

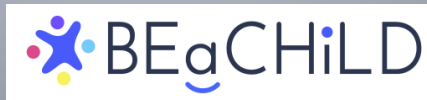


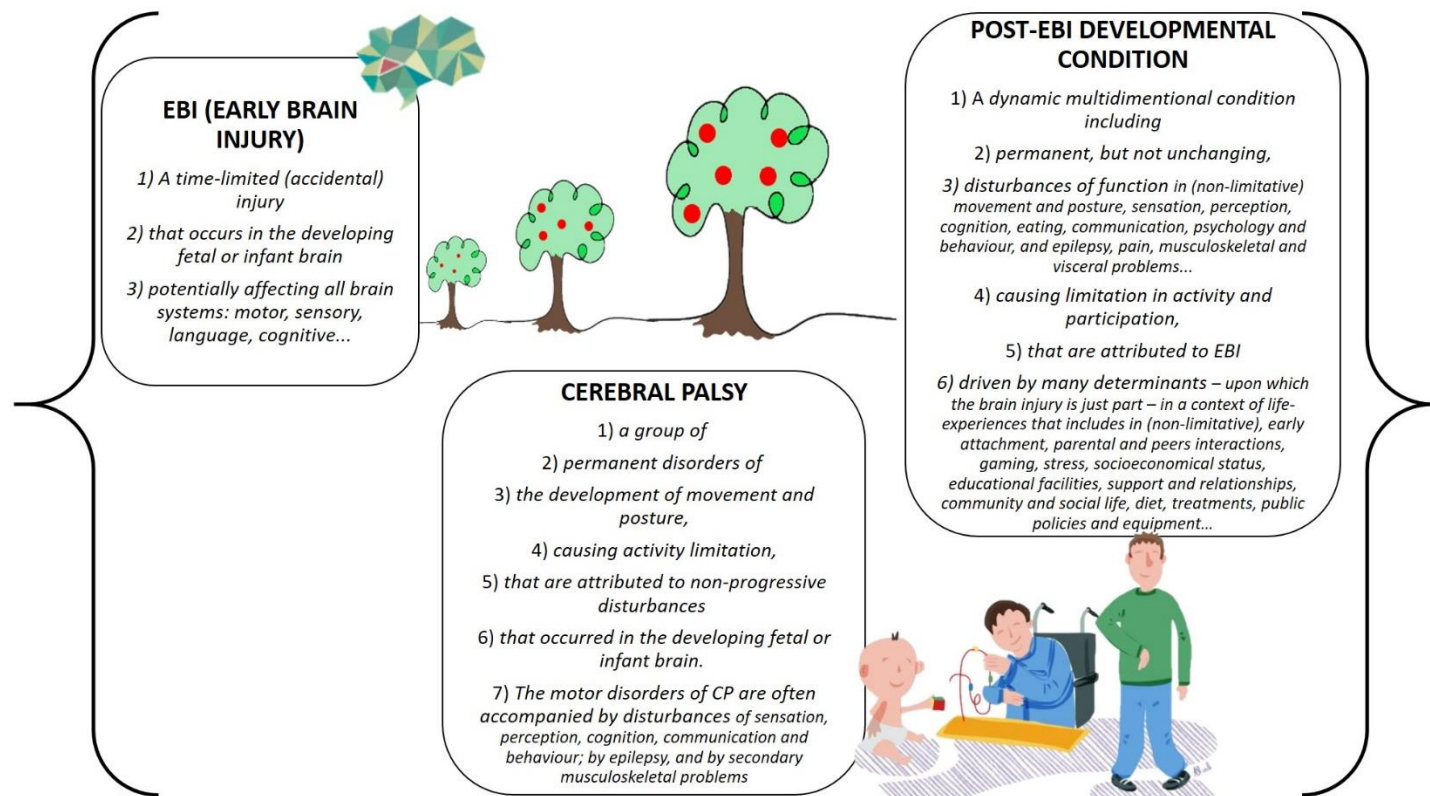
Les thérapies (motrices) pour l'autonomie dans la paralysie cérébrale

Christelle Pons, MD, PhD Sylvain Brochard, MD, PhD

Rodolphe Bailly, Josselin Demas, Mickael Dinomais et le GIS BEaCHILD

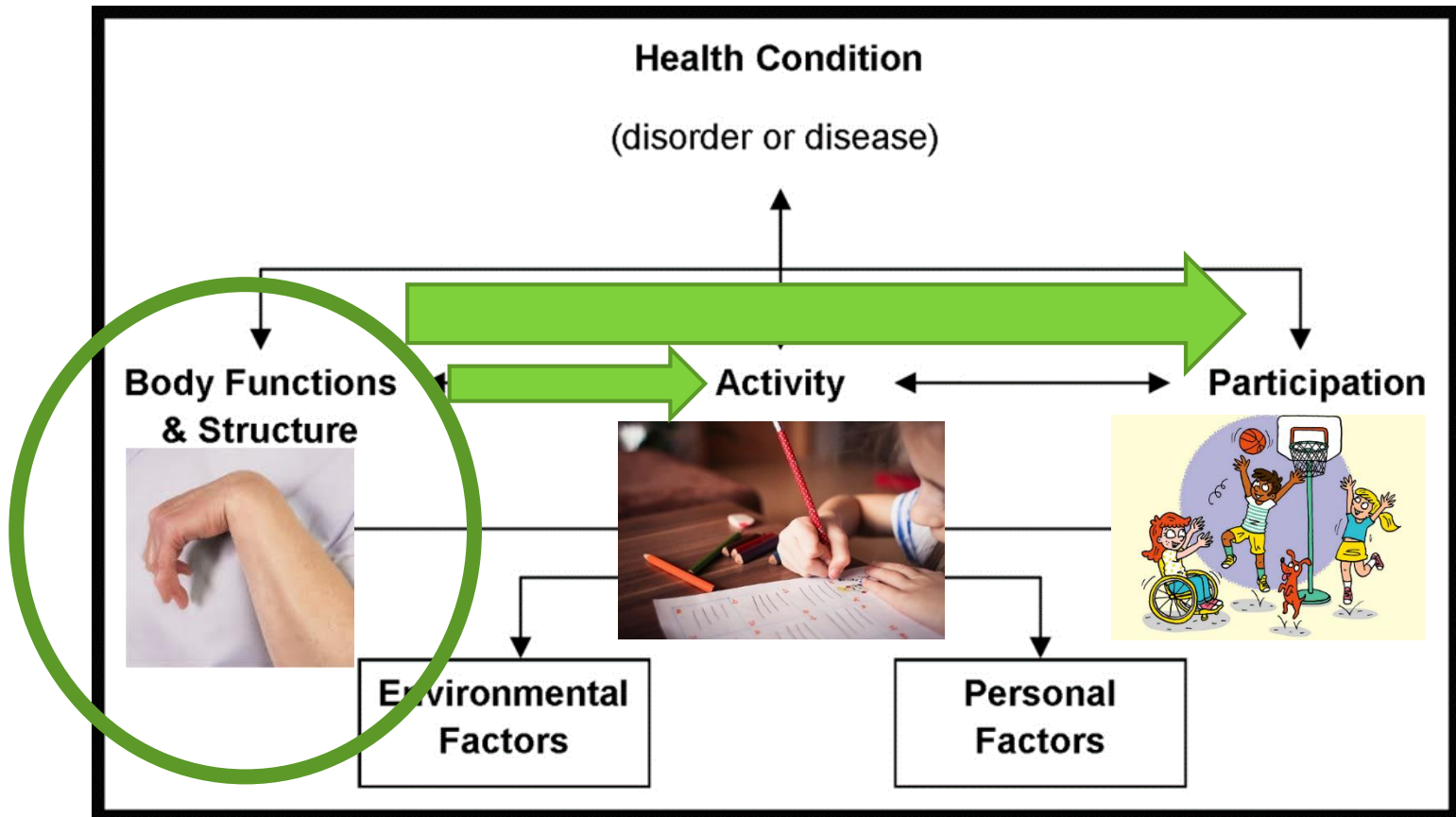
*Webinaire Grand Ouest
15 Septembre 2020*





Chabrier et al. **2019**. From congenital paralysis to post-early brain injury developmental condition: **Where does cerebral palsy actually stand?**, *Annals of Physical and Rehabilitation Medicine*

Chronic condition: CIF/OMS



Aims

- Providing the up-to-date evidence based motor evaluation and intervention in cerebral palsy
- To suggest **interventions** according to
 - ICF domains
 - Level of evidence of the intervention
 - Goals you target as a clinician





The big picture !

