

ABSTRACTBOOK DCRM 2022

Donderdag 10 november 2022

Time	Session
09.00 – 10.00	Registration of the participants
10.00 – 10.10	Opening Congress
10.10 – 10.40	Keynote lecture: ZE&GG – Prof. dr. Sjoerd Repping
10.40 – 11.10	Keynote lecture: Patiëntenfederatie – Klaartje Spijkers
11.10 – 11.40	Keynote lecture: Cochrane – Dr. Carlotte Kiekens
11.40 – 11.50	Pitch presentations of the 10 Best Posters (plenary)
11.50 – 12.55	Poster walk and exhibition: Networking Lunch Break
12.55 – 15.30	Parallel Session A & B; Extra long workshops (2,5 hours)
12.55 – 13.55	Parallel Session A: Free paper sessions
14.05 – 15.35	Parallel Session B: Workshops and mini-symposia
15.35 – 16.15	Poster walk and exhibition: Networking break
16.15 – 17.45	General Assembly VRA
17.45 – 19.30	Free time
19.30– 23.00	Dinner and music entertainment <i>The social programme will take place in 1931</i>

Vrijdag 11 november 2022

Time	Session
08.30 – 9.00	Registration of the participants
09.00 – 10.30	Parallel Session C: Workshops and mini-symposia
10.30 – 11.15	Coffee break and visiting commercial exhibition
11.15 – 12.15	Parallel Session D: Debate and PhD thesis session D1. PhD thesis session: presentations of the best PhD theses in the Netherlands D2. Debate
12.15 – 13.25	Poster walk and exhibition: Networking Lunch Break
13.25 – 14.55	Parallel Session E: Workshops and mini-symposia
14.55 – 15.35	Poster walk and exhibition: Networking Break
15.35 – 15.45	Awarding best PhD thesis, best presentation and best poster
15.45 – 16.15	Keynote lecture: Prof. dr. Johan Vlaeyen
16.15 – 16.45	Keynote lecture: Prof. dr. Corry van der Sluis
16.50 – 17.00	Closing of the DCRM 2022

SYMPOSIA/WORKSHOPS

PARALLEL SESSION A/B

AB1 Proven practice: Practical pointers on the use of the International Classification of Functioning, Disability and Health (ICF) in clinical practice

Dr. Annette Van Kuijk³, MD, PhD, Professor in Rehabilitation Medicine Anne Visser-Meily¹, MD, PhD, Professor in Rehabilitation Medicine Jan-Willem Gorter¹, MD, PhD Joris de Graaf¹, MD, PhD, Professor in Rehabilitation Medicine Janine Verbunt^{2,4}, MD, PhD, Professor Rehabilitation Medicine and Medical Education Clemens Rommers^{2,4}

¹University Medical Centre Utrecht, Utrecht, Netherlands, ²Maastricht University Medical Centre, Maastricht, Netherlands, ³Tolbrug Rehabilitation / Jeroen Bosch Hospital, 's-Hertogenbosch, Netherlands, ⁴Adelante, Hoensbroek, Netherlands

AB1. Workshop: Proven practice Practical pointers on the use of the International Classification of Functioning, Disability and Health (ICF) in clinical practice, November 10, 2022, 12:55 PM - 3:30 PM

Session description:

Since the introduction of the World Health Organization's International Classification of Functioning, Disability and Health (ICF) in 2001, rehabilitation professionals have become more aware of the importance of a holistic approach to people with disabilities and have started to use its biopsychosocial approach to patients' health and functioning. The ICF enhances collaboration in healthcare, health education, and research by improving communication and information exchange among colleagues, patients, and families. Next to a broad perspective on health, the ICF also assists in interprofessional healthcare provision. Although diffusion of the ICF as a concept is widely recognized, application of the ICF within daily practice requires attention and support.

This workshop will focus on the application of the ICF in everyday practice of the rehabilitation physician and other rehabilitation professionals in a practice-informed approach. We will present best practices of rehabilitation settings working with the ICF to assist their patients, health professionals and graduate trainees. Participants will work together to synthesize, translate, and develop a practice-informed strategy to incorporate the ICF in their daily practice during the workshop.

Learning Objectives:

- To endorse a practice-informed approach applying the ICF in healthcare
- To increase the perceived usefulness of the International Classification of Functioning, Disability and Health (ICF)
- To provide a unique platform to share experiences and meet the needs and challenges in applying ICF in Rehabilitation Medicine

Topic/Keywords:

- Practice-informed
- ICF
- Postgraduate medical education

Outline session (150 minutes)

1. Welcome, Aim & Outline (5 min.). Chair: Annette van Kuijk

2. The ICF for dummies: Functioneren als focus van zorg en welzijn (15 min.) Presenter: Joris de Graaf
3. Practice-informed projects (60 min.; 15 min. each))
 - o ICF van en voor de revalidatiearts:
 - aan de slag in de spreekkamer bij volwassenen: PraatPlaat voor mensen met hersenletsel. Presenter: Anne Visser-Meily
 - aan de slag in de spreekkamer bij kinderen: ICF en de zes F-woorden (Family, Function, Fitness, Fun, Friends & Future). Presenter: Jan Willem Gorter
 - o ICF van en voor de patiënt: "Ik en mijn gezondheid": Presenter: Janine Verbunt
 - o ICF in het onderwijs: "ICF hoort in het DNA van het onderwijs. Presenter: Clemens Rommers.
4. Workshop in 5 small groups (40 min.)
 - o Four groups 'how to implement the ICF in my daily practice?' Anne, Jan-Willem, Janine, Clemens, Joris
5. Plenary session & Closure (30 min.)
 - o Sharing workshop outcomes in 5-minute pitch talks & discussion. Chair: Annette van Kuijk
 - o Closure (5 min.). Chair: Annette van Kuijk

AB2 Een onderzoeksnetwerk in dienst van de kennisagenda revalidatie: laat het netwerk voor je werken

Prof. Dr. Annemieke Buizer⁴, Dr. Mel Major^{1,5}, Prof. Dr. Jan Geertzen^{2,5}, Prof. Dr. Anne Visser-Meiliij³, Prof. Dr. Rienk Dekker², Dr. Badelog De Lange-Brokaar³, Drs. Ileen Albers⁴

¹Nederlandse Vereniging Voor Revalidatieartsen, Utrecht, The Netherlands, ²Universitair Medisch Centrum Groningen, Groningen, The Netherlands, ³Universitair Medisch Centrum Utrecht, Utrecht, The Netherlands, ⁴Amsterdam Universitair Medisch Centrum, Amsterdam, The Netherlands, ⁵Revalidatie Nederland, Utrecht,

AB2. Workshop: Een onderzoeksnetwerk in dienst van de kennisagenda revalidatie: laat het netwerk voor je werken, November 10, 2022, 12:55 PM - 3:30 PM

De Kennisagenda Revalidatiegeneeskunde wordt momenteel geüpdatet. Een nationaal onderzoeksnetwerk Revalidatie kan faciliterend zijn de uitvoering van onderzoek binnen de kennisagenda, het samenwerken in consortia, de implementatie van zorginnovaties en onderzoeksresultaten en de profilering van revalidatieonderzoek in Nederland. Op het DCRM 2022 zal het nationaal onderzoeksnetwerk Revalidatie gelanceerd worden. In deze workshop gaan we actief aan de slag met uitdagingen die onderzoekers en zorgverleners vaak tegen komen en waarin het netwerk ondersteunend kan zijn. De workshop bestaat uit een plenair gedeelte (met 3-5 korte presentaties van 8 minuten) en een praktisch en interactief deel. Leerdoelen: 1) inzicht verkrijgen in succesfactoren en knelpunten rondom bestaande onderzoeksnetwerken en de doelstellingen van het onderzoeksnetwerk Revalidatie en 2) toepassen van opgedane kennis in praktische, interactieve sessies ten aanzien van veel voorkomende praktische vraagstukken van onderzoekers en zorgverleners binnen de revalidatiegeneeskunde. Enkele vraagstukken beschrijven wij hieronder, maar voorafgaand aan de workshop zullen wij bij de ingeschreven deelnemers specifieke vraagstukken ophalen omtrent het interactieve deel.

Het plenaire gedeelte, waarbij Prof. Dr. Rienk Dekker als chair zal optreden, is als volgt opgebouwd:

1. Prof. Dr. Jan Geertzen: "De Taskforce Wetenschappelijk onderzoek"
2. Prof. Dr. Anne Visser-Meiliij: "Perspectief op voor- en nadelen van onderzoeksnetwerken in de revalidatiegeneeskunde"
3. Dr. Mel Major: "Het nationaal onderzoeksnetwerk Revalidatie: visie, ambitie en resultaten van een nationale inventarisatie".
4. Prof. Dr. Annemieke Buizer: "Samenwerken in netwerken binnen de kinderrevalidatie".
- 5: Een additionele spreker is gevraagd maar heeft bij het indienen van dit abstract nog niet formeel bevestigd: Henri Plagge, bestuurder van Adelante (onderwerp: Samenwerken binnen de Academische Werkplaats).

Het interactieve deel bestaat uit 4-6 groepen (afhankelijk van het aantal inschrijvingen) met maximaal 10 deelnemers. Elke groep wordt tijdens het proces begeleid door moderator (een van de sprekers / auteurs van dit abstract). De groepssessies krijgen de opdracht om concrete oplossingen te bedenken voor bestaande knelpunten, zoals de onderstaande - reeds opgehaalde - vraagstukken:

1. Faciliteren bij wet- en regelgeving omtrent onderzoek. Een voorbeeld is de regelgeving omtrent de MDR. Hoe kan het onderzoeksnetwerk dit proces vergemakkelijken? Is het haalbaar en wenselijk om administratieve processen uit te besteden aan een (nog op te richten) trialbureau? Hoe kunnen we protocollen, standard operating procedures en andere officiële stukken delen binnen het onderzoeksnetwerk?
2. Laaghangend fruit: implementatie van zorginnovaties. Een voorbeeld is het inzetten van ervaringsdeskundigen in het natraject van de MSR, waarmee positieve ervaringen zijn opgedaan bij

Adelante. Dit innovatieve project zou breed geïmplementeerd kunnen worden (diagnose-overstijgend, niet regio gebonden). Hoe kan het onderzoeksnetwerk faciliteren bij dit soort innovaties?

3. Uitdagingen rondom (bekostiging) van multicenter RCTs. Bij multicenter RCTs is het voor participerende centra soms financieel onvoordelig om patiënten aan te dragen voor de interventiegroep. Hoe voorkomen we dat een onderzoeksinterventie concurreert met standaard zorg?

4. Gezamenlijk indienen van een subsidieaanvraag. Een complexe groep patiënten zoals volwassenen met skeletdysplasie (MED/SED en achondroplasie) wordt binnen het expertisecentrum van UMCU gezien. Hoe kun je consortia vormen en aanvragen versterken rondom patiënten met zeldzame aandoeningen?

Na de groepssessies vindt er onder begeleiding van de voorzitter een plenaire terugkoppeling plaats. De opgehaalde oplossingen en suggesties vormen de basis voor de eerste activiteiten van het onderzoeksnetwerk.

Outline sessie:

Opening door workshop voorzitter (5 minuten)

Presentaties 1 t/m 5 (5 x 8 minuten, incl. vragen: 1 uur)

Inleiding, uitleg en indeling groepsopdrachten (5 minuten)

Pauze (10 minuten)

4-6 groepssessies (30 minuten)

Terugkoppeling resultaten, discussie, samenvatting en take home messages + actiepunten (40 minuten)

Het aantal interactieve sessies is afhankelijk van het aantal inschrijvingen. Additionele sessies worden gevormd n.a.v. de vantevoren opgehaalde informatie (middels korte vragenlijst) bij de ingeschreven deelnemers.

PARALLEL SESSION B

B3 Implementatie van een evidence-based interventie: Gepersonaliseerde training van fysieke fitheid

Dr. Karin Gerrits^{1,2}, Dr. Paulien Goossens², Drs. Douwe Kranendonck², Drs. Ilse Blokland³, Drs. Karin van der Ende⁴

¹Dept. of Human Movement Sciences, VU University Amsterdam, Amsterdam, the Netherlands, ²Merem Medische Revalidatie, Hilversum, The Netherlands, ³Heliomare, Wijk aan Zee, The Netherlands, ⁴SMA Plemper, Baarn, The Netherlands

B3. Mini-symposium: Implementatie van een evidence-based interventie: Gepersonaliseerde training van fysieke fitheid, November 10, 2022, 2:05 PM - 3:35 PM

Beschrijving van de sessie

Het trainen van fysieke fitheid (kracht- en uithoudingsvermogen) is voor veel patiënten (met diverse aandoeningen/beperkingen) onderdeel van hun revalidatietraject, omdat het een belangrijke voorwaarde is voor het herwinnen van mobiliteit en zelfredzaamheid, wat weer randvoorwaarden zijn voor het optimaliseren van de participatie. Omdat het nog ontbreekt aan eenduidig evidence-based beleid met betrekking tot het voorschrijven en van kracht- en conditietraining in de medisch specialistische revalidatiepraktijk werkt de afdeling Bewegingswetenschappen VU Amsterdam (BW-VU) sinds 2014 samen met diverse revalidatiecentra (o.a. Heliomare, Reade en Merem) om een veilig, op maat gemaakt en wetenschappelijk onderbouwd trainingsprogramma te implementeren bij patiënten voor wie verbeteren van fysieke fitheid een revalidatiedoel is. Dit symposium heeft als doel om de ervaringen met de implementatie van het programma te delen. Er zal worden ingegaan op de inhoud van de programma's en er worden resultaten en ervaringen van patiënten gepresenteerd, met speciale aandacht voor de meest kwetsbare doelgroepen. Daarnaast zal uitgebreid worden stilgestaan bij het belang, problematiek en mogelijke oplossingen rondom implementatie van deze interventie.

Programma

1. Inleiding: Van wetenschap naar praktijk en terug! (Karin Gerrits)
2. Inspanningsfysiologie (testen en trainen) in de revalidatiepraktijk (Karin vder Ende/ Douwe Kranendonck)
3. Een voorbeeld uit de praktijk: Implementatie bij kwetsbare groepen (Ilse Blokland)
4. Implementatie inde revalidatie: hoe moet dat eigenlijk? (Karin Gerrits/Paulien Goossens)
5. Afsluiting

Schets van het symposium

Karin Gerrits (senior onderzoeker BW-VU, onderzoek coördinator Merem) zal de workshop (in)leiden en de achtergrond van het gedachtengoed van gepersonaliseerd trainen toelichten. Aan het eind van het symposium zal zij via een interactieve sessie en aan de hand van het implementatieprogramma FITopMAAT binnen Merem ingaan op de te volgen stappen bij implementatie van onderbouwde beweeginterventies (de 'do's en de don'ts'). Haar kennis, opgedaan binnen het Implementatienetwerk Sport en Bewegen, ZonMw kan hierbij dienen als handreiking naar andere revalidatiecentra, om zo verdere implementatie en borging binnen de MSR te faciliteren.

Douwe Kranendonck (revalidatiearts Merem) / Karin van der Ende (sportarts) zullen vanuit hun expertise en ervaring ingaan op het belang van de inspanningsfysiologie binnen de medisch specialistische revalidatie en hoe zij inspanningstesten gebruiken bij het opstellen van o.a. trainingsvoorschriften voor verbeteren van kracht en uithoudingsvermogen.

Ilse Blokland (promovenda BW-VU/Heliomare) zal haar onderzoeksresultaten en ervaringen met 'Fysiek profiel' bij o.a. CVA-patiënten delen en stilstaan op de belemmeringen, maar vooral ook de mogelijkheden, bij kwetsbare groepen met ernstige beperkingen. Omdat het van belang is dat de juiste zorg ook op de juiste plek terecht komt zal zij bovendien ingaan op de samenwerking met de 1e lijn.

Paulien Goossens (RvB Merem) zal vooral het belang van evidence-based practice en implementatie in de revalidatiepraktijk toelichten en hoe bestuur en beleid kunnen bijdragen aan het borgen hiervan binnen hun eigen revalidatiecentrum.

B4 Neurovisuele revalidatie voor visuele klachten bij mensen met de ziekte van Parkinson, dementie en multiple sclerose

Prof. dr. Joost Heutink^{1,2}, Dr. Gera de Haan^{1,3}, Fleur van der Feen^{1,3}, Iris van der Lijn^{1,3}, Vanessa Buijnink³

¹Klinische en Ontwikkelingsneuropsychologie, Rijksuniversiteit Groningen, Groningen, Nederland, ²Koninklijke Visio, Onderzoek en Zorgverbetering, Huizen, Nederland, ³Koninklijke Visio, Revalidatie en Advies, Haren, Nederland

B4. Mini-symposium: Neurovisuele revalidatie voor visuele klachten bij mensen met de ziekte van Parkinson, dementie en multiple sclerose, November 10, 2022, 2:05 PM - 3:35 PM

De visuele klachten die mensen met een neurodegeneratieve aandoening, zoals de ziekte van Parkinson, dementie en multiple sclerose, worden nog vaak niet goed erkend of herkend. Visuele klachten kunnen een grote impact hebben op het dagelijks leven. Daarom is het belangrijk inzicht te krijgen in de aard en de ernst van visuele klachten van deze mensen en te onderzoeken hoe de zorg het beste kan worden ingericht. Om te beginnen is een korte vragenlijst ontwikkeld, de Screening Visuele Klachten (SVK). Deze vragenlijst is afgenomen bij een grote groep mensen bij het Punt voor Parkinson, de poli klinische geriatrie van het Medisch Centrum Leeuwarden en het MS Centrum Noord-Nederland. Hieruit kwam naar voren dat bij bepaalde groepen veel verschillende klachten veelvuldig werden gerapporteerd. Aan de hand van visuele klachten kunnen mensen worden doorverwezen naar passende revalidatie. De SVK kan hierin ondersteunen. Neurovisuele revalidatie kan worden ingezet om de participatie in het dagelijks leven van mensen met hersenletsel met visuele klachten zo groot mogelijk te houden en de kwaliteit van leven te vergroten. Het doel van dit mini-symposium is inzicht te geven in de visuele klachten bij mensen met een neurodegeneratieve aandoening en de in neurovisuele revalidatie die hierbij past.

1. Neurovisuele revalidatie bij mensen met niet-aangeboren hersenletsel – Joost Heutink
2. Screening Visuele Klachten vragenlijst en visuele klachten bij mensen met de ziekte van Parkinson – Iris van der Lijn
3. Visuele klachten bij mensen met dementie en MCI – Gera de Haan
4. Visuele klachten bij mensen met multiple sclerose en de samenhang met visuele en cognitieve functiestoornissen – Fleur van der Feen (Chair)
5. Revalidatie en advies voor mensen met een neurodegeneratieve aandoening bij Koninklijke Visio – Vanessa Buijnink

1. Eerst wordt besproken wat neurovisuele revalidatie voor mensen met niet-aangeboren hersenletsel inhoudt en hoe het zorgpad voor deze mensen eruit kan zien.
2. Tijdens de tweede presentatie wordt uitgelegd hoe de SVK is ontwikkeld, uit welke items en schalen deze bestaat en hoe de SVK bij mensen met een neurodegeneratieve aandoening ingezet kan worden om te ondersteunen bij doorverwijzingen en de revalidatie. De resultaten van een studie naar de prevalentie van visuele klachten bij mensen met de ziekte van Parkinson worden gepresenteerd.
3. In de derde presentatie wordt aandacht besteed aan de visuele klachten van mensen die de poli klinische geriatrie bezoeken voor dementie of MCI.
4. Daarna komt ook de prevalentie van de visuele klachten die mensen met multiple sclerose ervaren aan bod. De visuele klachten lijken slechts voor een klein deel verklaard te worden door visuele functiestoornissen. Ook andere factoren zoals cognitieve of depressieve klachten kunnen een rol spelen bij visuele klachten.
5. Tot slot wordt besproken welke revalidatiestrategieën ingezet kunnen worden bij mensen met de ziekte van Parkinson, dementie en multiple sclerose om de participatie en kwaliteit van leven zo hoog mogelijk te houden, ondanks de visuele klachten.

B5 Hoe dragen we optimaal kennis over in een zorgnetwerk? Een leven lang leren van- en aan patienten en collega zorgprofessionals in de zorg voor mensen met een chronische aandoening.

Dr. Nicole Voet^{1,2}, Dr. Esther Kruitwagen³, Drs. Martin Beuzel³, Drs. Nikolas Fahlksog¹, Drs. Ronne Pater^{1,2,4}

¹Klimmendaal revalidatiespecialisten, Arnhem, Nederland, ²Radboudumc, Nijmegen, Nederland, ³UMCU, Utrecht, Nederland, ⁴Schoudercentrum IBC Brabant, Schaijk, Nederland

B5. Workshop: Hoe dragen we optimaal kennis over in een zorgnetwerk? Een leven lang leren van- en aan patienten en collega zorgprofessionals in de zorg voor mensen met een chronische aandoening., November 10, 2022, 2:05 PM - 3:35 PM

“ Coming together is the beginning, keeping together is progress, working together is success” (Henri Ford)

Leerdoelen:

Leren van en aan elkaar over:

- Optimale kennisdeling in de zorg voor mensen met een chronische aandoening
- Optimale wijze van overdracht in de zorg
- Delen van casuïstiek en ervaringen in de zorg voor mensen met een chronische aandoening
- Het komen tot creatieve oplossingen in het complexe landschap van zorg voor mensen met een chronische aandoening
- Het bekijken van de zorg vanuit het perspectief van de ander (patient en collega)

Programma:

1. Introductie: kennisdeling in de zorg voor spierziekten, samenvatting studentprojecten (30 minuten), Ronne Pater en Nicole Voet, met input vanuit patientenvereniging Spierziekten Nederland
2. Aan de hand van ingebrachte casuïstiek volgen we de reis van de patiënt. Hierbij reflecteren we op de effecten van de huidige werkwijzen en rolverdeling en onderzoeken we samen hoe we iedere betrokkenen in hun kracht kunnen zetten en optimaal kunnen faciliteren met kennis en middelen. Samen creëren we de zorg voor morgen. (interactief, 60 minuten), onder begeleiding van Ronne Pater, Esther Kruitwagen, Martin Beuzel en Nikolas Fahlksog
3. Samenvatting bevindingen patiëntreizen: wat hebben wij van elkaar geleerd? (30 minuten), Nicole Voet

Voorzitter:

Nicole Voet, revalidatiearts en senior onderzoeker Klimmendaal/ Radboudumc, voorzitter project ontwikkeling zorgnetwerk voor spierziekten

Sprekers en workshopleiders:

Esther Kruitwagen, revalidatiearts en senior onderzoeker UMCU, lid stuurgroep project ontwikkeling zorgnetwerk voor spierziekten en landelijk ALS netwerk

Martin Beuzel, beleidsmedewerker UMCU, projectleider project ontwikkeling zorgnetwerk voor spierziekten, projectleider voor KinderOncoNet en betrokken bij Netwerk Kind&NAH

Nikolas Fahlksog, innovatiemanager, projectleider project ontwikkeling zorgnetwerk voor spierziekten, patientvertegenwoordiger

Ronne Pater, fysiotherapeut en junior onderzoeker, oud stagiaire project ontwikkeling zorgnetwerk voor spierziekten

Spierziekten Nederland zal tevens haar inbreng geven.

