for hours we still kept in mind that there is a time for everything in our lives, and so there is a time for feeling blue and for wanting to be alone with all our thoughts circling around in our minds. It is humane to feel down at times, but not for longer than natural and not in deeper grief. And, unfortunately PwMS tend to be in a bad mood more often than they should be.

One of the reasons for this - as I have said before - is the feeling of uselessness and having a depression. Again a woman from the group presented a good method: every morning she writes down all the things (even the tiny ones), she has to do that day and crosses out those she has done. And in the end of the day she sees with delight that she has done many, many things, which IS a very good feeling for everyone!

Against depression Rolande provided her solution which was going straight away to her hairdresser and setting her hair in flames. As she would put is: she needed some action, to do something crazy and to do that NOW!

Those of you who had such great endurance that they could stand the temptation of falling asleep might have noticed that I have not yet spoken about the role of the MS Societies in helping to cope with EPs. There are indeed many ways that a society can help its members, such as: a help-line, psychotherapist, support groups, workshops on different aspects of the problem, personal assistance and of course education.

In my point of view, we did find valuable things, but - as one of the participants keen-eyed observed - each and every person in the room was the fighting-type and not by any chance someone who would give in. And finishing off, I would like to say that it is a great and admirable thing! Keep up the good spirit!”
WORKSHOP 3
TELECOMMUNICATION AS A MEANS FOR SELF-HELP IN MS
Pierre Ketelaer

Slide 1

Workshop: applications of telecommunication in MS

Pierre Ketelaer M.D.
Luc De Wolf Eng. PhD.
National Multiple Sclerosis Centre, Melsbroek, Belgium
Institute of Technology, Leuven, Belgium

Slide 2

DIFFERENT USEFUL TECHNOLOGIES

- TELEMATICS
- VIRTUAL REALITY
- DOMOTICS
- ROBOTICS

Malta, May, 2003
MS Symposium
Slide 3

**TELEMATICS**

- telematics: telecommunication of information technology
- transmission of information to a distant location via
  - wires - networks
  - radio - wireless
  - storage medium (disc, chip card)

Slide 4

**Impact of new hardware**

- cameras,
- PDA (personal digital assistant),
- mobile phones
- wearable computers (medical parameters follow-up), ...
Slide 5

TELEMATICS
components & applications

- Networks (local or wide area), the internet
- e-learning (courses), e-commerce (e-banking, e-shopping), message boards, videoconference, chat-rooms
- wireless technologies
  - GSM
  - GPS (global position system),
  - Bluetooth,
  - 3G mobile telecommunication systems: UMTS

Malta, May, 2003
MS Symposium

Slide 6

Telemedicine - Telerehabilitation
some applications in MS

- 3D-visualisation of patient-data
  - Hospital links
- Telepresence:
  - consulting physician, social worker, psychologist, care team members, online pharmacies, on call MD
  - Social involvement : Cybercafé
- NARCOMS Registry
- H-CAD (Home Care Activity Desk) in FP5
- Datamus
Slide 7

Telepresence

- Inquiry at the National MS Centre (NMSC)
- e-communication PwMS-NMSC
- Cybercafé in Melsbroek
- Research projects

 Malta, May, 2003
 MS Symposium

Slide 8

H-CAD - Home Care Activity Desk
Telemedicine & Home rehabilitation

- Supported by The European Commission DG Information Society.
  - Signo Motus srl, Messina, Italy
  - Pragma Engineering srl, Perugia, Italy
  - National MS Centre, Melsbroek, Belgium
  - Fundacion Instituto Guttmann, Barcelona, Spain
  - Azienda Sanitaria Locale n. 3, Foligno, Italy
This 3 year project (2001-2003) is a collaboration between partners from different European countries.

It deals with the design and development of a system capable to enable people with MS, TBI, or stroke to perform rehabilitation treatment for the upper limbs at home.

A communication system through the internet provides the hospital with the clinical data and allows users feedback.

Clinical Objectives

- The clear definition of a set of exercises for the upper limbs to be used as a standard for home rehabilitation of patients affected by MS, TBI, or stroke.
- The exercises focus on ROM, strength, endurance, hand motricity and have functional objectives.
- An evaluation system will be included. The definition of the standards allows the development of a low-cost, user friendly activity desk that can be used at home.
Slide 11

**INNOVATIVE ASPECTS OF H-CAD**

- Integration between communication technologies and state of the art man-machine interfaces in the field of neurological rehabilitation
- Provision of a new process of rehabilitation aimed at providing a continuous care to the patient reducing the associated social costs
- Provision of clinical data related to standard methodologies currently used in the rehabilitation of people with MS, stroke and TBI
- Provision of interactive clinical data through the internet

Matta, May, 2003 MS Symposium 11

Slide 12

**NARCOMS Registry**

- North American Research Committee on MS (NARCOMS)
- Patient driven database
- Multiple Sclerosis Quarterly Report (MSQR)
Slide 13

**MS Patient registry**

- **Purpose**: to speed development of new therapies and health care services
- **Online registration**: enrollment of PwMS by questionnaire (demographic info., MS-related medical history, therapies, health care services, a series of patient-assessed performance scales reflecting disability in 8 domains of function)

Slide 14

**MS patient Registry**

- 1998: Survey reasons for non-adherence to immunotherapies (sponsored by Serono) on 3,000 PwMS
- Since: widely recognized as a valuable resource for
  - surveying MS patients
  - recruitment for particular clinical trials
- Presently over 20,000 registered PwMS
Virtual Reality (VR)

- VR can be considered as the leading edge of a general evolution of communication interfaces like television, computer, telephone, ...

- Virtual environments (VE)

Virtual Reality application example

IR Head Tracker (www.NaturalPoint.com)
Slide 17

VIRTUAL REALITY
application areas

- Education and training: anatomy, MS pathology
- Remote surgery
- Neurological rehabilitation
  - Assessment and treatment of cognitive defects
  - Stress management
  - Motor assessment and rehabilitation


Slide 18

DOMOTICS - ROBOTICS

- Domotics: control of house appliances via computer technology
  - key-words: home automation, intelligent homes, environmental control
- Robotics: computer controlled devices that can interact with its surroundings
  - wheelchairs, technopets, MOBIL
CONCLUSIONS

• a large number of multimedia and telematics projects with interesting new features and applications
• VR is a maturing area, with promising perspectives for neurological rehabilitation in MS
• impact of technologies (robotics, domotics, ..) for PwMS
WORKSHOP 4
COMMUNICATION LIMITATIONS: HOW TO DETECT AND FIGHT THEM
Guy Ganty

Slide 1

Communication limitations

How to detect and fight them?

Slide 2

What's communication?

