GMT20250411-123016_Recording_1760x900.mp4

[00:00:02] Is that now? Yep. Yep. All right so let's I'm not Muted right. No no I'm not muted. Okay. All right. Mingalaba. And a very good evening to everyone. I'm Julie Ankerson I'm a rehabilitation medicine specialist from Malaysia and representing the Asian spinal cord network or what is also known as Iscon. It is truly an honour to welcome all of you to this important webinar, and I would first like to express our heartfelt thoughts and solidarity with all of you in Myanmar who recently had a very devastating earthquake, and we are aware that you have. I'm so sorry about my clock. And you are facing, uh, a lot of challenges there. And we want you to know that that you are not alone. Right? And today's webinar is more than just an educational event, right? It is the gesture of our support, a gathering of peers around the world who are here to share knowledge, encouragement and compassion. We hope that this session today will not only enhance or give you practical tips or knowledge to to what to do with people with spinal cord injury, but also serve as a reminder that, you know, we, the medical community around the region, stands with you. Thank you and welcome again to this webinar. First to you, Colin.

[00:01:37] Thanks very much, Julia. And I'm Colin O'Connell. I'm a rehabilitation doctor in Canada, and I've had the pleasure of working with with this this team with Eric and Julia and Fiona, uh, as part of our, uh, membership with the International Spinal Cord Society. So we're going to go over in a very brief way, the some of the principles and key areas of work for patients who've had a spinal cord injury. But we're also providing you with a number of links and access to other resources, uh, that we hope you can find useful as you move in this journey. Um, uh, in, uh, providing your care for patients. Uh, I do see someone has their hand raised already, so I'm not sure if, um, did someone want to ask a question now or. Okay, well, maybe we'll keep going. Uh, and we'll let world physio kind of manage. Manage the hands.

[00:02:45] It was a high up, I think. Okay.

[00:02:48] High five maybe.

[00:02:49] Okay. Yeah.

[00:02:51] All right. So we're going to start with what is actually a spinal cord injury. So this is an injury that happens to the spinal cord, which is protected by the vertebrae, uh, of the entire spine. And the trauma or injury to the cord then results in impairment or loss of function in both sensory functions, autonomic functions and mobility, which then leads to paralysis. And in earthquakes, spinal cord injuries are extremely common, and we've seen in a number of events over the past 20 years, high numbers of persons who have sustained spinal cord injuries and survived to the rehabilitation stage. So what we're presenting you is, is experience that we have learned from, from what has happened in these previous earthquakes and how to manage patients with spinal cord injury. It's also extremely important to recognise that not only does an earthquake cause new injuries with the spinal cord, but also people who are living in the communities who already have a spinal cord injury are now significantly affected and you as a rehabilitation team will be important in their recovery from this event as well. And those issues include things like they've lost their homes, they've had damage to their or losses to their equipment, such as wheelchairs or adaptive aids. They may have losses in terms of the supports for care that they have, or access to the ways that they used to have an income.

[00:04:39] And as well, because the health services are now disrupted. Rehabilitation that they might have been relying on is now interfered with. So it's important to in your rehabilitation approaches to be considering the new injuries and those with spinal cord injury who are affected now by this disaster. In rehabilitation, we like to think of our response to a disaster as being a continuum, which would have started with prevention and preparedness activities in order to be ready for an event like an earthquake, and then it moves into the response and recovery. These webinars, and right now we are really going to be focussed on that read that event that has happened now and this response, but then moving as well into into recovery in general, the principles of spinal cord injury care in in an earthquake and you've already passed because the stage that you are at right now, you have you have likely passed now the extrication stage where you are trying to remove the individual with suspected spinal cord injury from that side of the of the. The disaster and providing that initial triage that very first. Medical evaluation and an emergency care uh typically which would. Have been done within uh, limited resources and you're also now. At a spot where some of that initial surgical or medical attention may have already been provided. So we're going to focus right now in this session really on that early functional rehabilitation and assessment.

[00:06:21] But this also starts segueing into being able to provide the emotional and social supports for that patient and their family. And you should be starting to think about the long term needs, because a spinal cord injury is, for many, a life long injury and starting to think and plan around how you're going to integrate those individuals back into the community and as well looking around your teams. Uh, and who can become those spinal cord experts to support these, uh, new needs of individuals, as you're looking at, not just your individuals who've had a spinal cord injury, you are also should be at this stage, trying to get an evaluation of how many people and what severity of injuries and where are they in your community. So you hopefully will have or you should develop some very user friendly spinal cord specific assessment or checklists and try to get a sense and an evaluation, an estimate of how many people are you dealing with with spinal cord injury and what is their characteristics? How many persons with paraplegia? How many persons with tetraplegia? Where are they? And that will help you in your planning. Because one of the things that's very important in spinal cord injury is because it's a very high skills type of, of approach for patients. You want to be able to to cohort those patients into sites, rehabilitation sites that you are going to designate as the centres of excellence or the centres of expertise.