Inhoud workshop:

In 2020 is het project “Ontwikkeling van een zorgnetwerk voor kinderen en volwassenen met een spierziekte” van start gegaan. Binnen dit project wordt gebouwd aan een Landelijk Spierziekten Zorgnetwerk, met als doelstelling een hogere kwaliteit van leven door een grote kwaliteit en continuïteit van zorg. Bijna 40 studenten hebben tot nu toe informatie opgehaald over de huidige en de wenselijke situatie. Tot op heden wordt kennis over onze patiënten en specifieke diagnoses en behandelingen aan elkaar vooral op papier gedeeld, maar is dit de optimale manier voor kennisdeling en overdracht van patiëntgegevens? Revalidatieartsen in opleiding worden ook niet alleen op papier opgeleid, en de periode rondom COVID heeft geleerd dat een ‘ warme kennis- en casusoverdracht’ onmisbaar is. In de workshop zal, aan de hand van casuïstiek uit uw en onze praktijk geoefend worden met deze wijze van kennisdeling en overdracht en kunnen we alvast een start maken met een nieuwe manier van kennisdeling en overdragen. Zorgprofessionals in de zorg voor mensen met chronische aandoeningen worden van harte uitgenodigd deel te nemen om kennis te halen en brengen. Vooraf vragen wij u om voorbeeldcasuïstiek te delen.

B6 ProtheseAcademie: de academische werkplaats rondom het (thuis)gebruik van arm- en beenprothesen.

Prof. dr. Han Houdijk¹, Prof. dr. Corry van der Sluis¹, Dr. Aline Vrieling¹, mevr Sepholine Loman², Partners ProtheseAcademie.³

¹UMCG, Groningen, The Netherlands, ²Korter Maar Krachtig, Enschede, The Netherlands, ³ProtheseAcademie, , The Netherlands

B6. Mini-symposium: ProtheseAcademie: de academische werkplaats rondom het (thuis)gebruik van arm- en beenprothesen., November 10, 2022, 2:05 PM - 3:35 PM

Chairs:

Han Houdijk, afdeling Bewegingswetenschappen UMCG, Groningen

Corry van der Sluis, Aline Vrieling, Centrum voor Revalidatie UMCG, Groningen

Sprekers:

Diverse partners uit de ProtheseAcademie, inclusief patiëntenvereniging KorterMaarKrachtig

Achtergrond

In Nederland is veel kennis en kunde aanwezig met betrekking de tot ontwikkeling, vervaardiging, verstrekkingen en het gebruik van arm- en beenprothesen. Desalniettemin is de tevredenheid van de gebruiker met deze hulpmiddelen vaak nog onvoldoende. Om de effectiviteit van prothesen en de tevredenheid van de gebruiker te verbeteren is betere samenwerking van alle stakeholders op dit terrein gewenst. Recent heeft ZonMw binnen het onderzoeksprogramma Goed Gebruik Hulpmiddelen subsidie ter beschikking gesteld voor het inrichten van academische werkplaatsen. Eén van de academische werkplaatsen die op basis van deze middelen zal worden ingericht is de ProtheseAcademie; de academische werkplaats rondom de gebruiker, voor het genereren en verspreiden van kennis over het (thuis)gebruik van arm- en beenprothesen.

In de ProtheseAcademie werken kennisinstellingen, onderwijsinstellingen, zorgverleners, protheseverstrekkers, fabrikanten, zorgverzekeraars uit heel Nederland samen met de eindgebruikers om kennis rondom ontwikkeling en gebruik van arm- en beenprothese te ontwikkelen en te verspreiden. De ProtheseAcademie bestaat uit een centraal loket van waaruit activiteiten worden aangestuurd door een vaste coördinator. Deze activiteiten omvatten: het ophalen van vragen in een vragenbank, het omzetten van vragen naar onderzoeks- en praktijkgerichte projecten, het coördineren van projecten met alle partners, het terugkoppelen van antwoorden naar de stakeholders en ondersteunen bij de implementatie van de resultaten. Centraal daarbij staat de gebruiker, vertegenwoordigd in een gebruikerspanel, die een belangrijk aandeel heeft in het genereren van vragen, uitvoeren van projecten en implementeren van de resultaten, met als ultiem doel het verbeteren van de kwaliteit, doelmatigheid, tevredenheid van prothesezorg in Nederland.

In dit mini-symposium willen we de ProtheseAcademie en alle aangesloten partners aan u voorstellen. Met de volgende doelen:

De deelnemers:

- zijn bekend met de doelstellingen, organisatie en werkwijze van de ProtheseAcademie.
- zijn op de hoogte van de praktijkgerichte en onderzoeksprojecten die momenteel in de ProtheseAcademie worden opgezet en uitgevoerd.
- discussiëren mee over mogelijk aanvullende vragen die in de ProtheseAcademie kunnen worden opgepakt.
- weten hoe zij kunnen aansluiten bij en/of deelnemen in de ProtheseAcademie.

Opzet van de sessie

- ProtheseAcademie: visie, missie en organisatie. (15 min door sessie-voorzitters)

Naast de aanleiding voor de opzet van de ProtheseAcademie, zullen hier de doelstellingen van de academische werkplaats alsmede de organisatievorm en werkwijze worden toegelicht. Ook zullen alle deelnemende partners worden voorgesteld

- ProtheseAcademie: De gebruiker centraal. (10 min door KmK)

In de ProtheseAcademie speelt de eindgebruiker een centrale rol. De patiëntenvereniging KorterMaarKrachtig zal de relevantie van de ProtheseAcademie en haar inbreng toelichten.

- Praktijkgerichte en onderzoeksprojecten in de ProtheseAcademie. (35 min door verschillende partners uit de ProtheseAcademie)

In de subsidieaanvraag voor de academische werkplaats zijn al 3 onderzoeksprojecten en 4 praktijkgerichte omschreven die samen met de gebruikers en partners zijn geprioriteerd. Deze projecten zullen door verschillende partners uit de ProtheseAcademie worden gepresenteerd.

- Discussieronde aanvullende (onderzoeks-)vragen. (20 min, interactief met publiek)

De ProtheseAcademie heeft als taak het ophalen van vragen m.b.t. prothesegebruik bij verschillende stakeholders. Graag gaan we samen met u in discussie over vragen die in de nabije toekomst in de ProtheseAcademie een plaats kunnen krijgen.

- Deelnemen in de ProtheseAcademie (10 min, door coördinator)

Bij de afsluiting van het symposium zal de coördinator van de ProtheseAcademie toelichten hoe geïnteresseerden kunnen aansluiten bij de activiteiten van de ProtheseAcademie.

B7 Preventie is bewezen effectief, maar wat zijn de succesfactoren in het daadwerkelijk gaan toepassen van gezond gedrag?

Dr. Casper van Koppenhagen, Dr. Norbert van den Hurk, Dr. Lottie Kuijt-Evers, Dr. Tim Boymans, Dr. Adrie Bouma

¹Werkgroep VRA Bewegen en Sport (WVBS), ,

B7. Mini-symposium: Preventie is bewezen effectief, maar wat zijn de succesfactoren in het daadwerkelijk gaan toepassen van gezond gedrag?, November 10, 2022, 2:05 PM - 3:35 PM

Achtergrond

Bewegen, gezonde voeding, het dragen van een helm, het stoppen met roken, voldoende slaap, het wassen van de handen....We weten dat het bijdraagt aan preventie van morbiditeit en mortaliteit. Maar waarom is het zo moeilijk om deze 'obviously proven practice' toe te passen, waarom is dit geen gemeengoed? Van kleine schaal naar grote schaal geven we u een beeld van hoe het wél kan. Voor u zelf, voor in de spreekkamer, voor in uw ziekenhuis of centrum, voor in uw dorp of stad. Zelfs op landelijke en Europese schaal blijkt verandering mogelijk.

Doel workshop

Deelnemers krijgen praktische adviezen over hoe zichzelf, hun patiënt of omgeving te stimuleren tot gezond gedrag. We delen dé succesfactoren.

Moderator

Casper van Koppenhagen, revalidatiearts Rijndam RC, locatie Erasmus MC), sportarts np. Casper is gepromoveerd op het onderwerp "Fitheid en kwaliteit van leven bij mensen met een dwarslaesie". Hij is auteur, blogger en podcastmaker van 'KopCast' en 'van geluk spreken' van Medisch Contact.

Spreekers:

Norbert van den Hurk, huisarts in Leende, oprichter van het Gezonde Dorp

<https://gezonddorp.nl>

Norbert van den Hurk neemt u mee naar het dorp Leende waar hij en sportarts Hans van Kuijk de stichting het 'Gezonde dorp' hebben opgericht. Het Gezonde Dorp heeft als doel om samen met dorpsgenoten, de lokale en regionale middenstand, scholen, sportverenigingen, overheden en zorgverleners een wereld te creëren, waarin een gezond beeld van voeding en beweging leeft. Doel daarbij is het terugdringen van welvaartsziekten als obesitas, diabetes mellitus type 2 en hypertensie. Welke succesfactoren kwamen Norbert en Hans tegen?

Lottie Kuijt-Evers en Sander Kerstens, docenten en onderzoekers van het lectoraat oncologische zorg binnen het Kenniscentrum Health Innovation van de Haagse Hogeschool.

Het Medical Delta Living lab Better in – Better out beoogt het prehabilitatie traject bij mensen met darmkanker te optimaliseren. Hoe kan dit op een gepersonaliseerde manier worden gedaan? En voor wie heeft prehabilitatie een verder voordeel? Maar ook de vraag hoe dit financieel past binnen de zorg rondom darmkanker patiënten en de zin en onzin van RCT's zullen tijdens de presentatie besproken worden. De presentatie geeft een startschot om het gewoon te gaan doen.

<https://www.medicaldelta.nl/living-labs-field-labs/medical-delta-living-lab-better-in-better-out>

Tim Boymans, orthopedisch chirurg, Beweeghuis Netwerk.

Tim Boymans neemt u mee naar Maastricht-Heuvelland waar hij en orthopedisch chirurg professor Lodewijk van Rhijn een zorgnetwerk voor mensen met beweegklachten hebben opgericht. Het resulterende

Beweeghuis Netwerk zet in op positieve gezondheid. Zelfmanagement en empowerment vinden zij belangrijk, maar hoe maakten zij dit tot succesfactoren?

Adrie Bouma, projectleider GLIM (Groningen Leefstijl Interventie Model), wetenschappelijk onderzoeker UMCG.

Adrie Bouma heeft vanuit Physicians Implement Exercise = Medicine (PIE = M) goed inzicht in wat barrières en succesfactoren zijn voor het toepassen van een op maatgemaakt leefstijl advies. Wat moet u wel doen en wat juist niet om gedrag positief te veranderen?

B8 Non-farmacologische interventies bij de ziekte van Parkinson: wetenschappelijke evidentie, onderliggend cerebraal werkingsmechanisme en toepassing in dagelijkse praktijk

Dr. Jorik Nonnekes^{1,2}, Drs Sabine Schootemeijer¹, Drs Janna Maas¹

¹Radboud University Medical Centre, Nijmegen, , ²Sint Maartenskliniek, Nijmegen,

B8. Mini-symposium: Non-farmacologische interventies bij de ziekte van Parkinson: wetenschappelijke evidentie, onderliggend cerebraal werkingsmechanisme en toepassing in dagelijkse praktijk, November 10, 2022, 2:05 PM - 3:35 PM

Non-farmacologische interventies bij de ziekte van Parkinson: wetenschappelijke evidentie, onderliggend cerebraal werkingsmechanisme en toepassing in dagelijkse praktijk

Sprekers:

Drs. Sabine Schootemeijer (Radboudumc)

Drs. Janna Maas (Radboudumc)

Dr. Jorik Nonnekes (Radboudumc en Sint Maartenskliniek).

Voorzitter: Dr. Jorik Nonnekes

De ziekte van Parkinson is na de ziekte van Alzheimer de meest voorkomende neurodegeneratieve aandoening, en de prevalentie van de ziekte van Parkinson zal de komende decennia snel toenemen. Non-farmacologische interventies zijn naast dopaminerge medicatie een essentieel onderdeel van de behandeling voor zowel de motore als non-motore symptomen bij de ziekte van Parkinson. De wetenschappelijke evidentie voor non-farmacologische interventies is de afgelopen jaren gegroeid, en daarnaast beginnen de onderliggende werkingsmechanismen op cerebraal niveau duidelijk te worden. Een uitdaging is om de revalidatiebehandeling op zo dicht mogelijk bij huis aan te bieden; door technologische ontwikkelingen wordt dit mogelijk. Het doel van dit symposium is om deze ontwikkelingen toe te lichten aan de hand van drie interventies.

Allereerst zal Drs. Sabine Schootemeijer een overzicht geven van het effect van beweeginterventies bij mensen met de ziekte van Parkinson. Ze zal ingaan op de benodigde trainingsintensiteit – en duur, en laten zien hoe de compliance (het volhouden van het sporten) verbeterd kan worden. Recente studies laten zien dat regelmatig sporten neuroplasticiteit bij mensen met Parkinson stimuleert wat een indicatie is dat beweeginterventies de progressie van de ziekte van Parkinson mogelijk kan remmen. Drs. Sabine Schootemeijer zal deze veelbelovende bevindingen toelichten, en bespreken of beweeginterventies wellicht ook al in de prodromale fase toegepast moeten worden.

Drs. Janna Maas zal hierna ingaan op logopedische interventies om de spraakverstaanbaarheid bij mensen met Parkinson te verbeteren. De afgelopen jaren heeft ze onderzoek gedaan naar de effectiviteit van (online) logopedie op spraak en kwaliteit van leven bij de ziekte van Parkinson in de vorm van een klinische trial: de PERSPECTIVE-studie. Specifiek zal ze ingaan op de resultaten van dit onderzoek, evenals de voor- en nadelen van telerevalidatie bij mensen met de ziekte van Parkinson.

Dr. Jorik Nonnekes zal tenslotte een overzicht geven van compensatiestrategieën om zowel continue als episodische loopstoornissen bij mensen met de ziekte van Parkinson te verminderen. Hij zal laten zien dat deze creatieve manieren om het lopen te verbeteren evidence-based zijn, en hij zal aan de hand van ambulante EEG-data laten zien wat het mogelijke onderliggende mechanisme is. Tenslotte zal hij ingaan op

een recent ontwikkeld interactief platform dat mensen met Parkinson en zorgverleners helpt om de compensatiestrategieën toe te passen.

PARALLEL SESSION C

C1 Physical fitness in amputation of the lower limb

Irene Newsum, Chang Ho Wessel¹, Nicolet Munster, van

¹*Heliomare, Wijk aan Zee, The Netherlands*

C1. Mini-symposium: Physical fitness in amputation of the lower limb, November 11, 2022, 9:00 AM - 10:30 AM

An active lifestyle is important for good physical and mental health. Patients with amputation of the lower limb have a decreased physical activity compared to the 'average' Dutch person. But what does an active lifestyle really mean? And what is the guideline for physical activity?

In this minisymposium we want to provide insight into the physical fitness of patients with amputation of the lower limb due to peripheral arterial disease and how many extra energy it costs them to be physically active. A physical profile has been developed to improve physical fitness of patients in rehabilitation settings and is already in use at various locations in the Netherlands. What are the results so far and what is the practical experience with the use of the physical profile?

There are several obstacles for patients with an amputation of the lower limb to be sufficiently physical active: search for a new sport, the application process for the right sports aids. The Ministry of Health, Welfare and Sport recently presented a new guideline for sports aids, which Hans Leutscher will discuss with us. And how can you, as a rehabilitation physician, contribute to this?

By changing the physical possibilities, the occurrence of an injury is lurking. What can you do to prevent this in patients with a prosthetic leg? What training principles should you take into account when improving physical fitness? What advice do you give and what role do you have as a rehabilitation or sports physician?

Speakers and outline session:

- Han Houdijk, professor Human Movement Sciences UMCG, will discuss the balance between physical fitness and physical strain in persons with an amputation of the lower limb. He will demonstrate how an imbalance will influence walking ability and how walking ability can be improved by an optimised physical fitness.
- Liesbeth Simmelink, PhD and rehabilitation physician UMCG, will tell us about her PhD thesis "Met één been kun je nu wél testen" (Now it is possible to perform a cardiopulmonary exercise test (CPET) with one leg). She will also discuss important factors for measuring and improving physical fitness during rehabilitation after amputation of the lower limb.
- Floor Groot, sports physician Sport- en Beweegkliniek (Haarlem) and Heliomare, and Roy Appel, movement therapist Heliomare, will guide us through the translation of CPET into practice, the actual training to maximize strength in a short time.
- Hans Leutscher, specialist Kenniscentrum Sport & Bewegen, will discuss the exercise guidelines for physically disabled persons and will also discuss the guideline for sports aids (2022) which should ensure that (potential) athletes who are physically disabled can apply for a sports aids more easily.

Come to this minisymposium to learn, apply and promote physical fitness among persons with an amputation of the lower limb, to learn about the (im)possibilities of CPET (even with one limb), to share your experiences and to increase your network.

C2 From CP guideline to CP proven practice: the road to implementation and innovation

Prof. dr. Annemieke Buizer^{1,2}, Drs. Marieke van Driel³, Drs Maaïke de Klein⁵, Dr. Jeanine Voorman^{4,5}

¹Amsterdam UMC, Amsterdam, Nederland, ²Netherlands CP register, Amsterdam, Nederland, ³CP Nederland, Huizen, Nederland, ⁴UMC Utrecht, Utrecht, Nederland, ⁵CP Net, Utrecht, Nederland

C2. Workshop: From CP guideline to CP proven practice: the road to implementation and innovation,
November 11, 2022, 9:00 AM - 10:30 AM

Session description

Since 2006, a multidisciplinary guideline for the diagnosis and treatment of children with Cerebral Palsy (CP) is available. The guideline has been updated, with the most recent update starting this year. Providing a guideline is the first step, but it does not change clinical practice at once.

Three initiatives that are paving the road to implementation will be presented:

1. Implementation projects were started by development of a network of Knowledge Brokers. By developing implementation strategies and practical tools, efficiency in implementation increased highly. In 2013 CP-Net was founded (www.CP-Net.nl), a collaboration of health care providers, researchers, and the client organisation for CP.
2. Besides scientific knowledge, the use of knowledge of people with lived experience of CP is crucial. The Dutch client organisation, CP-Nederland (www.CP-Nederland.nl) participated in the development of the CP-guidelines and developed a research agenda.
3. The Netherlands CP-register (www.CPregister.nl) started in 2016, and has developed into a combined screening/follow up and treatment registry, with nationwide coverage. It includes tools for shared decision making. Data collection will enable research promoting personalized treatment for children with CP.

Learning objectives:

- Systematic approach to implementation of a guideline into daily practice.
- Which factors are related with success or failure in implementing a guideline.

Presenters:

Annemieke Buizer: CP guideline and process of updates

Marieke van Driel: involvement of CP-Nederland in guideline development and implementation

Jeanine Voorman: organization of CP Net

Maaïke de Kleijn: Knowledge Broker-system, practising steps for implementation

Annemieke Buizer: the role of the Netherlands CP-register

Discussion with the audience

Outline of the session:

In the workshop, CP-Nederland, CP-Net and the Netherlands CP-register will explain what they have done in the last years to achieve successfully the translation of scientific knowledge to innovation in daily rehabilitation practice.

Typical for the efforts is the collaboration of scientists, healthcare providers and experts with lived experience of CP. The desired innovation and translation in daily practice is a leading motive.

Which factors are related with success or failure? Based on the several phases of implementation and change of behaviour, the participants learn about implementation of a guideline, combining theoretical knowledge with experience from practice.

