



**THE INTERNATIONAL
SPINAL CORD SOCIETY
ANNUAL SCIENTIFIC MEETING
ISCoS 2020: VIRTUAL**

**WORKSHOPS
ABSTRACT BOOK**

**1 - 5 SEPTEMBER 2020
#ISCoS2020GoesVirtual**

Climate Change and Spinal Cord Injury: An imperative to act now

Dr Marcalee Alexander^{1,2}, Dr Colleen O'Connell³, Ms Nishu Tyagi⁴, Dr Marieke Dekker⁵, Dr Ingebjorg Irgens⁶, Dr Shinsuke Katoh⁷

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NB MAlexander is CEO of a nonprofit Telerehabilitation International. This is volunteer work and there is no conflict of interest.

The world is grappling with the climate crisis as temperatures have increased in many areas, weather patterns are more erratic and extreme weather events are stronger and more frequent. These changes are already impacting the day to day lives of persons with SCIs; moreover, the prognosis is that temperature increases will continue, fires will be more frequent, floods will be more common and rising sea levels will result in a need for significant migration. A recent survey of 125 SCI professionals in Spinal Cord Series and Cases revealed 57.6% believed climate change had impacted their client's health and well-being and 86% were interested in more education. Moreover, 82.5% of participants reported professionals should consider the issue of sustainability in their practice. Despite these concerns, minimal attention has been paid to how climate change will impact persons with disabilities and in particular, those with SCIs, who are undoubtedly among the most vulnerable.

The goal of this workshop is to discuss climate change, consider how it is already impacting people with SCIs and discuss what next steps needs to be performed so that people with SCIs can adapt to the effects of climate change. This course has been purposely designed to include individuals from around the world, including variable climates and living situations so as to best describe the breadth of the problem. We will discuss concerns and solutions, hold a question/ answer session and brainstorm the optimal pathways forward for ISCOS to support our members and their clients as the climate changes.

Introduction: Alexander-Background on climate change survey, show video clip of person with sci discussing climate change 5 min

Around the world: How climate change is already impacting our clients with SCIs.

O'Connell-Canada & Haiti-5 min

Tyagi-India 5 min

Dekker-Africa 5 min

Best practices for mobilizing our patients: What do rehab centers need to add to our educational programming and our support services for disaster planning?

Alexander-A home care team from Houston and a sustainable dwelling in Puerto Rico 6 min

O'Connell-Disaster Preparedness Kits 6 min

How can a person with an SCI live a more sustainable life?

Irgens-A view from a privileged Northern Country 8 min

Tyagi-A view from a southern, less economically developed environment 5 min

What are rehabilitation professionals doing as we move forward?

Katoh-Addressing frequent typhoons in Japan 8 min

Alexander-Sustain our Abilities: Reaching out to climate change advocates and raising awareness 8 min

Group discussion: What can we do? 29 minutes

The purpose of this group discussion will be to discuss the above concerns with audience participation so that future research and educational programming ideas can be developed. It will also be to help people to connect and problem solve about their local areas as to how they can best address issues associated with disasters, sustainability and climate change and the impacts on persons with SCIs.

No lab? No problem! Local solutions to providing evidence-based management of sleep disordered breathing in spinal cord injury.

Dr Marnie Graco^{1,2}, Professor David Berlowitz^{2,3,4}, Dr David Gobets⁵, Dr Colleen O'Connell^{6,7}

¹Alfred Health, Melbourne, Australia, ²Institute for Breathing and Sleep, Melbourne, Australia, ³The University of Melbourne, Melbourne, Australia, ⁴Austin Health, Melbourne, Australia, ⁵Heliomare Rehabilitation Center, Wijk aan Zee, The Netherlands, ⁶Stan Cassidy Centre for Rehabilitation, Fredericton, Canada, ⁷University of New Brunswick, Fredericton, Canada

Sleep disordered breathing (SDB) is a highly prevalent secondary complication of spinal cord injury (SCI) and is associated with substantial neurocognitive impairment and reduced quality of life. Recent meta-analysis has estimated the prevalence of at least mild SDB in tetraplegia to be over 80%, and at least moderate SDB at over 60%. Despite this, research estimates that less than 20% of people with SCI are diagnosed and treated. This suggests that more than half of people with tetraplegia have a clinically significant disorder that is being overlooked by the health system.