- Two targets during care management
 - **Motor learning**
 - **Musculo-skeletal management** (spasticity, casting, surgery, pain,...)
- Directed to a **better participation**

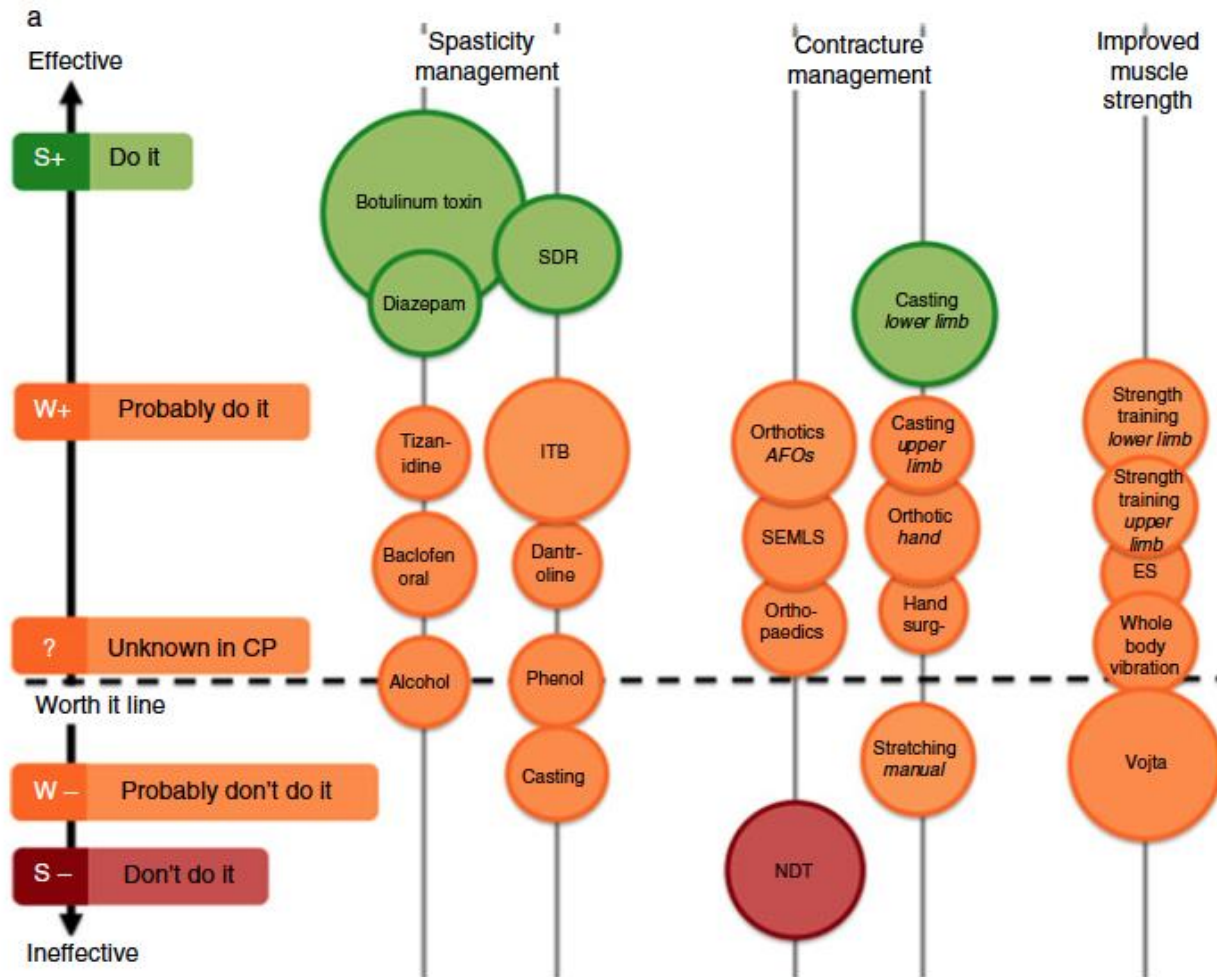
A systematic review of interventions for children with cerebral palsy: state of the evidence

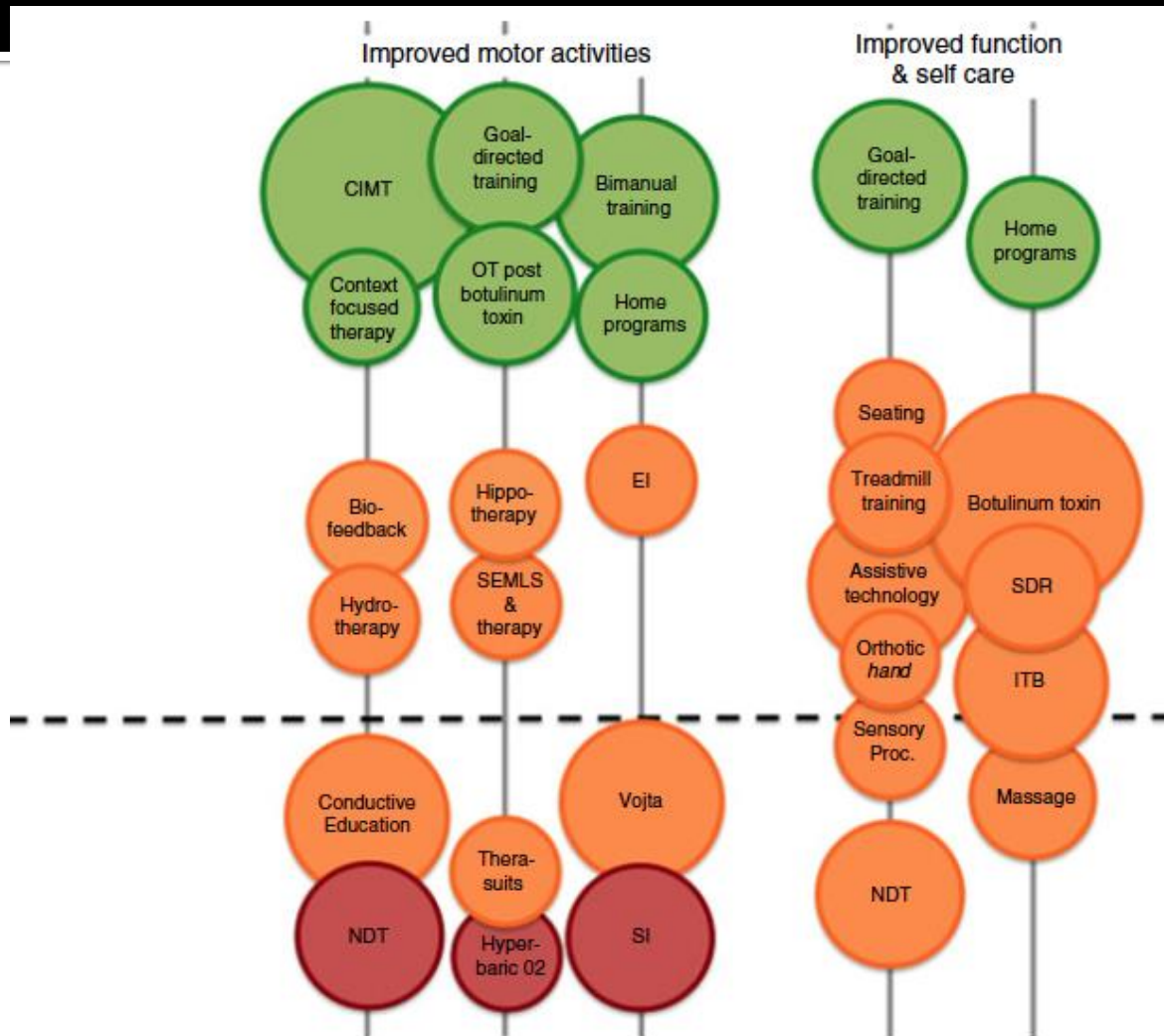
IONA NOVAK^{1,2} | SARAH MCINTYRE^{1,2} | CATHERINE MORGAN^{1,2} | LANIE CAMPBELL² | LEIGHA DARK¹ | NATALIE MORTON¹ | ELISE STUMBLES¹ | SALLI-ANN WILSON¹ | SHONA GOLDSMITH^{1,2}

¹ Cerebral Palsy Alliance, Sydney; ² University of Notre Dame Australia, Sydney, Australia.

Correspondence to Associate Professor Iona Novak, Head of Research, Cerebral Palsy Alliance Research Institute, PO Box 560, Darlinghurst NSW 1300, Australia.

