Evidence Centre

Use of the CDR Evidence Center EBP Tool Kit

Ivonne Montgomery
OT PPL

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BCCH & BCW

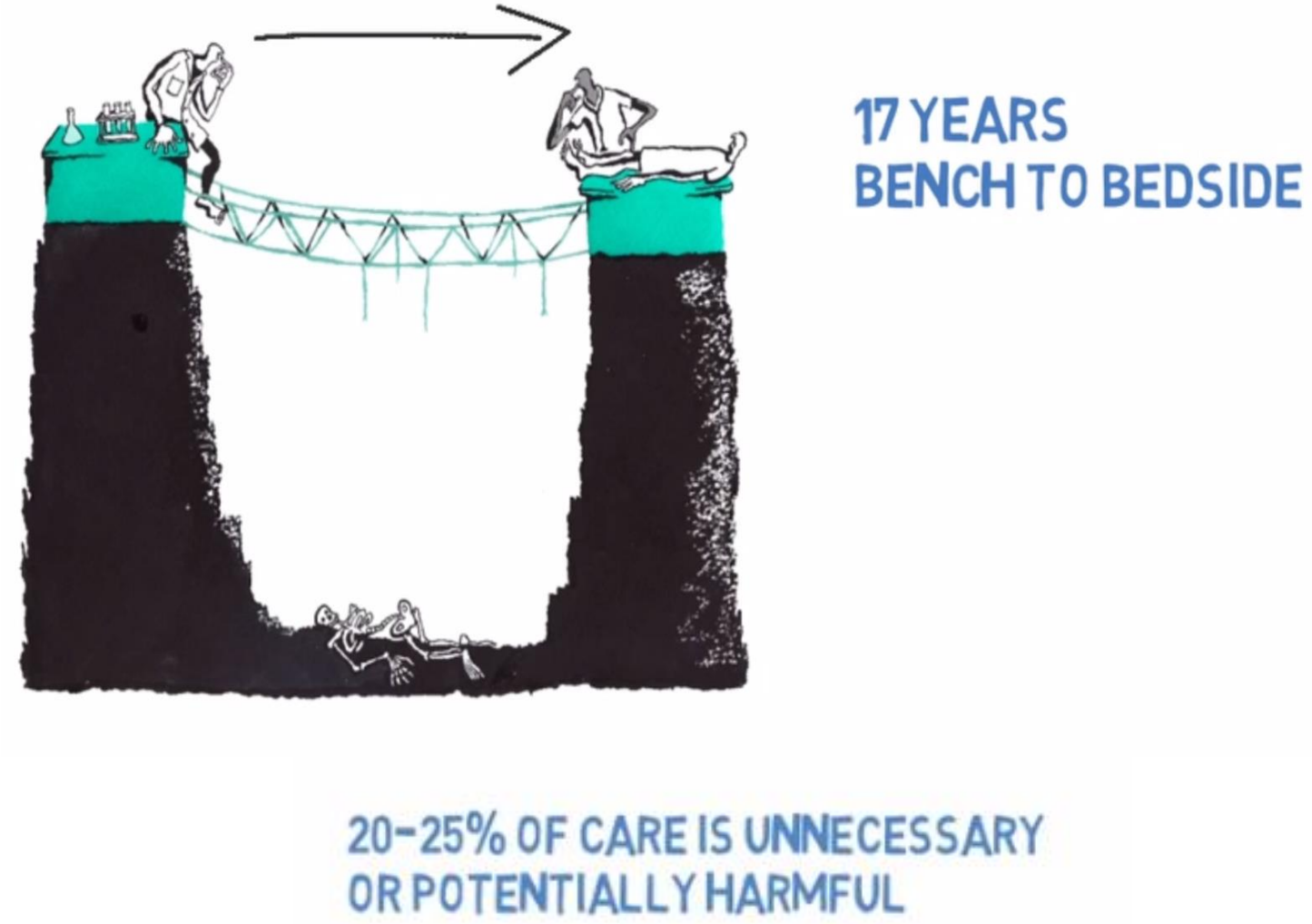
What is Evidence Based Practice

EBP integrates:

- the best available research evidence
- the clinician's expertise
- and the patient's values & preferences [1]

Why Is EBP Important?