The usual management pathway for SDB in SCI involves referral from the primary care or rehabilitation doctor to specialist sleep services for investigation and management. However, this care model often presents significant access barriers to people with tetraplegia. In the general community, there is increasing recognition that highly prevalent sleep disorders, such as SDB, place unmanageable access pressures on specialist sleep services. Research addressing these access issues in the general community has demonstrated that ambulatory models of diagnosis and treatment can be as effective as laboratory-based ones, and that health professionals other than sleep specialists can deliver safe and effective care.

Our research has identified three spinal cord injury (SCI) centres that have developed local solutions to these access issues. All three SCI centres have created a highly skilled, multi-disciplinary team dedicated to managing respiratory issues, including SDB. Routine screening and diagnosis is performed with portable, automated equipment and the collaborative decision on whether treatment is indicated, and the type of treatment, is based on test results, patient symptoms and patient wishes. These findings demonstrate that is feasible for multi-disciplinary SCI rehabilitation teams to independently manage un-complicated SDB without external referral.

This workshop will provide participants with background knowledge on the epidemiology of SDB in SCI. It will describe the latest evidence on ambulatory diagnostic and treatment methods and alternatives to specialist sleep services. Participants will hear from the SCI rehabilitation centres that have developed "in-house" models of managing SDB and be encouraged to consider local solutions for their setting. Finally, participants will be invited to contribute to the design of planned prospective trials to test the implementation of alternative models of SDB management in SCI.

Session outline:

- Professor David Berlowitz - "Overview of the latest research on epidemiology and treatment of SDB in SCI" (10 minutes)
- Dr. Marnie Graco - "Models of SDB management in SCI" (10 minutes)
- Dr. David Gobets - "Example of a comprehensive SDB service within an SCI centre in the Netherlands" (15 minutes)
- Dr. Colleen O'Connell - "Ambulatory diagnostic and treatment techniques for SDB in SCI" (15 minutes)
- Facilitated discussion:

"What other local solutions might address the under-diagnosis and treatment of SDB?" and
"What are the barriers and enablers to SCI centres providing SDB diagnosis and treatment services?" (25 minutes)

- Dr. Marnie Graco - "Future research opportunities" (10 minutes)

- Professor David Berlowitz - Summation of session (5 minutes)

Visceral Fat, Anthropometric cut-off for Central Obesity, and the Role of Trunk Muscles, and Treatment of Obesity in Adults with Spinal Cord Injury

Dr Ashraf Gorgey^{1,2}, Dr. David Dolbow³, Dr Peter Gorman⁴

¹Hunter Holmes McGuire VA Medical Center, Richmond, United States, ²Virginia Commonwealth University, Richmond, USA, ³William Carey University, Hattiesburg, USA, ⁴University of Maryland, Baltimore, USA

Over two-thirds of persons with SCI suffer from obesity associated cardio-metabolic consequences. Obesity is likely to impact their social, recreational activities, quality of life and impose socio-economic burdens. Recent reports highlighted that central obesity defined by increased both waist and abdominal circumferences are likely to impose significant health risks after SCI. The central obesity is characterized by increased visceral adipose tissue (VAT); which has been identified as an independent risk factor in different clinical population. In persons with SCI, VAT has been independently associated with impaired glucose tolerance, insulin resistance and dyslipidemia. It has been linked to secretion of pro-inflammatory cytokines. The symposium will review 1) recent evidence about the role of increasing VAT on increasing pro-inflammatory cytokines and inhibited mitochondrial health in persons SCI. This imbalance of increasing inflammation and diminished anabolic growth factors is likely to increase cardio-metabolic risk factors in men with SCI . 2) Therefore, the development and validation of anthropometric cut-offs are highly necessary for this population to establish accurate guidelines that is population specific. This anthropometric cut-off may also distinguish those who are risks of developing central obesity, metabolic syndrome and cardiovascular disorders in persons with SCI. 3) It is still unclear what is the role of exercise on visceral adiposity and central obesity. Recent evidence suggests that maintenance of the size of trunk muscles may attenuate the increase in VAT and lead to favorable metabolic profile. Furthermore, SCI individuals find it difficult to reduce caloric intake because of poor dietary habits. There has been limited success in use of some techniques such as surface electrical stimulation with androgen replacement therapy, robotically assisted locomotor activity and recently exoskeletal robotic therapy. Techniques for treatment of morbid obesity used in non SCI populations such as gastric sleeve surgery have not been utilized frequently in those with SCI, but successful cases have been reported.