Emission of message
Risks of disorders in MS
Reception
Integration
Answer

Reception
Slide 3

**Questionnaire Communication**
SLP Department – Melsbroek
APF – Mission MS
2002

10,000 PwMS through the magazine
« APF Mission SEP »

350 answers

Slide 4

**Age Distribution**
- Average: 53 years
- Range: from 26 to 82 years

(Number of PwMS: n = 326)
Slide 5

Place of communication

What degree of importance do you attach to communication with others?

% of respondents

0 1 2 3 4 5 6 7 8 9 10

0,00 5,00 10,00 15,00 20,00 25,00 30,00 35,00 40,00 45,00 50,00

VAS

Slide 6

- Does communication have an important place
  - Within your family?
  - In your work time?
  - In your spare time?

% of respondents

0 10 20 30 40 50 60 70 80 90

Family: 80,37
Profession: 32,82
Spare time: 66,26
First symptoms

- Did you notice any change in mobility and expression in your face? Has your laughter changed?
- Are you short of breath during a physical effort? In rest?
- Do you suffer from sleepiness during the day?

Auto evaluation - Voice and speech

Did you notice any changes in your communication possibilities like:
- a change in intensity and height of your voice
- a hoarse voice
- difficulties to pronounce sentences in one time
- speaking slowly
- stammer sometimes
- difficulties in finding the appropriate words
Slide 9

**Behaviour in conversations**

- Do you join less in conversations?
- Are you afraid of getting tired?
- Are you afraid of not being understood?

![Bar chart illustrating the percentage of people experiencing various levels of conversation fatigue, fatigue, and intelligibility.]

Slide 10

**Auto evaluation - Voice and speech**

- Impact of fatigue, stress, attention and concentration deficits on the capacity to pronounce a sentence

![Bar chart illustrating the impact of fatigue, stress, and attention on voice and speech.]

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Slide 11

Auto evaluation - Voice and speech

- Impact of fatigue, stress and concentration deficits on dysarthria

Slide 12

Evaluation of environment *(by the PwMS)*

- Does it happen that family members ask you to repeat a message?
- Do you notice impatience by them?
- Is the conversation much shorter?
- Do people who don't know you ask you sometimes to repeat your message?
- At Phone, does it happen that people ask you to repeat your message?
- Do you observe some changes in the communication habits of your environment?
- For fear of making you tired?
- For fear of not understanding you?
- Do people hesitate before speaking with you?
Slide 13

EVALUATION OF ENVIRONMENT (by the PwMS)

- Changes in the communication habits of the environment according to perceptual parameters

Slide 14

EVALUATION OF ENVIRONMENT (by the PwMS)

- Fear for not understanding the PwMS according to perceptual parameters
Slide 15

**Evaluation of environment (by the PwMS)**

- Hesitation before speaking with the PwMS according to perceptual parameters

Slide 16

**Social activities**

Regardless of ambulating restrictions, do communication disorders modify your social activities?
- Do you see even frequently your friends, like before?
- Do you go to restaurant or café, like before?
- Do you have cultural/leisure activities (theatre, cinema, library…)?
- Do you go out to get shopping, eventually with help?
- Do you have sports activities?
- Do you stay at home, more than before?
Evaluation of social habits (by the PwMS)

- Relation between stay-at-home aspect and voice and speech disorders

![Graph showing evaluation of social habits](image)

Slide 18

Evaluation of social habits (by the PwMS)

- Relation between stay-at-home aspect and cognitive deficit, fatigue, stress, and sleepiness

![Graph showing evaluation of social habits](image)
Social & family role

Are you afraid that communication disorders modify your:
• Conjugal role: feeling of distance, loneliness, …
• Parental role:
• Professional role: change of status, loss of job,…

Fatigue, stress & cognition

• Do you notice more fatigue than before during current conversation?
• Do stressful situations favour apparition of speech impediments?
• Do you notice concentration or memory problems?

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Drugs interaction

Do you observe any influence of drugs on your speech?

![Bar Chart](image)

Communication limitations

How to detect them?

1. Voice & Speech Disorders - Intelligibility
2. High Level Language Problems – Cognition
3. Emotional aspects
Slide 23

Fatigue
↓
Articulation
↓
Muscular weakness

Drugs

More time

Intelligibility

PwMS

Depression, passivity, social isolation, irritability, aggressivity, revolt, depreciation, decreased self-esteem

Slide 24

What’s Dysarthria?

Dysarthrie  Darley, Aromon & Brown (1969)

• Deficit of muscular control of speech resulting from a cerebral, cerebellar and brainstem involvement inducing
  – Muscular weakness
  – Palsy
  – Incoordination
Slide 25

What’s Dysarthria?

**Dysarthria** Darley, Aronson & Brown (1969)

- Affects speed, force, variations, timing and precision of all movements inducing
  - Respiratory process
  - Phonatory process
  - Nasality
  - Articulation
  - Prosody (speed, stress, intonation)

Slide 26

- Categorized according to different combinations of auditivo perceptual impressions corresponding probably to different underlying neuropathophysiology:
  - flacid: inferiors motoneurons
  - spastic: superior motoneurons
  - ataxic: cerebellum
  - hypokinetic or hyperkinetic: extrapyramidal
  - mixed: combination
Dysarthria Assessment

- Perceptual assessment
  - 38 items of Darley, Aronson et Brown (1972)
  - Assessment of Intelligibility of Dysarthric Speech (Yorkston & Beukelman, 1983)
  - Frenchay Dysarthria Assessment (Enderby, 1983): 54 items: respiration, phonation, motor performance, articulation, prosody and intelligibility

Dysarthria Profile in MS

- Mixed: ataxic et spastic

Graph:
- Imprecise articulation
- Hoarseness
- Reduction respiratory support
- Prolonged intervals
- Modified accentuation
- Reduction of speed
- Reduction of pitch variations
- Reduction of intensity variations
Methods for assessment

- Acoustic analysis: temporal and spectral exploration of the acoustic signal of the speaker
  - temporal characteristics = syllables duration, segments, subsegments (vowels, formantic transitions, occlusion …)
  - spectral characteristics = energy distribution according to frequency
  - phonatory characteristics = exploration of the glottic wave (fundamental frequency, pitch variations, duration and amplitude by cycle, relations between periodic and aperiodic energy)

Perceptual reflect of voice
Slide 31

Subsystems Dysfonctions
Murdoch et al. (2000) (N=30)
• 23 / 25 subsystems of the Frenchay Dysarthria Profile disturbed (excepted cheeks and lips at rest)
• Lingual and laryngeal functions more disturbed
Hartelius et al. (1993) (N=30)
• In all dysarthrics : déficit of all aspects of oral production
• Mild dysarthrics : respiratory deficit increased, oral motor and phonatory deficits out of proportion with articulation deficit and intelligibility
• Reduced prestations of expiratory pressure, duration of fricatives et voyels, oral diadocokinesy, speed