- There is a 17 year gap between the promise of evidence-based health care and its current level of adoption [2-7]
- Translation of the latest evidence into routine clinical care varies & lags in all countries and specialities [3,4] (which for paediatric patients is an entire childhood)



Why Is EBP Important?

- EBP is a regulatory expectation for occupational therapists and a vehicle to advance the profession and ensure that occupational therapists deliver quality services to their patients [8,9]
- Applying EBP ensures that clinicians use effective interventions to achieve desired outcomes and contributes to best quality care [10]
- Allows patients to make informed choices knowing that recommendations are based on evidence
- Allows occupational therapists to be confident and certain which interventions are and are not effective and which interventions require ongoing measurement

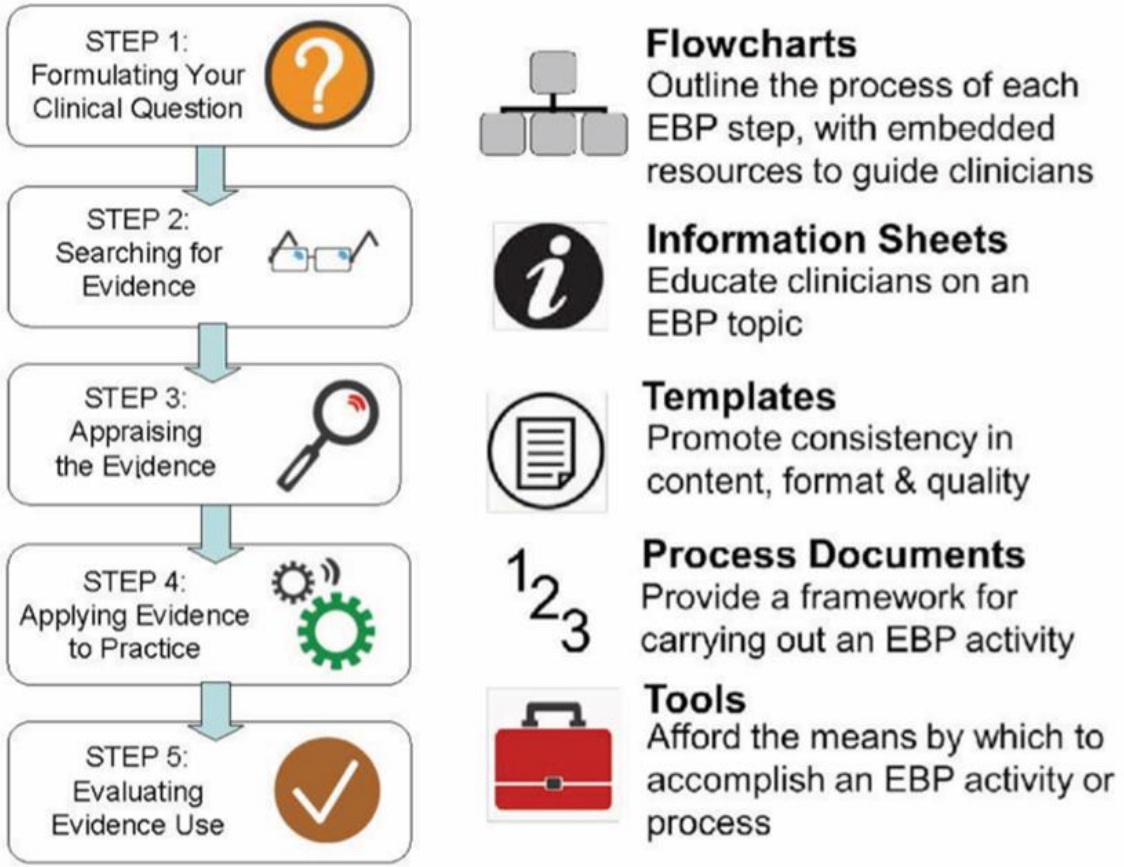
Why Is EBP Important?