1) Reciprocal findings of VAT and Trunk muscles in altering Cardio-metabolic Profile in Men with SCI (20 minutes).

Dr. David Dolbow will review and discuss the existing literature regarding the role of VAT in influencing cardio-metabolic risk factors in men with SCI. The presentation will highlight the relationship between trunk muscle and increasing VAT as well as altered metabolic profile in men with SCI.

2) Proposed SCI Anthropometric cut-offs for Central Obesity and Cardio-Metabolic Risk Factors. What is the role of exercise? (20 minutes).

Dr. Gorgey will highlight established evidence of using both waist and abdominal circumferences to identify those at risks of developing central obesity and altered cardio-metabolic profile in men with SCI. Finally, the effects of 16-week resistance training combined with testosterone replacement therapy (TRT) on anthropometrics and muscle quality in men with SCI will be highlighted.

4) Potential approaches to management of obesity in SCI (20 minutes)

Dr. Gorman will discuss some of the approaches available to manage obesity in those with chronic SCI including resistance training with electrical stimulation, robotic and exoskeletal training, along with limited experience with gastric banding techniques.

The Monitoring Efficacy of Neurogenic Bowel Treatment On Response (MENTOR) tool: Experiences as a non-hospital survey tool, validity in a Japanese rehab setting and preliminary results of its use in MS.

Dr Klaus Krogh¹, Dr Masashi Nomi², Dr Atsushi Sengoku², Dr. Anton Emmanuel⁴

¹Aarhus University Hospital, Aarhus, Denmark, ²Hyogo Rehabilitation Center Hospital, Kobe, Japan, ³Iizuka General Spinal Injuries Center, Iizuka, Japan, ⁴University College London (UCL) and Royal National Orthopaedic Hospital (RNOH), London, United Kingdom

Title: The Monitoring Efficacy of Neurogenic Bowel Treatment On Response (MENTOR) tool: Experiences as a non-hospital survey tool, validity in a Japanese rehab setting and preliminary results of its use in MS.

Speakers: Klaus Krogh, Masashi Nomi, Atsushi Sengoku, and Anton Emmanuel

Objectives:

1. Present and discuss the extended uses of MENTOR as a tool for evaluating treatment of neurogenic bowel dysfunction (NBD)
2. Demonstrate the validity of the MENTOR tool in an Asian rehab setting (Japan)
3. Discuss the preliminary data of MENTOR as an MS tool.

Audience: All audience levels of experience are welcome.

Target Audience: Physicians, nurses, therapists, researchers and consumers.

Prior learning or experience in dealing with persons with NBD and using the MENTOR tool would be helpful but not required.

Outline of Workshop (Total time = 90 minutes):

Speaker 1 Does the MENTOR work as a non-hospital survey tool to assess bowel care in persons with SCI? (15 minutes):

Speaker 2: Management of NBD in Japanese patients with SCI (10 minutes)

Speaker 3: Japanese validation of MENTOR (15 minutes)

Speaker 4: Preliminary results of MENTOR in a MS population in the UK (10 minutes)

All: Cases illustrating the use of MENTOR and discussion of treatment options + Q&A (30-40 minutes)

Disclosures:

The MENTOR Tool has been developed with unrestricted financial support from Coloplast A/S

Abstract:

Neurogenic Bowel Dysfunction (NBD) is an important cause of morbidity in persons with spinal cord injury (SCI). Many persons with SCI continue with their usual method for bowel care even though they consider it insufficient. This is unfortunate because new treatment modalities have been introduced during the last

decades. The MENTOR is a simple tool developed to make healthcare professionals and persons with SCI aware of insufficiently treated NBD.

The first part of the workshop will present key aspects in assessment and treatment of NBD. This will be followed by results of assessment with MENTOR in a large population of people with SCI. Results will illustrate how the MENTOR can improve the awareness of insufficiently treated NBD and thereby change clinical practice.

Second results from formal translation and validation of the MENTOR in a Japanese setting will be presented. This will include the level of concordance between the MENTOR tool and clinical decision experienced clinicians specialized in NBD. Likewise, user-friendliness of the tool will be described among Japanese persons with NBD and compared to previous data from the US and Europe.

Third preliminary data and results on the use of MENTOR in MS, will be discussed to determine if its use might be expanded to more pathologies in the future.

Finally, cases of NBD will be presented and discussed with the audience. This will illustrate the practical use of the MENTOR and potential difference in evaluation and treatment of NBD across continents and cultures.