E-mail: inovak@cerebralpalsy.org.au

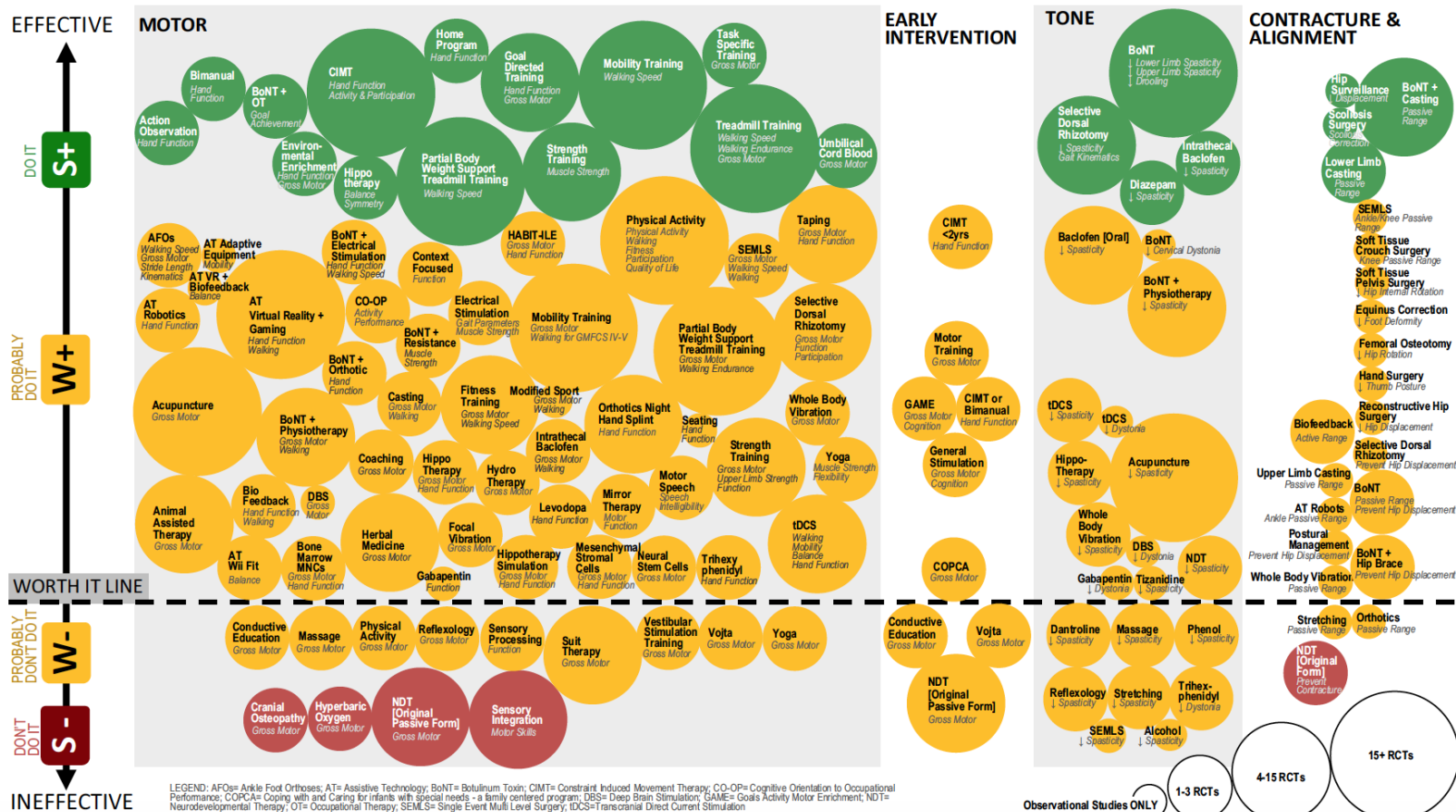


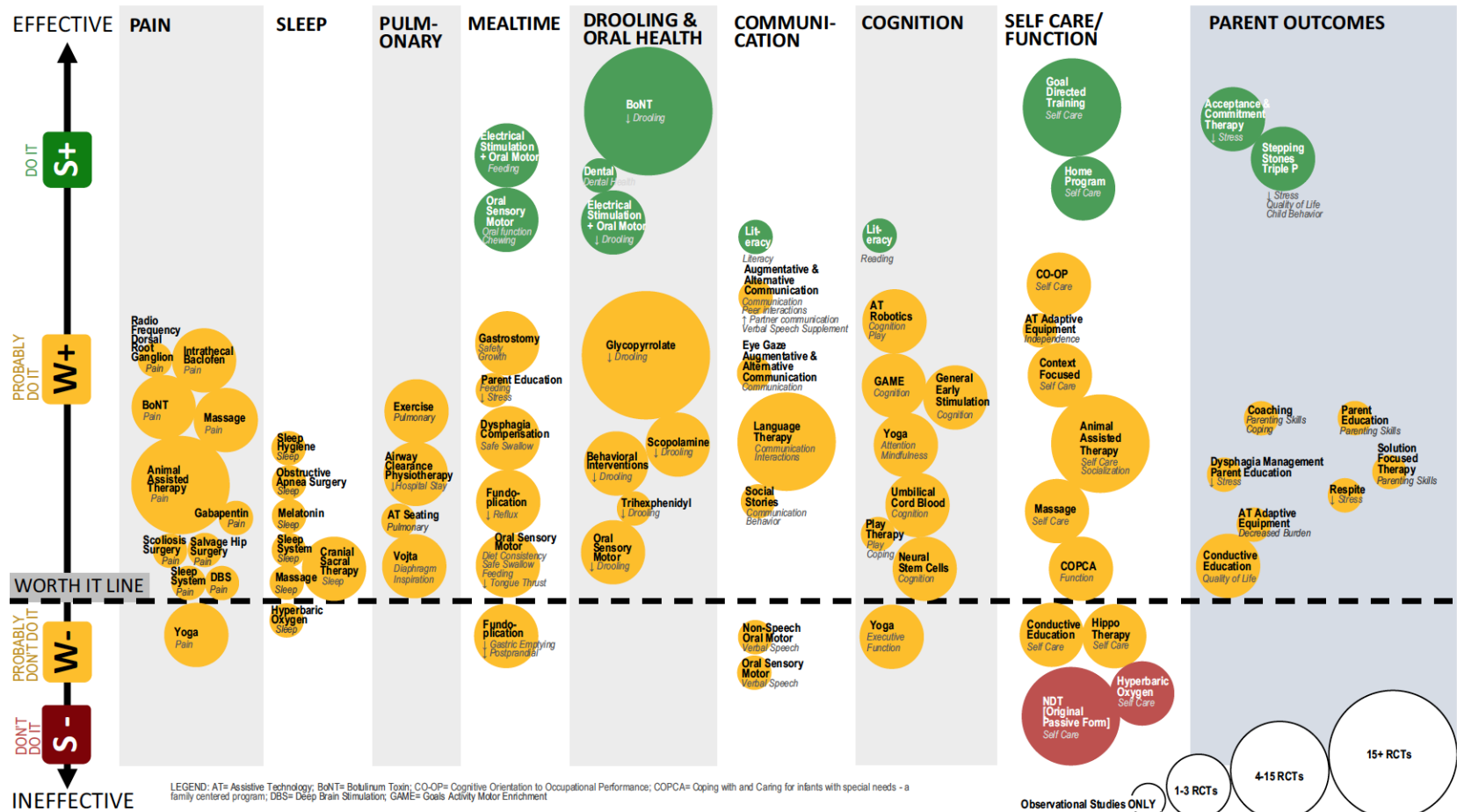




State of the Evidence Traffic Lights 2019: Systematic Review of Interventions for Preventing and Treating Children with Cerebral Palsy

Iona Novak¹ • Catherine Morgan¹ • Michael Fahey^{2,3} • Megan Finch-Edmondson¹ • Claire Galea^{1,4} • Ashleigh Hines¹ • Katherine Langdon⁵ • Maria Mc Namara¹ • Madison CB Paton¹ • Himanshu Popat^{1,4} • Benjamin Shore⁶ • Amanda Khamis¹ • Emma Stanton¹ • Olivia P Finemore¹ • Alice Tricks¹ • Anna te Velde¹ • Leigha Dark⁷ • Natalie Morton^{8,9} • Nadia Badawi^{1,4}