[00:08:11] And that will allow you then to introduce the training and the mentorship, even if your resources are somewhat restricted for both those short and the long term, and it will allow you to really build those networks and coordination of care for those who are going to be engaged with spinal cord injury. It also allows those patients and families to form that very important network. It's important to recognise that with a spinal cord injury, your initial assessment will will probably include both your your physical examination as well as your radiological examination. It's so important that you diagnose and you assess not just on the basis of the imaging. The image I'm showing you here shows two of the same same groups of bones that are involved, same compromise. You can see of the spinal of the spinal cord itself. If you see here but can have two very different outcomes. Some people can have what's called a complete injury, meaning there's no motor or sensory function below the level of the injury, in which case, in all likelihood, they will require the use of a wheelchair for mobility. Some individuals may have an incomplete injury with some motor or sensory function below the level, and they can have variable types of mobility. So part of the assessment then

is doing a comprehensive neurologic examination to help decide the severity of the injury and the level.

[00:09:53] In general, injuries that happened at the at the at the cervical level, high cervical can result in impairment essentially from the neck down. But injuries at the lower cervical level will affect basically the arms and the chest down, varying depending on which actual level the injury happens. At a thoracic injury, you're looking at more of a paraplegia level. And then in the low lumbar and sacral injuries, you may have variable weakness and sensory losses affecting parts of the lower limbs. So your examination includes that neurologic assessment. You're going to be looking at their motor function their power, their sensation and their reflexes. Now, in an earthquake situation, undoubtedly individuals with spinal cord injuries will have also had other injuries that could include internal injuries, head or facial trauma, crush injuries, and long bone fractures. Now, ideally, um, you have access to imaging, but this is not always the case. So trust your physical examination and treat as though if you suspect a spinal cord injury because of the weakness and sensory changes. Treat it as such even in the absence of imaging. But a CT scan combined with plain film x rays can help you identify those spinal levels. But ideally, if you have access or opportunity, an MRI can help you identify where the bones are that have been involved, whether there's soft tissue trauma, and then guide you in your spinal stabilisation.

[00:11:48] There is a standard assessment for spinal cord injury. It's called the International Standards for the Neurologic Classification of Spinal Cord Injury. And it involves testing strength in key muscle groups in the arms and the legs, and testing sensation with light touch and pinprick through key sensory areas. The materials we're going to provide you with have links to where you can get the details with step by step guides on how to do this evaluation, as well as an online calculator where you can put in your values and it will give you the final report. So this is the classification system that is used Throughout the world in order to define a spinal cord injury. It allows us to define what's called the neurologic level. So which level of the spine that is affected as well as the severity of injury, how complete that injury is, which can give you some prognosis information about what types of mobility they may expect. In the end, you get a score which is defined as, uh, we the, the level of injury, the neurologic level, for example, cervical level seven, then defined by a impairment scale. And we call this the Asia, the

American Spinal Injury Association Impairment Scale. And it's classified between A, B, C, D and E which tells us our severity of injury.

[00:13:29] It is important that this evaluation has been done by someone who understands spinal cord injury, who is then able, after the evaluation, to explain to the patient and family what their diagnosis is. Be prepared to address questions like Will I ever walk again? Will I be able to go home and be able to temper your response and your education, uh, in a supportive way? You do not want to give false hope, but you do not want to diminish or extinguish all hope. So you can explain from your examination, for instance, that they may need to use a wheelchair more for mobility, but that your team will be there to support them as they move forward. Now we're going to be heading into some of the very important, uh, symptom and and medical areas of attention. The first I wanted to mention is pain. There is a preconception that individuals who've had paralysis may not have pain, but this is certainly not true. It is important for all your patients to ask them about pain. They may have neuropathic pain, uh, which is typically burning pain, uh, sharp pain, electrical pain. Or they can have nociceptive pain arising from injury or compromise of the bones, the muscles, the internal organs. And then once you've evaluated your pain, you need to treat pain as well. It's very important. And now we're going to move to Fiona Stephenson who will be presenting on.

[00:15:09] Hello I'm delighted to be with you today to give you a very brief overview of bladder, bowel and skin management. Um, for our patients with spinal cord injury after earthquakes. Now it's really important to realise that all these three things bladder, bowel and skin care are interrelated. Um, and of course, urinary incontinence and faecal incontinence ultimately cause skin integrity damage. And this will really, really hinder rehabilitation. And of course, needs to be avoided. I mean, it can cause months and months and months of hospitalisation. Uh, and no rehab or suspected spinal cord injured patients must be catheterised. Uh, we usually say for a female a size 12. For male size 14. And, um, make sure that the catheter is on free drainage. Change the catheter bag every week. Um, obviously change the catheter if it's blocked, if there's urinary tract infection. Um, or, as per advice, um, on the catheter company, which is between 4 and 6 weeks. Ultimately, the gold standard is to aim for intermittent Mischaracterisation. But in the immediate acute stages, it's really important to make sure that our patients are having at least three litres of fluid a day when catheterised, because this does reduce the risk of dehydration, urinary tract infections, but also, um,

deep, deep thrombo embolism and pulmonary embolism. The key thing here is the safe positioning of the catheter for male and a female. For a female, it would be attaching the catheter to the thigh, making sure that it's secure.