Slide 32

• temporal deregulation
• increased intervals between syllables et accentuations
• egalisation of syllables
• variability increased between syllabic sequences
• increased variability of intervals between accentuations
Phonatory Characteristics

Darley et al. (1972) - FitzGerald et al. (1987)
- Control of intensity
- Pitch variations
- Hoarsness

Hartelius, Buder & Strand (1997)
Long term Phonatory instability (tremor) measured by:
- Coefficient of variation of pitch and intensity
- Spectral Analysis

Infra clinic symptoms dysarthria in MS
Variations of intensity
Variations of pitch
Soft phonation
Hoarseness
Slide 39

**Respiratory Dysfunction**

- **Prevalence**
  - Darley et al. (1972): 77%
  - Hartelius et al. (2000): 77%
    - 74% mild deficit
    - 26% severe deficit
  - Murdoch (2000): deficit in 52% of recently diagnosed PwMS
    - 66% mild deficit
    - 34% severe deficit

Slide 40

- **Interdependence** of the 2 subsystems during the speech process
- A **reduction of the expiratory flow** induces:
  - A reduction of the length of sentences
  - A reduction of pitch and intensity control
  - A reduction of all vocal parameters
  - A deterioration of the global accentuation profile of speech
Slide 41

Muscular Weakness

Abdominals → Exp. P. → Local hypventilation → Scoliosis

Diaphragm → Insp. P. → P.E.F. → Cough → Hypersecretions → Micro-atelectasy

Intercostals → Pulmonary Compliance

Spine

Vocal parameters modified

Reduced intelligibility

Slide 42

• Trigeminal nerve
• Facial nerve
• Glosso-pharyngeal et pneumogastric nerve
• Spinal nerve
• Hypoglossis

Motor aspect
• Sensitive aspect
• Reflexes
Communication limitations
How to fight them?

1. Dysarthria
   a. Respiratory function
   b. Oral motor function
   c. Voice
   d. Communication strategies
2. High Level Language Problems
3. Guidelines for better communication
**Slide 45**

**Basic principles of dysarthria rehabilitation**

- Precocity
- Improvement of respiratory support
- Improvement of vocal efficiency
- Stimulation of motricity, sensibility and reflexes
- Improvement of capacity to produce contrasted accentuations
- Feedback
- Current situation (group therapy)

**Slide 46**

- Vocal intensity
- Vocal variability
- Vocal stability
- Intelligibility
- Articulatory précision
**Daily training**

**Mobilisation**
- Head - trunk
- Shoulders
- Joints
  - costo-transverse
  - costo-vertebrales

**Support instrumental**
- Inspiratory phase
  - InspirX
  - T triflo
  - DHD Coach
  - Volatex
- Expiratory phase
  - Bottles
  - Resonance tube
  - Therapep

**Comportemental**
- Posture
- Abdominal support
- Inspiratory checking
- Respiratory patterns
- Accentuation

**Daily training**

**Mobilisation**
- Head - trunk
- Shoulders
- Joints
  - costo-transverse
  - costo-vertebrales

**Support instrumental**
- Inspiratory phase
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- Expiratory phase
  - Bottles
  - Resonance tube
  - Therapep

**Comportemental**
- Posture
- Abdominal support
- Inspiratory checking
- Respiratory patterns
- Accentuation
Intrapulmonary Percussive Ventilation

Mobilization of the external respiratory mechanisms: costo-transverse and costo-vertebral joints
- Prevention of the thorax rigidity by stimulation of the synovia production and maintenance of the articulator cartilages
- Preservation of the flexibility of the capsules and ligaments

Active or passive reverse pedaling induces spine mobilization through the three spatial dimensions
- Horizontal plane: rotation
- Frontal plane: flexion
- Sagittal plane: extension

Reverse pedaling

GOALS
- Mobilization of the external respiratory mechanisms: costo-transverse and costo-vertebral joints
- Prevention of the thorax rigidity by stimulation of the synovia production and maintenance of the articulator cartilages
- Preservation of the flexibility of the capsules and ligaments

Active or passive reverse pedaling induces spine mobilization through the three spatial dimensions
- Horizontal plane: rotation
- Frontal plane: flexion
- Sagittal plane: extension
Conclusions

Only a multidisciplinary approach including a global view of the respiratory insufficiency can improve the efficiency of the communication and swallowing treatment.

Slide 52

- Motor training
  - Slow and precise movements
  - Simple but quick movements

- Motor coordination

- Temporal coordination
  - Simple and complex movements
Muscle tone regulation

• Cryotherapy
  – Reduction of gamma hypertony
  – 5 min ice application (-15°)
• Cycloid Vibratory Therapy
  – Reduction of alpha hypertony
  – Proprioceptive neurostimulation
  – Simultaneous relaxing of antagonists
• Transcutaneous Neurostimulation
  – Reduction of hypertony and spasticity
  – Improvement of lymphatic circulation

Slide 54

- reduction of abduction or adduction
- phonatory stability
- phonatory coordination
- accentuation
- visual feed back pitch, intensity and duration (Speech Viewer)
- visual feed back pneumo-phonatory coordination
- visual feed back vocal cords
- visual feed back expiratory pressure and flow
- auditive feed back laryngeal stress (EMG)
- voice amplifiers
Adaptation at home

Interactive communication strategies

- When using an alphabet
  - The speaker points the first letter of the word
  - The listener asks a repetition of each word or sentence
  - The listener asks a clarification in case of a lack of understanding
- Identify context and topic of conversation
  - The speaker identifies contextual signs: name of the person, feeding, animal, etc…
  - The speaker identifies explicitly the topic of the conversation, particularly when topics are changing
Slide 57

**Speaker**

- Modify contents and duration
- The speaker simplifies the contents
  - reduction of idiomatic expressions to the benefit of literal expressions
  - Modification of the length of the speech according to the severity of dysarthria
- Determine the comprehension level of the listener: the speaker maintains the eye contact with the listener and asks regularly if the message is understood

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- Modify the physical environment
  - Reduce the noise level and increase the proportion signal – noise
  - Avoid a poorly lighted environment
  - Maintain eye contact
  - Maintain an adequate speaker/listener distance
- Develop competences for active listening
  - The listener increases the speaker's attention
  - The listener informs the speaker about his comprehension level
Slide 59

**Interactive strategies**

- Eye contact
- Determine feedback methods
  - immediate or delayed
  - specific or when incomprehensible
  - topic definition
  - resume contents and identify erroneous information
  - specific gesture indicating incomprehensibility
  - signs facilitating the intelligibility

Slide 60

**High Level Language Problems in MS?**

**A new concept!**

*With the contribution of Antonella Nota - SLP - Melsbroek - Belgium*
Slide 61

History of language problems in MS

- Language dysfunction may occur early in the disease course (Friedman, Brem, Mayeux - 1983).
- Rao (1986)
  Research into the language abilities in individuals with MS seems to have been limited to neuropsychological assessments rather than tests designed specifically, to assess linguistic abilities, especially High Level Language
- Language subtests incorporated into neuropsych assessment batteries may fail to identify complex linguistic performances of individuals with MS.