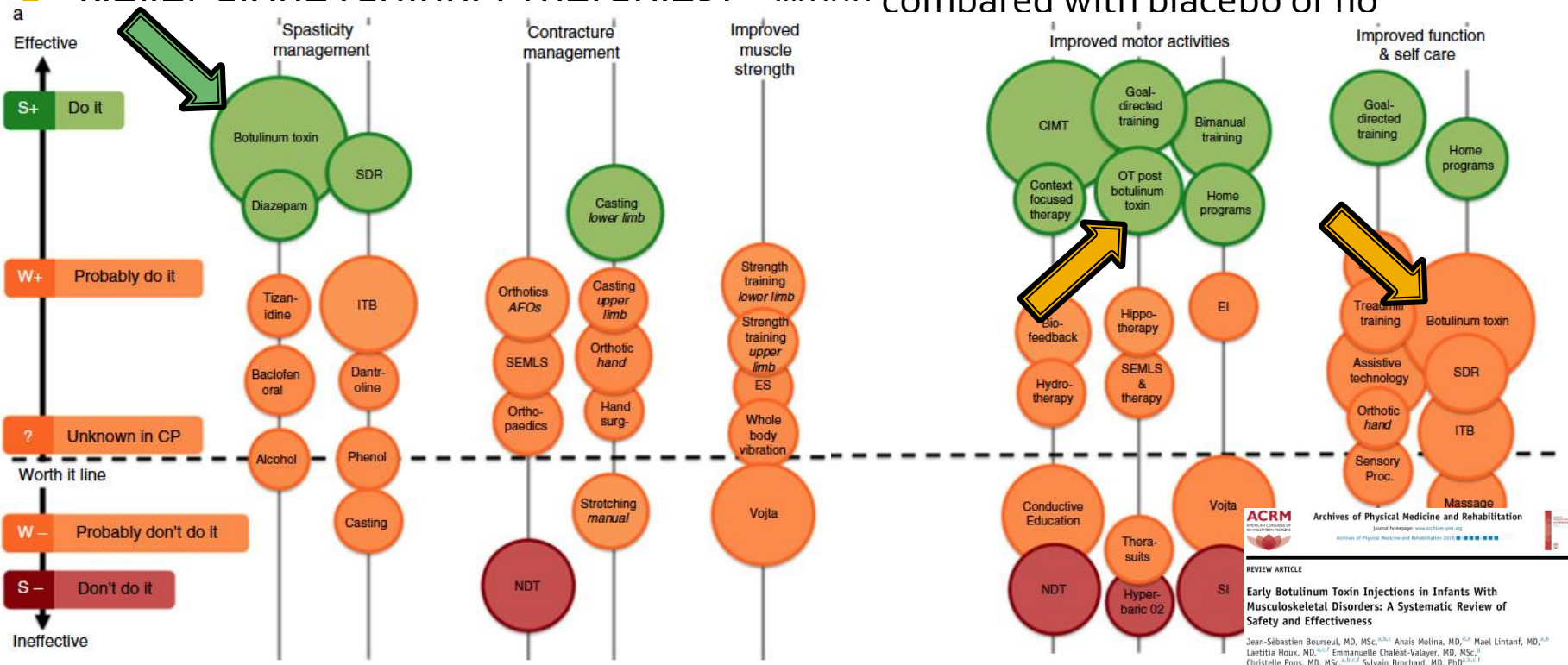
Botulinum Toxin

Fehlings 2010, Kahraman 2016, Yana 2019,

Fonseca 2018

- 4 systematic reviews Fehlings 2010, Kahraman 2016, Yana 2019, Fonseca 2018

- Never alone (adjunct therapies) "When compared with placebo or no

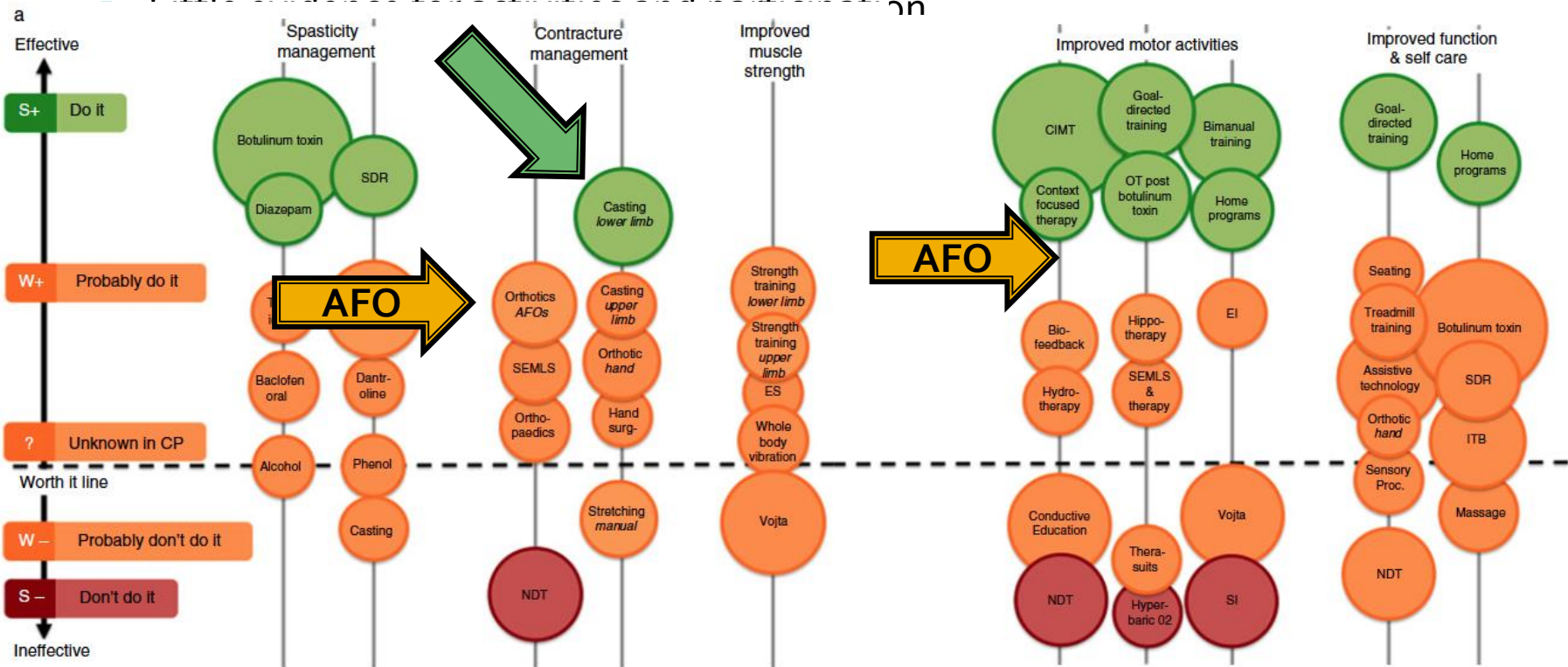


Orthosis/casting



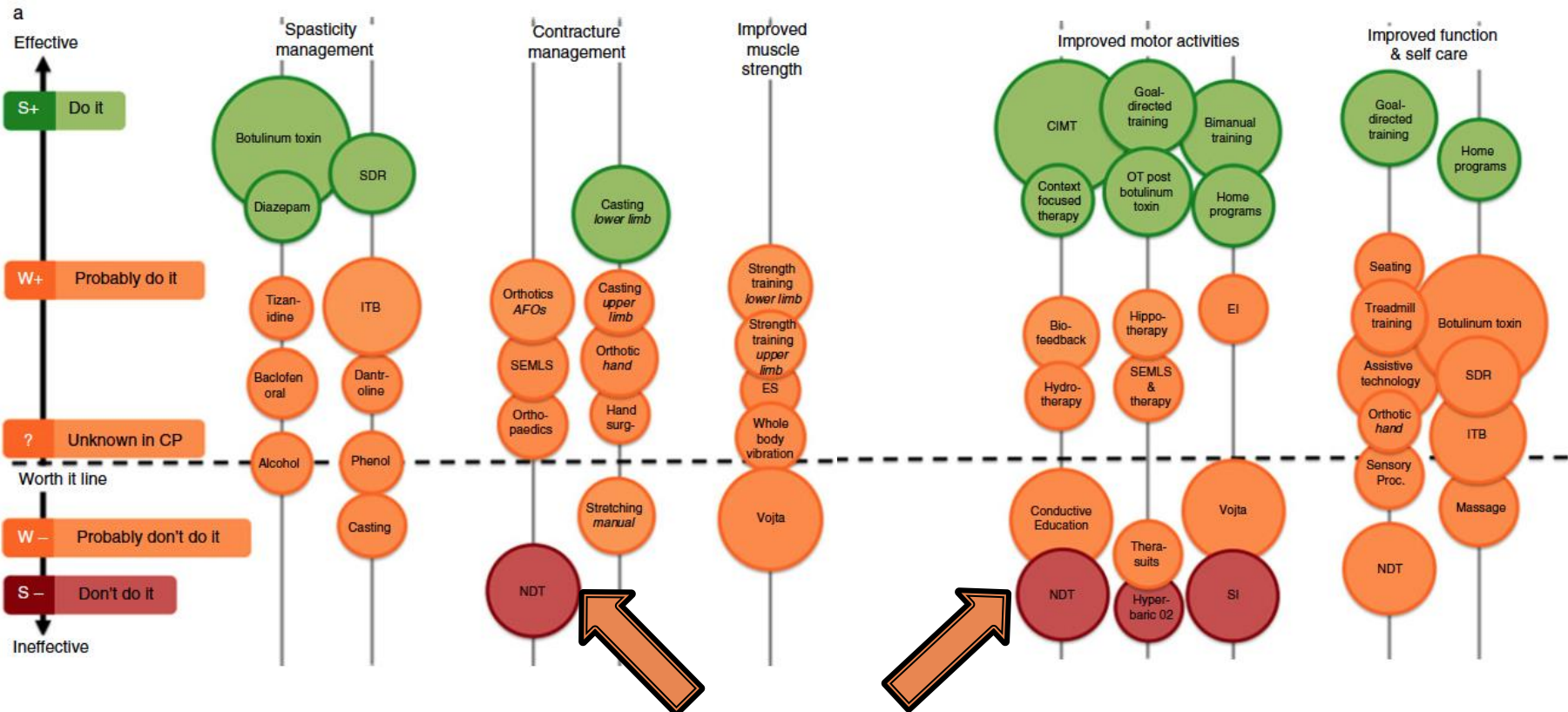
■ Casting AF Tustin 2017

- Increased passive dorsiflexion, ITB+ Casting ?