Perspectives on patient-partnered research

Mr Rob Wudlick^{1,2}, Mr. John Chernesky³, Dr. Femke Hoekstra^{4,5}, Dr. Andrei Krassioukov^{4,5,6,7}

¹University Of Minnesota, Excelsior, United States, ²Get Up Stand Up to Cure Paralysis, Minneapolis, United States, ³Praxis Spinal Cord Institute, Vancouver, Canada, ⁴University of British Columbia, Vancouver, Canada, ⁵International Collaboration on Repair and Discovery (ICORD), Vancouver, Canada, ⁶GF Strong Rehabilitation Centre, Vancouver, Canada, ⁷American Spinal Cord Injury Association (ASIA), Richmond, United States

Integrated Knowledge Translation (IKT) is the meaningful engagement of the right research users, at the right time, throughout the spinal cord injury (SCI) research process. In patient-partnered research, patients are equitable partners—as opposed to research subjects—who leverage their lived experience and expertise to influence research to be more patient centred, relevant, and useful. [1] People with lived experience of SCI (often referred to as consumers) have a broad range of experiences and skills that can add value to SCI research. Engaging consumers as co-researchers in the research process is an increasingly popular health research approach promoted by funding agencies.

This workshop will bring together the perspectives of funders, researchers, consumers and clinicians to explore the reasoning behind this novel way of undertaking SCI research. We will explore the reasons funders are demanding it and how to write funding proposals that resonate with their requirements, look at the evidence in literature showing how it has been successfully undertaken, discuss how people living with SCI can contribute to research and how to effectively and meaningfully engage them, and how consumer input can help inform clinical research and practice.

John Chernesky will provide an overview of current funders requiring partnered research and discuss what evidence funders are looking for in grant proposals to show that an effective and meaningful engagement plan has been developed. (20 minutes)

Dr. Femke Hoekstra will summarize the findings from her review of reviews and scoping review of partnered research, which identified an extensive set of principles, strategies, outcomes, and impacts. The findings from these reviews were used to co-develop the first IKT guiding principles for conducting and disseminating research in partnership with the SCI community. (20 mins)

Rob Wudlick will showcase good common practices and experiences of consumer engagement in research and healthcare. Key areas include benefits of consumer engagement, how to find engaged consumers, good practices of consumer engagement, and experiences of consumer engagement. (20 mins)

Dr. Andrei Krassioukov will demonstrate how engagement has informed his and his student's work as a clinician researcher. An early adopter of engaged research, Dr. Krassioukov has utilized this methodology extensively and will explain how it can be conducted in real-world settings and discuss some of the challenges, benefits and learnings he has discovered throughout his career. (20 mins)

The workshop will conclude with a panel Q+A with all presenters. (10 mins)

This introductory workshop is suitable for anyone interested in learning more about undertaking patient-partnered research. It is expected that attendees will learn:

- Why funders are more often requiring grant proposals be submitted as patient-partnered research
- What funders are looking for to demonstrate effective and meaningful engagement will occur
- What evidence of benefit there is to support undertaking patient-partnered research

- What principles and strategies can guide their work in engaging people with SCI
- Where to go when seeking patient-partners
- How to meaningfully engage people living with SCI
- Practical application of these techniques in real-world settings

[1] <https://www.pcori.org/engagement/value-engagement>

How to use the Cochrane Evidence in the field of Spinal Cord Injury: The Cochrane Rehabilitation strategy

Dr Carlotte Kiekens¹, Dr Chiara Arienti², Prof Julia Patrick Engkasan³, Prof Stefano Negrini^{4,5}

¹Spinal Unit, Montecatone Rehabilitation Institute, Imola, Italy, ²IRCCS Fondazione Don Carlo Gnocchi, Milan, Italy,

³Department of Rehabilitation Medicine, University of Malaya, Kuala Lumpur, Malaysia, ⁴Department of Biomedical, Surgical and Dental Sciences, University of Milan "La Statale", Milan, Italy, ⁵IRCCS Istituto Ortopedico Galeazzi, Milan, Italy

Outline of the 90-minute session:

- Cochrane Rehabilitation knowledge translation activities. Carlotte Kiekens (15 minutes)
- What is a Cochrane Review and how to use it in Spinal Cord Injury rehabilitation practice. Julia Patrick Engkasan (15 minutes)
- Overview of Cochrane Reviews in Spinal Cord Injury rehabilitation. Chiara Arienti (15 minutes)
- Cochrane Rehabilitation special projects: the rehabilitation definition for research purposes and RCT Rehabilitation Checklist (RCTRACK) for reporting. Stefano Negrini (15 minutes)
- Discussion (30 minutes)

Abstract

The creation of the Cochrane Knowledge Translation Strategy came from the difficulty to apply scientific knowledge in clinical practice: in the field of Evidence Based Medicine, high quality evidence is not consistently applied in practice. The aim is to shortly present what Knowledge Translation is and its relevance for Spinal Cord Injury rehabilitation.