[00:17:06] And for a male making sure that the catheter is secure on the abdomen. And you can see here the position of the penis, what you're trying to do is trying to avoid is to stop the catheter pulling on the bladder neck, which can be a cause of a pressure injury. Make sure it's off the floor. Make sure you have really, really good hygiene, all connections are cleaned, etc. etc. just to stop the risk of infection. Ultimately we are aiming for, uh, intermittent catheterisation and we did a study in Haiti, um, three and four, seven year follow up study and found that, uh, using catheters, um, for up to a month, um, same catheter up to a month, because obviously the the resources were very limited there, making sure that the catheter was checked to make sure that it was, um, really clean cleaned with safe water and soap, rinsed with safe water and then left to dry in, um, a cotton bag. Really, really important. Um, and this is what a cotton bag looks like. Um, and, uh, our patients can, um, get to make these actually, as part of their rehabilitation. The aim is 4 to 6 hourly catheterisation, if possible. But some top tips. Make sure that your patient is sipping fluids throughout the day. Um, a lot more in hot countries and drinking more in the morning than the afternoon and evening.

[00:18:48] Catheterise an hour after getting into bed because of the diuresis and the pooling in the lower legs. Um, and when the patient is in bed, make sure they've got catheterisation equipment close to hand. Vitamin C can change the pH in the urine. Um, and it's really important just to monitor how much you're either drinking. Is it too much or too little? Are you drinking in a lot in the morning or too much in the afternoon? And it's important that the system is really, really flushed. If you think there's an infection, get your patient to drink a lot more. Obviously, as mentioned, use a single catheter, um, whenever possible. But um, certainly after an emergency, such as an earthquake in in limited resource countries, this really isn't achievable. A really important thing to do is make sure that the catheter is slowly removed from the bladder, because this will make sure that the bladder is fully emptied and you're not going to get debris or 100 or so mil left in the bladder, which can build up and it can increase the risk of infection. And this is a team approach. Skin management is very, very important. Uh, and safe movement is vital because what we want to do is protect the spinal cord and keep maintain that spinal alignment.

[00:20:24] If you can get your hands on some slide sheets, they're really, really helpful. As you can see here, this is a five man roll, a log roll and you can see where all the nurses are standing. And here again this is uh, with nurses, um, turning the patient onto the left side. And this is actually really useful for, uh, doing bowel care. In the left lateral position, but also for any other, uh, procedure. Checking the skin. Bladder care. Bowel care repositioning. Of course, medical assessments, physiotherapy and occupational therapy and so on. So it's really useful to plan your repositioning schedule when it comes to bowel care. It's very important to establish this in the acute stage. Uh, there are risks. We don't know whether or not the bowel sounds. The bowel will be flaccid in the, um, in spinal shock phase. Um, and our patient may actually need a nasogastric tube because of its poor colonic motility, very prolonged bowel transit time. So these patients are at risk. And if there is a lot of build up, this can cause diaphragmatic splinting, which will affect the respiration. With our spinal cord injury patients, they as a rule of thumb you could say they have two types of bowel reflex and a reflex. But as I've already mentioned, all patients, they'll have a flaccid bowel in the spinal shock phase. And this means that they require daily bowel care by manual evacuation.

[00:22:04] So that's really important. And what we're aiming for is a type three to type four stool. As you can see here, it's well formed sort of like a sausage. With, um, manual evacuation that is daily. As I've mentioned, this is a flow chart that's, um, on the, uh, Elearn sci website, on the consumer module, and it shows how to, um, provide a manual evacuation. And that is for the flaccid bowel. So that would be um, usually um below uh T12 around about T12 L2, there's a spastic or reflex bowel and this is above the T12 L2. Um and this is where you do have that spasm. Um, and what you can do is um, once spinal shock has resolved and if there is an anal wink noted, then you may be able to start and do digital stimulation, which is where you stimulate the muscle in the around the anus. Um, and do that, uh, daily. And then you can decrease to every 2 to 3 days. And again, this is all in the e learn CI models. Safe positioning and skin management is extremely important. Um it reduces the risk of infection, osteomyelitis, urinary tract infection, depression, chest infections, and ultimately the risk of death. For other risk factors, of course we've got motor deficit loss sensory deficit loss. There's reduced skin perfusion, diminished vascular tone and decreased capillary pressure.

[00:23:55] You've also got the risk of malnutrition, anaemia, hypoproteinemia vitamin deficiency and so on. And with prolonged pressure you have the risk of pressure injuries. Um, and certainly um there's there's pain, there's spasticity, scar tissue, previous pressure, injury. All these things go hand in hand with spinal cord injuries. So it's really, really important to make sure that your patient is positioned well. And this is the it's a perfect position. It's called the 30 degree tilt. And literally our patient is in 30 degrees with a pillow folded behind the back, two pillows under the upper leg, one pillow under the lower leg. And you will see that all the bony promontories are relieved of pressure. There's also a pillow, um, by the feet, and that helps to reduce the risk of foot drop. With prevention, education, hydration, good nutrition, with good bladder and bowel management, psychological support take away the risk of factors. Take away your pressure ulcers, pressure injuries. You will have intact skin. There are lots of different, um, places that you can go to online. Please do go to eLearning. Org. There are lots of free modules there on for every single member of the multidisciplinary team. There's also a pressure ulcer risk guidelines. Um, and there's also a lot of information on PSI. Thank you so much for your attention and I wish you all the very best.

[00:25:49] Thank you. Eric.