Neurodevelopmental therapies

- The most used worldwide
- Reflex inhibition, passive movement, guidance



Strength training



Contents lists available at [ScienceDirect](#)

Research in Developmental Disabilities



Review article

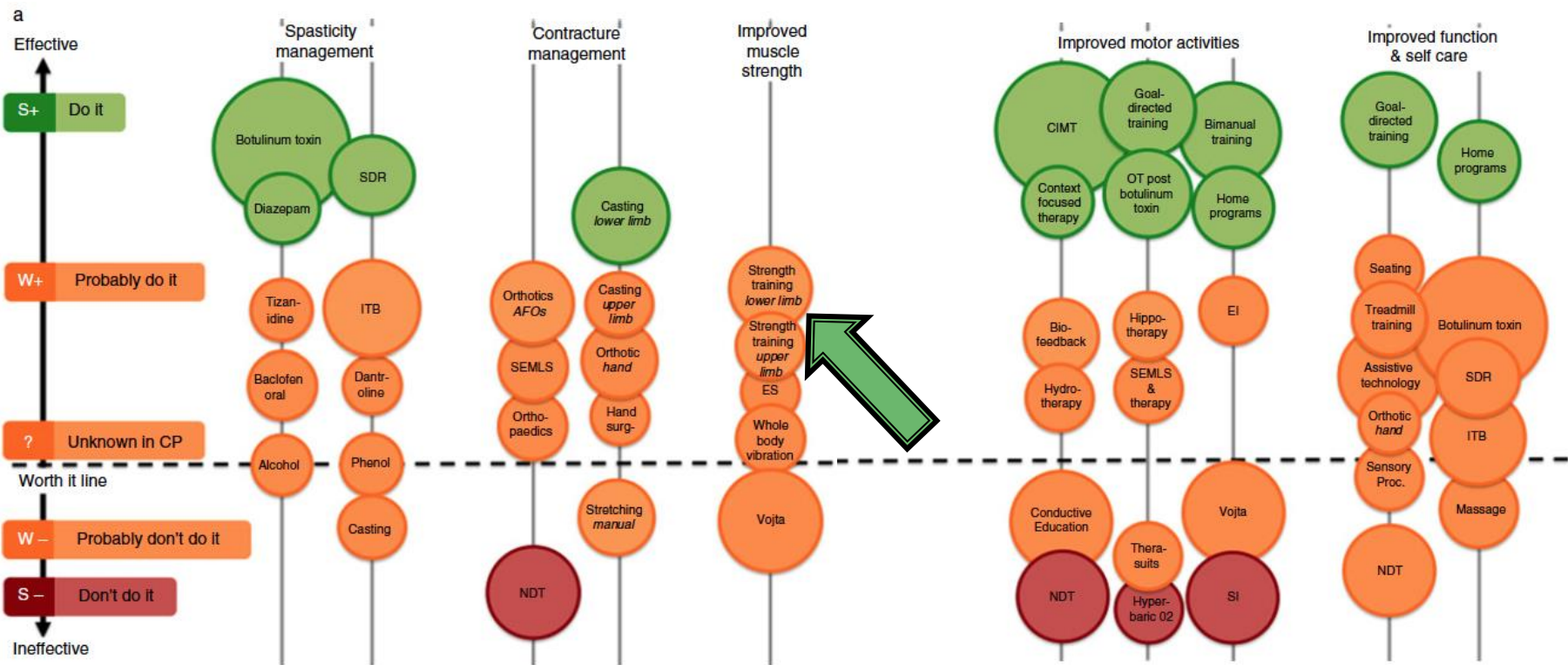
Meta-analysis of the effect of strengthening interventions in individuals with cerebral palsy



Eun-Young Park ^{a,1}, Won-Ho Kim ^{b,*}

- Systematic review Rameckers 2015, Meta-analysis Park 2014
- Spastic muscle = Weak muscle
- Correlation between spasticity and quality of gait= poor
- Types: concentric, excentric, isokinetic, Neuro-muscular Electrical stimulation, task-oriented
- **3 (45 min) per weeks during 8 weeks ?**
- Outcomes
 - **Large effect size**
 - Improve strength, decrease spasticity (AG)
 - Improve activities for LL, for UL ?
 - No effect A plantaflexor, Hip abd/add/ext
- Best responders: < 7 ans