- Essential for building **expertise**
- **Expertise** is more than just time in practice
- **Expertise** involves the integration of at least 3 essential ingredients:
    1. Professional Reasoning
    2. Assessing and Measuring Outcomes
    3. Evidence-Based Practice [11-16]

Evidence Centre

Evidence-Based Practice Toolkit

Evidence - Based Practice



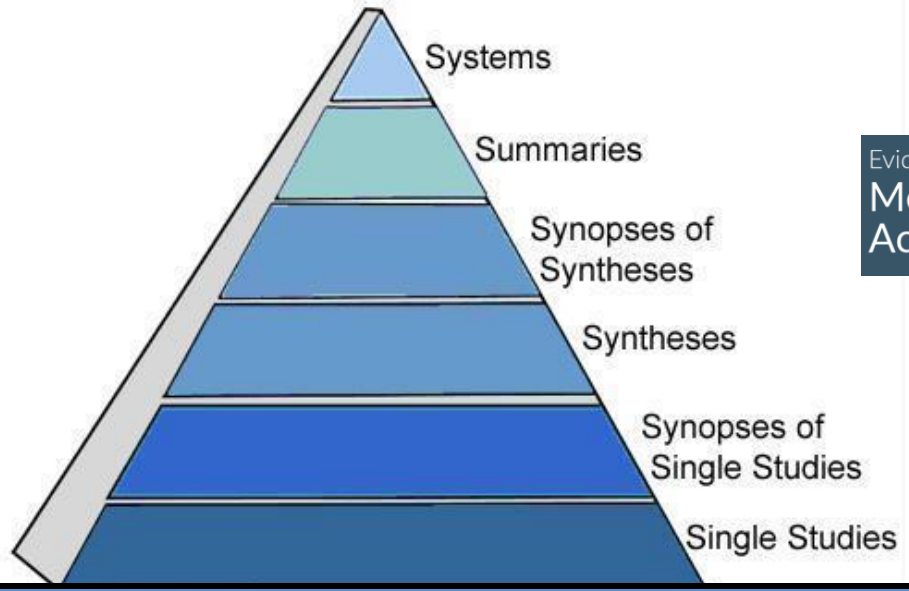
http://www.childdevelopment.ca/Evidencecentre/EvidenceBasedPractice.aspx