C3 Actief binnen en buiten de spreekkamer – generieke activiteiten in de opleiding

Prof.dr. Vincent de Groot^{1,2}, Mw.dr. Ilse van Nes³, Mw.drs. Vera van Reuler⁴, Prof.dr. Clemens Rommers⁵, Mw. dr. Annique Priesterbach⁶

¹Afdeling revalidatiegeneeskunde Amsterdam UMC, Amsterdam, Nederland, ²Voorzitter Concilium, , Nederland, ³Sint Maartenskliniek, Nijmegen, Nederland, ⁴Aios OOR AMC, op dit moment werkzaam in Amsterdam UMC, Amsterdam, Nederland, ⁵Adelante/ MUMC+, Maastricht, Nederland, ⁶MRC, Doorn, Nederland

C3. Mini-symposium: Actief binnen en buiten de spreekkamer – generieke activiteiten in de opleiding,
November 11, 2022, 9:00 AM - 10:30 AM

Introductie

Welke revalidatieartsen hebben we in de toekomst nodig en hoe geven we dit vorm in de opleiding? Naast medisch inhoudelijke kennis, vaardigheden, klinisch redeneren en goede communicatie wordt van alle aiossen verwacht dat zij op basisoniveau bekwaam worden in de drie generieke competenties 'Leidinggeven en organiseren', 'Onderwijs en supervisie verzorgen' en 'Actief bijdragen aan de wetenschap'. Van oudsher heeft deze laatste competentie een grote rol in de opleiding vanwege de wetenschapsreis uit het kaderbesluit. Hierbij doen de aiossen tijdens hun opleiding een (poster)voordracht op een wetenschappelijk congres of schrijven ze een wetenschappelijk artikel. In dit mini symposium geven we handvatten hoe aiossen ook met activiteiten die binnen de andere generieke competenties vallen aan deze wetenschapsreis kunnen voldoen. Tot slot tonen we voorbeelden van verdiepingsmogelijkheden van de generieke activiteiten 'Leidinggeven en organiseren' en 'Onderwijs en supervisie verzorgen'.

Programma

In dit mini symposium bespreken en onderbouwen we het belang van differentiatie binnen de opleiding en ons vak, waarbij aiossen breed opgeleid worden door verschillende collega's en ieders talenten benut worden.

De volgende presentaties zullen onderdeel zijn van het mini symposium:

Eindtermen van de verschillende generieke activiteiten en handvatten hoe die te toetsen - Vincent de Groot

Ontwikkelingen in diverse OORs ten aanzien van de generieke activiteiten - Ilse van Nes en Clemens Rommers

Praktische voorbeelden van stages gericht op de generieke activiteit 'Onderwijs en supervisie verzorgen' en 'Leidinggeven en organiseren' - Vera van Reuler en Annique Priesterbach

Discussie over de revalidatiearts van de toekomst - Vincent de Groot

C4 Enhancing the evidence base of rehabilitation: from clinical studies to clinical registries with real-world data

Dr. Anita Beelen¹, Prof. dr. Gert Kwakkel², Dr. Ruben van Eijk³, Ruud Bongers⁴

¹Center of Excellence for Rehabilitation Medicine, University Medical Center Utrecht and De Hoogstraat Rehabilitation, Utrecht, Netherlands, ²Amsterdam University Medical Centre, Location VUmc, Amsterdam, The Netherlands,

³Department of Neurology, University Medical Center Utrecht, Utrecht, Nederland, ⁴University Medical Center Utrecht, Utrecht

C4. Mini-symposium: Enhancing the evidence base of rehabilitation: from clinical studies to clinical registries with real-world data, November 11, 2022, 9:00 AM - 10:30 AM

Clinical registries with real-world data has attracted increasing attention in health research to address effectiveness of treatment and form the basis of precision medicine. In rehabilitation medicine, with heterogeneous samples and complex interventions, robust evidence for treatment effectiveness is currently lacking. Large, comprehensive data registries with longitudinal data on real-world functioning may form the solution for building the evidence base. Technological advances in the last decade, with electronic health records, ehealth applications for blended-care, new technologies for remote-monitoring of functioning and advances in data analytics, make this the right time to build and make use of clinical registries, thereby accelerating precision rehabilitation. Important prerequisites for building clinical registries is standardization of data collection using core sets of functional measures that can be used in clinical practice as well as valid, precise and frequent longitudinal measurement of real-world functioning.

In this mini-symposium experiences with clinical registries and registry-based research will be shared and the national initiative CumuluZ will be presented that can unlock all patient healthcare data in care networks for optimal use in care and research. The opportunities and challenges in developing and implementing clinical registries in rehabilitation medicine will be interactively discussed.

Program outline (90 min):

1. Welcome and introduction - Dr. Anita Beelen, PhD, assistant professor at the Center of Excellence for Rehabilitation Medicine, University Medical Center Utrecht and De Hoogstraat Rehabilitation, Utrecht (10 min)
2. Getting consensus in clinical measures on stroke recovery and rehabilitation studies post stroke: The ISRRA initiative - Gert Kwakkel, PhD, Professor in Neurorehabilitation Head Department Acquired Brain Injury, Rehabilitation centre Reade, Amsterdam & Department Rehabilitation Medicine, Amsterdam University Medical Centre, Amsterdam (20 min)
3. The importance of clinical registry data in drug development for Amyotrophic Lateral Sclerosis - Ruben van Eijk, MD PhD, assistant professor and medical statistician, department of Neurology, University Medical Center Utrecht (20 min)
4. CumuluZ: let's put health-data to work! Ruud Bongers, IT-Architect, Directorate Information Technology, University Medical Center Utrecht, Utrecht (20 min)
CumuluZ will provide a futureproof healthcare platform based on an open common data model and open API's. It will unlock all patient healthcare data via a transmural longitudinal record and will put clinicians and patients back in the driver's seat of clinical innovation.
5. Panel discussion on opportunities and challenges of clinical registries in rehabilitation (20 min)

Objectives:

- To create awareness of the importance of clinical registries and synergistic use of different data sources for evidence building in rehabilitation medicine
- To obtain insight in the advances in care and research obtained from existing clinical registries in and outside the field of rehabilitation
- To provide a platform to discuss the opportunities and challenges in generating, implementing and maintaining registries in rehabilitation medicine

Topic/Keywords (max. 3): Clinical registries, digital technology, real-world evidence

Transparency: No potential conflict of interest to report

Comments:

Language: The workshop will be in Dutch.

C5 Over rouw en veerkracht in de revalidatie

Dr. Casper Van Koppenhagen¹, dr Veronique Moulaert¹

¹Erasmus MC, Rotterdam, the Netherlands

C5. Workshop: Over rouw en veerkracht in de revalidatie, November 11, 2022, 9:00 AM - 10:30 AM

Mini symposium (1,5 uren, max 5 sprekers, 30-50 deelnemers)

DCRM 'Proven practice: effectiveness and impact in rehabilitation medicine'.

Titel mini symposium: Over rouw en veerkracht in de revalidatie.

Organisatie: Véronique Moulaert en Casper van Koppenhagen

Achtergrond

In ons werk als revalidatiearts zien we dagelijks mensen die te maken hebben met verlies zoals (letterlijk) een deel van hun lichaam, moeiteloos kunnen bewegen, makkelijk kunnen denken of verlies van gezondheid in algemene zin. Verlies van functie en taken in het leven leidt vaak ook tot een veranderingsproces in identiteit, zingeving en (toekomst)perspectief.

Verlies geeft rouw en een goed doorlopen "rouwcyclus" draagt bij aan herstel van veerkracht. Veerkracht die nodig is om het leven weer op te pakken. Dit rouwproces begint vaak al tijdens de revalidatie maar kan heel verschillend en SOMS grillig verlopen.

Maar hoe doe je dat dan, goed rouwen? En wat kunnen wij als revalidatiearts doen om dat proces te ondersteunen?

met rouw hebben we dus dagelijks te maken in de revalidatie maar in onze opleiding hebben we hier eigenlijk zo goed als niks over geleerd.

Doel workshop

Deelnemers krijgen inzicht in rouw binnen de revalidatie, praktische adviezen over omgang met rouw in spreekkamer, op de afdeling, bij zichzelf en bij collegae.

Moderator/chair

Véronique Moulaert, revalidatiearts UMCG centrum voor revalidatie (locatie Beatrixoord), werkt nu 10 jaar in de neurorevalidatie en begeleidt daar mensen met NAH en MS. Zij had zelf op jonge leeftijd al te maken met ingrijpend verlies. Véronique won in 2014 de VRA PhD award met haar proefschrift 'Life after survival of a cardiac arrest. The brain is the heart of the matter'.

Casper van Koppenhagen, revalidatiearts Rijndam RC (locatie Erasmus MC), sportarts np, auteur, blogger, podcastmaker van 'KopCast' 'van geluk spreken' van Medisch Contact. Auteur "Ik had je gedacht mijn kind" over het verlies van zijn zoons Lennard en Simon, alsmede het opgeven van kinderwens. Promoveerde in 2013 op "Life satisfaction and wheelchair exercise capacity in persons with spinal cord injury".

Sprekers:

Ervaringsdeskundige en rouwcoach Annamariëke Driessen, partner "Wakker". Je kunt meer dan je denkt! Annamariëke spreekt, weet waar ze het over heeft en raakt met een lach en een traan. Positieve gezondheid, omgaan met verandering en inspirerend leiderschap. Een inspirerend verhaal, dat prikkelt,

door pakkende persoonlijke metaforen te linken aan een organisatie. Hierdoor raakt zij en zet ze mensen in beweging. Soms voor even en vaak voor heel het leven.

Tanja van Roosmalen van Lef Verliesbegeleiding, tevens trainer en rouw- en verliesbegeleider bij Expertisecentrum Omgaan met Verlies.

C6 The person behind the patient: to be taken for granted?

Prof. dr. Marcel Post^{1,2}, Prof.dr. Jeanine Verbunt^{3,4}, Dr. Marion Sommers¹, Dr. Christel van Leeuwen¹, Prof.dr. Anne Visser-Meily¹

¹Center of Excellence for Rehabilitation Medicine, UMC Utrecht Brain Center, University Medical Center Utrecht, and De Hoogstraat Rehabilitation, Utrecht, The Netherlands, ²University of Groningen, University Medical Center Groningen, Department of Rehabilitation Medicine, Groningen, The Netherlands, ³School for Public Health and Primary Care, Department of Rehabilitation Medicine, Maastricht University, Maastricht, The Netherlands, ⁴Adelante Zorggroep, Hoensbroek, The Netherlands

C6. Mini-symposium: The person behind the patient: to be taken for granted?, November 11, 2022, 9:00 AM
- 10:30 AM

Rehabilitation aims to optimize body functions and functional abilities, with the ultimate aim to optimize independence, participation and quality of life. Rehabilitation is person-centered, meaning that the interventions and approach selected for each individual depends on their goals and preferences. Nevertheless, rehabilitation is generally characterized by a strong focus on treatment of impairments and functional disabilities. Although varying across diagnoses, attention for psychological factors is relatively sparse in rehabilitation.

In this mini-symposium we want to address the following learning objectives:

1. To provide knowledge on the impact of psychological factors, such as self-efficacy, illness perceptions, resilience etc., on rehabilitation outcomes at various levels (independence, secondary health conditions, participation) in multiple diagnostic groups;
2. To provide knowledge on examples of psychological interventions as part of multidisciplinary rehabilitation, such as ACT, Mindfulness, self-management training, CBT, CFT and other;
3. To discuss and explore the commonalities and differences in the impact of psychological factors across diagnoses.

Chair: Marcel Post

Speakers:

Marcel Post: Introduction

Jeanine Verbunt: The person behind the patient with chronic pain

Marion Sommers: The person behind the patient with amyotrophic lateral sclerosis

Christel van Leeuwen: The person behind the patient with spinal cord injury

Anne Visser-Meily: The person behind the patient with stroke

Outline of the session:

Marcel Post will introduce the topic by presenting evidence from multiple recent studies on the predictive value of psychological factors measured early after injury for long-term outcomes (10 minutes). After that, four speakers will present evidence on the relevance of psychological factors and present psychological interventions in various diagnostic groups (15 minutes each): Jeanine Verbunt on chronic pain and multiple psychological therapies, Marion Sommers on amyotrophic lateral sclerosis and self-compassion therapy, Christel van Leeuwen on spinal cord injury, mindfulness and self-regulation groups, and Anne Visser-Meily on stroke. The session will be closed by a discussion with the audience (15-minutes).

C7 Orthostatic hypotension: mechanisms, measurement, clinical relevance

Prof. dr. Carel Meskers¹, Dr Jurgen Claassen², Drs. Marjolein Klop³, Prof dr.dr. Andrea Maier⁴, Prof dr Richard van Wezel³

¹Amsterdam UMC, Amsterdam, The Netherlands, ²Radboud UMC, Nijmegen, The Netherlands, ³Radboud University, Nijmegen, The Netherlands, ⁴University of Singapore, Singapore, Singapore

C7. Mini-symposium: Orthostatic hypotension: mechanisms, measurement, clinical relevance, November 11, 2022, 9:00 AM - 10:30 AM

Orthostatic hypotension (OH), defined as a systolic blood pressure drop of > 20 mmHg and/or a diastolic blood pressure drop of > 10 mmHg during a postural change from supine to stand, is highly prevalent in older adults and adults with neurological diseases like Parkinson. OH is associated with detrimental outcome amongst which are falls. Its treatment may encompass revision of medication, compression stockings and instructions like standing up slowly and active contraction of calf muscles before standing up. Evidence of such interventions is low.

Much is unknown about underlying mechanisms of OH, its definition, measurement and symptom assessment as well as their clinical relevance. This symposium discusses the latest insights in epidemiology, mechanisms and measurement of OH, based on a number of research projects and clinical cohorts.

Learning objectives: 1) participants are familiar with the epidemiology of OH; 2) participants understand the basic mechanisms of OH and cerebral oxygenation; 3) participants are familiar with various measurement techniques; 4) participants know how to position OH in clinical practice.

Chair: Prof dr. Carel Meskers, rehabilitation physician, Amsterdam UMC, Amsterdam, The Netherlands.

Outline of the symposium:

1. Epidemiology of OH (Prof Andrea Maier MD PhD).
2. Mechanisms of OH and cerebral oxygenation (Drs. Marjolein Klop).
3. Measurement of OH and cerebral oxygenation (Prof dr. Richard van Wezel).
4. OH in clinical (geriatric) practice: present and future (Dr J. Claassen).
5. Implications for rehabilitation practice (Prof dr. Carel Meskers).

C8 Developing and evaluating complex interventions in rehabilitation research; the MRC framework illustrated with examples from clinical studies.

Dr. Jan Groothuis¹, Dr. Yvonne Veenhuizen¹, Prof. dr. Maud Graff^{1,2}, Prof. dr. Philip van der Wees^{1,2}

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C8. Mini-symposium: Developing and evaluating complex interventions in rehabilitation research; the MRC framework illustrated with examples from clinical studies., November 11, 2022, 9:00 AM - 10:30 AM

Complex interventions are common in rehabilitation and provide challenges in research since the treatment programs are multidisciplinary and patients have personalized goals. The Medical Research Council (MRC) and National Institute of Health Research in the UK has published guidance on developing and evaluating these complex interventions, the so called MRC framework. This framework describes the different steps in scientific research into complex interventions. To be successful, a health innovation has to be implemented within daily (rehabilitation) care. Implementation of these complex interventions is included in the framework, however implementation research and strategies for an effective implementation is often inferior within a research proposal.

In this mini-symposium we will present this MRC framework illustrated with recent examples from clinical practice within the multidisciplinary outpatient clinic and primary care setting. The objectives are to learn about the MRC framework as a tool for developing and evaluating complex multidisciplinary rehabilitation interventions, and to have relevant clinical examples on how to use this tool within rehabilitation research. With specific attention on effectively implementing a complex intervention within rehabilitation care.

Session outline:

- Welcome, Jan Groothuis
- Context and setting of complex interventions in rehabilitation (5 min), Jan Groothuis
- The MRC framework, an introduction. Illustrated by the clinical example of the evaluation of feasibility, efficacy and cost-effectiveness of two 10-week home based occupational therapy interventions for people with Dementia (COTiD) and for people with Parkinson's disease (OTiP) and their caregivers (20 min), Maud Graff
- Clinical example of Energetic, Effectiveness and cost-effectiveness of a self-management group program to improve social participation in patients with neuromuscular disease and chronic fatigue (15 min), Yvonne Veenhuizen
- Implementation of complex interventions. Illustrated by the clinical example of Coach-2-move, a personalized treatment strategy by physical therapists to elicit physical activity in community-dwelling older adults with mobility problems. (20 min), Philip van der Wees
- Energetic, clinical example of an implementation plan (10 min), Yvonne Veenhuizen
- Discussion and experiences from the audience (20 min)
- Concluding remarks, Jan Groothuis

PARALLEL SESSION E

E1 Developing and implementing a Standard of Care for psychosocial care in pediatric rehabilitation: WHAT, HOW and NOW?

Dr. Mattijs Alsem¹, Rogier Doornbos, Dr Marjolijn Ketelaar², Dr. Heleen Reinders-Messelink³, Marike Willems⁴

¹Amsterdam Umc, Amsterdam, Netherlands, ²Kenniscentrum Revalidatiegeneeskunde Utrecht, Utrecht, Netherlands,

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E1. Workshop: Developing and implementing a Standard of Care for psychosocial care in pediatric rehabilitation: WHAT, HOW and NOW?, November 11, 2022, 1:25 PM - 2:55 PM

Session Description

In pediatric rehabilitation care, the focus is on development and participation of children with disabilities. The importance of parents, and other family members and broader social environment is widely recognised. Moreover, it is recognised that psychosocial functioning of the child as other family members are important variables in development and participation, and thus are important in rehabilitation practice. However, children and parents feel that there is not enough emphasis on psychosocial support and care, whereas professionals often report it is challenging to address these issues well. To support the implementation of knowledge related to psychosocial care, CP Netherlands initiated the development of the National Standard of Care of Psychosocial Care in Pediatric Rehabilitation, in a joined effort of parents, patients, researchers, and health care professionals. Starting with questions derived from interviews and focus groups with all stakeholders, an extensive literature research was conducted on five themes: Information, the child's functioning, parents, other family members, and the social environment.

In this session we will present the Standard of Care, including the recommendations, and we will discuss strategies for implementation into daily practice, including the toolbox and monitor for teams and families.

Learning Objectives:

- To learn about patients' and parents' perspectives on psychosocial care in pediatric rehabilitation.
- To learn about the current literature on psychosocial care in pediatric rehabilitation, and the translation into recommendation into the Standard of Care .
- To get inspired on possible ways to implement the recommendations of the standard of care into daily practice.
- To form ideas on future research and innovation projects to further develop and improve psychosocial care in pediatric rehabilitation.

Outline of the session (1.5 hours)

- General introduction (MA) 5'
- Parental Experiences (RD) 10'
- How to develop a standard of care (MW) 10'
- Current literature and recommendations (MK) 15
- Monitor 10 (HR)'
- Discussion 30'

Chair:

Mattijs Alsem

Presenters:

Rogier Doornbos: Aanleiding, eigen ervaringen als ouder.

Marieke Willems: Hoe ontwikkel je een zorgstandaard?

Marjolijn Ketelaar: Van vragen tot aanbeveling

Heleen Reinders-Messelink: De monitor

E2 Precision Orthotics; the future of orthotic care in neuromuscular rehabilitation

PhD Niels Waterval¹, PhD Merel Brehm, Prof. Frans Nollet

¹*Amsterdam Umc, Amsterdam,*

E2. Mini-symposia: Precision Orthotics; the future of orthotic care in neuromuscular rehabilitation, November 11, 2022, 1:25 PM - 2:55 PM

In many neuromuscular disorders, weakness of the lower legs, including the calf muscles is common. Such weakness causes gait deviations resulting in a reduced walking speed, increased walking energy cost and related fatigue. In rehabilitation care, ankle-foot orthoses (AFOs) for calf muscle weakness are provided with the aim to augment walking. The effects of AFOs on reducing gait deviations, and improving walking speed and energy cost though depend on their mechanical properties, and how the properties are matched with the patients' impairments. To maximize treatment effects of AFOs for calf muscle weakness, these properties need to be optimized for each user. We have coined this Precision Orthotics.

In the first part of this symposium, we will recap some of the studies on the effectiveness of AFOs for neuromuscular disorders as prescribed in usual-care and demonstrate how their effects can be improved by Precision Orthotics. Thereafter, the implications of this research for prescribing orthotics are discussed, with the focus on implementation possibilities. This is followed by a presentation about new technological advancements that can be used to optimize orthotic properties, and a discussion with the audience about how to organize Precision Orthotics in the standard-of care- and whether specialization and/or collaboration are needed and warranted to improve orthotic treatment outcomes in the Netherlands.

Outline:

- Effectiveness of AFOs in usual care and the beneficial effect of stiffness-optimization (20 min - M. Brehm)
- Is implementation of Precision Orthotics possible? (20 min - F. Nollet)
- Technological advancements to optimize orthotic properties (20 min - N. Waterval)
- Plenary discussion on the future direction and need of collaborations in orthotic care (30 min)

E3 Op weg naar een betere transitiezorg in de revalidatie; de Net-Als-Jij transitieroute

Dr. Iris Van Wijk^{1,2}, Prof. dr. Jan-Willem Gorter^{2,3}, Msc Cecilia Kalsbeek⁴, Dhr. Max Been

¹Department of pediatric rehabilitation, De Hoogstraat Rehabilitation, Utrecht, Netherlands, ²Center of Excellence for Rehabilitation Medicine, UMC Utrecht Brain Center, University Medical Center Utrecht, and De Hoogstraat Rehabilitation, Utrecht, Netherlands, ³Department of Rehabilitation, Physical Therapy Science & Sports, UMC Utrecht Brain Center, University Medical Center Utrecht, (location Wilhelmina Children's Hospital), Utrecht, Netherlands, ⁴Kalsbeek Impact, Amersfoort, Netherlands

E3. Workshop: Op weg naar een betere transitiezorg in de revalidatie; de Net-Als-Jij transitieroute, November 11, 2022, 1:25 PM - 2:55 PM

Voertaal: Nederlands

Groepsgrootte: 30-35 personen, van tevoren in subgroepen in te delen om een evenwichtige verdeling te krijgen tussen kinderrevalidatieartsen en revalidatieartsen werkzaam in de zorg voor volwassenen. Bij voorkeur aanmelden als duo.