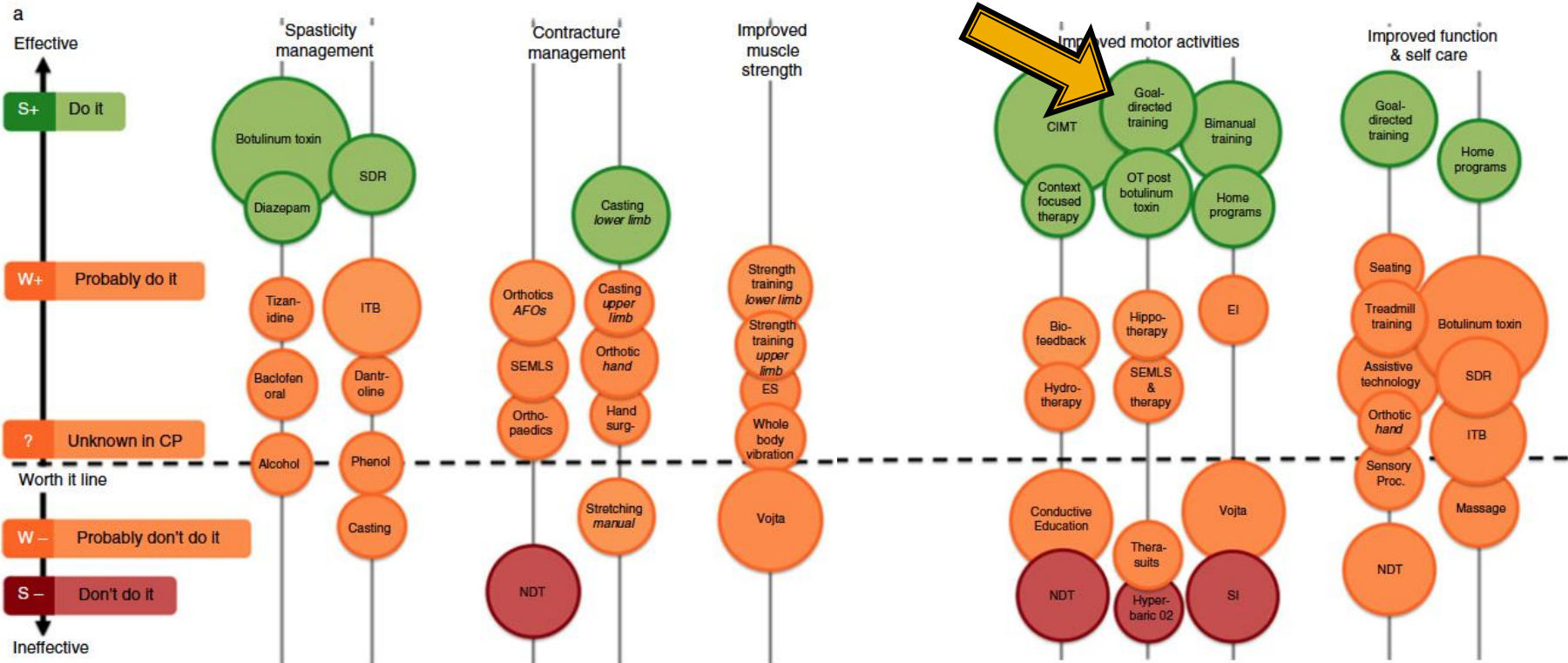


Goal oriented therapy

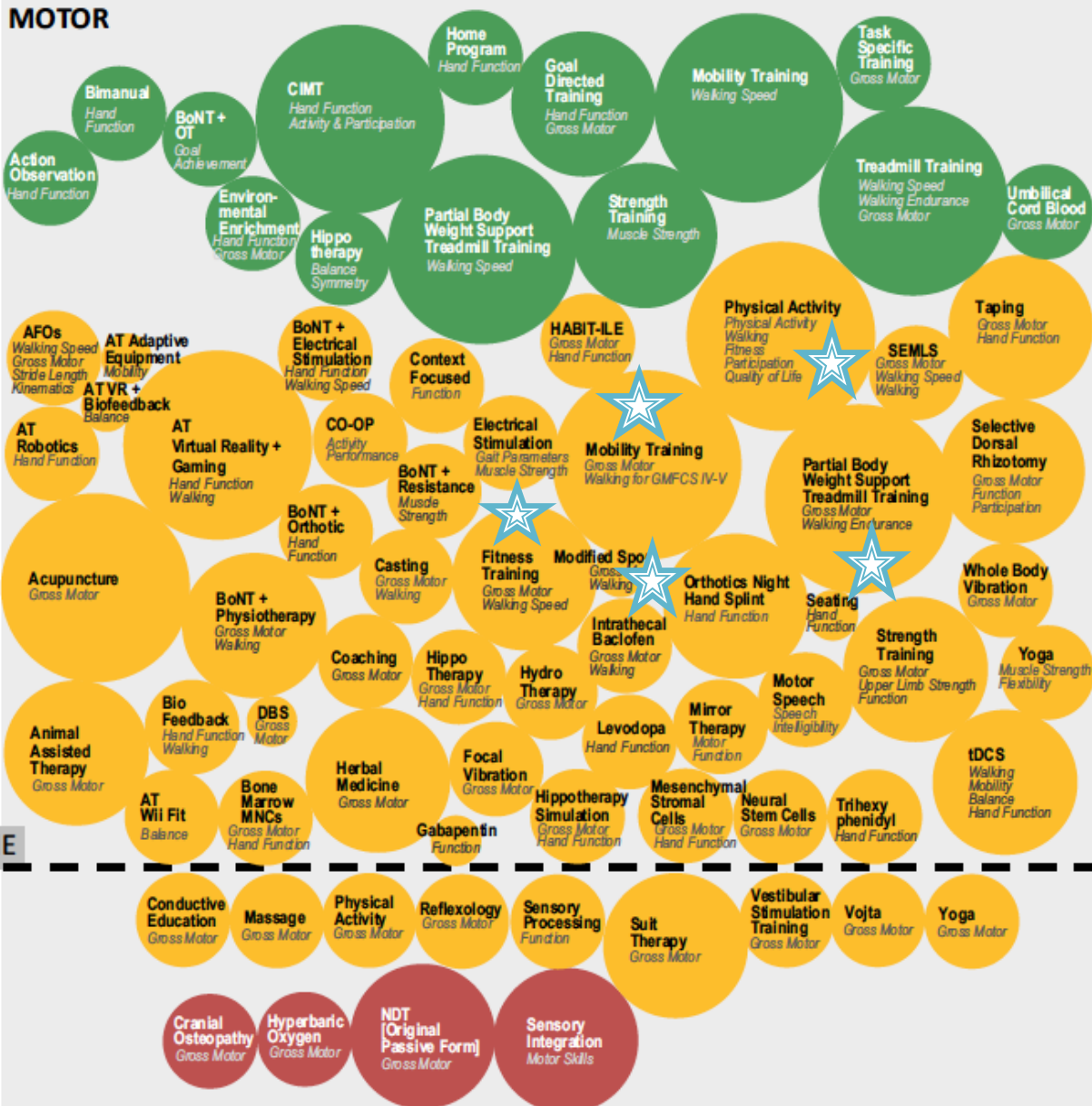
- Functional GOAL SETTING +++
- Walking Moreau 2016, Carvalho 2017, Booth 2018
 - Overground gait training, partial BWS, Treadmill,
 - Positive effect on gait speed, endurance, Gross motor function (small size effect)
 - +VR, + biofeedback ?



Goal oriented therapy



MOTOR



Quality of goal setting in pediatric rehabilitation—A SMART approach

Annemarie Bexelius¹ | Eva Brogren Carlberg² | Kristina Löwing² 

Bexelius 2018

Thérapie orientée vers l'objectif

Spécifique: relié de manière fiable à un chapitre de la CIF

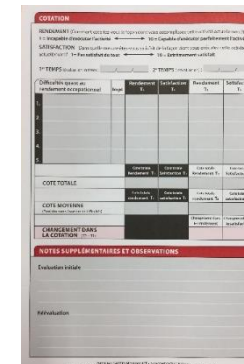
Mesurable: objectifs et étapes bien définies, changement dans 1 dimension

Attirant: lien entre l'objectif et la performance de l'enfant au quotidien

Réaliste: évaluation de l'évolution du niveau de performance de l'enfant

Temps: en lien avec la durée de l'intervention

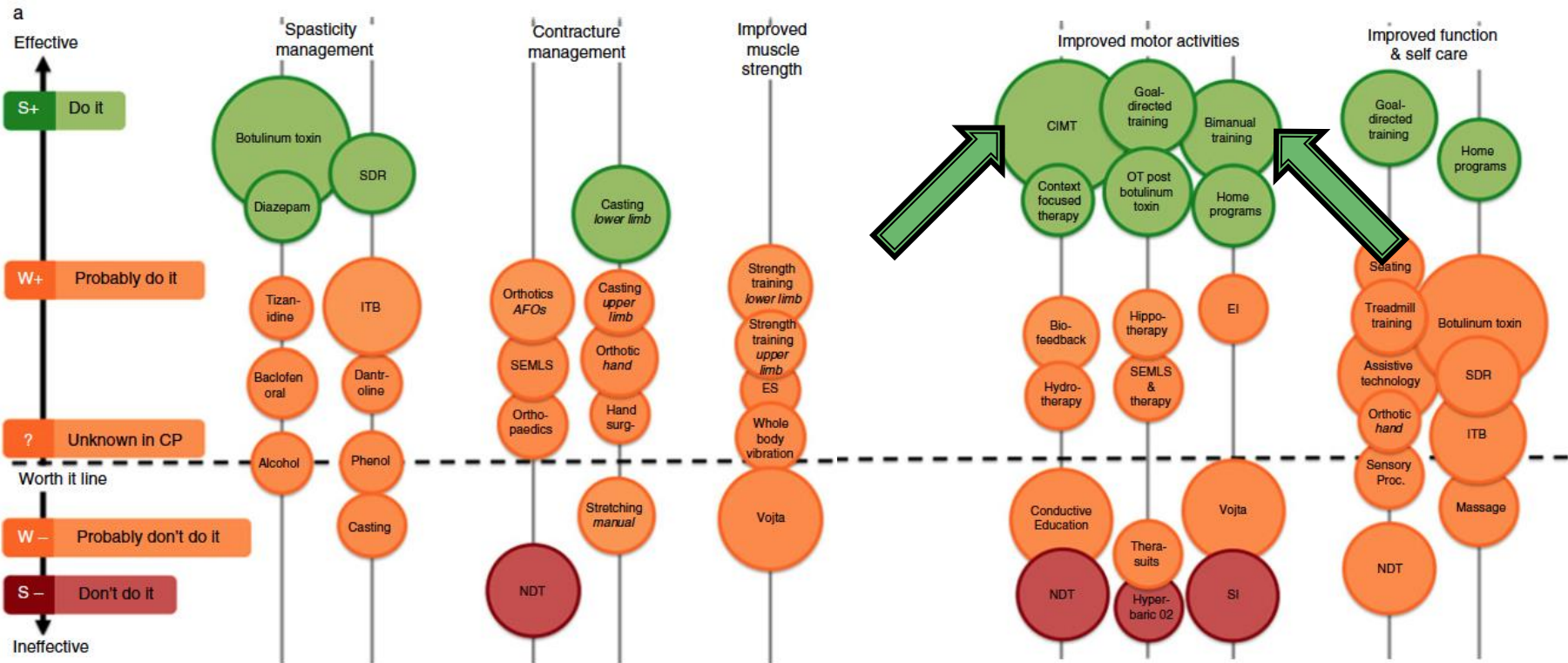
Avant les stages définition de 5 objectifs (MCRO)



Constraint Induced Movement Therapy (CIMT) Hand Arm Bimanual Intensive Training (HABIT+-ILE)

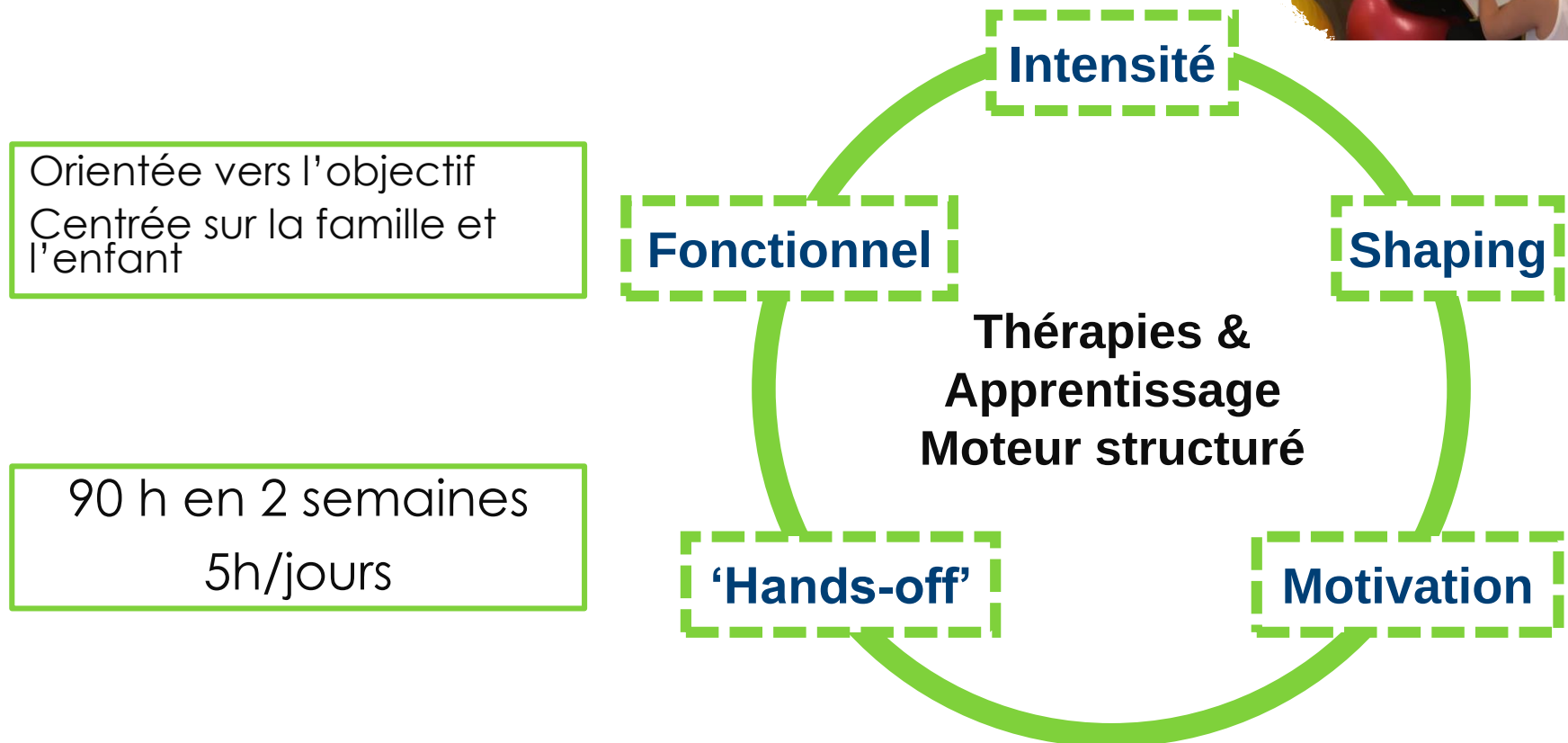
- Strong evidence that CIMT and HABIT have greater effects than « usual therapy » *Eliason 2014, Chen Y 2014, Sakzewski 2014*
 - Unimanual performance of the impaired upper-limb
 - Performance on previously set individual goals