Cochrane Rehabilitation (CR) is organized to provide the best possible Knowledge Translation (KT) in both directions (bridging function), toward the world of rehabilitation (e.g. spreading reviews), and to the Cochrane community (e.g. production of reviews significant for rehabilitation).

Most of the work of CR has been performed following the KT strategy: for example, CR has finished the "tagging" process of Cochrane Systematic Reviews (CSRs) relevant for rehabilitation published until August 2019. Four CSRs were related to Spinal Cord Injury rehabilitation on the following topics: the effectiveness of pharmacological interventions on spasticity, locomotor training on walking ability respiratory muscle training and non-pharmacological interventions on chronic neuropathic and nociceptive pain. The results highlighted the low quality of evidence and consequently, any conclusion about the effectiveness of rehabilitation in spinal cord injury management was not addressed. This issue is related to the complexity of rehabilitation characteristics that make difficult to keep the standard of high quality of evidence. To face this important challenge, CR started two important projects to improve the quality of evidence in rehabilitation field. The first is the rehabilitation definition for research purposes with the aim to specify a definition of rehabilitation suitable for research purposes that also defines inclusion and exclusion criteria. The second is the RCT Rehabilitation Checklist (RCTRACK) project to improve designing, conducting, reporting, implementing, and assessing the Risk of Bias in rehabilitation.

A proposal of rehabilitation definition and RCTARCK checklist have been presented to dedicated Consensus Meetings in Milan and in Orlando, respectively. The next step is to finalize and approve them after a Delphi round consensus procedure.

These KT activities of CR represent a new strategy to disseminate and improve the evidence more meaningful for the world of Spinal Cord Injury rehabilitation. The vision of CR is that all rehabilitation professionals apply Evidence Based Clinical Practice, combining the best available evidence as gathered by high quality Cochrane systematic reviews, with their own clinical expertise and the values of patients and to take decisions according to the best and most appropriate evidence in this specific field.

The dilemma of inappropriate surgeries for Spine Trauma: Revision surgery or accepting a poor stabilization

Dr Harvinder Singh Chhabra¹, Dr Hans Josef Erli², Dr Frank Rainer Abel³, Prof Shinsuke Katoh⁴, Dr Patrick Kluger

¹Indian Spinal Injuries Centre, New Delhi, India, ²Vivantes Humboldt Hospital, Berlin, Germany, ³Klinik für Querschnittgelähmte, Orthopädie und Rheumatologie, Klinik Hohe Warte, Klinikum Bayreuth, GmbH,, Bayreuth,, Germany, ⁴The University of Tokushima, Tokushima, Japan

Speakers:

1. Dr Hans Joseph Erli
2. Dr Rainer Abel
3. Dr S Katoh
4. Dr P Kluger
4. Dr H S Chhabra*

*Chairperson

Learning Objectives:

1. To identify the causes of inappropriate surgeries for spine trauma.
2. To summarise strategies to reduce incidence of inappropriate surgeries for spine trauma
3. To understand if the supervised neglect for inappropriate stabilization for spine trauma is a suitable option and whether decision making differ between developed and emerging countries
4. To identify challenges faced during revision surgeries.

Participants: Any level is suitable.

Target audience:

Spine surgeons, Psychiatrists, All rehabilitation disciplines (Physiotherapists, Occupational Therapists, Assistive technologists, Psychologists, Peer Counselor), Nurses, Policy makers, Hospital administrative, Researchers, Consumers

Technical requirements:

1 LCD projector capable of handling input from laptop computers will be needed.

Abstract:

Experts, whether involved in acute management or comprehensive rehabilitation management of person with Spinal Cord Injury, often come across patients with inappropriate stabilization. They then face the dilemma of whether to suggest revision surgery or supervised neglect accepting a poor stabilization. Going in for revision surgery interrupts and delays the comprehensive rehabilitation whereas accepting a poor stabilization carrier the inherent risks of a probable failed stabilization. If the team decides to go in for a revision surgery, the dilemma is again the timing of surgery, whether to go in for immediate surgery or wait till the patient is medically stable and well mobilized. The revision surgeries also pose a challenge and often require strategies which differ from primary surgeries.