→ None of the language difficulties were detected by a standard aphasia test.

Slide 62

- High Level Language: ability to use multiple areas of complex linguistic and cognitive processing (Lethlean & Murdoch - 1997).
- Detection of High Level Language deficits has received increasing attention during the last 10 years (Lethlean et Murdoch - 1993, 1994, 1997).
- Traditionally, language problems have been linked mainly to
- Progressively, more attention has been given to language processing (Alexander, Nuerse rt Palumbo 87; Wallach et Papagno, 88; Nadeau et Crosson 1997).
Although language impairment does not necessarily result from impaired cognition, every aspect of language requires cognitive processing and an interdependent relationship exists between the two (Kennedy & De Ruyter - 1991).

- Deficits of memory and attention can be expected to affect basic language processes while impairments of problem solving may affect High Level Language processes (Uomoto 1991).

Language problems in MS

- Naming
- Narrative discourse
- Sentence comprehension
- Word fluency
- High level language
- Reading

Language problems in MS: description
1. Naming

- Naming deficits in PwMS have been attributed to inefficient patterns of semantic memory search (Beatty, Monson, Goodkin, Caine et al, 86).

- PwMS reflect an inability to retrieve the appropriate word from the lexicon, rather than a breakdown of semantic knowledge as identified in Alzheimer (Smith et al, 89; Troster, Salmon, Mc Cullough, & Butters, 89).

Slide 66

- Although PwMS use approximately the same number of words and ideas, and the same basic story framework, as control subjects,

- they failed to provide much information considered essential to the story

- and use more redundant information than control subjects.

- This would indicate that group differences may be partly due to a
Slide 67

What’s inferred information?

Inferred information

- relies on the higher cognitive function of abstract reasoning
- to utilise information such as facial expressions, physical distance, body posture and physical setting to make appropriate inferences

pragmatic disturbance:
the speaker’s failure to take the listener’s perspective

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Slide 68

- Deficits become apparent when the PwMS are attempting to understand semantically non constrained sentences with subordinate phrases or sentences in the passive voice.
- One possibility is that the sentence comprehension deficit in MS is due to the loss of certain aspects of grammatical knowledge.
- The authors speculate that a slowed information processing speed may also account for the sentence processing deficits of some PwMS.
Slide 69

4. Word fluency

- Researchers have found that subjects with RR and CP disease courses perform more poorly on word fluency tasks than control subjects. (Beatty et al 88,89; Heaton et al, 1985, Jennekens-Schinkel& Sanders 1986)

- Impaired initiative and spontaneity, impaired working memory and attention difficulties are all extralinguistic factors that may interfere with the speed and efficiency of completing a word fluency task (Chertkow&Bub,1990)

Slide 70

This study results showed that MS performed significantly below subjects in the control group on measures of high-level language abilities including:

- the naming
- the comprehension of concepts requiring logico-grammatical operations
- the repetition of sentences and digits
- the word fluency
Slide 71

5. High level language (Lehman & Murdoch, 1997)

- all activities requiring
  - verbal explanation
  - verbal-reasoning
  - reconstruction of sentences
  - definition of words
  - interpretation of absurdities, ambiguities and metaphors.

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Presence of reading deficits (Jambor, 1969)
Guidelines for better communication with PwMS

Problem definition
- Fatigue
- Loudness ↓
- Articulation ↓
- Muscular weakness
- Drugs
- More time
- Accurate topics
- Rephrasing or stopping interaction if unintelligibility
- Expiratory pressure
- Short sentences
- Eye contact
- Lip-reading
- Position
- Fatigue management

Implication
- Lack of interest
- Withdrawal from conversation
- Word finding ↓
- Concentration ↓
- Abstraction ↓
- Apathy
- Depression, anxiety, social isolation, irritability, aggressibility, guilt, Depression, Decreased self-esteem
- Restitution of priorities and life concepts
- Respect of dignity & identity
- Therapy of emotional disorders
- Depression, passivity, social isolation, irritability, aggressibility, guilt

Cognitive Aspects

Tasks organisation
- Simplification of info
- Compensatory techniques

Lack of interest

Advises & solutions

Slide 74

« The music of human language is the most beautiful art »
Leos Janacek (1854 – 1928)

Thank you for your attention.
Slide 1

Physiotherapy Service Development Programme

Innovative models for physiotherapy in the UK

Jill Anderson and Tracey Mifflin

Slide 2

Physiotherapy Service Development Programme

Workshop objectives

- To share the learning from the MS Society and MS Relief physiotherapy service development programme
- Specifically around user involvement in service development
Slide 3

Workshop objectives

- Highlight the range of different levels of physiotherapy services at different stages of MS; for people with minimal impairment to people with more severe impairment
- Agree the importance of providing targeted physiotherapy services

Slide 4

The MS Society and MS Relief Physiotherapy service development programme
Slide 5

A partnership programme

- MS Relief
- The Chartered Society of Physiotherapy
- The National Hospital for Neurology and Neurosurgery

Slide 6

Objectives

- improve the quality of physiotherapy service for people with MS
- contribute to the evidence base for physiotherapy
- identify effective models of physiotherapy services
Slide 7

Physiotherapy Service Development Programme

Objectives

- stimulate innovative practice in which user involvement is central
- inform further research into specific aspects of physiotherapy

Slide 8

Physiotherapy Service Development Programme

The Walton Centre

- A multi-disciplinary relapse management clinic
- rapid access to an assessment clinic within the existing MS clinic
- a co-coordinated, multidisciplinary approach and improved planning for rehabilitation when steroid treatment is advocated medically
- the development of a treatment plan, which is agreed between the patient and the multi-disciplinary team
Physiotherapy Service Development Programme

North Tees and Hartlepool NHS Trust

- self-management and education programme, through groups
- advice and information sessions
- individually tailored exercise programmes and
- an ongoing programme in a local leisure centre with the support of a health and fitness advisor