Step 1

- Formulate a clinical question
  - Background
  - Foreground

Step 2: Search for Evidence

- Identify sources of evidence



Evidence-Based Review of
Moderate to Severe Acquired Brain Injury

Trip

PEDro
PHYSIOTHERAPY EVIDENCE DATABASE

The Joanna Briggs Institute

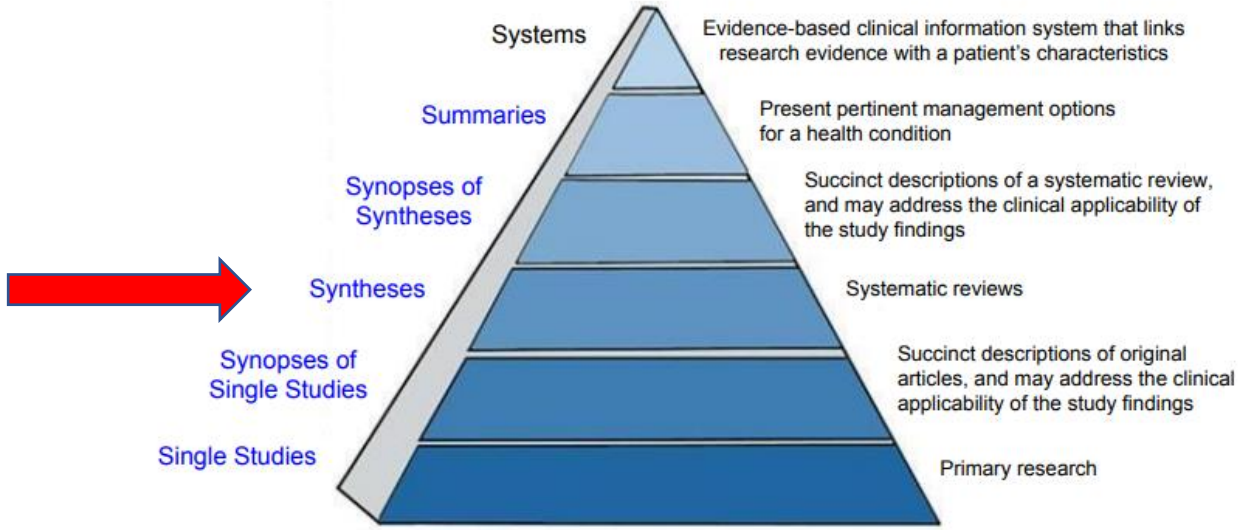
Cochrane

NICE National Institute for Health and Care Excellence

PubMed Health

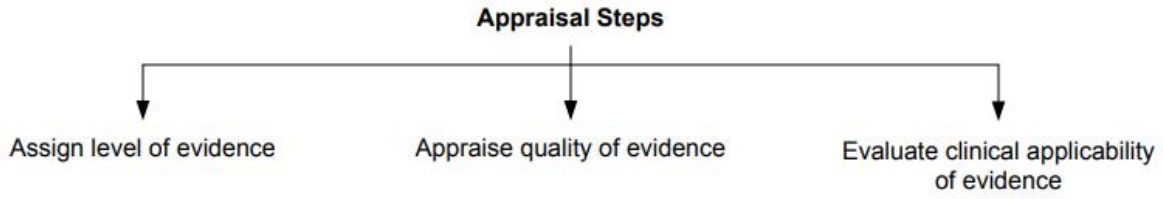
Step 2: Search for Best Evidence

Determine where your best evidence fits on the 6s Hierarchy of Pre-Appraised Evidence[1]



S1
S2
S3
S4
S5
S6

Reference: DiCenso, A., Bayley, L., & Haynes, R. B. (2009). Accessing pre appraised evidence: Fine-tuning the 5s model into a 6s model. *ACP Journal Club*, *151*(3), JC3-2-JC3-3.