The workshop will discuss the dilemma of revision surgery or supervised neglect accepting the poor stabilization, the timing of surgery (if required) and the challenges of revision surgeries.

The consumer perspective will also be discussed.

Workshop Schedule (90 minutes):

Topic Speaker

Introduction and Welcome to the workshop - H S Chhabra (2min)

Inappropriate stabilization of spine trauma : Definition and causes- Rainer Abel (10 min)

Supervised neglect for inappropriate stabilization of spine trauma :Is it acceptable? - S Katoh (10min)

Revision surgery: indications and challenges- Hans Joseph Erli (10min)

Dilemma of supervised neglect or revision surgery for inappropriate stabilization for spine trauma:

Consumer's perspective- H S Chhabra (10min)

Panel discussion -Inappropriate surgery for spine trauma : dilemmas and strategies to reduce incidence in developed as well as emerging countries scenario (45min)

Moderator-H S Chhabra

Panelists- Hans Joseph Erli, S Katoh, Rainer Abel, Patrick Kluger

Carry Home Message- H S Chhabra (3min)

SCI specific webportal to achieve favourable Community-health Outcomes: What should be included?

Miss Nishu Tyagi¹, Dr Andrei Krassioukov², Ms Amanda Lee³, Dr Shakti Goel⁴, Dr Sunil Sharma⁵

¹Indian Spinal Injuries Centre, Delhi, India, ²University of British Columbia, Vancouver, Canada, ³University of British Columbia, Vancouver, Canada, ⁴Indian Spinal Injuries Centre, Delhi, India, ⁵Indian Spinal Injuries Centre, Delhi, India

Spinal cord injury (SCI) is confronted with all kinds of short and long term problems in functioning after discharge from an initial rehabilitation. Many of the consequences associated with SCI do not result from the condition itself, but from inadequate medical care and rehabilitation services, and from barriers in the physical, social and policy environments. The need for continuing care for persons with SCI living in the community/home is essential.

Community-health Outcomes and Personalised Exercises/Education (COPE) workshop is a joint venture initiative of Indian Spinal Injuries Centre (ISIC), India and University of British Columbia (UBC), Canada. COPE is an SCI specific web-portal that will assist to achieve favourable community-health outcomes after SCI. This workshop aims to discuss the parameters and finalize the domains required to assist community inclusion techniques after SCI. This workshop shall include the round table discussion between different stakeholders includes caregivers, consumers, occupational therapists, physiotherapists, rehab physicians and doctors on the following:

- ☑ Identify the lacunae and important topics on which people with SCI shall require information during home /community inclusion.
- ☑ Content specification of the web-portal by open discussion.
- ☑ Formulation of SCI database repository

The global discussion on COPE portal domains/sub-domains/parameters shall assist in the refinement of this unique development and it may be expected that SCI individuals may reach closer to normal health outcomes and lead a full and meaning full life in reducing cost. This can facilitate long-term adjustment of geographically diverse SCI audience by providing access to timely information about optimized exercises, health, community inclusion, employment generation, recreation, and home modifications etc.

Learning Objectives

- ☑ Importance of community/home care inclusion techniques.
- ☑ Priorities and health recoveries set by persons with SCI.
- ☑ To formulate prevention strategies, SCI follow-up database, facilitate community inclusion, encourage community independence and good practices.
- ☑ Identified Domains and subthemes of COPE portal.

A total of five domains identified are:

1. Environmental related Information
2. Exercises related to Information
3. Health-related Information
4. Policy related Information
5. Care-giver related Information

S No.	Topic	Time	Speakers
1.	Worksheet distribution of Identified COPE Domains and Subthemes to audience		
2.	Introduction to COPE Workshop	-3 min-	Dr Shakti Goel

3. Community Need Analysis and Results- 7 min- Ms. Nishu Tyagi
4. Developed Domains and Sub-themes of the COPE portal - 30 min - Dr Andrei Krassioukov, Ms Nishu Tyagi, Dr Shakti Goel, Ms Amanda Lee
5. Overview of rehabilitation and community practices in Canada vs. India -20 min- Dr Andrei Krassioukov, Ms Nishu Tyagi, Dr Shakti Goel
6. Panel Discussion on - SCI specific web portal to achieve favourable Community-health Outcomes: What should be included? - 30 min - Moderator: Ms Nishu Tyagi
Experts: Ms Amanda Lee, Dr Andrei Krassioukov, Dr Shakti Goel, Dr Sunil Sharma and Audience

Adjourn

Defining and Grading of a Spinal Unit which holds relevance for both developed and emerging countries: can we replicate the trauma unit model?