Beschrijving workshop en leerdoelen:

Begin 2022 is de landelijke kwaliteitsstandaard verbeteren Transitiezorg uitgekomen en is een transitiezorg innovatieproject getiteld "Net Als Jij" voor en door jongeren met cerebrale parese (CP), Spina Bifida, en een aanlegstoornis van het been en hun ouders afgerond. Beide ontwikkelingen onderschrijven de noodzaak én urgentie voor het verbeteren van de zorg voor jongeren met een beperking in de transitiefase in de revalidatiesector. Om dit te bereiken is er actie nodig, zowel voorafgaand, tijdens en na de overgang naar de zorg voor volwassenen.

In Canada zijn er goede voorbeelden in het verbeteren van de transitiezorg waar wij in Nederland van kunnen leren. In het project Net Als Jij zijn met participatie van jongeren in alle fases (organisatie-onderzoek-co-creatie-implementatie) belangrijke stappen gezet in het tegemoetkomen aan de behoeftes van jongeren in de transitiefase. Dit heeft geleid tot de ontwikkeling van betekenisvol informatiemateriaal voor jongeren, hun ouders en zorgprofessionals. De diverse (gespreks)tools zijn beschikbaar om te worden toegepast in de praktijk. In de workshop zullen jongeren met de deelnemers in gesprek gaan en aan de slag gaan met de tools aan de hand van een transitieroute met als doel concrete verbeteringen uit te denken die de deelnemers in de eigen organisatie zouden kunnen invoeren.

Leerdoelen:

Aan het eind van de workshop heeft de revalidatiearts (in opleiding) en andere disciplines betrokken bij de zorg voor adolescenten (12-25 jaar) kennis verkregen over:

- waarom de doelgroep adolescenten (12-25 jaar) een specifieke begeleiding nodig heeft voorafgaand, tijdens en na de overgang van de kinderrevalidatiezorg naar de revalidatiezorg voor volwassenen.
- Waar jongeren met een beperking in de transitiefase tegenaan kunnen lopen.
- De ervaringen die zijn opgedaan met verbeteringen in de transitiezorg in Canada en wat wij in Nederland daarvan kunnen leren.
- Welke tools er zijn om de transitie te vergemakkelijken en waar deze te vinden zijn.
- Welke (visie)verschillen er zijn tussen kinder- en volwassenteams en hoe die te overbruggen.

Tevens hebben zij praktische ervaring opgedaan met het ontwerpen van een transitieroute die zij in hun eigen organisatie zouden kunnen door ontwikkelen en implementeren.

Chair: Iris van Wijk en Cecilia Kalsbeek

Presenters:

Jan Willem Gorter: hoogleraar kinderrevalidatiegeneeskunde UMCU en lid van de werkgroep Net Als Jij

Titel presentatie:

Ervaringen met verbeteringen in transitiezorg in Canada vanuit het perspectief van de transitiondoctor.

Max Been: jongere met Spina Bifida, lid van de co-creatiegroep van Net Als Jij

Titel presentatie:

De transitie naar volwassenenzorg vanuit het jongerenperspectief.

Uitwerking workshop:

De workshop zal worden gestart met een 2-tal presentaties, waarna we praktisch aan de slag gaan in 3 groepen met het "uittekenen" van een transitieroute met behulp van diverse al beschikbare tools (o.a. uit de toolkit van Op eigen benen) en de nieuw ontwikkelde tools uit het project Net als Jij. De groepen zullen bestaan uit een mix van vertegenwoordigers van de kinderrevalidatiezorg en zorgverleners die werkzaam zijn in de volwassenen revalidatie. Deze methode is uitgetest tijdens een beleidsmiddag van de Medische Staf van De Hoogstraat Revalidatie. Onder begeleiding van en in gesprek met ervaringsdeskundigen en een jongere van Jong-Pit zullen de groepen hun ideale transitieroute uitstippelen.

E4 Stiff knee gait: the role of rectus femoris in stroke. The science, the daily clinical practice and a special case study

PhD Corien Nikamp^{1,2}, MD, PhD Judith Fleuren^{1,3}, PT, PhD candidate Martin Tenniglo^{1,2,3}, PT Ruth Huurneman³

¹Roessingh Research and Development, Enschede, Netherlands, ²University of Twente, Departement of Biomedical Signals and Systems, Techmed Centre, Enschede, Netherlands, ³Roessingh, Centre for Rehabilitation, Enschede, Netherlands

E4. Mini-symposium: Stiff knee gait: the role of rectus femoris in stroke. The science, the daily clinical practice and a special case study, November 11, 2022, 1:25 PM - 2:55 PM

Outline session

Stiff knee gait is characterized by a decreased peak knee flexion during swing and is a common deviation in the gait pattern observed after stroke. Overactivity of the rectus femoris muscle is often related to this reduced peak knee flexion, and stiff knee gait is linked to limited walking speed, stumbling and falls. This symposium will include basic scientific research on the treatment options for stiff knee gait post-stroke with implementation of results into clinical practice.

The symposium will start with scientific research performed at Roessingh Research and Development and includes the results of a randomized controlled trial on botulinum toxin injections in the rectus femoris in stroke patients, as a treatment option for patients walking with a stiff knee gait. Patient examples and clinical recommendations from this randomized controlled trial will be discussed.

Second, we will continue with an example of a stroke patient presenting stiff knee gait from the clinical practice from Roessingh, Centre for Rehabilitation. The gait pattern, physical examination and outcomes of the (3D) clinical gait analysis will be discussed with the audience. Treatment options will be explained and effects be shown. Finally, the end results of the treatment, including rectus femoris transfer will be discussed.

To conclude the symposium, we will present a special case study of the Roessingh Diagnostic Centre, concerning a young stroke patient that experienced stiffness around the knee and decreased peak knee flexion in swing during normal walking and running. Before stroke, the subject exercised at high level (triathlons) and her goal was to participate in running-competitions again. The subject requested for a rectus femoris transfer to improve running. We will demonstrate the clinical decision making process within the clinical team related to this request, including results of multiple 3D gait analyses pre- and post-intervention with botulinum toxin during normal walking and running. End results of the treatment will be shown and the discussion will include the importance of including other situations than straight line walking in clinical decision making, related to the ambitions of the patient.

Chairs/presenters:

Introduction symposium

Chair: C. Nikamp, PhD

5 min

The effect of Botulinum toxin injections in the rectus femoris in stroke patients with a stiff knee gait

Presenter 1: M. Tenniglo, PT, PhD-candidate

20 min + 5 min questions

An example of clinical decision making and treatment options in multilevel gait problems after stroke

Presenter 2: J. Fleuren, MD, PhD

20 min + 5 min questions

Rectus femoris transfer to improve running after stroke: a case study

Presenter 3: R. Huurneman, PT

20 min + 5 min questions

General discussion and questions

Chair: C. Nikamp, PhD

10 min

Total 90 min

Learning objectives:

- 1) To acquire knowledge about the scientific evidence of treatment options of stiff knee gait after stroke
- 2) To understand how scientific research on the role of the rectus femoris in stiff knee gait is incorporated in clinical decision making of stroke patients presenting stiff knee gait
- 3) To get insight in the process of clinical decision making for treatment of overactivity of the rectus femoris

E5 Revalidatieregister: van data naar verbetering patiëntenzorg

Prof. dr. Coen van Bennekom¹, Drs. Jacob Zuurmond², Dr. Ineke Lokker³, Dr. Diana Oosterveer⁴, Dr. Janneke Stolwijk-Swuste⁵, Drs. Judith van Munster⁶

¹Heliomare, Wijk aan Zee, Nederland, ²Dwarslaesie Organisatie Nederland, Nijkerk, Nederland, ³SAZ Ziekenhuizen, Utrecht, Nederland, ⁴Basalt, Den Haag, Nederland, ⁵De Hoogstraat, Utrecht, Nederland, ⁶Sint Maartenskliniek, Ubbergen, Nederland

E5. Mini-symposium: Revalidatieregister: van data naar verbetering patiëntenzorg, November 11, 2022, 1:25 PM - 2:55 PM

Revalidatieregister: van data naar verbetering patiëntenzorg

Introductie (5 min)

De leden van Revalidatie Nederland (RN) en de Vereniging van Revalidatieartsen (VRA) willen met het Revalidatieregister meer inzicht krijgen in de gegeven zorg. Zodat artsen en managers van elkaar kunnen leren en de zorg voor de patiënt te verbetert. In deze workshop leggen we uit wat de meerwaarde van dit register is voor artsen en patiënten. Om registratie-inspanning te beperken is gekozen om bestaande data te verbinden in dit register.

Chair

Prof. dr. C.A.M. van Bennekom (Heliomare, AMC-UvA, Stichting Revalidatie Impact)

Sprekers

Dr. M.E. Lokker (SAZ)

Drs. J.C. van Munster (St. Maartenskliniek)

Dr. D.M. Oosterveer (Basalt)

Dr. J. Stolwijk-Swuste (de Hoogstraat, NDD)

Drs. J. Zuurmond (Dwarslaesie Organisatie Nederland)

Programma

Patiëntperspectief op data in de zorg (Drs. J. Zuurmond (spreker 1)) (15 min)

Het eigenaarschap van data ligt vooral bij instellingen en onderzoekers. De belangen en (wetenschappelijke) kaders bepalen daardoor wat er hoe verzameld wordt. Het perspectief van de patiënt zal leidend moeten worden. Dan zal het gebruik en de reikwijdte van (real-life) data effectiever worden.

Ervaringen waardegedreven zorgprogramma SAZ (Dr. M.E. Lokker (spreker 2)) (15 min)

Het waardegedreven zorgprogramma van de SAZ-ziekenhuizen is een soortgelijk initiatief als het Revalidatieregister. Dit programma is in 2018 gestart en het register kan leren van deze ervaringen. De data en uitkomsten worden niet alleen besproken maar ook leiden ook tot individuele verbeterdoelen voor patiëntgroepen.

Uitkomstmaten in de revalidatiezorg, uitkomstmaten hersenletselrevalidatie (Dr. D.M. Oosterveer (spreker 3)) (15 min)

Stichting Revalidatie Impact vormt één van de datastromen van het Revalidatieregister en verzamelt momenteel al uitkomstmaten binnen de revalidatiezorg. Waar mogelijk zijn dit generieke uitkomstmaten, indien nodig diagnose specifiek. Dit sluit aan bij het landelijke programma Uitkomstgerichte Zorg. De expertgroep Hersenen is hierin al gevorderd.

Nederlandse Dataset Dwarslaesierevalidatie (Dr. J. Stolwijk-Swuste (spreker 4)) (15 min)

De Nederlandse Dataset Dwarslaesierevalidatie (NDD) verzamelt sinds 2015 revalidatiegegevens in een landelijke dataset, onder andere over kwaliteit van leven en participatie en gebaseerd op de ISCOS. Met behulp van een SKMS-subsidie is de database inhoudelijk herzien maar nog niet betreft IT-infrastructuur. Mogelijk kan de NDD aansluiten op de IT-infrastructuur van Stichting Revalidatie Impact.

De meerwaarde van het register voor artsen Vroegbehandeling (Drs. J.C. van Munster (spreker 5)) (15 min)
Vanuit de eerste pilot wordt verteld wat het register kan betekenen voor de artsen van de Vroegbehandeling. In de zomer 2022 startte de eerste pilot binnen het revalidatieregister voor de patiëntgroep Observatie Jonge Kind. Deze groep is begin 2022 voor het eerst ingericht als herkenbare groep in de zorginformatiesystemen. Artsen kunnen daardoor hun profielen vergelijken en met elkaar in gesprek over hoe zij de observaties uitvoeren.

(Vragen & discussie: 10 min)

E6 Ontslagbestemming: externe en persoonlijke factoren / Discharge destination: external and personal factors (Dutch)

Drs. Paul Dekker^{1,4}, Drs. Sandra van Manen^{2,4}, Dr. Chantal Bakker^{3,4}, Gert van Dijk^{4,5}

¹Leiden University Medical Center, Leiden, Netherlands, ²Northwest Clinics, Alkmaar/Den Helder, Netherlands, ³Máxima Medical Center, Eindhoven/Veldhoven, Netherlands, ⁴VRA-werkgroep ziekenhuisrevalidatie (WZR), Utrecht, Netherlands, ⁵Erasmus MC, Rotterdam, Netherlands

E6. Workshop: Ontslagbestemming: externe en persoonlijke factoren / Discharge destination: external and personal factors (Dutch), November 11, 2022, 1:25 PM - 2:55 PM

De revalidatiearts heeft een belangrijke rol in triagering voor de behandeling van functionele beperkingen na ziekenhuisopname. Een groot deel van de triagering betreft advies geven over de ontslagbestemming, inclusief de indicatiestelling voor klinische opname binnen de interdisciplinaire medisch specialistische revalidatie (IMSR).

Bij een deel van de patiënten is er discussie over de ontslagbestemming vanwege persoonlijke factoren, bijvoorbeeld bij uiteenlopende medische en paramedische behandeldoelen, zoals bij psychiatrische comorbiditeit bij patiënten met multitrauma. Voor een ander deel van de patiënten wordt op grond van externe factoren een ander traject geïndiceerd dan vanuit de medische inhoud (functie- en activiteitsniveau) zou zijn gekozen. Bijvoorbeeld wanneer een patiënt (mogelijk) niet terug kan naar de eigen woning omdat de woning ongeschikt is en niet kan worden aangepast, of wanneer sprake is van een beperkt steunsysteem waardoor de verwachting is dat de ondersteuning in thuissituatie na ontslag ontoereikend zal zijn om functioneren in de oude woonomgeving mogelijk te maken.

Tijdens deze workshop wordt er gediscussieerd over de externe factoren die van invloed zijn op de indicatiestelling voor klinische opname in een instelling na een ziekenhuisopname en de ethische (en wettelijke) kaders hierbij. Het doel is om uiteindelijk te komen tot een (aanzet) voor een route om te komen tot een gezamenlijke visie en eventuele verdere uitwerking.

Leerdoelen

Deelnemers:

- Zijn op de hoogte van de manier waarop eventueel lokale en regionale verschillen een rol kunnen spelen in besluitvorming bij de indicatiestelling IMSR
- Hebben inzicht vanuit ethisch perspectief welke afwegingen gemaakt kunnen worden bij de indicatiestelling IMSR op grond van externe factoren.
- Hebben inzicht vanuit juridisch perspectief welke afwegingen gemaakt mogen worden bij de indicatiestelling IMSR op grond van externe factoren.
- Formuleren een (aanzet tot) een landelijke visie op de externe factoren die worden meegenomen in de indicatiestelling
- Komen eventueel tot een voorstel voor de route voor verdere uitwerking

Programma

Welkom en Opening (plenair)

Ethische overwegingen (plenair)

Welke medisch-ethische factoren kunnen mee worden genomen in de indicatiestelling. Afhankelijk van het beloop zullen juridische kaders ter sprake komen.

Discussie in groepjes

Groepjes van 4-5 personen

Discussie over de volgende punten

1. Welke uitdagingen in de indicatiestelling spelen er in het ziekenhuis?
2. Welke uitdagingen in de indicatiestelling spelen in het revalidatiecentrum?
3. Wat zijn 'best practices' bij ingewikkelde casus?
4. Wat zijn wensen voor verbetering?

Plenaire terugkoppeling

Er volgt per groepje een korte terugkoppeling.

Is het mogelijk om:

- Externe factoren in thema's te identificeren/groeperen?
- Factoren die vooral in het ziekenhuis spelen te identificeren?
- Factoren die vooral in het revalidatiecentrum spelen te identificeren?

Plenaire discussie

Worden de factoren/thema's door de ander deelnemers herkend?

Willen we hier vanuit onze beroepsgroep verder mee? Of hebben een voorstel hoe dit anders op te pakken?

Welke route moeten we dan kiezen?

Wat neem je mee van vandaag (kort terugkomen op ethische en juridische kaders)

Conclusie formuleren en plan van aanpak hoe verder.

Afsluiting

E7 Medisch leiderschap: de arts en manager in gesprek - waarom belanden we zo vaak in een oerwoud van miscommunicatie?

Drs. Alicia Lucardie¹, Drs. Yvette Van Horn¹

¹Adelante Zorggroep, Hoensbroek / Maastricht, The Netherlands

E7. Workshop: Medisch leiderschap: de arts en manager in gesprek - waarom belanden we zo vaak in een oerwoud van miscommunicatie?, November 11, 2022, 1:25 PM - 2:55 PM

Session description:

Na een succesvolle workshop tijdens het Colloquium 2022 waarin we meer leerden over de beleidscyclus, willen we nu een verdiepingsslag maken door daadwerkelijk met elkaar in gesprek te gaan. Inmiddels weten we dat artsen en managers vaak een andere taal spreken, wat regelmatig zorgt voor onderlinge frictie. Dit terwijl het juist belangrijk is om elkaar te kunnen versterken om zo invloed op bedrijfsmatige processen binnen de organisatie te realiseren.

Duidelijk is dat dit thema meer aandacht verdient binnen ons vak; zo kwam ook uit de feedback van het Colloquium. Waar lopen we als artsen tegenaan in de communicatie met managers? En waar lopen managers tegenaan? Welke aannames spelen er en waarom?

Na een plenaire introductie door een jonge arts en een manager, zullen we dieper in gaan op de taal die we spreken als arts en als manager. Ook zullen we in groepen uiteengaan om een aantal stellingen te bespreken, waarbij er ruimte is voor het delen van elkaars kwetsbaarheden en ervaringen uit de praktijk. Waarom belanden we zo vaak in een oerwoud van miscommunicatie? Waarom kost het zoveel energie? Hoe kun je het ombuigen naar een samenwerking die wél werkt?

Deze workshop is bij uitstek ontwikkeld voor de AIOS en jonge klaren, uiteraard zijn collega's met meer ervaring van harte uitgenodigd!

Outline session:

- Introductie: van een oerwoud van miscommunicatie naar arts-manager bingo (15 min)
- De taal van de arts en manager (15 min)
- Stellingen in 5 groepen (40 min)
- Plenaire terugkoppeling (10 min)
- Arts-manager bingo & afronding (10 min)

Chair(s)/presenters:

- Luikje van der Dussen - revalidatiearts, Raad van Bestuur Revant
- Jan-Willem Meijer - revalidatiearts, Raad van Bestuur De Hoogstraat
- Yvette van Horn - revalidatiearts, Raad van Bestuur Adelante Zorggroep
- Alicia Lucardie - aios revalidatiegeneeskunde
- Manager (definitieve naam volgt)

E8 Multi-center study to assess clinical effect of soft-robotic glove on hand function: regulatory context, latest results and practical experiences

Dr. Gerdienke Prange^{1,2}, Dr. Anke Kottink^{1,2}, Prof Corry van der Sluis³, Drs. Ronne Pater⁴, Prof. Hans Rietman^{1,2,5}

¹Roessingh Research and Development, Enschede, the Netherlands, ²University of Twente, Department of Biomechanical Engineering, Enschede, the Netherlands, ³University Medical Center Groningen, Groningen, the Netherlands,

⁴Klimmendaal revalidatiecentrum, Arnhem, the Netherlands, ⁵Roessingh Centrum voor Revalidatie, Enschede, the Netherlands

E8. Mini-symposium: Multi-center study to assess clinical effect of soft-robotic glove on hand function: regulatory context, latest results and practical experiences, November 11, 2022, 1:25 PM - 2:55 PM

Session description

A loss of hand function, whether due to sudden onset, a disease or gradual process, can inhibit activities of daily living (ADLs), limiting performance of even the most basic tasks. Despite dedicated hand rehabilitation, hand function limitations can persist in many cases. Numerous assistive devices are available to support ADLs where needed, such as adapted utensils. While these tools are helpful to compensate for the lost hand function during daily tasks, their use does not train the hand to improve or maintain function. With the advent of soft-robotic devices, a smart wearable glove has become available that enables direct support of hand function in a variety of ADLs with an assist-as-needed approach. Previous research found a first indication that several weeks of using a soft-robotic glove for its direct support led to improved hand function, showing a therapeutic effect on top of the assistive effect. These are very interesting findings, considering the clinical implications of a smart assistive technology enabling highly intensive and functional training while supporting performance of ADLs. But how to confirm such findings? What does it take for a promising medical device to become available for clinicians?

Using data currently being collected via a multi-center clinical trial (iHand study) on the therapeutic effect of a soft-robotic glove on hand function, we will illustrate various elements needed to find those answers. Starting with a general explanation of the formal requirements for medical devices to enter the market, zooming into the rules for conducting clinical trials under EU law and following Good Clinical Practice (GCP), we will show how those rules apply to the development of the soft-robotic glove up to its current version dedicated to rehabilitation purposes. Along the way, we'll present the latest results (expected to be complete by conference date) of the iHand study and share our experiences on practical aspects of such a clinical trial from different perspectives: researchers from the research institute coordinating the study, the rehabilitation physician from the clinical center managing the test site, the therapist supervising participants and conducting tests, and the patient participating in the tests and using the soft-robotic glove at home.

During this session, clinicians will learn about the clinical effect of an adaptive soft-robotic glove, used as assistive aid during ADLs for 6 weeks in the home environment, on hand function. They will also learn about future possibilities for rehabilitation using technology that merges assistive and therapeutic function. Furthermore, the audience will learn about the general context of the Medical Device Regulation and practical aspects of participating in a GCP-compliant study.

Session outline and program:

The session consists of 5 presentations, each illustrating different perspectives: regulatory, research coordinator, trial site manager, site therapist, study participant. Each presentation includes 5 min for questions. At the end, 10 min are dedicated to discussion with the audience about their experiences and expectations for future rehabilitation care and future rehabilitation research.