[00:25:49] Yes, it's my turn. Thank you. Um, my, uh, two topics that will follow here will cover the the issue of the early rehabilitation. So early rehabilitation mobilisation, therapy provision and assistive products. Uh, after, uh, after, um, an early injury. Um, my name is Eric. I'm a physiotherapist and I work for Humanity and Inclusion and Doctors Without Borders for, uh, their trauma, um, programs and support to trauma practice in conflicts and disasters. So, uh, of course, the golden standard here that has been issued so far by W.H.O., which you can find on the link here below is the minimum technical standards and recommendations for spinal cord injury Management in emergencies, which covered a very long period of preparation stemming from the early 20 tens. And, uh, where, uh, a few months ago, a few weeks ago, this was issued. And I think my, uh, recommendations here and the elements of um, of information will come and are really derived from this, um, from these minimal technical standards that you can find on the website, uh, in this link here below. Next. Now, what is very important is, and what uh, Colleen mentioned also in her introduction is, of course, the assessment, uh, the first assessment that Colleen mentioned, uh, the international uh classification for Neurological Conditions for Spinal Cord Injury, uh, is very important. Now, knowing

that in certain circumstances where you work, uh, this, uh, examination is quite long, there is an alternative which is called the maxim, which is in fact a uses the same, uh, ways of measuring.

[00:27:26] But, uh, it is more simplified because you will go going to less, um, less measures and less, um, things to, uh, to, to, to measure. So it means that that uh, classification can also, uh, gain more time. Uh, but of course this reduced in information as well, but it helps you at least to start up that early uh, rehabilitation recovery and to confirm also that you are dealing with a person with spinal cord injury. A second measure is, of course, a functional measure on how you are going to measure the changes, the functional changes the of the patient during your intake, uh, whether that is the first days after an injury or at the mid and long term. And for this there is the spinal cord injury independence measure, the version three. It is a set of uh scores that um, that are going to look at self-care, respiration, sphincter management, uh, mobility indoors and outdoors. Uh, it has, of course, an interdisciplinary component. Yeah. Because we talk about mobility sphincter management that, uh, the former presenters have already raised. Um, but it helps also with the planning of the care. And even you can communicate very easily on the results of these scores, uh, with your patient and the caregiver to see how the changes are going on in his recovery after the injury. And of course, very important on the mid and the long term, uh, is when, of course, all the preventive measures that have been mentioned here before, um, still have some challenges or do not work because of the specific environment where the patient is living or the distance or the closeness to his, uh, to his care institution means that you have to look at the map of a risk.

[00:29:03] What does the patient risk if he's going home back to his environment, either discharge sometimes too early in a lot of conditions. Um, and then you have to look at what would be the risk that you have to focus on, on either informing the patient about it and having to look for specific referral care or not, but also maybe make a planning where that patient maybe has less risks, uh, that you are going to get that you're going to identify with this scale. But look at how these risks can be addressed by patient education on one side, but also can be addressed by, um, um, an appointment that you can that you can plan well ahead because maybe at discharge some risk will not be felt by the patient, but they're only going to develop in the mid and the long term. And that is that is called the secondary um secondary complication uh measure for spinal cord

injury. It is going to list uh 16 health problems that are known to be common to say, um, and then the patient will be questioned about these health, uh, points on a, on a rate to know if it's important to him or not.

[00:30:08] And then you can get a map of the risks, even if he has the complication or if the complication is not yet present, so that you can then anticipate what will be the follow up needs for that patient next. Um, the ten topics in terms of the early rehabilitation, uh, that needs to be addressed and where physiotherapists, occupational therapists and to another extent, other members of the team are contributing to is all the list here of the the the let's say the the points that are impacting, uh, the, the the spinal cord injured person. Uh, it can go from, of course, a vertebral lesion the way the, the way his column has been managed, uh, the spinal shock status, the very important autonomic dysreflexia that can also be, uh, developed in the mid and the long term, it may be not with early patients. The postural hypotension very important in the first weeks of, of recovery, you know, to to be monitored. Deep vein thrombosis risks with pulmonary emboli that can also be prevented with all the different measures that were, uh, that were mentioned before bladder bowel dysfunction, pressure ulcers, uh, which uh, my colleague uh, has also already been uh, been presenting. And of course, the psychosocial distress and functional outcomes and to a lesser extent, heterotopic ossification in the course where, you know, these risk factors, uh, exist, but the Physiotherapy and the early rehabilitation will work on this.

[00:31:30] Now, the early rehabilitation phase is based on the fact that you need to have personnel available that can support the patient and stabilise the patient, but also manipulate the patient in a safe in a safe environment. And Fiona. Well, she, um, she, she put already forward some, uh, manipulations that you do with the patient when you want to hand him safely and, of course, to handle him also from one place to the other in your care institution, wider from his bed. Um, to, uh, to the physiotherapy room or to the physiotherapy corner. And of course, these risks of safe handling, of course, they increase with, uh, either the, the fact that the patient has not been, uh, managed yet, uh, surgically to make sure that his spine is stable. Um, but also look at how that patient, if he is moved, can also work already on the prevention of, uh, of his complications. Another very important phase in the early mobilisation is active and passive exercises as well as positioning, uh, knowing that, uh, they have to be more or less prescribed, uh, or permitted by the, by the medical team to make sure there are no risk factors and

they know the risk factors. Then better, even in a immobile patient, uh, for after spinal cord injury, certain exercises can be permitted, but it depends on the level of the injury and the guidance of the medical team.