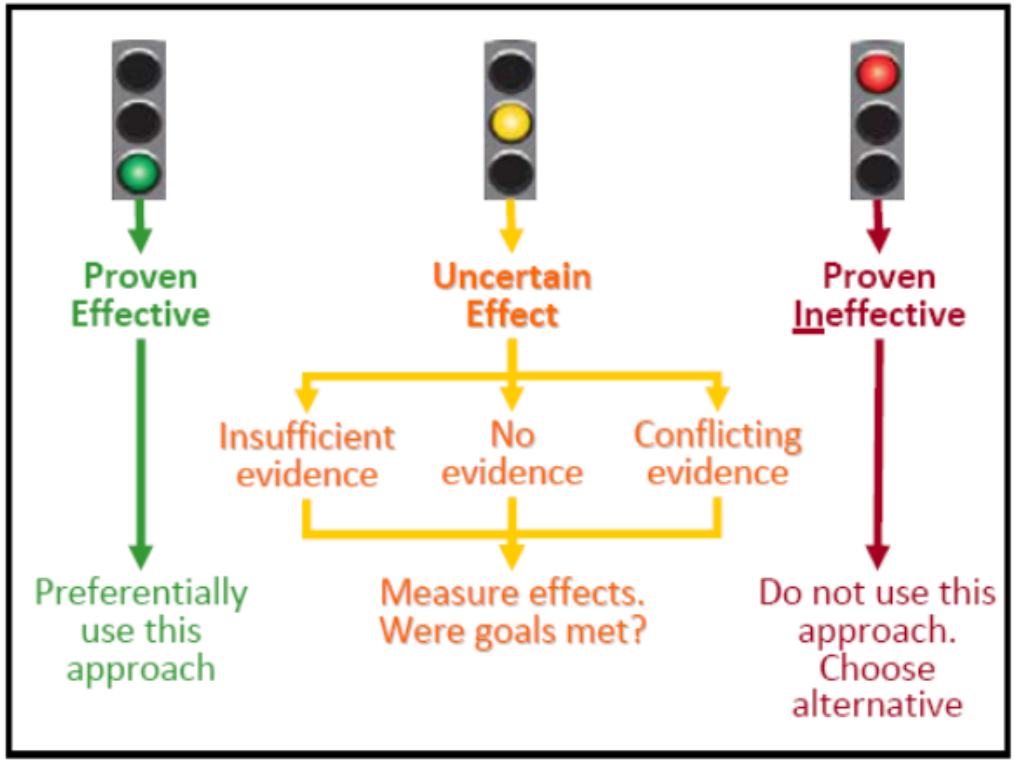


Step 2: Select Best Evidence

- Select the “best evidence” to answer a clinical question

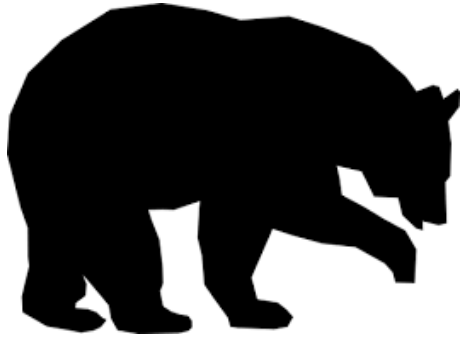
Step 3: Appraise and Synthesize

- Traffic Light an Intervention



Step 3: Appraise and Synthesize

- Complete a BEAR (Brief Evidence Appraisal of Research) [17,18]



Step 3: Appraise and Synthesize

- Develop a knowledge product (resource)

Sunny Hill Health Centre for Children
Therapy Department

LEVEL I

Lower Case Letter Worksheets

A Cognitive Approach to
Teaching Printing to
Primary School Aged Children

Printing Like a Pro!

By Ivonne Montgomery, MRSc, OT and Jill Zwicker, PhD, OT (C)
Sunny Hill Health Centre for Children, 2017
Created Using: Educational Fontware, 2012

Worksheets and other supporting materials can be found at:
http://www.childdevelopment.ca/School-Age_Therapy_Practice_Resources.aspx

Choosing an Occupational Therapist or Physiotherapist for Your Child

Information for Families who have a Child with Developmental Coordination Disorder (DCD)

Here are some tips to think about when you choose an Occupational Therapist or Physiotherapist (OT/PT) in your community:

- Do they believe in collaborative goal setting?
  (which includes the child, family members and therapist)
- Do they focus on meaningful task-specific goals for your child?
  (for example: learning to tie shoes, print neatly, shoot a basketball)
- Are sessions scheduled at least once per week?
- At the sessions, is there task-specific coaching and practice?
  (for example: learning to draw, skip rope, cursive write, ride a bike)
- Is there weekly homework to work on in between sessions?
  (for example: homework for printing or skipping practice)

Reference: Smits-Engelsman, B. C. M, Blank, R., Van der Kaay, A. C., Mosterd-Van der Meijs, R., Vlugt-Van den Brand, E., Polatajko, H. J., & Wilson, P. H. (2013). Efficacy of interventions to improve motor performance in children with developmental coordination disorder: a combined systematic review and meta-analysis. *Developmental Medicine & Child Neurology*, *55*(3), 229-237

Created by Sarah Whyte, Stephanie Young and Ivonne Montgomery, Occupational Therapists Sunny Hill Health Centre for Children, June, 2016

SEATING & POSITIONING

CUT- OUT INCLINED DESKS

Did you know?