- Introduction to the soft-robotic glove and its clinical evidence
 - Chair: H. Rietman MD, PhD; 10 min
- Protocol and latest results of GCP-compliant study into clinical effect of soft-robotic glove use
 - Speaker: A. Kottink, PhD; 20 min
- Managing a test site in GCP compliant multi-center study: barriers and facilitators
 - Speaker: C. van der Sluis, MD, PhD; 15 min
- Taking part in a clinical trial to test the soft-robotic glove effect: therapist and patients' experiences
 - Speaker: R. Pater, MSc, PT; 20 min
- Next steps for the soft-robotic glove towards clinical availability
 - Speaker: G. Prange, PhD; 15 min
- General discussion and closing
 - Chair: H. Rietman, MD, PhD; 10 min

FREE PAPER SESSION

001

The effects of a blended care intervention in partners of patients with acquired brain injury – results of the CARE4Carer randomized controlled trial

Drs. Jennifer Welten¹, PhD Vincent Cox¹, PhD Ruben van Eijk^{2,6}, Prof. dr. Caroline van Heugten^{3,4,7}, Prof. dr. Johanna Visser - Meily^{1,5}, MD PhD Vera Schepers⁵

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A3. Free paper session: top 4 orals, November 10, 2022, 12:55 PM - 1:55 PM

Introduction: Partners of patients with acquired brain injury (ABI) experience increased levels of burden and emotional distress. Ideally, support programs are easily accessible as well as personalized. A blended care intervention, combining web-based support with face-to-face consultations, is a promising approach.

Objective: To assess the effect of the CARE4Carer blended care intervention on caregiver mastery and psychosocial functioning compared to usual care in partners of patients with ABI.

Participants: 120 partners of patients with ABI.

Methods: A multicenter randomized controlled trial was conducted. The CARE4Carer intervention lasted up to 20 weeks and consisted of nine online sessions combined with two face-to-face consultations with a social worker. Outcome measures were caregiver mastery scale and measures of psychosocial functioning, which were assessed at baseline, 24 and 40 weeks follow-up.

Results: There were no differences between groups at baseline. At week 24 and 40, CMS was increased in the intervention group (n=59) compared to controls (n=61) (mean difference 1.31, week 24: 95%CI -0.118–2.741; p=0.072, week 40: 95%CI -0.258–2.883; p=0.1). In a per protocol analysis, CMS was significantly increased in the intervention group compared to controls (week 24: mean difference 1.53, 95%CI 0.103–2.958; p=0.036, week 40: mean difference 1.57, 95%CI 0.005–3.142, p=0.049). Family functioning, anxiety and caregiver strain improved.

Discussion and conclusions: We found an improvement in CMS in the intervention group, which reached statistical significance in a per protocol analysis.

Clinical message: A blended care intervention can be a valuable treatment option for partners of patients with ABI.

002

A randomized controlled trial of early transcranial magnetic stimulation (TMS) of the contralesional motor cortex for promotion of upper limb recovery until 1 year post-stroke - BSTARS trial

PhD Jord Vink^{1,2}, Dr. Eline van Lieshout^{1,2}, Prof. dr. Anne Visser^{1,2}, Prof. dr. Bart van der Worp¹, Prof. dr. Rick Dijkhuizen¹

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A3. Free paper session: top 4 orals, November 10, 2022, 12:55 PM - 1:55 PM

Background

Despite developments in acute stroke therapies and rehabilitation strategies, many stroke patients are left with long-term upper limb motor impairment. This is the first trial to investigate whether continuous theta-burst stimulation (cTBS), a form of transcranial magnetic stimulation (TMS), of the contralesional primary motor cortex (M1) delivered within three weeks after stroke onset promotes long-term upper limb motor recovery until 1 year post-stroke.

Methods

Patients with unilateral stroke and upper limb motor impairment were recruited from rehabilitation center De Hoogstraat and randomized to receive active or sham cTBS of the contralesional M1 combined with regular care upper limb therapy, within three weeks after stroke onset. The primary outcome was the Action Research Arm Test (ARAT) score, at three months post-stroke. Secondary outcomes consisted of other measures of upper limb function and activity and quality of life, as well as the length of stay (LOS) at the rehabilitation center.

Findings

Between April 2017 and February 2021, we enrolled sixty patients. We randomized 29 patients to receive active cTBS and 31 patients to receive sham cTBS. The mean difference in ARAT score at three months post-stroke was 9.5 points (95% CI -1.2 to 17.9) in favor of the active cTBS group. LOS was 18 days shorter in the active cTBS group (95% CI 0.0 to 36.4).

Interpretation

Stroke patients who receive cTBS of the contralesional M1 within 3 weeks after stroke onset present additional recovery of the upper limb compared to patients who received sham cTBS, resulting in earlier discharge.

003

Quality of life and its relation with the presence of secondary health conditions among patients with a recent spinal cord injury

PhD Eline Scholten¹, PhD Marcel Post^{1,2}, PhD Christel van Leeuwen¹, MSc Aline Hakbijl-van der Wind¹, PhD Janneke Stolwijk-Swüste¹

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A3. Free paper session: top 4 orals, November 10, 2022, 12:55 PM - 1:55 PM

Introduction: Secondary health conditions (SHCs) are common among patients with spinal cord injury (SCI). Having SHCs may negatively influence their quality of life (QoL), but this has rarely been investigated in an inpatient setting.

Objective: To describe QoL in patients with SCI at admission and discharge from inpatient rehabilitation and to explore the associations between SHCs and QoL controlling for demographic and SCI characteristics.

Patients: Patients with a recent SCI and admitted to a rehabilitation center specialized in SCI between 2015-2019.

Methods: Data on QoL and the presence of impairment of bladder function, bowel function, temperature regulation, pain, pressure sores and cardiovascular function were retrieved from the Dutch SCI Database. QoL was assessed with the International SCI QoL Basic Dataset (range 0–10).

Results: Patients (n=393) reported significantly lower mean QoL at admission (life as a whole: 5.0 ± 2.3 , physical health: 4.5 ± 2.1 , mental health: 5.9 ± 2.1) compared to discharge (6.5 ± 1.8 , 6.1 ± 1.9 , and 7.0 ± 1.7). Pain was the most frequently reported SHC at admission (63%) and discharge (49%), followed by problems regarding bladder (61% and 43%) and bowel function (57% and 39%). Significant bivariate associations between total QoL and SHCs were found at admission and discharge for bladder function ($r = -.20$, $r = -.29$), bowel function ($r = -.23$, $r = -.30$), pain ($r = -.10$, $r = -.30$) and pressure sores ($r = -.13$, $r = -.18$). Controlled for other characteristics, only pain remained significantly associated with total QoL.

Discussion and conclusions: Pain was the most frequently reported SHC and was also independently associated with lower QoL.

Clinical message: Effective pain management is important in first inpatient rehabilitation.

004

What are the differences in participation after stroke between men and women?

Dr. Joris De Graaf^{1,2}, Drs. Sanne van Miltenburg¹, Prof. dr. Marcel Post^{1,3}, Prof. dr. Anne Visser-Meily^{1,2}

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A3. Free paper session: top 4 orals, November 10, 2022, 12:55 PM - 1:55 PM

Introduction

Women appear to have a higher risk for long term restrictions in participation than men. This gender difference is currently poorly understood, as solely biomedical factors have been examined so far.

Objective

The aims of this study are to (1) map gender differences in participation outcome one year after stroke and (2) identify demographic, stroke-related or psychological determinants of participation for men and women separately.

Patients

A total of 326 patients (mean age 66.5±12.4y, 65.0% men) completed the restriction and satisfaction subscale of the Utrecht Scale of Evaluation of Rehabilitation-Participation (USER-P) at one year after stroke as part of the prospective longitudinal Restore4Stroke Cohort study.

Methods

Bivariate and multiple linear regression analyses were performed to analyze demographic, stroke-related and psychological factors as predictors of long term participation in men and women separately.

Results

Women experienced significantly more restrictions in participation one year after stroke in comparison to men. Similar satisfaction with participation and predictors of restrictions in participation were observed in men and women. Depressive symptoms were predictive for satisfaction with participation in men, whereas stroke severity and maladaptive psychological factors were identified as predictors in women.

Discussion and conclusions

Women have worse participation outcome compared to men at one year after stroke. Different biopsychosocial factors may contribute to these differences, such as severity of stroke, mood problems and maladaptive psychological factors.

Clinical message

To close the gap in participation outcome after stroke between men and women, we should take into account gender-specific predictors of participation during stroke aftercare.

Participation and fatigue among young patients with acquired brain injury in outpatient rehabilitation: a 2-year follow-up.

Drs. Florian Allonsius^{1,2}, Dr. Menno van der Holst^{1,2}, Prof. Dr. Thea Vliet Vlieland², Dr. Frederike van Markus-Doornbosch¹, Dr. Arend de Kloet¹

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A4. Free paper session: brain injury / stroke, November 10, 2022, 12:55 PM - 1:55 PM

Introduction: Acquired brain injury (ABI) often causes fatigue and participation problems, which may persist over time in young patients. However, knowledge regarding the course of these problems over time is lacking.

Objective: Describe the course of participation and fatigue problems over time in young patients with ABI.

Participants: Patients with ABI (5–24 years), referred for outpatient rehabilitation.

Methods: At rehabilitation referral (baseline) and 2 years thereafter, patients completed the Child/Adolescent-Scale of Participation (CASP, total score 0-100) and the PedsQL™Multidimensional-Fatigue-Scale (PedsQL™MFS, total score 0-100). Lower scores indicate more participation restrictions/fatigue. Linear mixed-models were used to determine change over time (estimated mean (SE), change-scores (95%CI)). Furthermore, Pearson correlation (r) was used to assess the relation between participation and fatigue.

Results: Two-hundred-twenty-three patients completed the questionnaires at baseline, but only 47 two years later. The median age (baseline) was 14(IQR:11-16), 74% had traumatic brain injury. Mean (SE) CASP and PedsQL™MFS total scores at baseline were: 77.9(1.1) and: 50.0(1.2), respectively. Over time, CASP total scores improved significantly: +10.5, (6.4-14.7), $p<0.01$). PedsQL™MFS total scores also significantly improved: +9.2, (3.4-15.0), $p<0.05$), however, fatigue remains considerably present after two years (mean: 59.2, SE). Large correlations were found between participation and fatigue at baseline ($r=0.5$) and after 2 years ($r=0.6$)

Conclusion/Discussion: Participation and fatigue problems were found in this population which became less over time, however, especially fatigue problems remain considerable.

Clinical message: This study endorses the importance of measuring participation and fatigue over time to monitor these problems and to evaluate rehabilitation treatment after ABI where needed.

Patient activation during the first 6 months after the start of stroke rehabilitation

Drs. Winke van Meijeren-Pont^{1,2}, PhD Sietske Tamminga^{1,2}, PhD Marta Fiocco^{2,3}, MSc Alessandra Gonzalez Avila¹, Gerard Volker¹, MSc Steffi Janssen¹, MD, PhD Thea Vliet Vlieland^{1,2}, MD, PhD Daniella Oosterveer^{1,2}

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A4. Free paper session: brain injury / stroke, November 10, 2022, 12:55 PM - 1:55 PM

Introduction: Patient activation is a prerequisite for self-managing health after stroke.

Objective: Examine patient activation at the start of stroke rehabilitation and its course in the 6 months follow-up.

Patients: 478 stroke patients receiving multidisciplinary rehabilitation.

Methods: Patient activation was measured with the Patient Activation Measure (PAM, score 0-100, 4 levels, higher score and level denotes more patient activation) at start of the rehabilitation (baseline), 3 and 6 months thereafter. Multivariate mixed model analysis was used to analyze the course of patient activation.

Results: Patients' mean age was 63.0 years (inter quartile range (IQR) 56.0-70.0 years) and 308 (64.2%) were male. At baseline the mean PAM score was 60.2 (Standard deviation (SD) 14.3), with the number of patients in PAM levels 1, 2, 3 and 4 being 76 (17.8%), 85 (19.9%), 177 (41.4%) and 90 (21.0%), respectively. The mean PAM score increased over time (3 months 60.7 (SD 14.8), 6 months 61.9 (SD 18.0), p0.007). Between baseline and 6 months, 122 (41.4%) patients remained in the same level, 105 (35.6%) patients increased and 68 (23.1%) decreased in PAM level. At all time points, >35% of patients were in level 1 or 2.

Discussion and conclusions: PAM scores increased slightly from start of rehabilitation up to 6 months follow-up, with about one third of patients improving in PAM-level. At all time points over a third of patients had a low level (1 and 2) of patient activation.

Clinical message: Interventions to increase stroke patients' activation during and following rehabilitation seem warranted.

Accuracy of prognostic models to predict long-term recovery of independent walking after stroke: a systematic review

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A4. Free paper session: brain injury / stroke, November 10, 2022, 12:55 PM - 1:55 PM

Objective

It is necessary to gain insight in the prediction of independent walking regardless of patient-specific neurological recovery and at any time-point after stroke. Such prediction models can be used by clinicians to inform patients about the recovery potential and in the decision-making process, which will improve individualized stroke rehabilitation. Therefore, this systematic review provides an overview of current evidence about prognostic models and its performance to predict recovery of independent walking at any time-point after stroke.

Search strategy

In MEDLINE (PubMed), CINAHL and Embase we searched up to December 2021 for all relevant studies in English and Dutch. Keywords were 'stroke', 'independent walking', 'prediction', 'model performance' (discrimination and/or calibration) and all terms related to these.

Selection

Based on the criteria, title and abstract were screened on relevance by two independent reviewers. They retrieved full article copies of the relevant studies and select them independently. A conflict of opinion was resolved by consensus after discussion.

Data synthesis

To decide to what extent a paper may contribute to the review, the QUIPS Tool was used by two independent reviewers. Descriptive statistics, study methods and model performance were extracted by one reviewer and cross-checked by the second reviewer.

Conclusion

The most strong predictors for a favorable outcome on independent walking are: TCT sitting balance $\geq$ 25 and MI-leg $\geq$ 25 within 9 days poststroke (AUC=.97, sensitivity=.97, specificity=.79). However, several other prediction models included variables such as age, gender and BBS at admission. Though, comparing the performance of these models is difficult due to their different methods.

Decision-making on referral to primary care physiotherapy after inpatient stroke rehabilitation

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A4. Free paper session: brain injury / stroke, November 10, 2022, 12:55 PM - 1:55 PM

Introduction

Before stroke survivors are discharged from the hospital or an inpatient rehabilitation center after inpatient stroke rehabilitation, a decision must be made concerning referral to primary care physiotherapy. Some stroke survivors are referred to primary care physiotherapy and others are not.

Objective To acquire insight into the decision-making processes of healthcare professionals concerning referral to primary care physiotherapy at the time of discharge from inpatient rehabilitation.

Methods

A generic qualitative study using thematic analysis was performed. Nineteen healthcare professionals from nine hospitals and (geriatric) rehabilitation centers in the Netherlands were interviewed.

Results

The decision on referral is influenced by personal factors and home environment of the stroke survivor, organizational factors within the care setting, and the intuition and feeling of social responsibility of the individual healthcare professional.

Discussion/Conclusions

After inpatient rehabilitation, many elements are considered that may influence referral to primary care physiotherapy. Presently, there is no consensus concerning referrals. The final decision depends on the individual physiotherapist and care setting. Healthcare professionals mentioned the importance of movement behavior, although there is no consensus if secondary prevention is a primary task of the physiotherapist. More research is needed to identify risk factors for functional decline in order to develop a referral policy that addresses primary care physiotherapy to the right group of stroke survivors.

Clinical message

Stimulation of physical activity and prevention of sedentary behavior are the most important factors to consider for referral to primary care physiotherapy, to prevent decline in ADL and for secondary prevention.

Control in the Absence of Choice: A Qualitative Study on Decision-making on Gastrostomy in ALS with Patients, Caregivers, and Healthcare Professionals

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A5. Free paper session: neurodegenerative diseases, November 10, 2022, 12:55 PM - 1:55 PM

Introduction

Gastrostomy is recommended in amyotrophic lateral sclerosis (ALS) for long-term nutritional support. Patients and healthcare professionals (HCPs) perceive decision-making as complex.

Objective

To explore patient, caregiver, and HCP perspectives on decision-making on gastrostomy.

Methods

Semi-structured interviews with patients who have made a decision on gastrostomy and caregivers; HCPs were interviewed separately. Interviews were transcribed and analyzed thematically.

Results

Interviews were conducted with 13 patients and 12 caregivers in 14 cases; and 5 HCPs in 10 cases. Participants described decision-making on gastrostomy as a continuous process of weighing (future) clinical need of gastrostomy against their values and beliefs to come to a decision to accept or reject gastrostomy, or postpone decision-making, while being supported by loved ones and HCPs. Patients described gastrostomy as inevitable, but retained agency through control over the timing of decision-making. They said physical necessity, experiences on loss and identity, and expectations on gastrostomy placement were important factors in decision-making. Decision-making was described as a family affair with caregivers supporting patient choice. HCPs supported the patient during the decision-making process and respected their autonomy and values; patients stressed the importance of adequate information on benefits and the procedure.

Discussion and conclusions

Patients feel in control over decision-making on gastrostomy when they are able to make their own choice at their own pace and supported by loved ones and HCP's.

Clinical message

Person-centered decision-making on gastrostomy requires early information exchange and repeated discussions with patients and their caregivers in which their values are incorporated and patient choice respected.

Stigma experienced by ALS patients and their family caregivers: A mixed-methods study

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A5. Free paper session: neurodegenerative diseases, November 10, 2022, 12:55 PM - 1:55 PM

Introduction: Stigma in people living with amyotrophic lateral sclerosis (ALS) can negatively impact quality of life, emphasizing the need to tackle stigma.

Objective: To explore types of stigmatizing experiences faced by Dutch ALS patients and their family caregivers as well as its association with mental health.

Methods: A cross-sectional survey was administered among ALS patients (N=193) and caregivers (N=87).

Outcomes included stigma, self-compassion, self-criticism, quality of life, depression, anxiety and caregiver burden. Manifestations of stigma were explored in more depth through semi-structured interviews with 8 ALS patients and 11 caregivers.

Results: Findings suggest that the majority of patients and caregivers experience stigma to some extent due to visible symptoms of ALS, impaired speech, dependency on others, the use of assistive devices and changed social roles. In both groups, stigma scores showed moderate to strong associations with psychological health and distress. Three major themes emerged from the interviews: (1) enacted stigma, including social exclusion (e.g. relationship distancing, being excluded in conversations) and stigmatizing attitudes and responses (e.g. staring, patronizing), (2) self-stigma, including experiences of alienation (e.g. feeling ashamed/embarrassed, inferior or left-out) perceived discrimination (e.g. feeling ignored, judged or misunderstood) and anticipated stigma (e.g. fear of being excluded), and (3) stigma resistance, the ability to resist people's stigmatizing attitudes/behaviours.

Discussion and conclusion: People living with ALS may experience stigmatization. Our findings may inform the development of interventions targeting stigma in ALS patients and caregivers.

Clinical message. Professionals should be aware of stigmatizing experiences that patients and caregivers may encounter due to ALS.

Blended versus face-to-face CBT for MS-related fatigue: results of a non-inferiority multicenter randomized clinical trial

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A5. Free paper session: neurodegenerative diseases, November 10, 2022, 12:55 PM - 1:55 PM

Introduction: Cognitive behavioural therapy (CBT) has been found effective in reducing fatigue severity in MS patients. However, individual face-to-face CBT draws heavily on limited treatment capacity, and the travel distance to the treatment centre can be burdensome for patients. Therefore, we developed “MS Fit”, an internet-supported CBT for MS-related fatigue, based on an evidence-based face-to-face CBT protocol. **Objective:** to test non-inferiority of MS Fit compared to face-to-face CBT for MS-related fatigue.

Patients: 166 severely fatigued ambulatory MS-patients.

Methods: Patients were randomly assigned to either MSFit or face-to-face CBT. Primary endpoint was fatigue severity assessed with the Checklist Individual Strength at the end of 20-week treatment (EOT).

Multilevel analysis will be conducted with fatigue severity at EOT as dependent variable, treatment group as fixed factor and baseline fatigue severity as covariate. MS Fit will be considered non-inferior when the lower bound of the 95% CI of the estimated effect of treatment is > the non-inferiority margin of -1.35.

Results: Since April 2018, patients have been treated by 26 trained psychologists in 14 hospitals and rehabilitation centers in The Netherlands and Belgium. The study population consisted of 127 women and 39 men, with a mean age of 45.3 yr (sd 10.3). Average MS duration was 8.8 yr (range: 0-41).

Discussion and conclusions: We will be able to conclude if MS Fit is an efficient alternative to face-to-face CBT without losing effectiveness.

Clinical message: Implications for clinical practice will be discussed, and related to implementing blended CBT as a treatment of MS-related fatigue.

Clinical practice recommendations for early respiratory management in patients with ALS.

Drs. Jaap Bakers^{1,4}, Dr. Esther Kruitwagen^{1,4}, Dr. Peter Wijkstra², Prof. dr. Leonard van den Berg³, Prof. dr. Anne Visser-Meily^{1,4}, Dr. Anita Beelen^{1,4}

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A5. Free paper session: neurodegenerative diseases, November 10, 2022, 12:55 PM - 1:55 PM

Background: Respiratory testing at regular clinic visits can be burdensome for patients with amyotrophic lateral sclerosis (ALS). There is a need for methods to monitor respiratory dysfunction, and interventions for symptomatic management that are easy to perform.

Objective: To provide evidence-based recommendations for (1) the assessment of respiratory function to early detect respiratory dysfunction and inefficient cough; (2) non-pharmacological interventions to improve inefficient cough and respiratory muscle weakness.

Methods: As part of the development of a clinical guideline for physical therapy in ALS, evidence was summarized and, together with clinical expertise, preferences of patients and caregivers, and recommendations from existing guidelines, incorporated in recommendations.

Recommendations:

1. Assessment of respiratory function should comprise the evaluation of signs and symptoms of respiratory weakness, combined with sitting Vital Capacity, supplemented with supine Vital Capacity or -in case of orthopnoea- with Maximal Inspiratory Pressure, or Sniff Nasal Inspiratory Pressure. Cough strength should be assessed by Peak Cough Flow (PCF).
2. In case of inefficient cough (PCF <270L/m), or earlier with signs and symptoms of reduced cough ability, airway clearance techniques, especially airstacking, are indicated. Inspiratory and expiratory muscle training are not recommended for routine use.