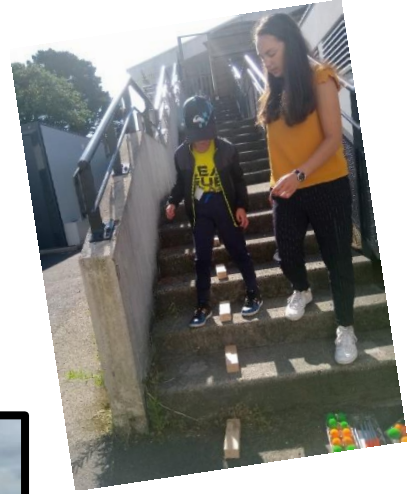
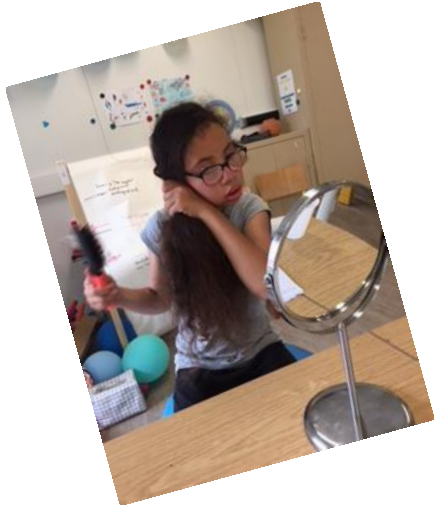
Constraint Induced Movement Therapy (CIMT) Hand Arm Bimanual Intensive Training (HABIT+-ILE)



Structuration de l'intervention

(Bleyenheuft and Gordon, 2014)

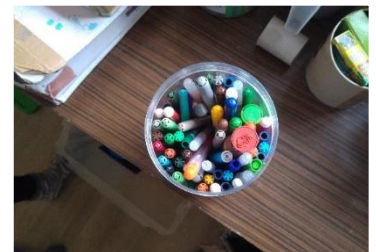
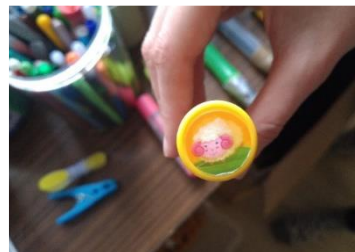


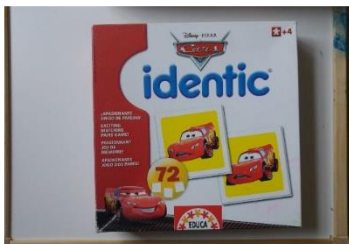


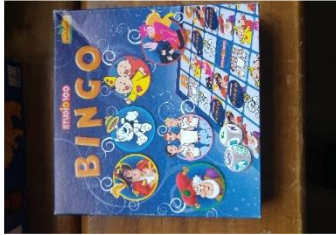
Quelles réalités organisationnelles ?

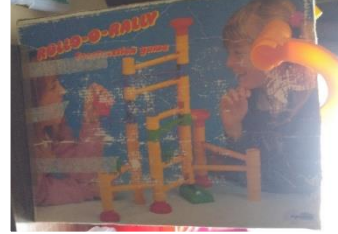
- 90 h= 2 semaines
- 3 ou 4 superviseurs
- 10-12 enfants/ 30 par an sur un site
- 1 intervenant = 1 enfant (coût)
- Intensif oui mais FUN !!!!

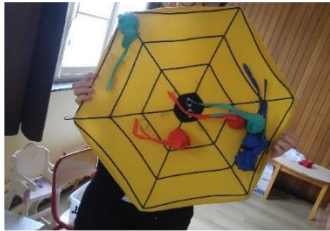


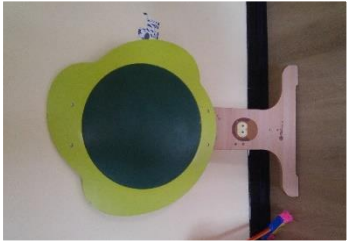














AVC INFANTILE : UNE THÉRAPIE PAR LE JEU

Plusieurs dizaines de militants de mouvements écologistes ont bloqué hier un centre de distribution d'Amazon en région parisienne.

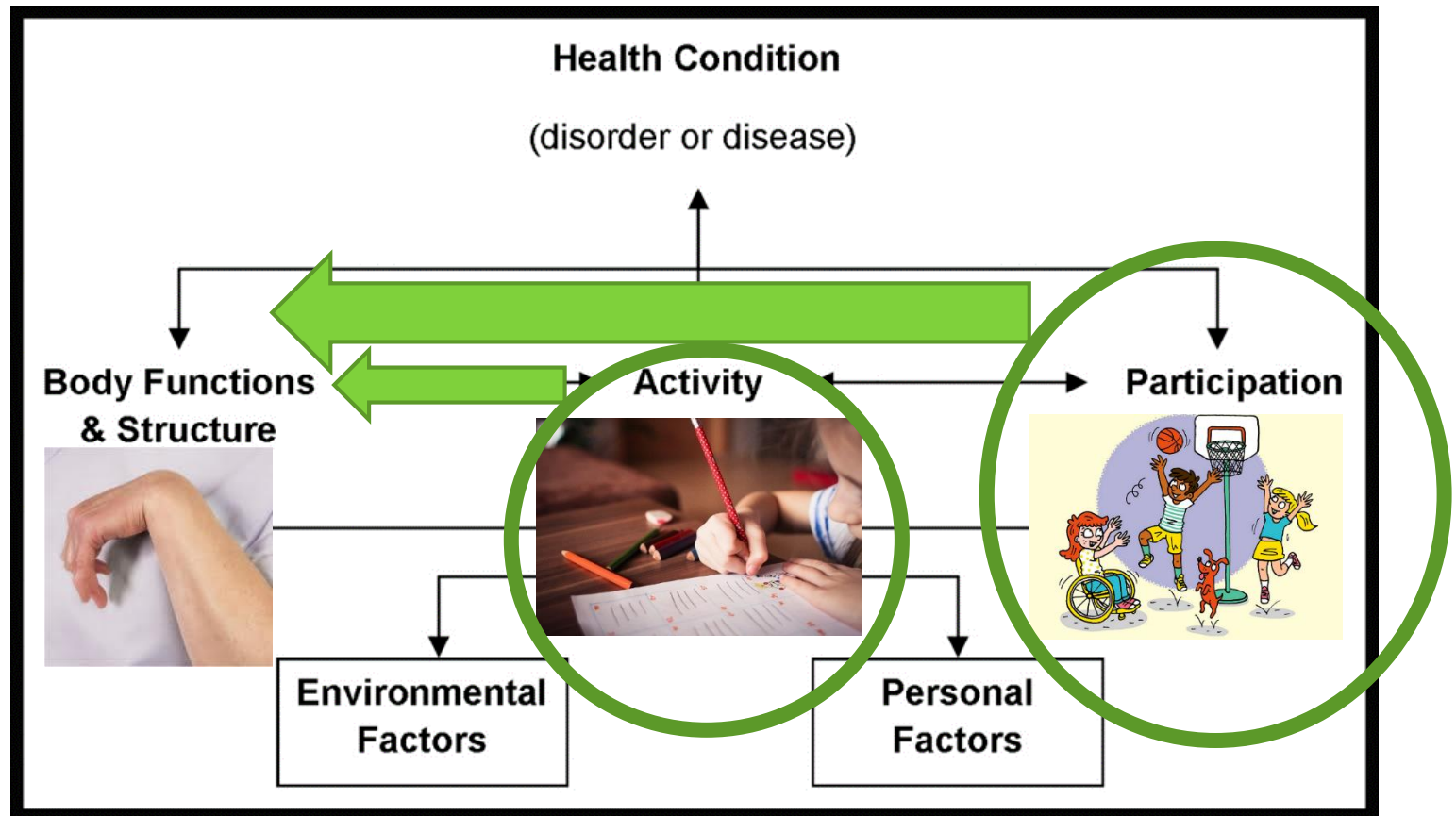
PREMIÈRE
ÉDITION

Projet CAP'