Woodlands Respite Care Centre

- An exercise programme in the management of fatigue
- explore the impact of a specific exercise programme on MS fatigue
- define the target group of PwMS, based on a review of the literature, that would benefit from this type of service
Slide 11

Woodlands

- evaluate the effects of the programme
- produce recommendations to enable physiotherapists to set up a fatigue management exercise programme

Slide 12

West Cumbria PCT

- a community neuro-physiotherapy service to people with MS living within West Cumbria PCT,
- a central point of contact,
- satellite clinics to those areas where there is currently no access to neuro-physiotherapy assessment and treatment, and
- an evening and weekend clinic.
**Physiotherapy Service Development Programme**

**The evaluation**

Aims To assess each service's ability to:

- Deliver effective interventions for people with MS
- Involve users in service development
- Offer timely and appropriate access to service provision

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**Physiotherapy Service Development Programme**

**The evaluation**

- Provide information, education and advice
- Meet agreed standards
Physiotherapy Service Development Programme

**Evaluation outcome**

To provide recommendations from which:

- Models and protocols of physiotherapy service developments can be developed
- Effective methods of involving service users and cares in service developments can be replicated

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**Slide 16**

Physiotherapy Service Development Programme

**Evaluation outcome**

To provide recommendations from which:

- Direction and strategy for future research
- In addition it will provide a detailed descriptive account of each service
- Detail descriptive accounts of developing MS specific physiotherapy services can be developed
Questions
are there common issues on accessing physiotherapy for people with MS?
access; how/where/specialist care?

More questions
is there a common level of demand/need for physiotherapy service across borders?
what are the different roles and responsibilities for a neurophysiotherapist in different countries?
Slide 1

Physiotherapy Service Development Programme

West Cumbria Primary Care Trust

Physiotherapy service development project

Tracey Mifflin

Slide 2

Project aim

To develop and evaluate a specialist neuro-physiotherapy service for people with MS who live in a rural community. User involvement is central to this project.
West Cumbria

- One of the most geographically isolated communities in England.
- Population of 135,000 scattered across 685 square miles.
- 2 MS society branches—Copeland/Allerdale.
- Neurologist services provided from Newcastle—110 miles away.

Physiotherapy services before the project

- Lottery – referral, neurophysiotherapy
- No community service
- Referrals from GP or other health care professional
- Long waiting list
Slide 5

Physiotherapy Service Development Programme

Project aim

To develop and evaluate a specialist neuro-physiotherapy service for people with MS who live in a rural community. User involvement is central to this project.

Slide 6

Physiotherapy Service Development Programme

User involvement

- People affected by MS consulted at every stage
- Stakeholder - Multi-Agency Focus Group.
- Steering Group.
- 1:1 Interviews.
Slide 7

User involvement

- Expert Patient Group.
- Consultation through client and user questionnaires.
- Through the needs assessment - ‘The Way Forward’

Slide 8

Background

- ‘The Way Forward’ NCHA 2000
- Key themes identified;
  - Central point of contact
  - Co-ordination of services
  - Transport and geography issues
  - Access to specialist care
  - Lack of community neuro-physiotherapy
Action Research Cycle

Steering group
Project therapist
Expert Patient Group
Steering group

Action
Intervention
Enquiry
Evaluation

Steering group
Project therapist
Focus group

Client questionnaire
1-1 interviews
Professional questionnaire

Adapted from Kolb’s Action Learning Cycle (1984)

Slide 10

Physiotherapy Service Development Programme
West Cumbria

Interventions
- A community neuro-physiotherapy service for people with MS living within rural West Cumbria PCT. (18hrs/week).
- A **central** point of contact.
- Satellite clinics to those areas where there is currently no access to neuro-physiotherapy assessment and treatment.
Interventions

• Evening and weekend clinic.
• Home/Out Patient/In Patient settings
• Self-referral.

Enquiry and Evaluation

• Run together and influence each other.
• Interviews
• Questionnaires
• Other outcome measures included the MS Impact Scale and the Amended motor club assessment
• All information fed back into Action Research Cycle
Slide 13

**Information gained**
- Timing of appointments.
- Location.
- Satisfaction with treatment.
- Satisfaction with advice.
- Involvement in treatment planning.
- Are needs adequately addressed.
- Access to service.
- Future Planning.

Slide 14

**Results**
- Patients seen so far - 54
- Total Contacts - 269
- Both the MSIS and the AMCA show improvement
- Questionnaires results – scored 4-5/5 on all questionnaires
Slide 15

Results - comments

"I was able to discuss where I felt the physiotherapy was needed most"

“I am able to do things that I was not able to do before”

“Physiotherapy is the only medical intervention I have access to and I find it very useful”

Slide 16

Results - comments

“It is a great relief to have ongoing treatment and to be able to contact someone if I have a problem”

“Long may it last!”
Rehabilitation in MS

“One of the main goals of social policy in Russian Federation is rehabilitation and broad compensation of limitations in private life and restoration of social status of disabled persons and increase of financial independence”

State program
“Social maintenance of disabled persons 2000-2005”

The total number of MS patients in Russia

150,000
Slide 3

The trigger points of MS in Russia

- The increase a year – 7%
- The early beginning of MS – 16-32 years
- The early beginning of disability – 3-5 years after the beginning of MS
- High level of disability – 72%
- 35% disable people less then 28-years old
- Severe disability – 73% from the total number

Slide 4

Children and women

- "The early beginning of MS" - 10-15 years old (from the total number)
- Young women from the total number
- The beginning of MS just after pregnancy
Slide 5

Family

- the problems of the family – divorce 75%
- Physical - 20% - and verbal - 45-50% - aggression
- children missing from home – 15-17%
- health care by adult parents – 60%
- by children – 17-20%

Slide 6

Job and education

- High education –
- need to change and adaptation of the working place –
- can walk only inside the house more then one year –
- Don’t participate in the entertainments –
Slide 7

**Treatment**

- without special treatment - 90%
- the price for special treatment one patient a year – 15000 $ (reimbursement by insurance companies is not adequate)
- the level of income of families with MS patients is 30 - 65 $ for patients per month – more then 80%

Slide 8

**Social service**

The whole amount of social service (medical, social, professional, psychological) is available for not more then -
Slide 9

The whole amount of suicidal deaths
of young MS patients
is 600%
in comparison with the average level
in total population.

Slide 10

The strategy of rehabilitation.