[00:32:49] Um, for patients that can sit out of the bed, uh, of course, then you need to look at appropriate equipment such as a chair, a wheelchair that has to include already the pressure relief measures, you know, and the postural support that is necessary for a patient with spinal cord injury so that he can use these devices very safely. Um, once the patient is able to mobilise, the level of the completeness of the spinal cord injury will determine the type of transfer to use and the type of assistive technology that will be needed. Next, um, in terms of the ADL activities of daily living, assistive technology, mobility products and orthotics supports, um, the focus is, of course, on leading to optimal self-care at the earliest for the patient and his environment. It's also important that you have a proper prescription to make sure that the available, um, the available tool and the equipment that you give him is relevant to that patient. And so that you can monitor also with functional measures on how that equipment is going to change already the mobility of the patient. It needs always to be accompanied by education instructions and indications on how to use that equipment properly, safely, but also with information on maintenance. And we know that for wheelchairs this is a key issue. The provision of packages that should foster on activities of daily living and enhancement are focussed on, well, the A6 and the eight packages, meaning ranging from uh crutches uh ranging from um um gate gate platforms for people who have some mobility.

[00:34:26] But of course here in spinal cord injury it has mainly to do with transfer boards, um, toilet chairs, uh, and wheelchairs, of course, and that need to be available, as well as the absorbent products for, uh, incontinence and uh, also a safe, um, uh, a safe solution for uh, the bladder, bladder evacuation, etc.. So that would be more the focus on how the assistive products will be provided then. Safe mobility is is of course always related, as I said before, with wheelchairs, but also with a seat and a cushion and even special mattress. You know, if the patient has to, has to lie down in his, in his setting as well. And of course, the environmental changes, you know, that need to be done and that need to be reflected on for the patient when he's going home. Need also to look at how the caregiver also can be assisted with specific equipment such as a shower, toilet chair, bed pants, urinal flasks and cathedrals to ensure that the the

reasonable environmental changes and the activities of daily living can be continued once the the patient is discharged from the from the from the hospital. Next the functional outcomes I think here um, I will be a bit more specific on what type of mobility to expect in that early rehabilitation phase, according to all the levels of injury that my that my colleague Colleen already explained before next mobility for c1-c6.

[00:35:53] Now of course, in your environment, I think in the earthquakes where we see that unfortunately the high level lesions between C1 and C3 have a very, very low, um, let's unfortunate chance to, uh, to come alive out of, uh, of extrication as such. So let's say we look more at, uh, how functionally the C4 up to C6, uh, patients which have which will have a very limited, uh, outcome in terms of mobility. Uh, but we still should focus on how a wheelchair area dependency would have to be planned from the, from the onset, how the attendants need to be trained for transfers, mainly that, uh, my colleague Fiona explained already how pressure ulcer prevention in the wheelchair needs to be prioritised by exercising with movements where the patient is more self-reliant on how to do that prevention and of course, the breathing exercises, because we know that the pulmonary muscles will be quite affected at these level of lesions. And where then, of course, the the risk of pulmonary infection is high. And then the physiotherapy and the exercise program needs to be focussed on this. Of course, the upper limb mobility solutions with technical aids for activities of daily living will have to be anticipated then very, very early in the in the rehab process. But in an emergency situation, we know that this picture of first training the caregivers, looking at how the respiratory function needs to be stabilised as much as possible with physiotherapy, and how we anticipate what mobility would be possible for the upper limbs, will have to be looked at for this level of of lesion of patients.

[00:37:28] Next, the other level, which becomes then more functionally I would say because between C7 and T1 either it's complete or incomplete injury. We know that the upper limb function will be preserved, which means which provides for a lot of possibilities on how the patient Patients can, um, may be much more responsible for his own mobility. But with strengthening, of course, the function of the upper limb and the conservation of the brachial triceps means that he can push up himself, meaning that all the prevention in terms of um, in terms of pressure ulcers and the seats, uh, can be, uh, can be operated and taught to the patient by himself. His exercises, transfers also can be possible. Of course, it will take a lot of skills to be developed by the patient in terms

of balance and in terms of coordination that he needs to do. But with the proper occupational therapy and physiotherapy services, the patient can very quickly be put in an exercise program where he can work towards that independence for his transfers. Uh, at the bet, uh, of course, and positioning, but also to, um, put these exercises already into practical issues such as for addressing and going to the toilet and doing all the transfers, uh, by himself on a daily basis, from wheelchair to chair or in other positions.

[00:38:42] Next, for the thoracic outcomes, of course, we know that there is upper limb control. So he has also already abdominal control which means that for the functional goals in, in and with reasonable adaptations for the environment in the future, that patient has very, very good outcomes, you know, to be quite independent and to be able to live quite independently for his daily tasks. Of course, there's also the risk of the the T6 injuries where autonomic dysreflexia needs to be, needs to be have a surveillance because that can have consequences on on the on on the situation and the quality of life of the patient. But um, mobility with wheelchair and being maintained with standing tables uh, and sometimes at, at points where also either a choice between a manual, uh propulsed wheelchair and an electric wheelchair can give that patient a lot of autonomy. Uh, and also even, uh, aspects of, uh, vocational training and professional reintegration is still possible. But of course here it's the wheelchair tool that would be very important to provide independence for his for his mobility outdoors also. Next then the lower lesions that are remaining here as we see well here of course the the if the person is well trained, the lesion itself functionally will not have a significant impact on the ADLs. But provided that there are some environmental changes that need to be done for that patient, the functional gait or community gait should be stimulated and leaving, then the wheelchair available for long distances and also for the ageing process, of course, um, orthotic management of course is needed with um with orthotics, you know, that will be able to to help the person with certain levels of gait and independent gait, maybe with the help of a stick or such.