Conclusions and clinical message: Evaluating signs and symptoms of respiratory weakness combined with relevant respiratory function tests are recommended for the early detection of respiratory dysfunction and inefficient cough in ALS and have the potential for remote monitoring. In the case of inefficient cough, airway clearance techniques, that are easy to perform are available before ventilator support is needed.

Evaluation of usability, user acceptance and performance of T-GRIP hand exoskeleton

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A6. Free paper session: rehabilitation care, November 10, 2022, 12:55 PM - 1:55 PM

Introduction

T-GRIP is an innovative robotic hand exoskeleton that supports the lateral pinch grip by actuating the thumb movement. This frequently used grasp allows patients to complete a wide variety of tasks, including picking up and manipulating objects.

Objective

To assess the performance and satisfaction of T-GRIP.

Patients

Three SCI individuals with hand function problems (C5-C6 lesion) were recruited at Roessingh Center for Rehabilitation.

Methods

A feasibility study was conducted, in which participants were asked to perform a maximum pinch strength measurement and the Grasp and Release Test (GRT). Also, satisfaction was measured with the Quebec User Evaluation of Satisfaction with Assistive Technology (QUEST) questionnaire.

Results

All participants showed a higher maximum pinch force (index finger-thumb) with exoskeleton than without exoskeleton. Without T-GRIP, all participants were only able to grasp and release the peg object. With T-GRIP, they were able to grasp and release all three objects (peg, fork, weight), although the number of successful completions for grasping and releasing the pegs decreased in two participants. A high level of satisfaction was measured. They were most satisfied with the safety and effectiveness of the device. Comfort was rated lowest.

Discussion and conclusions

Participants were positive about the feasibility of the first prototype. Currently, the T-GRIP device is further developed, and the new prototype will be tested with 5 SCI and 5 stroke individuals on usability, user acceptance and performance. Results are expected in August 2022.

Clinical message

T-GRIP can improve the hand function by enabling the execution of daily tasks.

Just-Like-You- co-creation of meaningful transition to adulthood information for adolescents with cerebral palsy, spina bifida and (congenital) limb malformations and their parents

Dr. Iris Van Wijk^{1,2,5}, MSc. Cecilia Kalsbeek³, Ms Kai-Lin van Berkel⁴, Ms Veronique Visser⁴, Ms Kim van Rooij⁴, Dr. Marjolein Verhoef^{5,2}, Prof.dr. Jan-Willem Gorter^{5,2}

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A6. Free paper session: rehabilitation care, November 10, 2022, 12:55 PM - 1:55 PM

Introduction

Transitioning to adulthood is a process with increasing autonomy for adolescents. For youngsters with a disability growing up brings extra challenges, especially during the transfer from pediatric services to adult (rehab)care. Despite growing attention for the transition process by clinicians, information directed at adolescents with disabilities and adjusted to their specific needs is scarce.

Patients and methods

The Just-Like-You project was executed with participation of adolescents in all phases of the project. The Design Thinking Method was used to first reveal experiences with transition of care in our clinics at a Children's Hospital and Rehabilitation Centre in Utrecht, The Netherlands. Focus group-sessions were held with 12 adolescents (ages 18-23) with cerebral palsy, spina bifida, (congenital) limb malformations and 4 parents. Thematic analysis was applied. A survey was conducted amongst health care professionals of the participating clinics (n=36). Subsequently information materials were developed in co-creation sessions.

Results

Both focus groups and the survey with professionals revealed areas of improvement. To meet the needs of the adolescents and parents, information materials for the Just-like-You-website were developed to 1) facilitate transfer of care (e.g. road map, information about adult-centered teams), 2) share peer experiences (e.g. blogs and vlogs) and to 3) facilitate communication between parents-adolescents-professionals. A workshop format was created for the effective implementation of these materials.

Conclusion

The Just-like-You project created impact in rehabilitation medicine by co-creation of a website to allow for sharing practical information/peer experiences, and of an implementation tool to improve the transition experiences in rehabilitation care.

Physical recovery across care pathways up to 12 months after hospitalization for COVID-19: a multicenter prospective cohort study (CO-FLOW)

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A6. Free paper session: rehabilitation care, November 10, 2022, 12:55 PM - 1:55 PM

INTRODUCTION The sudden COVID-19 pandemic forced quick development of care pathways for COVID-19 patients.

OBJECTIVE To assess trajectories of physical recovery in patients following different care pathways after hospitalization for COVID-19.

PATIENTS We followed 582 COVID-19 patients (age 59.7 [11.2] years, 31% female) in four different rehabilitation settings: no rehabilitation (No-rehab, 19.6%), community-based rehabilitation (Com-rehab, 54.1%), in- and/or outpatient medical rehabilitation (Med-rehab, 13.7%), and in- and/or outpatient rehabilitation in a skilled nursing facility (SNF-rehab, 12.5%).

METHODS In the ongoing CO-FLOW study aerobic capacity (6-minute walk test [6MWT]) and handgrip strength [HGS] were measured at 3, 6, and 12 months post-hospitalization.

RESULTS 6MWT (+17.6 m [95% CI 8.7 to 26.4 m]) and HGS (+3.8 kg [3.1 to 4.5 kg]) improved significantly from 3 to 6 months and only HGS from 6 to 12 months (+2.9 kg [2.2 to 3.6 kg]). At 3 months, the percentage of normative values reached in HGS differed significantly across care pathways ($p < 0.001$), but not for 6MWT ($p = 0.057$), with largest impairments in Med- and SNF-rehab. At 12 months these differences were no longer significant, reaching 90.5% of 6MWT norms and 106.5% of HGS norms.

DISCUSSION AND CONCLUSIONS Physical function improved after hospitalization for COVID-19, with largest improvement within 6 months. Patients with Med- and SNF-rehab had more severe impairment in physical outcomes at 3 months, but reached equal levels at 12 months compared to patients without rehabilitation.

CLINICAL MESSAGE COVID-19 patients following different care pathways post-hospitalization reach similar levels of physical function, likely indicating rehabilitation success.

Cognitive and Psychological 1-year Recovery Patterns Across Care Pathways in Survivors of Hospitalization for COVID-19: A Multicenter Prospective Cohort Study (CO-FLOW)

Drs. L. Martine Bek¹, dr. Merel E. Hellemons², Drs. Julia C. Berentschot², dr. Marieke M. Visser³, dr. Susanne M. Huijts², dr. Jasper van Bommel⁴, dr. Michel E van Genderen⁴, prof. dr. Joachim G.J.V. Aerts², prof. dr. Gerard M. Ribbers^{1,3}, dr. Rita J.G. van den Berg-Emons¹, dr. Majanka H. Heijenbrok-Kal^{1,3}

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A6. Free paper session: rehabilitation care, November 10, 2022, 12:55 PM - 1:55 PM

Introduction Comparison of recovery patterns across care pathways for COVID-19 is necessary for optimizing rehabilitation strategies.

Objective To evaluate cognitive and psychological recovery up to 12 months after hospitalization for COVID-19 across care pathways.

Patients Survivors of hospitalization for COVID-19.

Methods CO-FLOW is an ongoing multicenter prospective cohort study with assessments at 3, 6, and 12 months after hospitalization for COVID-19. Main outcomes: cognition (Montreal Cognitive Assessment, Cognitive Failure Questionnaire), posttraumatic stress disorder (PTSD; Impact of Event Scale-Revised), anxiety and depression (Hospital Anxiety and Depression Scale).

Results In total, 613 patients were analyzed (age 59.7 (11.4) years; 186 (30.3%) female; length of hospital stay 19.1 (19.3) days). Significant recovery occurred within the first 6 months post discharge. Cognitive deficits persisted in 26.7% (65/243) and psychological problems in 16.3% (40/205) at 1-year follow-up. Patients without rehabilitation (N=123) and who received medical rehabilitation (N=86) significantly improved cognition score (MD 1.3 [95%CI 0.37; 2.24], P=.007; 1.8 [0.45; 3.15], P=.009, respectively), but the latter experienced more cognitive failure over time (4.84 [1.89; 7.79], P=.001). Patients who received community-based rehabilitation (N=326) showed recovery in anxiety (-0.60 [-0.94; -0.26], P=.001), depression (-0.58 [-0.95; -0.21], P=.002), and PTSD (-2.7 [-3.75; -1.69], P<.001), but not in cognition. **Discussion and conclusion** Survivors of COVID-19 showed cognitive and psychological recovery within the first 6 months after hospitalization, with most persisting problems in cognitive functioning at 12 months, which differed across care pathways.

Clinical message Additional cognitive or psychological support might be warranted in patients who received medical or community-based rehabilitation.

Long-term changes in body satisfaction and longitudinal associations with physical capacity and body composition among participants of the HandbikeBattle during a handcycle training period

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A7: Free paper session: exercise and physical activity, November 10, 2022, 12:55 PM - 1:55 PM

Introduction:

Wheelchair users have a reduced physical capacity and a high risk of obesity. This may contribute to dissatisfaction with their body function and appearance. Handcycling has shown positive effects on physical capacity, however, effects on body satisfaction and its associations with physical capacity and body composition are unknown.

Objective:

To examine:

- 1) changes in body satisfaction during five months of handcycle training and one year of follow-up.
- 2) associations among changes in physical capacity or body composition, and body satisfaction during the handcycle training period.

Patients: 143 HandbikeBattle participants (age 43±13 years, 96 men) with spinal cord injury (N=74), leg amputation (N=21), other impairment (N=48).

Methods: Measurement time points: start training period (T1), end training period (T2); four months (T3) and one year (T4) of follow-up. At all time points the 10-item Body Satisfaction Questionnaire (range: -3 to +3) was filled out. BMI, waist circumference and physical capacity were determined at T1 and T2. Multilevel regression analyses were performed.

Results: Functional and appearance satisfaction increased during the training period and significantly decreased during follow-up (functional: mean±SD, T1:0.69±1.18; T2:1.48±0.92; T3:0.88±1.24; T4:0.79±1.49; appearance: T1:0.57±1.70; T2:1.18±1.57; T3:0.61±1.69; T4:0.32±1.70). Improvements in physical capacity and body composition were associated with an increase in body satisfaction.

Discussion and conclusions: Body satisfaction increased during handcycle training and decreased during follow-up. Body composition and physical capacity were longitudinally associated with improvements in body satisfaction during training.

Clinical message: Handcycle training might be an important means to improve body satisfaction. Long-term sustainability needs to be further investigated.

Handrim wheelchair propulsion technique in individuals with spinal cord injury with and without shoulder pain

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A7: Free paper session: exercise and physical activity, November 10, 2022, 12:55 PM - 1:55 PM

Study design: Cross-sectional study.

Objectives: To explore the difference in wheelchair propulsion technique between individuals with spinal cord injury (SCI) with and without shoulder pain.

Setting: Three Dutch rehabilitation centers.

Methods: Thirty-eight experienced wheelchair users with SCI (aged 47.9 (12.4) years, time since injury: 14.7 (9.6) years, tetraplegia: 18.4%, motor complete lesion: 65.8%) participated in this study. They were divided in a 'shoulder pain' (n=15) and 'no-shoulder pain' (n=23) group using the Local Musculoskeletal Discomfort scale. The last minute of two 3-minute blocks of submaximal manual wheelchair propulsion on a motor-driven treadmill were analyzed on kinetic and spatio-temporal data, collected by a force-instrumented measurement wheel. T-tests and regression analyses were performed to identify differences between groups.

Results: There were no significant differences between the pain and no-pain group in power output and propulsion velocity. After correction for identified confounders, linear regression analyses showed that the shoulder pain group had an average 0.3s (95% CI, 0.50 – 0.09) shorter cycle time, 15.5° (95% CI, 27.4 – 3.7) smaller rim contact angle and 7.8% (95% CI, 15.3 - 0.3) less variability in the work per push compared to the no-pain group.

Conclusions: Individuals with SCI, who experience shoulder pain, propelled with a shorter push-time, smaller contact angle, and decreased variability of the work per push during manual wheelchair propulsion, compared to individuals with SCI without shoulder pain. Whether this difference in propulsion technique could be regarded a possible pain-avoiding mechanism or cause for shoulder pain remains to be determined.

External and internal work load during a mountain time trial in recreational handcyclists vs. a world class handcyclist and determinants of performance

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A7: Free paper session: exercise and physical activity, November 10, 2022, 12:55 PM - 1:55 PM

Introduction: The HandbikeBattle is a mountain time trial in Austria in which former patients of rehabilitation centers participate. There are studies on handcycling in the rehabilitation setting and competitive sport domain but physical demands of climbing a mountain in a handcycle are yet unclear. **Objective:** To evaluate the external and internal work load of recreational handcyclists during the HandbikeBattle, to compare the results with a world class (WC) handcyclist, and to identify time trial performance determinants.

Patients: Ten recreational and one WC handcyclists.

Methods: Handcyclists performed a graded exercise test to determine power output (PO) and heart rate (HR) at the ventilatory thresholds (VT1 and VT2) and exhaustion. PO and HR were continuously measured during the HandbikeBattle.

Results: Absolute PO_{mean_race} (119±21 vs. 203W, p<0.001) was lower in the recreational handcyclists compared to the WC handcyclist. Absolute and relative HR_{race} (86±7% vs. 88%, p=0.40) and relative PO_{race} (66±10% vs. 62%, p=0.24) were similar. Recreational handcyclists cycled significantly less time at a PO between VT1-VT2 (48% vs. 64%, p=0.02) and more at a PO>VT2 (34% vs. 11%, p=0.005). POVT2 showed the strongest correlation with finish time (r=-0.78) and PO_{peak} with PO_{mean_race} (r=0.90).

Discussion and conclusions: Lab outcomes PO_{peak} and POVT2 are important performance determinants for longer time trials in handcyclists. Recreational handcyclists cycled most of the race in intensity zones 2 (VT1-VT2) and 3 (>VT2).

Clinical message: It is important to improve PO_{peak} and POVT2 with training. It is recommended to incorporate zones 2 and 3 in the training for the HandbikeBattle.

Comparing two identically protocolized, multicentre, randomized controlled trials on caregiver-mediated exercises poststroke: Any differences across countries?

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A7: Free paper session: exercise and physical activity, November 10, 2022, 12:55 PM - 1:55 PM

Introduction: Variation in treatment effects across countries with a different healthcare system and cultural context have been given little attention in stroke recovery trials.

Objective: To compare two identically protocolized trials conducted in two different western countries in order to identify factors that may have caused variation in secondary trial outcomes.

Patients: Patients with stroke (N=129) and their caregivers were recruited from hospitals and rehabilitation facilities in the Netherlands and Australia.

Methods: Comparative study based on individual patient data from two randomized controlled trials investigating the effect of a caregiver-mediated exercises intervention. Patient characteristics, compliance, usual care and process measures were compared across countries. We examined if study setting significantly moderated treatment effects in terms of anxiety, depression, fatigue and self-efficacy.

Results: Dutch patients were younger ($P=0.005$) and had a lower functional status ($P=0.001$). Australian patients were recruited earlier poststroke ($P<0.001$), spent less time in exercise therapy ($P<0.001$) and had a shorter length of stay ($P<0.001$). The level of contamination was higher ($P=0.040$) among Dutch controls. No effect modification was observed and trial outcomes did not change after controlling for cross-country differences.

Discussion and conclusions: No moderating effect of study setting was observed, although important clinical differences were identified across countries.

Clinical message: We argue that we can proceed faster to evaluating interventions within heterogeneous populations and study settings within large, phase III/IV trials.

Satisfaction with sitting posture varies between wheelchair users with different diagnoses

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A8: Free paper session: musculoskeletal system and technical devices, November 10, 2022, 12:55 PM - 1:55 PM

Introduction

Dutch-speaking wheelchair users have access to the Checkjezit-tool (<https://www.checkjezit.nl/hoe-geschikt-is-je-rolstoel/check-je-zit/>). By answering questions, wheelchair users can check if their wheelchair is well adjusted to their physical and functional needs. The database (n=384) may not reflect the general wheelchair-population but provides an opportunity to compare between groups of diagnoses.

Objective: To describe satisfaction with sitting posture between wheelchair users with different diagnoses.

Patients: Paraplegia (PP); n= 118 and Tetraplegia (TP); n=47, Cerebral Vascular Accident (CVA); n= 32, Multiple Sclerosis (MS); n=42, Muscular Disease (MD); n=67, Spina Bifida (SB); n=24, Cerebral Palsy (CP); n=22, Leg amputee (LA); n=27

Methods: Descriptive analyses of a database of wheelchair users who completed the checkjezit-tool. Only diagnosis groups with n>20 were selected.

Results: Dissatisfied with sitting (% within diagnosis): PP (62%) and TP (55%), CVA (84%), MS (79%), MD (81%), SB (63%), CP (64%), LA (70%). Lacking support: PP (43%) and TP (34%), CVA (50%), MS (69%), MD (66%), SB (46%), CP (55%) and LA (44%).

Discussion and conclusions: The proportion of dissatisfied wheelchair users appeared large and especially in CVA, MS and MD. Lacking support of the wheelchair was most prominent in MS and MD. Possibly a deterioration in physical functioning is responsible, which causes changing needs (e.g. more support) in the wheelchair.

Clinical message: Health care providers should pay attention to the physical and functional needs of dissatisfied wheelchair users. A regular check is necessary to adapt wheelchairs in time, especially to changing needs due to progressive conditions or other factors e.g. ageing.

Assist-as-Needed robotic leg support in moderate-severely affected stroke patients

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A8: Free paper session: musculoskeletal system and technical devices, November 10, 2022, 12:55 PM - 1:55 PM

Introduction: Active and intensive rehabilitation is important to improve leg function after stroke. Combining robotic leg support with actively-triggered electrostimulation (ES) via Assist-As-Needed control enables active effort of severely affected patients. This may provide a bedside training tool for early rehabilitation post-stroke.

Objective: The current study aims to determine the feasibility of EMG-based actively-triggered Assist-As-Needed support during knee extension and/or ankle dorsal flexion in sub-acute stroke patients.

Patients & Methods: Six sub-acute stroke patients were asked to perform sets of knee extension and/or ankle dorsal flexion while being supported by ES and/or mechanical robotic assistance. The amount and type (robotic and/or ES) of assistance were dependent on the ability of the patients and could differ for every repetition (Assist-as-Needed). Every set consisted of 30 repetitions, after which the Visual Analogue Score (VAS) was noted, to evaluate how (un)comfortable robotic and/or ES support felt. Furthermore, Motricity Index (MI) was performed.

Results: MI was on average 20.5 for the knee and 10 for the ankle, indicating moderate-severe impairment of the leg. The average VAS was 2.5, which suggests that the support was experienced as comfortable and not exhausting by the patients.

Discussion and conclusion: It is feasible to apply Assist-as-Needed support via robotic leg support and/or electrostimulation in sub-acute stroke patients. The next step is to test the clinical feasibility of Assist-as-Needed robotic and/or ES support as training in a clinical setting.

Clinical message: Assist-as-Needed robotic and electrostimulation leg support is feasible to apply and experienced as comfortable in sub-acute stroke patients.

Tailored interviewing to uncover the perspectives of children with multiple disabilities on daily activities: a qualitative analyses of interview methods and interviewer skills.

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A8: Free paper session: musculoskeletal system and technical devices, November 10, 2022, 12:55 PM - 1:55 PM

Introduction:

Uncovering the perspective of children with a developmental disorder is important in rehabilitation medicine. For these children, expressing themselves in an interview is not self-evident. The interviewer should adapt his communication to the child, but a clear decision algorithm is missing.

Objective:

This study aims to identify helpful interview techniques and interviewer skills to uncover the perspective of children.

Patients:

Children with mitochondrial disorders

Methods:

Videos of nine interviews with children with a mitochondrial disorder were analyzed by five researchers. First, the successfulness in uncovering the child perspective was analyzed. Next, the communicative abilities of the children and type of questions of the interviewer were observed. Thirdly, a qualitative directed content analysis of the semi-structured interviews was conducted.

Results:

An interview pattern was observed in the children's communication leading to six successful interviews. Children communicated verbally on four different levels and also used non-verbal communication. The interviewer used five types of questions which varied between and within the children. The content analysis resulted in two themes: parental influences and interviewer skills.

Conclusion:

Results show the importance to match the type of questions to the verbal communication level of the child and revealed several interviewer skills and techniques. An overview to guide tailor-made interviewing is presented.

Clinical message:

Health professionals should develop communication skills to tailor their communication to the child. Revealing the child's perspective is the start towards enabling child-centered care.

The influence of hydrotherapy on residual limb volume in patients with transtibial amputation in the early post-amputation phase

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A8: Free paper session: musculoskeletal system and technical devices, November 10, 2022, 12:55 PM - 1:55 PM

Background: Hydrotherapy is common in rehabilitation medicine and could benefit transtibial amputees. However, effects of hydrotherapy on residual limb volume are yet unknown, while changes in stump volume in the early post-amputation phase may complicate the prosthetic fitting process.

Objectives: Determine the influence of hydrotherapy on residual limb volume in transtibial amputees.

Patients: Ten patients within six months after transtibial amputation, receiving inpatient rehabilitation with hydrotherapy.

Methods: Patients received hydrotherapy twice a week for two to six weeks. Every morning, evening, and before and after each hydrotherapy session, the circumference of the residual limb was measured at three levels. These measurements were used to calculate stump volume. Within-group analysis using a Wilcoxon signed-rank test compared: 1) Residual limb volume before and after hydrotherapy; 2) volume changes due to hydrotherapy with diurnal changes; 3) diurnal volume changes on days with and without hydrotherapy. A questionnaire was used to determine how patients believed that hydrotherapy influenced their fatigue, physical fitness, strength, balance and (phantom limb) pain.

Results: No significant differences were found in residual limb volume before and after hydrotherapy. Volume changes due to hydrotherapy did not differ significantly from diurnal volume changes. Diurnal changes were not significantly affected by hydrotherapy. No adverse events were reported. A positive influence on physical fitness and muscle strength was reported by respectively 100% and 83,3% of the participants.