Some moderate quality evidence supports the use of cut-outs desks with inclined surfaces to improve fine motor skills and classroom performance in children with motor impairments, such as cerebral palsy. However, some of the research is conflicting; therefore, the following recommendations should be evaluated when applied with a child to determine their effectiveness for that individual child.

What is a cut-out desk with inclined surface and where should it be used?

A cut-out desk with an inclined surface is an ergonomic, sloped work surface with a semi-circular cut-out around the trunk. This design can be useful for children with motor impairments. The cut-out surface provides added support and stability to the trunk and forearms to enhance fine motor skills, such as pencil motor accuracy, and writing. Cut-out desks, with or without inclined surfaces, are often used in the classroom, along with supportive classroom seating.

Image credit: CAP Furniture
https://capfurniture.com.au/product/650-650-cutout-table/

Image credit: School Outfitters
https://www.schooloutfitters.com/catalog/product_info/pfam_M7252/products_id/PRO18342

Health Centre for Children

Developed 2017 by Rebecca Stanke and Jenna Cunningham, Occupational Therapy Students

Step 4: Apply Evidence to Practice

- Identify key messages for action

- Develop a practice change plan

Step 5: Evaluate Evidence Use

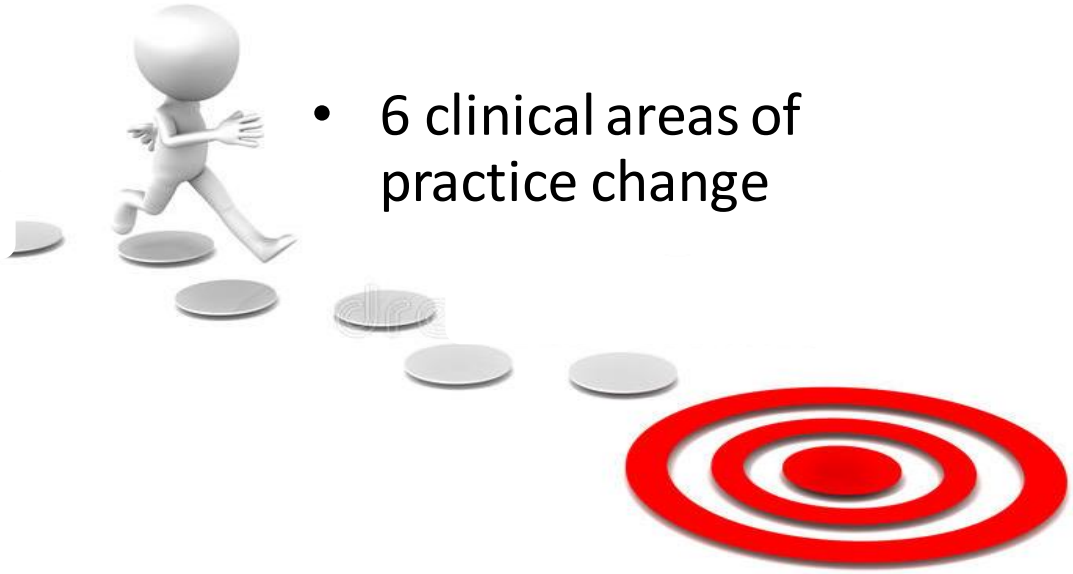
- Plan for outcome measurement of both intervention as well as use of new EBP

Evidence to Practice Examples
(Sunny Hill OT Knowledge Broker Initiative)

Outputs & Outcomes (2011-2019)