[00:40:29] And sports and recreation should be part of that. The PT program, you know, to maintain his his function in the mid and the long term. Next. Um, now, when, uh, the professionals, you know, are being confronted here with an intake of spinal cord injury, either in a general trauma ward after after such an injury or after, um, after a disaster or a mass casualty management. Of course, it's important to focus on what is, uh, with with

the available means and the inflow of the patients and the time that you have per patient and per family member of that patient that you need to plan your care quite carefully. And here, this is an example that humanity in inclusion uses. And maybe in my second presentation, I will talk a bit more in detail on how this came to to a part. Um, it's how you going to plan your overall goal in the map on five six first sessions, and where you're going to focus more on an education program to make sure that the patient has seen or the and the caregiver have seen the different aspects of the care and the checklist they have to go through more personally, while the other aspect of follow up then will have to be looked at after a risk scale has been identified as saying no, this is the risk map of that patient and where we have to focus on on his, uh, on his long term goals.

[00:41:45] But I would say that the program on the five six first sessions are very essential, you know, to cover all these different risks, uh, and to focus on the priorities of the patient in terms of, uh, his basic mobility, uh, how to preserve him from, uh, the, the risks of skin, uh, problems, uh, but also to anticipate or very quickly already the the mobility. But this of course, in these five, four sessions, it's important that the caregiver is always present and the side of the patient so that the transfer of know how can be done very early, so that at least the first part of my, uh, my presentation on the early rehabilitation mobilisation, um, my second part of presentation is one that is going more directly on the experience that we had with humanity and inclusion. Uh, from 2016 on until 2021. Uh, on a self uh, on on an initiative of a safe hospital initiative. And I think the people that will be attending here from, from Myanmar probably have heard of these, uh, programs in Mandalay and in Yangon, where, uh, a safe hospital initiative was a whole program that prepared the hospital for a potential mass casualty inflow.

[00:42:54] Um, this had been done for, let's say, more, uh, for the for the teams that were related to ambulance to, uh, getting, uh, pre-hospital care and having the patients safely going into a hospital. There were also exercises that were planned, you know, to look at how a simulation and how a problem solving could be set up once that there would be unfortunately, in a, in a, in a real situation. Next. Um, the also the sources of that information were already coming then from, uh, the early rehabilitation handbook, let's see. Or his precursors and of course, well, what you can find also today in the minimum technical standards and recommendations on spinal cord injury and the sources you know are on the link in the middle. Now, what is relevant for the recent

events in Myanmar? Well, of course, is to have a regular update on the context regarding the SSI needs since the onset of the earthquake. So we are now almost two weeks after, uh, after the onset. And then we believe that probably there are already identified spinal cord injured patients, either in a general trauma ward, uh, or, um, being under care, but maybe not in the right spot where they should be. And this is the first challenge on how to identify them and to cohort them.

[00:44:04] That would be the first advice after two weeks of what we know. Um, where are the suspected SSI patients and the fractured cohort? Now, of course, if they end up in a trauma ward and orthopaedic trauma ward and are just seen as a fracture, as such a fracture of the of the column of the vertebral column, there should be a surveillance because any fracture you know of the of the of the of the of the column means that there can be a risk of spinal cord injury. And it's therefore that the assessments the. Neurological assessments are very important to be done on a regular basis. And should that neurological assessment change between the first intake after a fracture and there is an evolution, well, then we all have to be sure that all the precautions and prevention is being taken. Of course, the potential needs then for the for the injured after the earthquake is that you also probably could be faced, as Colleen said, the persons that were living already with the spinal cord injury before the earthquake and because of the breakdown of the system around them, or they get complications and they could also maybe go for counselling or for advice if that is a priority to a hospital where you are going to be working with chronic conditions then and here, it's very important to make a kind of clear triage on the choices that you have and nevertheless give the right information to the patients that are coming to seek care.

[00:45:22] Yeah. Next. Now, are they cohorted in other outreach programs and how to find them. Now we know that when there is a when when there is a post-earthquake response in terms of basic needs, well, maybe there are some people with spinal cord injury that have specific needs because maybe they didn't get the injury from the earthquake, but they still need to have a follow up. And how do the chronic patients overcome the challenges on the resources that they have remaining? And here also, well, the planning that I did in my my former presentation also can help already you with the map of either having a risk questionnaire to see what the risk of that the patient has actually and how you're going to address these risk, but not overcharging. Of course, the care for the patients that are in the acute stage today. Yeah. Next. Now in Myanmar,

we set up a process between 2016 and 2019 with, uh, a whole, uh, interdisciplinary approach, uh, which we called was an attempt for a national guidance process for Myanmar. And we call this the multidisciplinary mass casualty management guidelines, consensus for spinal cord injury care in that we did in Yangon next. Now this was done through a three day workshop with all stakeholders in Yangon General Hospital in 2017, I think. Uh, which was very original because we had uh, the medical teams, uh, surgeons, uh, that were present, uh, nursing departments were present, medical partners were present.