Discussion and conclusion: Hydrotherapy does not significantly affect residual limb volume or diurnal volume changes.

Clinical message: Hydrotherapy can be applied within inpatient rehabilitation after transtibial amputation.

POSTERS

P01

The effect of mindfulness, exercise and cognitive training on physical fitness in chronic stroke patients: the mindfit project, a randomized controlled trial

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Pitch presentations of the 10 best posters, November 10, 2022, 11:40 AM - 11:50 AM

Background: The MindFit Project examined the effect of Mindfulness Based Stress Reduction (MBSR) and Physical Exercise (PE) combined with Computerized Cognitive Training (CCT) and CCT alone (control group) on physical fitness; [www.clinicaltrials.gov NCT04759950](https://www.clinicaltrials.gov/NCT04759950).

Methods: Stroke patients (3-60 months post-stroke) were included for a 12-week single-blind randomized controlled trial, and assigned to the MBSR, PE or control group. Physical fitness was measured by the Senior Fitness Test at baseline and after the intervention, consisting of six tests: lower and upper extremity strength (30-second Chair Stand Test and 30-second Arm Curl Test, repetitions), aerobic fitness (2-minute Step Test, repetitions), lower and upper body flexibility (Chair-sit-and-reach Test and Back Scratch Test, centimeters), and agility and dynamic balance (8-foot Up and Go Test, seconds). Linear regression models were used, corrected for age and sex.

Results: 129 patients were included (age 57.9, SD11.3; M/F 77/52; 29.3 months post-stroke, SD20,7). MBSR benefited dynamic balance and agility compared to control ($\beta=-0.23$, 95%CI=-6.53- -0.14) and PE ($\beta=-0.023$, 95%CI=-6.34- -0.09). PE improved aerobic fitness ($\beta=0.32$, 95%CI=2.87-14.88) and lower body flexibility ($\beta=0.24$, 95%CI=0.45-7.43) compared to control. MBSR was inferior to PE in aerobic fitness ($\beta=-0.33$, 95%CI=-17.34- -3.38) and lower ($\beta=-0.27$, 95%CI=-1.94- -0.21) and upper extremity strength ($\beta=-0.26$, 95%CI=-2.33- -0.22).

Conclusion: A 12-week MBSR program improved dynamic balance and agility in chronic stroke patients. A PE program improved aerobic fitness, strength and flexibility. Both interventions can be valuable in reducing post-stroke motor impairments. This is the first evidence regarding the effect of Mindfulness on physical outcomes in a chronic stroke population.

P02

Initiating non-invasive ventilation in patients with ALS in the Netherlands: A retrospective population-based cohort study

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Pitch presentations of the 10 best posters, November 10, 2022, 11:40 AM - 11:50 AM

Introduction. The optimal timing for initiating non-invasive ventilation (NIV) in patients with ALS is currently a topic of debate, since guidelines are mostly based on expert opinion. Expanding the evidence-base for the timing of NIV in current clinical practice, could help to gain more insight into the optimal timing of NIV.

Objective. To determine the timing of NIV in a population-based cohort of patients with ALS in the Netherlands, and evaluate the reasons for not starting with NIV.

Patients. 323 patients with ALS who had been referred to two centers for home mechanical ventilation.

Methods. A retrospective chart-review was performed. Initiation criteria were hypercapnia or the presence of orthopnea/dyspnea. Data collected included hypoventilation symptoms, forced vital capacity and blood gasses at referral and NIV initiation, survival and reason for not starting with NIV.

Results. NIV was initiated at time of hypercapnia (85%), dyspnea (73%) and/or orthopnea (57%). Median survival after NIV for patients with ALS 11 months, which was one-third of the total disease duration. Most patients who did not use NIV (79%) had reached a joint decision with their physician not to start NIV.

Furthermore, patients with no/mild respiratory complaints were generally reluctant to start NIV.

Discussion and conclusions. Our findings have shown that Dutch patients spent a considerable portion of their disease duration on NIV, and that patients were initiated on NIV at time of respiratory insufficiency.

Clinical message. The initiation of NIV in the Netherlands has shown to be appropriate in patients with ALS with respiratory insufficiency.

P03

WALKING WITH A RESISTANCE FORCE APPLIED TO THE TRUNK CAN STIMULATE PROPULSION AFTER STROKE

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Pitch presentations of the 10 best posters, November 10, 2022, 11:40 AM - 11:50 AM

Introduction

A decreased propulsive capacity post stroke is associated with a diminished walking ability. When walking with a resistance force (RF) applied to the trunk, more propulsion is required to enable forward progression. This may stimulate propulsion after stroke. Before RF can be used in training, the effects on propulsion mechanics and related muscles activation need to be assessed and compared between stroke patients and able-bodied individuals.

Objective

To determine the effects of RF during walking on propulsive force, braking force and muscle activity in chronic stroke patients and controls.

Patients

Nine hemiplegic stroke patients and nine healthy controls.

Methods

Participants walked on a treadmill at 0.56m/s with and without RF of 10% body weight applied to their trunk. The propulsive force, braking force and muscle activity of Biceps Femoris, Rectus Femoris, Medial Gastrocnemius and Soleus were recorded of the right (controls) or paretic (stroke) leg during walking.

Results

When a RF was applied, the propulsive force increased in duration and magnitude while the braking force reduced to zero. Moreover, muscle activation amplitude of Biceps Femoris and Rectus Femoris increased during the propulsive phase. Effects of walking with RF were similar between stroke patients and controls.

Discussion and conclusions

The results show walking with RF increases propulsive force. The thigh muscles are specifically targeted in this intervention.

Clinical message

Walking with RF increases propulsion forces and thigh muscle activity related to propulsion. The provision of RF during treadmill walking may stimulate propulsive capacity after stroke.

P04

Traumatic Spinal Cord Injury in the Netherlands: mortality and end-of-life decisions in the first 6 months

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Pitch presentations of the 10 best posters, November 10, 2022, 11:40 AM - 11:50 AM

Introduction

End-of-life decisions (ELDs) do occur in the (sub) acute phase of traumatic spinal cord injury (TSCI). However, literature describing ELDs in TSCI is scarce.

Objective

To explore ELDs in TSCI in a Dutch level-1 trauma center.

Patients

Consecutive TSCI admissions to a level-1 trauma center in the Netherlands between 2015 and 2020. Data were retrospectively extracted from hospital records.

Methods

The primary outcome was the use of ELDs within six months after admission. Clinical and trauma characteristics were investigated and patient and family communication from the ICU registry was studied for motivations in ELDs.

Results

A total of 219 patients were identified, 66% male, median age 58 years, 37% high cervical injuries and 90% sustained spine injuries with an Abbreviated Injury Scale ≥ 3 . Forty-five patients (21%) died within 6 months (82% in-hospital). Deceased patients were older, had more comorbidities, were more severely injured ($p < 0.05$), but no differences in level of spine injury were found. ELDs were recorded in 37 (82%) of the deceased, including 24 patients (53%) withdrawn from life sustaining treatment (WLST), which was highly associated with severe brain injury (87%). The loss of independence was mentioned as decisive in 29% of the cases who received WLST.

Discussion and conclusions

In this Dutch TSCI cohort, the majority of deaths in the first 6 months after onset of TSCI followed an ELD, which was characterized by WLST and highly associated with accompanying severe brain injury.

Clinical message

In TSCI WLST is highly associated with accompanying severe brain injury.

P05

The effect of physical therapy in the early rehabilitation phase after mild traumatic brain injury in children: a systematic review

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Pitch presentations of the 10 best posters, November 10, 2022, 11:40 AM - 11:50 AM

Objective

To systematically review the literature for the effects of targeted physical therapy and aerobic training in the early phase after sustaining mild traumatic brain injury (mTBI) on reducing post-concussive symptoms and increasing activity/participation levels in children with mTBI.

Search strategy and selection of articles

A systematic search was conducted in several databases. Studies including targeted physical therapy and/or aerobic training as an intervention for children with mTBI were included. Data were extracted for study characteristics, patient characteristics, and outcomes of post-concussive symptoms and activity/participation levels. Risk of bias was assessed, standardised mean differences were calculated and a narrative analysis was performed. Quality of evidence was assessed using GRADE.

Evaluation of articles and results

Four studies were included. Three studies showed a small to medium effect of aerobic training on reducing post-concussive symptoms in combination with targeted physical therapy. One study showed a medium effect on increasing quality of life, but this study showed no effect on increasing activity/participation levels. The quality of evidence was low for all outcomes.

Conclusion

There are indications that aerobic training, whether or not in combination with targeted physical therapy, is effective in reducing post-concussive symptoms in children with mTBI in the early rehabilitation phase. The effect on activity/participation levels remains unclear, due to a lack of research.

P06

How do patients and significant others experience continuity of care and empowerment after clinical rehabilitation?

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Pitch presentations of the 10 best posters, November 10, 2022, 11:40 AM - 11:50 AM

INTRODUCTION: patients with spinal cord injury (SCI) or acquired brain injury (ABI) and their significant others can experience a big difference between life during clinical rehabilitation and community participation after clinical discharge. Continuity of care and empowerment are important aspects herein.

OBJECTIVE: To investigate how patients and their significant others with SCI/ABI experience the continuity of care and empowerment 6 months after clinical rehabilitation.

PATIENTS: Patients with SCI/ABI and their significant others.

METHODS: Parts from the Consumer Quality Index and Patient Assessment of Chronic Illness Care questionnaires were used to assess experienced continuity of care and empowerment respectively.

RESULTS: A total of 130 dyads completed both questionnaires. Participants were generally satisfied regarding experienced continuity of care and empowerment. Younger participants experienced significantly less continuity of care compared to older participants (patients: 3.2 ± 0.6 and 3.4 ± 0.6 respectively, significant others: 3.2 ± 0.7 and 3.4 ± 0.6 , respectively). Dyads with SCI experienced less continuity of care than those with ABI (patients: 3.2 ± 0.6 and 3.4 ± 0.6 , significant others: 3.2 ± 0.7 and 3.4 ± 0.6 , respectively). Significant others of patients with SCI experienced less empowerment than those with ABI (3.4 ± 1.0 and 3.9 ± 0.9 , respectively).

DISCUSSION AND CONCLUSIONS: Younger participants and those with SCI were less satisfied concerning continuity of care 6 months after clinical discharge.

CLINICAL MESSAGE: Health care professionals specializing in SCI should improve continuity of care and empowerment for patients and significant others. Health care professionals should realize that younger people experience less continuity of care, and adjust their care accordingly.

P07

Request for euthanasia of persons with spinal cord injury in the Netherlands

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Pitch presentations of the 10 best posters, November 10, 2022, 11:40 AM - 11:50 AM

Introduction

Living with spinal cord injury (SCI) can be challenging and questions concerning end-of-life care are growing. End-of-life decisions are complex and demand prudence on the side of the patient, family and professionals.

Objective

To describe the requests for euthanasia and the process of euthanasia requests within the rehabilitation team.

Patients

Persons with spinal cord injury in the Netherlands.

Methods

Rehabilitation physicians treating SCI in the Netherlands and Belgium completed a questionnaire on all the euthanasia requests they had encountered, the process that followed the request, and the role of the rehabilitation physician in this process.

Results

Thirty physicians responded and reported 61 requests for euthanasia between 1996 and 2021. Twenty requests resulted in euthanasia, 14 in the home setting, no case was performed in the rehabilitation center. One third (N=13) reported to have local procedures in this process. Ten physicians use a two-track policy: ongoing rehabilitation and support for referral for euthanasia when the request persisted. All reported that either the rehabilitation physician or the psychologists are the leading persons in the rehabilitation team. All responded that a request had a profound impact on the rehabilitation team and 50% (N=15) felt inadequately qualified to guide this process.

Discussion and conclusion

Rehabilitation physicians had limited experience with requests for euthanasia in patients with SCI. Often a two-track policy was followed: ongoing rehabilitation and support for referral for euthanasia when the request persisted.

Clinical message

There is a need for a multidisciplinary approach to euthanasia requests and specific training for physicians.

P08

Impact of contractures on daily functioning in adolescents with SMA: a qualitative study

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Pitch presentations of the 10 best posters, November 10, 2022, 11:40 AM - 11:50 AM

Introduction: Many children with Spinal Muscular Atrophy (SMA) develop joint contractures. Understanding their experiences with contractures and received interventions is integral to improving outcomes especially in the era of disease modifying treatment (DMT).

Objective: This study explored the impact of contractures on daily functioning and participation and the impact of received interventions to prevent/delay/treat contractures.

Patients: 14 adolescents with SMA type 2/3, 10 females and 4 males, aged 16-30 years old.

Methods: Interviews focused on two topics: perceived impact of contractures on daily functioning and perceived impact of previous contracture management. The interviews were analyzed using inductive thematic analysis.

Results: In general participants didn't feel hindered by their contractures, as it was often accompanied by muscle weakness and they have adapted to their contractures over time. Participants considered contracture treatment useful if goals are meaningful and realistic for themselves. They were positive on physical therapy which was experienced as comforting. Some felt received treatment as unnecessary and burdensome, especially with regard to orthosis and standers. Participants mention that their perspective towards contracture management would change in the light of DMT because of motor milestone improvement.

Discussion and conclusions: The impact of contractures on daily functioning of adolescents with SMA is generally limited, while the impact of contracture management, especially orthosis and standers, can be burdensome.

Clinical message: In counseling, parents of children with SMA treated with DMT should be informed about the importance of contracture management and on the perceived impact of contracture management to make an individualized treatment plan.

P09

Rehabilitation is all about learning, even for healthcare professionals

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Pitch presentations of the 10 best posters, November 10, 2022, 11:40 AM - 11:50 AM

Background: Sustainable rehabilitation means equipping people to participate again in their home situation in a way that suits them, now and in the future. To achieve this, rehabilitation should focus on autonomy and self-management skills, which is captured in the vision “Rehabilitation it’s all about learning (RiL)”. Since 2020 Tolbrug Rehabilitation implemented RiL, causing healthcare professionals change their way of acting from caregiving to coaching professional.

Objective: The aim of this study is to explore the facilitating and prohibiting factors of RiL from a healthcare professional perspective

Method: In this qualitative study experiences and needs of ten healthcare professionals working according to RiL were captured using semi-structured interviews.

Results: Healthcare professionals experience more interdisciplinary collaboration and see improvement in the following areas: taking initiative, autonomy, and learning from each other. They find it difficult to think across disciplines and stimulate the patient's learning process instead of teaching them to master certain activities, in particular with the cognitively affected and passive patients.

Conclusion: It appears to be difficult for healthcare professionals to find and fulfill their own role within the 'freedom' that RiL offers. Coaching on the job, more confidence in own competencies and getting insight into the competencies of other healthcare professionals could facilitate the practical application. In addition, getting insight in the effectiveness is necessary to become confident with the new method.

Clinical message: Working according to RiL may lead to sustainable participation. Following studies should focus on patients experiences, effectiveness measured by quantitative data and further implementation.

P10

Applicability of AO Spine PROST (Patient Reported Outcome Spine Trauma) in people with a motor-complete spinal cord injury

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Pitch presentations of the 10 best posters, November 10, 2022, 11:40 AM - 11:50 AM

Introduction

The AO Spine Knowledge Forum Trauma developed and validated the Patient Reported Outcome Spine Trauma (AO Spine PROST) as an functional outcome measurement for people with spine trauma and minor or no neurological impairment.

Objective

To investigate the applicability of the AO Spine PROST for use in people with motor-complete spinal cord injury (SCI).

Patients

Dutch, adult former rehabilitants with recent motor-complete SCI.

Methods

1) Discussion meeting with 13 SCI rehabilitation physicians in the Netherlands; 2) International online survey among 196 health professionals; 3) Cognitive interviews, using thinking aloud and verbal probing, with 29 people with SCI. All participants rated the comprehensibility, relevance, acceptability and completeness of the AO Spine PROST on a 1-5 point scale (5 most positive). Professionals rated also the feasibility.

Results

Professionals and people with SCI rated the comprehensibility (mean 4.1, 4.0), acceptability (4.0, 4.6), relevance (3.9, 4.2), completeness (3.9, 3.6), and feasibility (4.1, N/A), respectively. Professionals commented the irrelevance of items about the lower extremities, and lack of items on breathing and complications. People with SCI missed items on the emotional impact of SCI and how the use of assistive devices should impact the score.

Discussion and conclusions

The AO Spine PROST was found applicable for people with motor-complete SCI. A slightly modified version of the AO Spine PROST was developed and is being tested in an ongoing validation study.

Clinical message

The AO Spine PROST can be used in SCI rehabilitation care and research to assess functioning in persons with motor-complete SCI.

Validity and Internal Consistency of the Case Complexity Index in Chronic Musculoskeletal Pain Patients, A Pilot Study of a Prospective Cohort Study

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Poster session 1 (Thursday: odd numbers), November 10, 2022, 11:50 AM - 12:55 PM

Introduction: Ten highly important factors were used to develop the Case Complexity Index (CCI) with predominantly psychosocial factors as the most important factors in the assessment and represent 59.1% of the total complexity

Objective/Patients: Evaluate the construct validity and internal consistency of the CCI in patients with Chronic Musculoskeletal Pain (CMP) admitted to a daycare rehabilitation setting.

Study design: A pilot study of a prospective cohort study with care as usual

Methods: Construct validity performed with the Outcome Questionnaire (OQ-45), Central Sensitization Inventory (CSI), Pain Catastrophizing Scale (PCS), Pain Disability Index (PDI), scale of kinesiofobia (TAMPA), care uptake, widespread pain, sick leave and intensity of the advised therapy. For internal consistency, exploratory factor analysis was performed and Cronbach's alpha were calculated.

Results: 25 patients were admitted. Three factors were found and an acceptable internal consistency for 2 of 3 factors (Cronbach's alpha = 0.75, 0.77). Hypothesis testing was not met. The total CCI correlated moderately strong with the intensity of the advised therapy ($r = 0.67$, $p < 0.001$) and fairly with the OQ-45 ($r = 0.46$, $p = 0.02$) and sick leave ($r = 0.35$, $p = 0.09$).

Discussion and Conclusions: Further research in the construct validity, and internal consistency is needed in a larger sample size. The discriminative properties of the CCI are promising due to its strong correlation with the intensity of the advised therapy. Further research is needed to determine the cut-off values for the dosage of the advised therapy in primary and secondary healthcare.

Associations between self-care self-efficacy and somatic secondary health conditions in individuals with spinal cord injury

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Poster session 2 (Friday, even numbers), November 11, 2022, 12:15 PM - 1:25 PM

Introduction: Spinal cord injury (SCI) could lead to somatic secondary health conditions (SHCs). To date the role of self-care self-efficacy (SCSE) in prevention of somatic SHCs is unclear.

Objective: 1] To describe the determinants of SCSE 2] to describe the course of SCSE and somatic SHCs and 3] to investigate the inter-relationship of SCSE and somatic SHCs.

Patients: Adult SCI patients admitted for first inpatient rehabilitation in a specialized rehabilitation center in the Netherlands.

Methods: Multicenter prospective cohort study. Participants (N=144) completed the Self-care Self-efficacy Scale and the Spinal Cord Injury Secondary Conditions Scale at discharge, 6 months, 1 year and 3-5 years post-discharge. Resilience and illness cognitions were investigated as determinants of SCSE.

Results: 1] Linear regression showed that psychosocial characteristics explained 27.0% of the variance in SCSE at discharge and 13.2% at 3-5 years post-discharge, of which resilience was the only significant independent determinant. 2] Levels of SCSE and somatic SHCs did not change significantly between test occasions. 3] Somatic SHCs and SCSE were significantly and negatively associated during the first year post-discharge ($r_s = -.25$ to $-.37$).

Discussion and conclusions: Resilience significantly contributed to the level of SCSE, both at discharge and 3-5 years after discharge. In addition, SCSE is negatively associated with somatic SHCs during the first year post-discharge. Further research is needed to reveal the mechanism behind the association between SCSE and somatic SHCs.

Clinical message: Screening of individuals with SCI on both SCSE and somatic SHCs is advised to detect individuals at risk early.

Comparison between the Spinal Cord Independence Measure-III and the Utrecht Scale for Evaluation of Rehabilitation

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Poster session 1 (Thursday: odd numbers), November 10, 2022, 11:50 AM - 12:55 PM

Introduction

The Spinal Cord Independence Measure-III (SCIM) is a disease-specific measure of functional independence. The Utrecht Scale for Evaluation of Rehabilitation (USER) is a generic measure of functional independence.

Objective

To compare the validity and responsiveness of the USER and the SCIM-III for outcomes of inpatient spinal cord injury (SCI) rehabilitation.

Patients

Adult rehabilitation inpatients with SCI in De Hoogstraat Rehabilitation.

Methods

Secondary analysis of data from the Dutch SCI Database and the USER database (2015-2019; N=186). The USER physical independence score (range 0-70) covers Mobility (0-35) and Self-care (0-35). The SCIM (0-100) covers Self-care (0-20), Respiration and sphincter management (0-40) and Mobility (0-40).

Results

Median age was 60.5 years and 60.5% were male. Types of injury were T7-S5 (35.5%), C1-T6 AIS D (29.6%), C1-T6 AIS A-C (17.7%), C1-T6 AIS unspecified (5.4%) and Cauda Equina (11.8%). Median duration of inpatient rehabilitation was 63 days. No floor or ceiling effects were found at admission. Ceiling effects were found for both Self-care scales and the SCIM Respiration/sphincter scale at discharge. Spearman correlations between both measures were very high (0.69-0.85). Discriminant validity for type of injury was shown for both by a strong (0.24) Kruskal-Wallis effect size. Responsiveness of the USER and the SCIM-III was shown by strong effect sizes (1.10 and 1.06) and standardized response means (1.28 and 1.20), respectively.