- Foundation of special rehabilitation centers
  for MS patients
- Introduction of complex social, medical,
  scientific, psychological and legislative
  programs for multidisciplinary accesses to
  social adaptation
Slide 11

Rehabilitation consist of five main directions:

- psycho-social
- medico-social
- every-day-life
- professional
- legislative

Slide 12

The special rehabilitation centers for MS patients was found in 2002 by

1. Social department of region Administration
2. Region MS organization
3. Biasness organization
The rehabilitation serves consist of Multifunction Neurocenters

- Medico-social department
- Department of psycho-social rehabilitation
- The family serves
- Department of professional rehabilitation
- The cabinet of legislative consultation
- The every-day-life department
Slide 15

Multifunction Neurocenters

Slide 16

Multifunction Neurocenters
The One special rehabilitation Multifunction Neurocenters for MS patients in Russia.

- 56 places
- 968 MS patients in year
- 105 serves personal,
  - 9 doctors
- 17 technical personal
  - 29 necessary
- 50 social works

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Budget
of Multifunction Neurocenters

in year.
The Allrussia MS organization (ARMSO)

- Foundation in 2001 year in May.
- Consist from 47 regions organizations
- Associated near 50000 MS patients
- The center in Samara (+7-846-232-03-74, Yan)
- The direction in Moscow (+7-095-402-29-68, Andrei)
- Mail: sams99@inbox.ru

Slide 20

Необходимо научить человека умению жить с этой болезнью,
борясь созидая,
побеждать без разрушительных последствий.
REPORT FROM WORKSHOP 1
MANAGING FATIGUE

Slide 1

European MS Platform

Conference
Malta, 1-4 May 2003

reports of the workshop Energymanagement

Slide 2

Management of limited energy
in daily life

Marijke Duportail, Head Occupational Therapy,
National MS Centre, Meikroek, Belgium

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Slide 3

MS related fatigue

- Fatigue is most common among the most disabling symptoms of MS (75 – 95%)
- Fatigue management – dealing with fatigue versus management of limited energy – Energy management?
- But what means fatigue in daily life to you, what are the strategies you apply, what do you integrate already, what’s missing for you?

Slide 4

Energy management

the expert
of the limited energy
the partner and the family
dealing with a partner with limited energy
the professional
try to image the particular fatigue level accompagnement and education
Principles of energy management

- Encourage a healthy lifestyle
  - Try to keep as fit as possible with sensible rest, sufficient exercises
  - Training relaxation techniques. Physical exercise is important
- Diet, find a good balance
- Implement ergonomic principles
Slide 7

**Ergonomic principles**

- Use adaptive devices or equipment
- The workplace is adequately organised; materials and equipment are easily in reach
- We organize ourselves better

Slide 8

Fatigue is one of the most disabling symptoms of MS, the energy is limited

Introduction of ergonomics in daily life is important

Assistive devices and home adaptation
Slide 9

ENERGYZMANAGEMENT

ERGOARM

Managing Fatigue in daily life-
Malta 2003 - Marijke Duportail

Slide 10

An example of ergonomics applied in the kitchen

Managing Fatigue in daily life-
Malta 2003 - Marijke Duportail
First problems in the home and first advices in home adaptations

- **BATHING**
  - handrail
  - shower instead of bath

- **STAIRS**
  - stairlift or rearrangement of bedroom

- **RAISING UP AFTER SITTING**
  - Raising the bed
  - Other techniques to come up

- **DIFFERENCES IN LEVEL**
  - Take away the carpets
Slide 13

There is only a disabled attitude of seeing things!

There is no physical disability!

Principles of energy management

Change the bath into a shower
Good morning everybody,

As Alan already told you I am going to report from our yesterday’s workshop with the topic of “Managing Fatigue”

Could anybody tell me what is the definition of fatigue?
  • Too tired to do something?

It could be many things. When it comes to explain to other people how it feels, we have difficulties. They can not really understand us and often they think that we are lazy or selfish etc. which is not the case.
Yet fatigue is the most common symptom of MS (75%-95% are suffering from that) and is affecting our daily life.

As a term “Managing Fatigue” includes something negative, we have decided to give a more optimistic and hopeful perspective by changing it into : “Management of limited Energy in daily life” / “Energy management” It’s like the way of seeing a glass of water half filled or half empty. Half filled is optimistic, half empty is pessimistic.

☐ Fatigue is most common among the most disabling symptoms of MS (75 - 95%)
☐ Fatigue management-dealing with fatigue- versus management of limited energy-Energy management?

☐ But what means fatigue in daily life to you, what are the strategies you apply, what do you integrate already, what’s missing for you?

The involved parts are:
  ■ the expert of the limited energy
    The person with MS is the expert. He knows better than anybody. I strongly believe that we are the best doctors of ourselves
  ■ the partner and the family
    ■ dealing with a partner with limited energy
  ■ the professional
    ■ try to image the particular fatigue level
    ■ accompagnement and education

Before attending this congress, some of us received a “homework”. We got a questionnaire that should be filled in and sent back to the leader of
the workshop for valuation. Yesterday we discussed about the results of this “questionnaire”.
According to that in general terms, although we are quite aware of what is good and what is bad for us but we do not apply it in our daily life. Among other things we had to fill in a diary, where we were marking our activities every hour, deciding if the activity was important or not, how we were feeling after that (if we got satisfaction and if we experienced fatigue and at which level)

I will show you a graphic

- The blue line is the fatigue level
- The yellow line is the value
- The pink line is the satisfaction

Fatigue diary of a PwMs during the day / Visualising the fatigue level during the day

We can see that the most important thing is the satisfaction. When satisfaction is in high level and the activity is important even if fatigue level is high as well, IT IS NOT THAT IMPORTANT!

Another thing we discussed was techniques about ENERGY MANAGEMENT. They can be divided in two parts

a. Physical techniques
b. Ergonomical principles

PHYSICAL TECHNIQUES

- Encourage a healthy lifestyle
  - Try to keep as fit as possible with sensible rest, sufficient exercises
  - Training relaxation techniques. We should avoid stress and tension when this is possible. My little experience says that we suffer a lot because we are very sensitive persons. We take over the problems of the others which makes us stressed and we feel sad. We should make the distinction of what concerns us and what concerns the others. If it is ours we should try to work on it. If it is others let them deal with, and don’t bother about it. You WILL AVOID A LOT OF TROUBLE!
  - Physical exercise is important.

- Diet, find a good balance
  There are several diets available. A PwMS can choose a suitable one with the help of a professional

  Ancient Greeks had an old saying: «παν μέτρον ἀριστον», which means: Do everything but in good measure. Don’t prevent yourselves from doing things, but on the other hand do not overdo! Find a balance. That will give you quality in your daily life.