[00:46:52] Rehabilitation was present and psychosocial agents were present as well. Plus also very important in that initiative was to have invited the organisations of persons with disabilities on how they were, uh, proper, you know, to, uh, let's say, to offer solutions on the mid and the long term care as well for people with spinal cord injury. Um, for doing these three days, all these different groups went into thematic working groups, uh, where they presented the existing guidelines as, uh, as they were provided in the different, uh, in the different references and Handbooks before, and how they could be translated more into a local aspect and local resources that were available in Myanmar. In Yangon and in Mandalay, and how they were different from it and how to close that gap, but at least at the expert panel of the Sai contributors could come after these three days with a whole list of final proposals for guidance, but based on the existing resources that were available in the in the country. But looking also at what resources or what circuits needed to be strengthened, more particularly to make sure that, uh, that these the care that was provided at that moment, um, came already to a certain standard and improvement on one side, but also look at how the preparedness, uh, capacity was present in Myanmar to respond to, uh, to a mass casualty management.

[00:48:10] The table of contents will show you all the subjects that were that were, uh, that were covered here. Next. Now, the finding and the need on the local needs of Sai Care Sick after this. This workshop and the process of the review. Um, we decided also that there would be a small research, like a kind of report to, to produce a report to know what is the the profile of the actual persons living with spinal cord injury in Myanmar. And we look then during for two years on a cohort of around 50 CI patients in Mandalay and in Yangon, where a 18 month follow up was done. And I think this information might be important on knowing what would be the priorities for you, for the anticipation, for

people with spinal cord injury needs in the next coming months. Um, it was descriptive data that was collected where we used the, the, the classification, the International Classification of Spinal cord injury, as well as a functional measure, the skill tree and the quality of life, uh, questionnaire as well of the patients. Uh, the recovery aspect focussed mainly on the significant improvements that we could see during these 18 months of the basic mobility in bed and the increased independence in grooming and feeding for the patients, while the gait outcomes are improved slightly and was still a challenge. But of course, when you talk about spinal cord injury in general, the gait, um, did uh, did not, let's say, get to the optimal results because of the level of the injuries that were in the cohort.

[00:49:34] And on the other side, there was a big need then to look at proper wheelchair provision. Uh, and of course, the reasonable environmental changes that were needed, uh, in the housing of the, of the patients. Um, but what was more important, what we found when we asked to the patients was the quality of life changes that were reported and where the physical health, um, the when the patients were seen in a, at a, at a centre or hospital level, they felt that their physical health was improving because they could see the progress. But on the other hand, the psychological well-being needed much more attention and needed, uh, much more strengthening in the in the care and the psychosocial support and counselling first. And of course, we saw that because in the cohort and this is maybe different, the participation of the women, a cohort which was 5050. And we see that in Myanmar in general. I mean, the, the, the when we look at internationally speaking, we talk about 15 to 10% of female spinal cord injury in the cohort. In Myanmar, this was a bit higher. And due to specific occupational um situations such as the traffic and use of motorbikes and where uh women also then got more exposed to spinal cord injury comparing to other countries. And here we saw that the psychosocial follow up for women and the special needs for women needed very special attention in the mid and the long term follow up.

[00:50:52] So that is something to anticipate as well in terms of the risk factors in the in the future. Now, the implementation of care as well, the monitoring capacity by the health workforce seems to be responsive to the needs of patients. So we have seen that that in Myanmar the capacity is available. And the areas in the field of the mobility, stimulation, gait training, bladder and bowel needs to become more focussed on the on the independence with the tools that have been explained in the former presentations.

Next. How to use the guidance well. This was, let's say, a national initiative. And it pulled, of course, on the experience of the trained, on the trained staff, mainly on OT and PT and others as well. And there was a simulation exercise that was done then later on in Mandalay General Hospital. Um, it conducted, of course, to look more at how the general mass casualty management was conducted, but also how to isolate then the risk factors of this persons with spinal cord injury. And of course, uh, we hope that, you know, the the recall of this, of this national guidance can help the actual, um, the actual actors that are present now in Mandalay, uh, to use and to tap into these resources because it's something that was already nationally based and there was a capacity that was present already. Next.

[00:52:13] Let's talk to me. I think we're.

[00:52:15] Ready now for questions and and and and for the discussion. I just wanted to leave you with a, you know, the rehabilitation approach to management for any condition and include spinal cord injury is that our overall goal is trying to maximise function, minimise disability and improve an individual's quality of life. And for all of our spinal cord patients, I think the rehabilitation aspect is going to be so, so important for their recovery and their, uh, getting back into the community. Uh, these are a number of the resources that we were mentioned, uh, today. And these are the links to those. And these will all be made available as well in a, in a PDF. So, so with that I'll open I'll leave that slide up. And uh, we can bring uh, Julia back and certainly open it up for questions. I'm not sure if I, I'm not seeing any questions in the chat or any hands raised.

[00:53:31] There is one.