Conclusions

The USER and SCIM-III showed similar validity and responsiveness.

Clinical message

The USER and the SCIM-III are equally useful to measure functional independence outcomes of SCI rehabilitation.

Parent-reported family impact and patients' quality of life after pediatric acquired brain injury in outpatient rehabilitation: a 2-year follow-up study.

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Poster session 2 (Friday, even numbers), November 11, 2022, 12:15 PM - 1:25 PM

Introduction: It is known that acquired brain injury (ABI) in young patients can cause persistent problems, including decreased health-related quality of life (HRQoL), and causes family impact (FI). However, there is a knowledge gap regarding the course of FI over time and the relationship with patients' HRQoL.

Objective: Describing a two-year follow-up of FI and the relationship with patients' HRQoL.

Participants: Parents of patients (5–24 years) with ABI, referred to outpatient rehabilitation.

Methods: At rehabilitation referral (baseline) and 2 years later, parents completed the 36-item PedsQL™Family-Impact-Module (FIM) to study FI, and the 23-item PedsQL™Generic-core-set-4.0 (PedsQL™GCS-4.0) to assess patients' HRQoL. Outcomes yield scores ranging 0-100, with lower scores indicating greater FI/lower HRQoL. Linear mixed models were used to determine change over time (estimated mean (SE), change-scores (95%CI)), and Pearson's correlation (r) to determine the relation between FI and HRQoL.

Results: Two-hundred-forty-six parents participated at baseline, but only 72 at follow-up. Patients' median age (baseline) was 14 years (IQR:11-16), and 181(74%) had TBI. Mean (SE) FI-score at baseline was: 73.7(1.2) and HRQoL-score 61.4(1.1). Over time, FI-scores improved slightly:+2.1(-1.9-6.2), whereas HRQoL-scores improved significantly:+12.0(6.4-17.6), $p<0.001$. High correlation was found between FI and HRQoL both at baseline($r=0.5$) and at follow-up($r=0.7$).

Conclusion: This study showed that FI-scores do not significantly improve over time in families of patients with ABI even though patients' HRQoL did improve significantly.

Clinical Message: Measuring/monitoring FI in families of patients with ABI and the patients' HRQoL over time is important to be able to proactively focus on reducing FI/improving HRQoL during rehabilitation.

Insight in individual patterns of physical activity behavior of patients admitted for inpatient rehabilitation treatment.

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Poster session 1 (Thursday: odd numbers), November 10, 2022, 11:50 AM - 12:55 PM

INTRODUCTION: Although enhancing physical activity (PA) is important to improve physical and cognitive recovery little is known about PA of patients during the inpatient rehabilitation treatment. Therefore, this study assessed the quantity, nature and context of PA in patients admitted to a rehabilitation center.

METHODS: PA of patients was measured during one day between 7AM-10PM by means of 3d-accelerometry (Activ8 yielding: daily percentage of active/sedentary behaviour, active/sedentary bout meaning a continuous period of active/sedentary behaviour) and behavioural mapping (3-hourly observations to assess: type of activity, body position, social context and physical location). Descriptive statistics were used to describe PA on group and individual level.

RESULTS: Accelerometry group data showed that patients were most active in the afternoon (maximum PA bout length 14 minutes, 41 minutes maximum sedentary bout lengths) and least active in the evening (9 minutes, 69 minutes) and afternoon (10 minutes, 55 minutes) although individual day patterns in A8 data vary largely. Adding qualitative behavioral mapping data improves insight in individual patterns, e.g. two of the least active patients (respectively 12% vs 14% active time) differed clearly in social context (59% vs 72% alone) and physical location (27% vs 65% in their room).

DISCUSSION/CONCLUSION: Although on average patients are rather active, quantity and patterns of PA vary largely among individual patients during inpatient rehabilitation treatment. This supports the need and opportunities for individualized strategies to support PA behaviour during inpatient rehabilitation treatment, therefore individualised interventions are needed to improve the behaviour of patients.

P16

Impact of pre-habilitation on myelopathy due to cervical spinal stenosis

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Poster session 2 (Friday, even numbers), November 11, 2022, 12:15 PM - 1:25 PM

Introduction

Spinal stenosis (SS) is a frequent degenerative disease accompanied by myelopathy leading to functional impairments, with a higher incidence in Curacao. Recently, interest has arisen to study the effects on prehabilitation in surgical spinal patients due to increasing evidence of positive outcomes. We hypothesize that the group of patients that receive preoperative rehabilitation and standard postoperative care will show better functional outcome compared with the group that only receives standard postoperative care.

Objective

To examine the differences in functional outcome between protocolized pre-operative rehabilitation program vs surgical treatment alone in combination with standard physiotherapy care.

Patients

20 patients between 46 and 72 years with confirmed cervical stenosis and myelopathy (10 intervention group and 10 controls).

Methods

Study group: 6 males and 4 women received both pre-habilitation and post-surgical rehabilitation.

Control group: 5 males and 5 women received only post-surgical rehabilitation.

Assessment instruments: 6 minute walking test, 9-hole peg test, functional dexterity test, hand held dynamometry, Astrand test, Quality of life.

Results

Study group showed important differences (>20%) in all tests excepting the 9-hole test.

Discussion and conclusions

Cervical myelopathy due to chronic spinal compression is frequent in Curacao. Surgical decompression is the primary treatment of choice. Although post-surgical physiotherapy contributes to functional improvement, it seems that patients who also receive pre-operative rehabilitation show a better functional outcome in both upper and lower extremities as well in QoL.

Clinical message

Pre-habilitation may add to a better functional outcome in patients with cervical stenosis with myelopathy that receive surgical treatment.

P17

The relation between physical work demands, functional capacity and presence of musculoskeletal complaints in individuals with brachial plexus injury; an explorative study.

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Poster session 1 (Thursday: odd numbers), November 10, 2022, 11:50 AM - 12:55 PM

Introduction

Work related musculoskeletal complaints (MSC) may be more common in individuals with brachial plexus injury (BPI) with physical work demands exceeding functional capacity (FC).

Objectives

1. To determine the concurrent validity of five methods measuring upper extremity work demands and the dictionary of occupational titles (DOT).
2. To explore the relation between physical work demands, FC and MSC in individuals with BPI.

Methods

Sixteen individuals with BPI performed six functional capacity evaluation (FCE) tests and were observed during work; work demands were assessed using five methods and DOT. MSC were assessed using a questionnaire. Spearman correlation coefficients were determined between work demands methods, FCE-test results and MSC. FCE-test results and work demands of individuals with BPI with and without MSC were visually analyzed and FCE-test results were compared to reference FCE values.

Results

Correlation coefficients of four out of five methods determining work demands and the DOT were moderate (1 combination) to strong (9 combinations). The fifth method showed low to fair correlations with the other methods. No relation was observed between physical work demand, FCE-test results and MSC.

Discussion and conclusions

The concurrent validity of the DOT and four out of five methods determining work demands was moderate to good. The relation between physical work demands, FC and MSC is not straight forward.

Clinical Message

MSC in individuals with BPI are not directly related to physical work demands exceeding FC. The cause of MSC seems to be multifactorial, like in the general population,

INNOVATION POSTERS

I01

Implementing a rehabilitation robot for arm and hand training of severely affected stroke patients in early-stage in-patient rehabilitation

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Poster session 1 (Thursday: odd numbers), November 10, 2022, 11:50 AM - 12:55 PM

Topic

Implementing a new medical technology, a rehabilitation robot for arm/hand training (ArmeoPower, Hocoma) by expanding the current treatment programme for severely-affected stroke patients shortly after admission to Roessingh Center for Rehabilitation, with consideration of impact on care outcomes and consequences for expected care costs.

Relevance

As the first in the Netherlands, Roessingh recently acquired ArmeoPower, a powered rehabilitation robot assisting movements of shoulder-hand. This enables adding arm/hand function therapy to early-stage stroke rehabilitation. Our experiences during a 2-month trial placement and preparations for implementing ArmeoPower in regular care are of interest for rehabilitation physicians, managers and therapists who are working with technological care innovations.

Current status

During a 2-month trial placement of ArmeoPower at Roessingh, potential impact was evaluated using surveys among physical/occupational therapists and rehabilitation physicians. Outcomes were positive with an average grade of 7.7 for potential impact and 7.0 for user friendliness. Expected added value comprises more (active) therapy and more feedback on performance. The most relevant innovation scenario for ArmeoPower was identified as early-stage inpatient stroke rehabilitation for patients with severe-moderate arm/hand limitations.

Plan of action

Next steps are to embed ArmeoPower in regular care, by developing treatment modules, including defining treatment protocols and in-/exclusion criteria, while considering planning, logistics and financial consequences. In parallel, a clinical trial is prepared by Roessingh Research and Development to assess the impact of ArmeoPower treatment in early-stage rehabilitation, aimed for next year. Furthermore, ArmeoPower will be implemented in a second population (potentially Spinal Cord Injury or post-surgery nerve/tendon transfer).

Measurement Feedback System for Intensive Neurorehabilitation after Severe Acquired Brain Injury

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Poster session 2 (Friday, even numbers), November 11, 2022, 12:15 PM - 1:25 PM

Topic

Patients with acquired brain injury (ABI) show strong heterogeneity in outcome and rehabilitation potential, while the complex origin of inter-individual differences remains poorly understood. Consequently, clinicians are held back in their ability to adapt care to the individual patient profile. The Daan Theeuwes Center for intensive neurorehabilitation of young patients with severe ABI has developed a Measurement Feedback System (MFS), providing the opportunity to contribute to the transition towards precision neurorehabilitation.

Relevance

The MFS structures clinical measurements and delivers the results directly back to clinicians, contributing to patient care by promoting (i) detailed multidisciplinary progress monitoring, (ii) balanced patient-centered discussion in the multidisciplinary team and (iii) shared decision making. Thanks to its structure, accumulation of clinical data in the MFS also produces growing databases that can be used for care evaluation and scientific research.

Current status

We developed specialized measurement tracks together with representatives of each discipline. The MFS was built in a digital platform, which automatically distributes measurements among clinicians at predetermined time points during the treatment. The results are visualized in patient dashboards that are accessible for all clinicians. Since step-wise implementation, 124 patients have been registered for which more than 15,000 clinical measurements are captured. The current completion rate is 86,4%.

Future directions

The successful implementation indicates that structured clinical assessment is feasible in a neurorehabilitation setting. We will share preliminary results and future directions of our Health Intelligence Program, which utilizes MFS data for care evaluation and innovation, and scientific research aimed at precision neurorehabilitation.

Implementation of the revised version of the Dutch Spinal Cord Injury Database

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Poster session 1 (Thursday: odd numbers), November 10, 2022, 11:50 AM - 12:55 PM

Topic: The importance of national registrations of healthcare-related information is increasingly recognized. Since 2015, data on people with a recent spinal cord injury (SCI) are collected in the Dutch SCI Database (DSCID). After five years of data collection, experiences with regard to the data collection process were evaluated and a revised version of the DSCID was developed, including an additional follow-up assessment 1 year post discharge. In this presentation we will describe the evaluation of the DSCID and the development of the DSCID 2.0.

Relevance: Collected data provide valuable insights into demographic characteristics, injury characteristics and secondary health conditions of people with SCI (e.g., with respect to bladder or bowel function or pain). In addition, the database offers the opportunity to compare treatment outcomes between people and rehabilitation centers. These insights can help to improve rehabilitation care.

Current status: The contents of the DSCID have been updated, new topics have been added (e.g., spasticity and upper extremities) and an additional patient reported follow-up assessment 1 year post discharge is being implemented. This follow-up focuses on functional independence, experienced secondary conditions, participation, quality of life and mood.

Plan of action: Currently we are searching for a suitable digital solution to collect the data at admission and discharge, since the current data collection tool is no longer suitable. The follow-up assessment will enhance the use of the DSCID for benchmarking in the future.

Implementation of early AFO-provision in the rehabilitation after stroke: from science to daily clinical practice

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Poster session 2 (Friday, even numbers), November 11, 2022, 12:15 PM - 1:25 PM

Topic

In a randomized controlled trial (RCT) we showed that early provision of ankle-foot orthoses (AFOs) post-stroke has substantial short-term functional benefits compared to delayed AFO-provision, without negative effects on muscle-disuse. To ensure the uptake of these scientific results in daily clinical practice, we conducted a structured implementation of which the results will be presented in this contribution.

Relevance

Based on the RCT, Roessingh Centre for Rehabilitation set-up a new multidisciplinary weekly consultation hour to facilitate early AFO-provision. Stroke patients are screened for AFO-indication on the day of admittance. In case of AFO-indication, a physical examination is planned, followed by a consultation hour 2-3 weeks after admittance. Within this hour, the gait pattern is observed and types of AFOs are available to assess effects. In case of AFO-indication, provision follows in the next week. Standard evaluation is planned 2-3 weeks after provision.

Current Status

The 6-months pilot lasted until February 2022. On average, 3 consults per week were planned and the consult was performed 23 days after admittance. 87% of the referred patients were provided with an AFO. Clinicians were enthusiastic about this new set-up. The possibility of easy referral early in the rehabilitation post-stroke, in combination with multidisciplinary assessment of the need for, and type of AFO, were highly valued. Points of improvement related to communication about the trajectory after AFO-provision were mentioned.

Plan of action

Currently, early referral for AFO-indication post-stroke is implemented in daily clinical practice of Roessingh. Suggestions for improvements during the pilot period are incorporated.

PERRIN knowledge translation: Longitudinal data available for people with Cerebral Palsy, parents and rehabilitation professionals.

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Poster session 1 (Thursday: odd numbers), November 10, 2022, 11:50 AM - 12:55 PM

Topic:

In the research program PERRIN, children, adolescents and young adults with cerebral palsy (CP) have been followed longitudinally (0-35 years of age). The research program has provided knowledge on developmental trajectories and determinants of activities and participation of children and youth with CP. These research results have been translated into information that young people with CP, parents and rehabilitation professionals can use to learn more about development, share this information with others, prioritize goals and aid shared decision making using this information.

Relevance:

In clinical practice it is important to work evidence based but this is not always easy. The PERRIN project resulted in an easy to use website focusing on sharing longitudinal data on development of children and youth with CP, provides recognition through video portraits, has a usefull tool to save and share the information from the website and has a tool that can be used in clincial practice to aid goal setting and shared decision making.

Current status:

The website has been developed togehter with experts by experience (young adults and parents), professionals and researchers making sure to incorporate the perspectives and needs of all involved. The website is available in the fall of 2022.

Plan of action:

Together with the stakeholders inlcuded in the project a plan for implementation has been developed. This plan includes an online campaign to highlight the website and contains the possibility to arrange a workshop for rehabilitation professionals to learn more about effective use of all features of the website.

Using an inertial movement sensor to quantify the level of trunk motor control in healthy infants

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Poster session 2 (Friday, even numbers), November 11, 2022, 12:15 PM - 1:25 PM

Trunk motor control is essential for proper functioning of the upper extremities and is an important predictor of gait capacity in children with delayed development. Early recognition and intervention in trunk motor development could improve trunk and overall motor function later in life. Current clinical tools to assess trunk motor control are largely subjective and lack the sensitivity to accurately monitor development and the effects of therapy. Inertial measurement units (IMU's) could provide an quantitative assessment that is inexpensive and potentially easy-to-implement in a clinical setting. In this pilot study, we explored a set-up with one IMU attached to back of an infant to monitor trunk acceleration and angular velocity during periods of quiet sitting. We hypothesized that jerk, the derivative of trunk acceleration and a proxy for movement smoothness, could be used to distinguish age and thereby presumed motor development. Trunk movement of six children between 6 months and 4 years of age with no developmental deficits was evaluated. Synchronised force plate data (center of pressure velocity) were collected as a more established method of quantifying trunk control in order to estimate construct validity. The analyses show that root mean square of jerk decreases with age, up to 24 months, and is correlated to center-of-pressure velocity. This metric therefore shows potential as an objective clinical method to differentiate trunk motor control levels in young children. A longitudinal study will be required to assess the ability of the metric to assess the progression of trunk motor control over time.

To push or to be pushed, that's the question in wheelchair mobility

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An active lifestyle is important to maintain good health, even more so in people that are wheelchair-bound. So, to measure physical behaviour for rehabilitation research and healthcare applications, it is important to have an easy-to-use and accurate method to distinguish between active or passive wheelchair use.

A wheel-mounted inertial sensor was used to measure wheelchair mobility and a newly developed algorithm was employed to detect whether motion was the result of manual propulsion or being pushed. In a validation study amputation patients performed a structured and unstructured test protocol (~20 minutes), containing different daily wheelchair motions. Manual video tagging was used as validation reference.

Results of four participants showed promising outcomes. Of all detected motion time (~10 minutes) per subject, 96.7% (94.2 – 98.6%) was assigned correctly, while 2.2% (0.4 – 5.6%) was falsely assigned active and 1.0% (0.2 – 2.9%) falsely assigned passive.

The misdetections could be explained by the algorithm principle, using speed variation to assign the motion type. If pushed with much speed variation (e.g. uneven flooring, avoiding obstacles) the motion was sometimes assigned as active propulsion, whereas short-slow manual manoeuvres could have been assigned as being pushed. In general, the longer the consecutive motion duration, the better the detection. In the next months, this innovative method will be validated with more subjects and subjects with various pathologies, to ensure a robust application among wheelchair users in rehabilitation. Once finalised, the method will be used for research and Basalt care programs to support an active lifestyle.

Redesign of the clinical neurorehabilitation treatment trajectories

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Poster session 2 (Friday, even numbers), November 11, 2022, 12:15 PM - 1:25 PM

Topic: Redesign of the clinical neurorehabilitation treatment trajectories

Relevance: Due to an aging and increasing population, the incidence and prevalence of stroke is expected to increase in the Amsterdam metropolitan region. To offer high-quality rehabilitation to all patients admitted to Reade Revalidatie we aim to redesign the treatment trajectories in a more client-oriented and financially healthy way.

Current Status:

The patient journey is an essential tool to redesign the inpatient treatment trajectories. Based on the patient journey we identified future improvements from different perspectives; 1) The patients perspective to ensure that the rehabilitation process is sufficiently based on individual expectations and possibilities. 2) An organizational perspective to ensure an optimized rehabilitation process, able to take care of an increasing number of patients, in a financial healthy organization.

To achieve our aims, we redesigned our old treatment trajectory into three new treatment trajectories with varied duration and treatment intensity based on 1) the patient's needs 2) evidence based interventions, and 3) an early functional prognosis. In the redesign process, we investigated patient's expectations using systematic interviews. We aim to use the outcomes on validated clinimetrics to underpin the selection for one of the three treatment trajectories for each patient.

Plan of action: To successfully develop and implement the redesigned trajectories, the project group consist of physicians, therapists from all disciplines, communications staff and planners. Evaluation will be done by a questionnaire for both employees and patients, before and after implementation. In addition, financial consequences will be monitored.

Learning and working together within peer groups to facilitate self-management skills.

What are the experiences and needs of patients and healthcare professionals?

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Poster session 1 (Thursday: odd numbers), November 10, 2022, 11:50 AM - 12:55 PM

Introduction: In order to give patients co-ownership over their rehabilitation process a new method called “Rehabilitation is Learning” has been implemented within Tolbrug Rehabilitation Center. This method considers the rehabilitation process as a learning process. Teaching methods such as learning from and with each other in peer groups are used within training. From previous research, we know that healthcare professionals consider arranging and performing peer-group sessions challenging.

Patients & Methods: Qualitative phenomenological study amongst 6 patients and 9 healthcare professionals conducted from January till March 2022 to explore facilitating and prohibiting factors of peer-group arrangements. Structured observations were performed by two researchers during group sessions.

Results and discussion: Both patients and healthcare professionals consider the interdisciplinary approach and meaningful context of the group arrangements as facilitating factors to train more effectively. Mutual learning (from and with peers), as well as taking co-ownership for the content of training are considered facilitating factors for regaining self-management skills. However, both patients and healthcare professionals experience difficulties in taking responsibility for and control of the organizational aspects of the training. Healthcare professionals reported a need for more group-dynamic and didactic skills, and patients for more information and support to ensure that the scope of and possibilities within the group arrangements are targeted to their own functional needs.

Conclusion: Both patients and healthcare professionals within Tolbrug reported a positive attitude towards training within peer groups. However, taking co-ownership of the group dynamics and the organizational prerequisites for training within peer groups is still challenging.

Usability of care robot Maatje and Zephyr BioHarness to stimulate physical activity in children with leukemia - a pilot study

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Poster session 2 (Friday, even numbers), November 11, 2022, 12:15 PM - 1:25 PM

Topic: Personalized rehabilitation, eHealth

Relevance:

Children with cancer have a decreased body composition and reduced strength and cardiovascular fitness compared to peers, as a result of both the disease and treatment side effects. Since they also show significantly reduced levels of daily moderate-to-vigorous physical activity compared to healthy age-matched controls, exercise interventions could contribute to limit this deterioration. These are often performed in a clinical setting, as this allows direct supervision. eHealth can be a solution to implement exercise interventions at home, as it allows for telemonitoring, direct feedback and daily reminders. The Zephyr Bioharness 3.0 collects physiological data during exercise, which is processed by an algorithm to provide semi real-time feedback via robot Maatje.

Aim: To test the usability of the designed system that connects robot Maatje and the BioHarness in the target population.

Method/Technology development:

To get real-time access to the Bioharness data, a labstreaming layer is used. Data is classified in intensity categories through an algorithm based on heart rate and activity level (accelerometer data).

The algorithm selects an intensity-specific feedback message and movement command, which is sent to Maatje via an MQTT connection.

Plan of action:

6 children with cancer perform a set of predefined tasks together with their parent(s), using the thinking-aloud-method. The ASQ is filled in after completion of each task. The HUBBI, UTAUT and a semi-structured interview are conducted after completion of all tasks.

Results:

Inclusions are ongoing. Performance metrics will be described and qualitative data will be used to explain these results.