Dr Harvinder Singh Chhabra, Dr Francois Theron, Dr Frank Rainer Abel, Prof Michael Fehlings

Speakers:

- Dr H S Chhabra*
- Dr Rainer Abel
- Dr Michael Fehlings
- Dr Francois Theron

*Chairperson

Learning Objectives:

1. Identifying different existing models of spinal injury services
2. Identifying requirements of man power and capabilities/other resources for a model spinal unit
3. Developing grading system for Spinal Units based on available resources and capabilities

Participants: Any level is suitable.

Target audience: Spine surgeons, Physiatrists, All rehabilitation disciplines (including Physiotherapists, Occupational therapists, Psychologists, Assistive technologists), Nurses, Consumers, Policy makers, Hospital Administrators

Abstract:

Humanity will ever be indebted to the guide and inspiration of great professionals like Sir Ludwig Guttmann, who had to overcome so many seemingly overwhelming issues to accomplish the noteworthy and nowadays indeed anticipated results in the management of persons with spinal cord injury. In the past few years/decades great advances have been made in the medical and nursing management, rehabilitation and resettlement of patients with serious spinal neural disease and injury. Special spinal units have played an important part in these advances.

Despite the revolutionisation of SCI management, there is no global consensus on a standardized definition of a spinal unit. There are spinal injury services where acute care including surgical management and comprehensive rehabilitation is done in one facility. At the other end of the spectrum are settings where acute management, including surgery where needed, is done in one facility and the patient is then transferred to a different facility for rehabilitation. Based on the resources available and their capabilities, there is a grading system for trauma units. However there is no such grading available for spinal units. Spinal Trauma Study Group is doing an exercise to define a spinal unit and develop a grading system which would hold relevance both in developed and emerging countries. The different models of existing spinal units and the STSG definition of spinal unit as well as grading system will be discussed in the workshop.

Spinal Unit to Spinal Services: Challenges in providing comprehensive management of persons with spinal cord injury

Dr Vernon Hill, Dr Harvinder Singh Chhabra, Mr Balraj Singhal, Dr Federico Montero, Dr Fazlul Hoque

Speakers:

- H S Chhabra*
- Alex Vaccaro
- Vernon Hill
- Raj Singhal
- Fazlul Hoque
- Federico Montero
- W El Masri

*Chairperson

Learning Objectives:

1. Defining comprehensive management of persons with spinal cord injury and its importance
2. Identifying deficiencies both amongst emerging and developed countries in providing comprehensive management of persons with spinal cord injury
3. Overcoming deficiencies in providing comprehensive management of persons with spinal cord injury using indigenous methods

Participants: Any level is suitable.

Target audience: Physiatrists, Spine surgeons, All rehabilitation disciplines (including Physiotherapists, Occupational therapists, Psychologists, Assistive technologists), Nurses, Researchers, Consumers, Policy makers, Hospital Administrators

Abstract:

Humanity will ever be indebted to the guide and inspiration of great professionals like Sir Ludwig Guttmann, who had to overcome so many seemingly overwhelming issues to accomplish the noteworthy and nowadays indeed anticipated results in the management of persons with spinal cord injury. In the past few years/decades great advances have been made in the medical and nursing management, rehabilitation and resettlement of patients with serious spinal neural disease and injury. Special spinal units have played an important part in these advances.

The term 'Spinal Service' may be preferred to 'Spinal Unit', and when organizing such centres it must be appreciated that we are not only taking into account the present situation but also planning for the future. Interchange of knowledge in the management of patients with serious spinal disease between all those who may be concerned with such patients is essential.

The workshop is designed to understand the comprehensive management of person with spinal cord injury, and identify the lacunae/deficiencies in providing such services in less-developed countries (LDCs), or emerging (developing) countries. Deliberations would help overcoming these deficiencies using the example of services in developed countries.