[00:53:32] Oh, there we go. Yeah.

[00:53:34] In the Q&A.

[00:53:36] Yeah. So what? Yeah. Go ahead Julia.

[00:53:39] So the question is which level of spinal cord injury is common.

[00:53:43] Mhm.

[00:53:46] Yeah.

[00:53:46] So in, in um in the earthquakes typically what we see is a thoracic level of injury being the most common. Uh, part of that reason is because those that have had cervical levels of injuries, if it's high cervical often in an earthquake situation. Uh, they don't survive the extrication and transport, uh, because of the overwhelming, uh, needs that are happening in that disaster. Um, the thoracic levels of injury and tend to be most common because it's often especially lower thoracic, because the internal organs are generally, uh, protected quite well and, uh, gives them a better survival advantage.

[00:54:45] There is another question here. Uh, what is the A-10? Oh, I think.

[00:54:53] That's for me. Sorry.

[00:54:55] Okay. All right. Okay.

[00:54:56] Yeah. These are the assistive technology packages where it's a list. I think in Ukraine, there was a test done on, uh, specific situations of mass casualty, and then they looked at what are the main required mobility aids that are needed for people, uh, with uh, with injuries in general. And the 8680 ten means that 86 is a list of six specific basic, uh, devices ranging from crutches, uh, Canadian crutches, etc. auxiliary crutches, uh, wheelchair, of course. Uh, and um, products for transfer that are needed that are really related to what you need in a first space. You know, when there is an early emergency and then the 810 is of course, the six basic items plus an additional one, but with a very big focus on self-care, uh, absorbent products for, uh, for, uh, bladder management. Yeah. And I think the if you want to look at how, um, needs need to be identified, especially by funders in the future. Yeah. Uh, if you relate to these 86 and 8010, uh, they are really known internationally to make a difference also for the people with spinal cord injury in the early process of of care. Yeah. And you can find that also on the W.H.O. website. And because of the modules that can give you very specific definition of what the device is, how to teach the health workers how to use them correctly and to prescribe them directly in that in that setting. Yeah.

[00:56:21] Excellent.

[00:56:21] I had the same question, Eric.

[00:56:23] Yeah. It's technical jargon. Sorry. Yeah. But I know the people, the Pts and OTS, well, they probably well know now what I'm more or less talking about. If they go to the W.H.O. website on the Tap modules. Yeah.

[00:56:36] Super. And I don't know.

[00:56:41] If there's any other questions or any comments. Um. No.

[00:56:49] Okay.

[00:56:50] Um, I did have just two, two other slides to quickly show if, uh, I, if we had extra time and it was and Eric had brought this up that, um, we talked a lot about the early recovery and early response, but certainly, um, in a spinal cord injury, particularly, the recovery is a lifelong thing. And so it's really important to start considering how those individuals are going to get home, how are they going to be managed longer term in the community and find their livelihoods and their vocations. And so it's important to start thinking about that now, even though it's in the early stage, and start to look at those networks of people and how you're going to involve perhaps peer mentors and, and individuals with spinal cord injury as part of that support and education team. And of course, in in as horrible as these disasters are, they're they can sometimes be a spark for opportunity to bring together the resources and the skills for spinal cord injury and allow you now moving forward to have some more robust spinal cord injury. Intentional programming supports for persons who are living with spinal cord injury. And we certainly as the International Spinal Cord Society and as the Asian Spinal Cord Network, we are here for you. And we certainly welcome at any time being able to provide you with further training, support, mentorship, as you may wish.

[00:58:29] And and especially Colleen, as you mentioned, uh, these opportunities for further development, even when in 20 1617, in Myanmar, we were talking about the preparedness for mass casualty management. The reflection on spinal cord injury came very, very quickly on. So it means there is already a good level of awareness in the medical and physical medical society in, in Myanmar on what are the needs for spinal

cord injury, because it was already identified in that preparedness phase as being a weak point of concern that spinal cord injury was a always a weak chain in the in the process of care, but also the the the looking forward to the mid and the long term future for people with spinal cord injury. I think that learning process, uh, is already quite present in Myanmar. But of course we need to look at how the conditions today are, because we know that, uh, well, these onsets can be very massive on the infrastructure, on the staff, uh, and also on the other priorities that they will probably have also in this, in this context. Yeah.

[00:59:31] Excellent. Thank you. Julia, any final words?

[00:59:37] All right. Okay. Thank you for. Yeah I mean thanks, Colin, Eric and also Fiona for the, the webinar and our colleague in Myanmar. I mean, we have I'm from Malaysia. So I mean, and we do have rehab physician who are from Myanmar working in Malaysia. So I feel for you. And if anything, because we I don't have any time problem with all of you. We are on the same or maybe 1.5 hour earlier, but I think it's fine. So if there's anything either us from Malaysia or Escon or East Coast can do for you, please reach out. And yeah, I'll be more than happy to lend our hand. And I think, um. I mean, I don't have experience personal experience with, with, I mean, managing spinal cord injury in disaster and but I think some of the, the, the concept still be applicable anyway in whatever condition. So be happy to share what we know with you guys. Thank you.

[01:00:49] Yeah.

[01:00:50] Thanks everyone. Good night.

[01:00:53] Yeah. Good evening.

[01:00:54] Yeah.