

REPORT

Workshop On Neurorehabilitation for Spinal Cord Injury (SCI) and Brain Injury

Date: 2082/01/06 (B.S.) | [6th April 2025 (A.D.)]

Venue: Spinal Injury Rehabilitation Centre (SIRC), Sanga, Kavre

Organized by: Spinal Injury Rehabilitation Centre (SIRC), run by Spinal Injury Sangh Nepal

Participants: Health professionals from Patan Academy of Health Sciences (PAHS)-
Doctors, Nurses and Therapists

workshop conducting team: PM&R physicians, PM&R fellows and resident, nurses, physiotherapists and occupational therapists, psychologists, peer counselors, patient coordinator, social workers, prosthetists and orthotists, rehabilitation technicians, patients/families and administrative staffs of SIRC.



Introduction

The Spinal Injury Rehabilitation Centre (SIRC) in Sanga Kavre, successfully conducted a one-day workshop titled '*Neuro-rehabilitation for Spinal Cord Injury (SCI) and Brain Injury*' on 2082/01/06. The event brought together Doctors, Nurses, Physiotherapists, Occupational therapists, psychologists, peer counselors, and rehabilitation specialists of SIRC and PAHS to discuss and practice different neuro-rehabilitation approaches. The workshop aimed to enhance clinical skills, improve patient care strategies, and foster collaboration between SIRC and PAHS in managing SCI and brain injury cases.

Workshop Structure and Proceedings

Morning Session: Registration, Introductions, and Overview

The day began with registration and breakfast from 8:00 to 8:45 AM, where participants were welcomed by the workshop coordinator Mr. Bishnu Prasad Ghimire. At 8:45 AM, representatives from SIRC and PAHS inaugurated the workshop with a brief introduction and **welcome speech** by Dr Prashna Napit, highlighting the importance of neuro-rehabilitation in Nepal and SIRC's role in advancing SCI care.

At 9:00 AM, Dr. Raju Dhakal, Medical Director and a key speaker, delivered **an overview of neuro-rehabilitation**, covering fundamental principles such as history and establishment of SIRC, rehabilitation need, multidisciplinary rehabilitation models, and few SCI cases benefitted from rehabilitation services. His session emphasized the need for integrated care involving medical and role of acute hospitals in overall care of patients.



Following the lecture, participants were taken on a **guided tour of SIRC's facilities** from 9:30 to 10:00 AM in three groups, led by Bishnu Prasad Ghimire, Mandira Baniya and Dr Prashnna Napit. The tour showcased inpatient rehabilitation units, outpatient unit vocational unit, assistive technology workshops, physiotherapy and occupation therapy units, tele-rehabilitation facility, halfway homes and recreational sports facilities etc., giving attendees a firsthand look at SIRC's comprehensive approach to SCI rehabilitation.



Hands-On Training Sessions (10:00 AM – 1:45 PM)

To ensure practical skill development, participants were divided into **three groups (A, B, C)** that rotated through specialized training stations: Each group spent **one hour per station**, ensuring in-depth exposure to all aspects of neuro-rehabilitation.

GROUP A: Medical & Nursing Care (Facilitated by PM&R Physicians & Nurses)

Medical and nursing care for spinal cord injury (SCI) patients, facilitated by Physical Medicine and Rehabilitation (PM&R) physicians and Rehabilitation nurses, focuses on managing common complications such as bladder and bowel dysfunction—addressed through catheterization techniques and structured bowel programs. Additionally, preventive measures like proper positioning, specialized mattresses, and advanced wound care techniques are emphasized to reduce the risk of pressure ulcers. The discussion also highlighted the importance of collaboration between rehabilitation teams and surgical specialists to ensure comprehensive and optimized recovery for SCI patients.



GROUP B: Physiotherapy & Occupational Therapy (Led by Physiotherapists & OTs)

This hands-on training session, led by physiotherapists and occupational therapists, focuses on key rehabilitation strategies. Participants practice mobility techniques, including safe transfers, wheelchair maneuvering, and gait training with assistive devices. Activities of Daily Living (ADL)

training covers adaptive methods for dressing, bathing, and feeding—particularly for those with limited hand function—along with recommendations for home and workplace accessibility modifications. Pressure mapping technique has also been demonstrated in this session.