ERGONOMIC PRINCIPLES

- use adaptive devices or equipment

- the workplace is adequately organised, materials and equipment are easily in reach

  - We organize ourselves better

  - Fatigue is one of the most disabling symptoms of MS, the energy is limited
Introduction of ergonomics in daily life is important

assistive devices and home adaptation

ENERGYMANAGEMENT

ERGOARM
An example of ergonomics applied in the kitchen
First problems in the home
and first advices in home adaptations

■ BATHING
- handrail
- shower instead of bath

- **STAIRS**
  - stairlift or rearrangement of bedroom

- **RAISING UP AFTER SITTING**
  - Raising the bed
  - Other techniques to come up

- **DIFFERENCES IN LEVEL**
  - Take away the carpets

*Change the bath into a shower*
Concluding I would like to say that WE CAN STILL DO THINGS. The only thing we have to do is realize that we must do them in a different way then the one we used before.

As a good friend of mine says:
There is no physical disability. There is a disabled attitude of seeing things!

So think positive, do not give up! Don’t get disappointed!

As a French composer and singer Georges Moustaki says:
Nous avons toute la vie pour nous amuser, nous avons toute la mort pour nous reposer.
(We have the whole life to enjoy ourselves and the whole death to rest)
REPORT FROM WORKSHOP 2

The report from Workshop 2 is incorporated into the summary of the workshop.

REPORT FROM WORKSHOP 3

TELECOMMUNICATION AS A MEANS FOR SELF-HELP IN MS

This workshop focused on how new technologies can help persons with MS to improve their quality of life.

TELEMATICS:

Mobile phones
PDA – personal digital assistant
Internet – email, ecommerce, elearning

Internet enables empowerment of persons with MS and the role of the MS societies should be to help educate people and increase confidence.

The Internet can also be used for telemedicine and telerehabilitation which is already happening in the U.S. This involves consultation, support, renewing prescriptions and giving advice over the internet.

The NARCOMS registry in the U.S. is a patient driven database for persons with MS. The process is that persons with MS fill in a questionnaire which asks questions about demographics, health care resources, medical history, care providers, disability, systematic therapies and alternative therapies. The results have been used to show the relationship between fatigue and mobility.

It was proposed that something similar be set up in Europe.
VIRTUAL REALITY:

Education and training
Neuro rehabilitation  cognitive effects
Stress management

Eg. Cognitive defects  memory testing, virtual tours
Attention deficits
Interactive driving simulation

DOMOTICS:

Control of house appliances via computer

ROBOTICS:

Computer central devices that can interact with surroundings eg. Wheelchairs with laptops, sensors etc.

TAKE HOME MESSAGES:

- Individuals do not have equal access especially Eastern European countries
- Could the EMSP help to resolve this inequity
- The Challenge – To ensure equal access to these innovative applications to ALL people with MS regardless of the country they live in.
This was a small workshop consisting of only 3 delegates.

Problems with reception, integration, answers and speech problems were discussed.

In a questionnaire survey carried out 55% of participants had intensity or pitch problems. People were afraid of getting tired and therefore joined in less with conversations.

Experience of impatience was reported and the need to repeat was a big problem. Therefore people tended to stay at home more, limited shopping and other activities.

Fatigue, stress, cognitive problems, memory and attention problems all affected the strength of voice.

**Intelligibility:** Fatigue, loudness, articulation, drugs, muscle weakness

**Solutions:** Rephrasing, accurate topics, short sentences, good positioning, lip reading, eye contact

**Cognitive Aspects:** Lack of interest, withdrawal, lack of concentration, apathy

**Solutions:** Task reorganisation, fatigue management, compensatory techniques

**Emotional Aspects:** Depression, passivity, irritability, low self esteem

**Solutions:** Emotional support
REPORT FROM WORKSHOP 5
“URO-REHABILITATION” – AN IMPORTANT TOOL TO TREAT URINARY DYSFUNCTION

More than 80% of persons with MS suffer from this problem.

BLADDER MANAGEMENT:
- Assessment
- Pharmacological treatments
- Rehabilitation strategies

WORKSHOP GROUP PROPOSALS/CONCLUSIONS:
- Screening: questionnaire, nutrition diary
- Assessment before treatment
- Regular reviews
- Awareness of side effects of medication
- Urodynamic evaluation – included as part of the rehabilitation programme
- More qualified doctors to assess – with experience
- Ask lots of questions
- Needs to be discussed at early stages of the disease
- More studies on this subject specifically relating to MS

Methods and costs were discussed in the workshop – again an inequity of access in different countries.

TIPS/TAKE HOME MESSAGES:
- Early intervention
- Full explanation to the person with MS and the team about bladder management and rehabilitation techniques.
Innovative models of physiotherapy in the UK

Jill Anderson
(MS Society)
Tracey Mifflin (West Cumbria Primary Care Trust)

Service Development Programme
Example of partnership working between
• MS Society (UK)
• MS Relief (another UK MS charity)
• Chartered Society of Physiotherapy
Slide 3

Objectives of the Programme

To reflect the range of different physiotherapy interventions and find out as much as possible about physiotherapy for people for people with MS to contribute to evidence base, identify models, stimulate innovative practice (esp. user involvement) & inform further research.

Slide 4

The 4 different services

- Self-management programme (Stockton-on-Tees)
- Relapse management clinic (Walton Centre, Liverpool)
- Fatigue management programme (Yorkshire)
- Model for delivery of equitable neuro-physiotherapy service to people with MS in a rural district (Cumbria)
Evaluation aims

To assess the ability of each service to:

- Deliver effective interventions for people with MS
- Involve users in service development
- Offer timely and appropriate access to service provision
- Provide information, education and advice
- Meet agreed standards

Model for delivery of equitable neuro-physiotherapy service to people with MS in a rural district

A community neuro-physiotherapy service to people with MS in West Cumbria

Special features:

- a central point of contact
- satellite clinics to areas where there is currently no access to neuro-physiotherapy assessment and treatment, and
- an evening and weekend clinic.
Slide 7

Action Research Cycle

Adapted from Kolb’s Action Learning Cycle (1984)

Slide 8

Key messages

• Access to neuro-physiotherapy services needs improving
• Continuity of service important
• Need to bring physiotherapy services into the home and into rural areas
• ££$$ is an issue (no surprise!)
Slide 9

Key messages

• The importance of involving all those who can have an impact on the service (stakeholders) in the design of a service
• We like the action-research model – useful for service development – must have user involvement
• The importance of involving all those who can have an impact on the service (stakeholders) in the design of a service

Slide 10

Key messages

• Importance of ‘custom-designed’ service & individual treatment plans
• Physiotherapy must have specific goals
• Physiotherapy has psychological as well as physical benefit – (measuring long-term benefit?)
Key messages

- There are a range of innovative physiotherapy services in Europe
- Physiotherapy is important for people with MS
- People with MS need to be enabled & empowered
FURTHER DEVELOPMENTS IN THE FIELD OF REHABILITATION IN EUROPE – WHAT PERSONS WITH MS CAN EXPECT FROM RIMS AND EMSP ON A POLITICAL LEVEL