Changements induits par la thérapie HABIT-ILE (Hand and Arm Bimanual Intensive Therapy Including Lower Extremities) chez les enfants avec une PARALYSIE CÉRÉBRALE uni et bilatérale en Age Pré-scolaire



Chronic condition: CIF/OMS



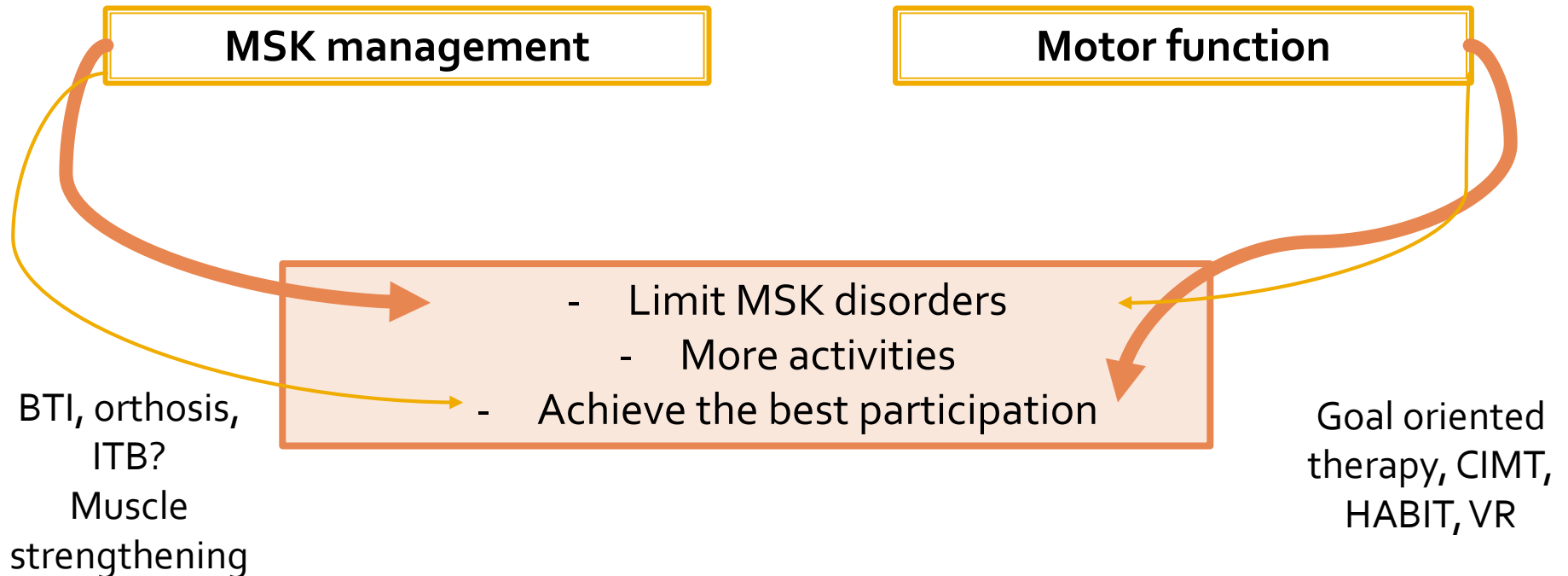
Key messages

- Rapidly evolving field
- GOAL setting with the children and its family



MSK management

Motor function



CEREBRAL PALSY: My Favourite Words

1



FUNCTION

I might do things differently but I CAN do them. How I do it is not important. Please let me try!



2

FAMILY

They know me best and I trust them to do what's best for me. Listen to them. Talk to them. Hear them. Respect them.

3



FITNESS

Everyone needs to stay fit and healthy, including me. Help me find ways to keep fit.



4

FRIENDS

Having childhood friends is important. Please give me opportunities to make friends with my peers.

5



FUN

Childhood is about fun and play. This is how I learn and grow. Please help me do the activities that I find the most fun.



6

FUTURE

I will grow up one day, so please find ways for me to develop independence and be included in my community.

Ce que disent les familles

Le constat en huit points clefs :

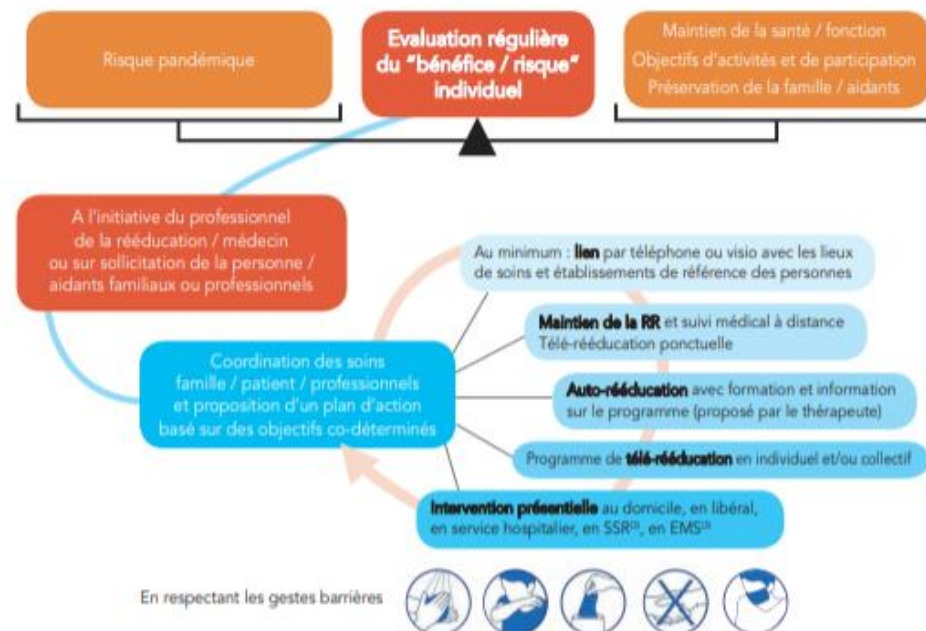
1. la prééminence des prises en charge par des kinésithérapeutes libéraux, souvent perçus comme isolés et non formés à la rééducation des personnes atteintes de paralysie cérébrale ;
2. peu de modulation de la rééducation selon les besoins, ressentis ou avérés (âge, sévérité du handicap), de la personne ;
3. la trop faible aide aux adultes sévèrement handicapés (non marchant) ;
4. l'existence de douleurs liées à la paralysie cérébrale, problème majeur signalé par 75% des adultes et une prise en compte de ces douleurs insuffisante ;
5. une prise en compte insuffisante des troubles associés et des rééducations nécessaires (ergothérapie, orthophonie) ;
6. une discontinuité dans les prises en charge au cours de la vie ;
7. une accessibilité à la rééducation ressentie par les participants comme inégale sur le territoire
8. l'importance des relations humaines et d'un projet coordonné de soins

CONSEILS POUR LA RÉÉDUCATION / RÉADAPTATION DES PERSONNES, EN SITUATION DE HANDICAP, CONFINÉES⁽¹⁾

(1) et en déconfinement progressif

Basés sur les résultats de l'enquête nationale ECHO
<https://enqueteecho.fr/>

La charte de la rééducation / réadaptation (RR) reste la référence
<https://fondationparalysiecerebrale.org/charte-reeducation-readaptation-paralysie-cerebrale#charte-pc>
Elle est complétée par des conseils compte tenu de la crise sanitaire



(2) Médecin (MPR, généraliste, pédiatre...), Ergothérapeute, Kinésithérapeute, Psychomotricien(ne), Orthophoniste, enseignant(e) APA, Orthoptiste, Neuropsychologue...
(3) SSR : Soins de Suite et de Réadaptation - EMS : Etablissement Médico-social



European Academy of
Childhood Disability



Poznan, Pologne,
25-28 Nov 2020
www.eacd.org

Virtual Europe
Début 2021
www.eacd.org



Webinaire SFERHE- **16 Nov 2020**
16h30-19h
« La participation à l'ère COVID »

Nîmes, France,
3-4 Mai 2020
Mobilité et Participation

www.sferhe.org



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Twitter: @FRISBEE29 @BEaCHILD_eu @sferhe @ifm3R



Webinaire Grand Ouest
15 Septembre 2020