GROUP C: Psychology & Societal Reintegration (Facilitated by Doctor, Psychologists & Peer Counselors)

The psychology and societal reintegration session, facilitated by clinical psychologist and peer counselors, addressed critical aspects of spinal cord injury (SCI) recovery. Dr. Smriti Shrestha (PMR Fellow) enriched the discussion by presenting an insightful case vignette on psychodynamic challenges following traumatic brain injury (TBI), highlighting parallels in psychological adaptation processes. The program systematically addresses SCI-related psychological trauma while teaching effective coping mechanisms. Comprehensive pre-discharge planning includes vocational rehabilitation for economic independence, community reintegration strategies to overcome social stigma through family counseling, and tele-rehabilitation systems for ongoing remote support.



Afternoon Session: Specialized Workshops & Interactive Activities

From 1:45 to 2:30 PM, Dr. Prasanna Napit and Ms. Mandira Baniya conducted an insightful session on **skin care and complication management**, focusing on the prevention and treatment of pressure injuries. The discussion highlighted essential risk assessment tools, such as the Braden Scale, for ulcer prevention, along with best practices for proper seating and positioning. Additionally, advanced wound care techniques—including debridement, negative pressure therapy, and surgical modalities—were explored to enhance patient outcomes. The session provided valuable knowledge for healthcare professionals managing skin-related complications.



From 2:30 to 3:00 PM, Mr. Pramod Khadka, a Prosthetist/Orthotist, led an engaging **demonstration on orthotics, prosthetics, and assistive devices**. He showcased custom orthotic solutions, such as ankle-foot orthoses and knee braces, designed to enhance mobility and stability. The session also covered critical aspects of wheelchair selection, proper fitting, and modifications to improve posture and pressure relief. Additionally, Mr. Khadka highlighted the ongoing challenges in accessing assistive devices in Nepal, shedding light on barriers to equitable healthcare.



The workshop concluded from 3:00 to 3:15 PM with a **feedback session, open discussion, and closing ceremony** moderated by Dr. Raju Dhakal. **Dr. Toya Bhatta (Spine Surgeon, PAHS)** and **Mira Shrestha (Medical Nursing Incharge, PAHS)** provided key remarks, highlighting the workshop's success in enhancing participants' practical neurorehabilitation skills. Attendees shared valuable suggestions, including requests for longer training modules and follow-up workshops on rehabilitation technologies. The session ended with a strong commitment to future collaborations, reinforcing the collective goal of advancing rehabilitation care in Nepal.



The workshop's closing ceremony was followed by an energizing **Adaptive Sports & Recreation session** from 3:30 to 4:00 PM, featuring a wheelchair rugby match between participants and SIRC patients. This highlight event served dual objectives: promoting physical activity and social inclusion for individuals with spinal cord injuries while demonstrating specialized sports wheelchairs and adaptive techniques. The friendly competition not only showcased the participants' newly acquired skills but also powerfully illustrated how adaptive sports can enhance rehabilitation. The match provided a fitting, action-packed conclusion to the day's educational program.



Conclusion

The Neuro-rehabilitation Workshop at SIRC was a resounding success, blending theoretical knowledge with hands-on training to improve SCI and brain injury care in Nepal. By fostering multidisciplinary collaboration and emphasizing patient-centered approaches, SIRC continues to lead advancements in rehabilitation medicine across the country. This workshop served as an exceptional platform for fostering collaboration between SIRC and Patan Hospital, enhancing their joint efforts in delivering comprehensive rehabilitation services to patients.

The workshop conducting team acknowledge with thanks to the Patan Academy of Health Sciences, SISN- SIRC and VOICE, SpiNepal and all the supporters.

Prepared by: Fellow **Dr Prashna Napit/ Dr Smriti Shrestha and the organizing team**

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