Frans Nijhuis

Slide 1

Organizing Vocational Rehabilitation in Europe

Prof. Dr. F.J.N. Nijhuis

Slide 2

THE EUROPEAN PLATFORM FOR REHABILITATION

A transnational network in vocational rehabilitation
Slide 3

CONTENT:

- EPR
  - role and function
- Vocational Rehabilitation:
  an integral approach
- Vocational Rehabilitation a
  continuous adaptation of possibilities
  and work

Slide 4

VISION

The EPR contributes to a world where every person
with a disability or other disadvantage access the
highest quality rehabilitation services that create
equal opportunities and interdependent
participation in society.
MISSION

Drawing strength from global diversity, the EPR is an innovative force and generator of expertise increasing the quality of rehabilitation services. Recognised as the outstanding and influential forum of service providers in Europe and in cooperation with service-users, the EPR realizes continuous improvement and lasting change through:

Providing professional development platforms that enhance the capacity of individual professionals, service providers and the entire rehabilitation sector.

Researching and developing methods, models and modes of delivery that directly innovate and improve rehabilitation service systems.

Influencing policy development, promoting the rehabilitation sector, and providing information and assistance to service providers on European and International affairs.

Slide 6

EPR ACTIVITIES

Professional development

Research & Development

Public Affairs

Experience-based Learning

Education & Training

Services & Strategies

Consultancy & Policy advice

European Corporate Affairs

Sectoral Representation
European Rehabilitation Academy

**GOAL**

To equip practitioners within the field of (vocational) rehabilitation for the challenges to be faced in a rapidly changing environment
Slide 9

How to reach this goal?

• Continuous professional improvement
• Optimising the knowledge management needs of professionals within the sector
• Tailor-made staff development activities

Slide 10

Health problem (illness or disease)

POSITION AND STRUCTURE  ACTIVITY  PARTICIPATION

PERSONAL FACTORS  EXTERNAL FACTORS
Slide 11

![Diagram showing personal development, individual factors, placement, and functioning in work situation relationships.](image)

Slide 12

**Questions**

- Personal development
- Short-term and long-term placement
- Functioning in work situation
- Costs versus benefits
- Predictors of successful placement
Slide 13

**Process model of labour integration**

Reintegration scheme  Guiding towards employment

Assessment  
Training and education  
Placement and after-care

……………………→ Guidance and support  …………………→

Slide 14

**Vocational Rehabilitation:**

an integral approach
Slide 15

Employees with a disability
- Medical, psychological vocational assessment
- Limitations and possibilities

Job characteristics
- Job analyses:
  - Psychological workload
  - Physical workload

Job demands

Comparison

Difference

None
Small/medium
Large

Rehabilitation
Adaptation personal work Rehabilitation
Other job

Misfit: news selection of function

Slide 16

Chronic disease

Interactive strategy of possibilities and job demands

- work
- person
- employment in process
Slide 17

Work Oriented

• Adaptations
• Workload
• Time schedules

Slide 18

Work as a learning environment

• skills
• attitude
• discipline
Slide 19

Personal oriented

- empowerment
- education
- training

Slide 20

Employment - process

1. Assessment
2. Job Finding
3. Job Analyses
4. Job Matching
5. Job Coaching
Vocational Rehabilitation for people with a chronic disease asked for a European policy and a continuing attention.
DECLARATION

by the participants of Meeting of the European Multiple Sclerosis Platform, Malta, May 2003

Acknowledging the dramatic differences across Europe faced by citizens affected by Multiple Sclerosis, we, representatives of EMSP, call for treatments and services that

- recognise personal dignity
- seek to maximise personal potential
- enable people affected by MS to be fully involved in and influence decisions about service provision
- take account of the full range of physical, cognitive, emotional and social implications of being affected by MS
- meet agreed European quality standards
- are subject to continual evaluation and improvement
- are accessible and timely
- are delivered by appropriately skilled and experienced professionals
- are provided equitably and efficiently, irrespective of geography or organisational professional boundaries

To achieve these goals, we affirm our commitment to:

- Working collaboratively with the European Institutions’ programmes and policies on health, social inclusion and non discrimination to promote the principle, and practice of equal treatment and services for people affected by MS across Europe
- Supporting concerted action and co-operation with relevant European medical NGOs and governmental agencies for the implementation of “European Wide Guidelines on Therapies for People affected by MS”

- Holding high level discussions with the EU Institutions to explore, in the framework of the Convention on the future of Europe, new EU competencies that can advance our endeavours for
  
  - more **MS related research** on national, European and world-wide level
  - better awareness on the **importance of continued employment** for persons with MS
  - achieving **high quality equitable treatment and services** for all Europeans affected by MS
  - **universal access** to public buildings and services throughout Europe

- Engaging in a major awareness campaign across Europe to ensure stakeholders at all levels support our drive towards a better quality of life and brighter future for every European affected by MS.

This declaration was adopted on May 3rd, 2003 in Malta. It constitutes the central message from 29 national MS Societies represented by the European MS Platform to fellow Europeans in this, the European Year of People with Disabilities.
WHAT WERE YOUR FEELINGS ABOUT THE CONGRESS?

“Thank you for your help. The meeting was very useful for Russians. Sure we will arrange feature collaboration with EMSP.”

“I'm back in Slovakia and from Saturday, back to my home town. I would like to thank you for organising such a great conference that for me was so fantastic.”

“This is our first experience at a conference of this sort. We are pleased that we were made so welcome and have felt comfortable enough to take part fully in the proceedings.”

“We have been encouraged by the positive attitudes and outlooks displayed by the conference as a whole.”

“We found some of the facts and figures presented frightening, but are optimistic that the situation is rapidly improving in those areas. With these presentations has come the realisation that we as a country are behind in many ways and ahead in many others, therefore we should appreciate what we have and strive to improve what we don’t and encourage all to the same high goals.”

“It was appreciated that the conference was held in English and appreciate the efforts made by others who had to listen in one language, think in another and then speak in the first language again.”

“On a personal level we have exceeded Peter’s (Kauffeldt) target of 10 new friends. We expect to maintain close contact with several of the people that we have met this week and look forward to perhaps renewing acquaintances with many others at future events.”

“After the conversations with these people I got deeper understanding where we are as an organization and what are our strong and weak points. Observations of how other MS Societies work help me to orientate what is the situation in Europe as a whole and how to set our priorities.”

Do you have any comments – good or bad – about this year’s congress. If so, please contact Rebecca Jestico on rjestico@aol.com
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