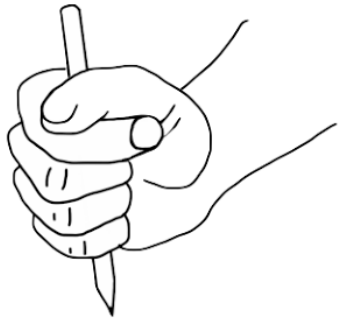
- 20 clinical questions answered

- 26 resources developed

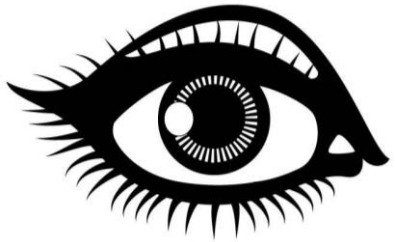


- 6 clinical areas of practice change

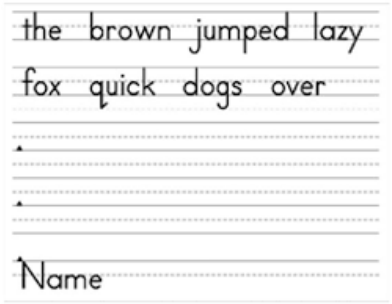
Clinical Background Questions



Handwriting &
Pencil Grasp



Eye Gaze
Technology



Minnesota
Handwriting Assessment

Pre-printing

Hypermobility

Tremor & Ataxia

Motor Planning

Developmental
Coordination Disorder

Clinical Effectiveness Questions

Inflatable Cushions & Therapy Balls

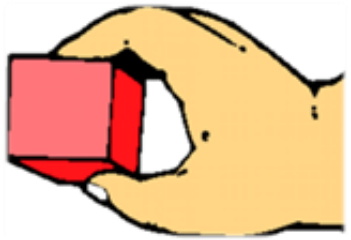
Weighted Equipment

Life Skills Training & Transition Planning

Safety in Power Mobility

Standing Frames

Gait Trainers



Fine Motor Intervention

Handwriting Intervention

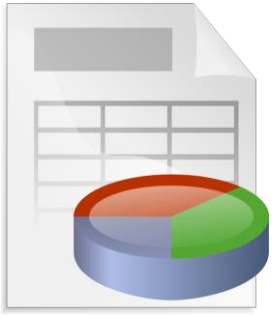
Cut-out Desks

OT Resources Developed

Evidence syntheses & journal articles

Handouts

Checklists



Data tracking forms

Toolkits

OT Resources Developed

Evidence Syntheses

Evidence for Practice (E4P) Syntheses:

- Minnesota Handwriting Assessment
- Management of Developmental Coordination Disorder
- Gait trainers

Critically Appraised Topics (CAT):

Association between:

- Autism & handwriting difficulties

Brief Evidence-Informed Assessment of Research (BEAR):

Effectiveness of:

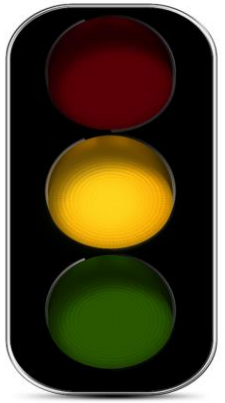
- Life skills training/transition planning
- Fine motor intervention

OT Resources Developed

Traffic Lighting

- Handwriting intervention
- Treatment for developmental coordination disorder (DCD)

- Inflatable cushions
- Therapy Balls
- Weighted Vests
- Standing Frames
- Gait Trainers
- Fine Motor Tremor
- Ataxia in Brain Injury
- Safety in Power Mobility
- Hypermobility Management



Evidence Centre

Occupational Therapy Knowledge Broker Initiative
Activities and Resources Developed (2011-20)

1) **Effectiveness of Handwriting Intervention:**
   - CAOT Conference (2012) poster referencing Traffic Light coding that describes the state of the evidence
   - Peer-reviewed journal article referencing Traffic Light synthesis of findings about the state of the evidence (2015)
   - Printing Like a Pro! Online Toolkit

2) **Pre-requisites for Printing Success:**
   - Appraisal of the literature followed by development of resources for educators:
     - Pre-requisites for Printing Success Handout
     - Pre-requisites for Printing Success Checklist

3) **Strategies for Motor Planning Challenges:**
   - Appraisal of the literature followed by development of resources for educators:
     - Motor Planning Strategies for Printing Challenges Handout
     - Motor Planning Strategies for Fine and Gross Motor Challenges Handout

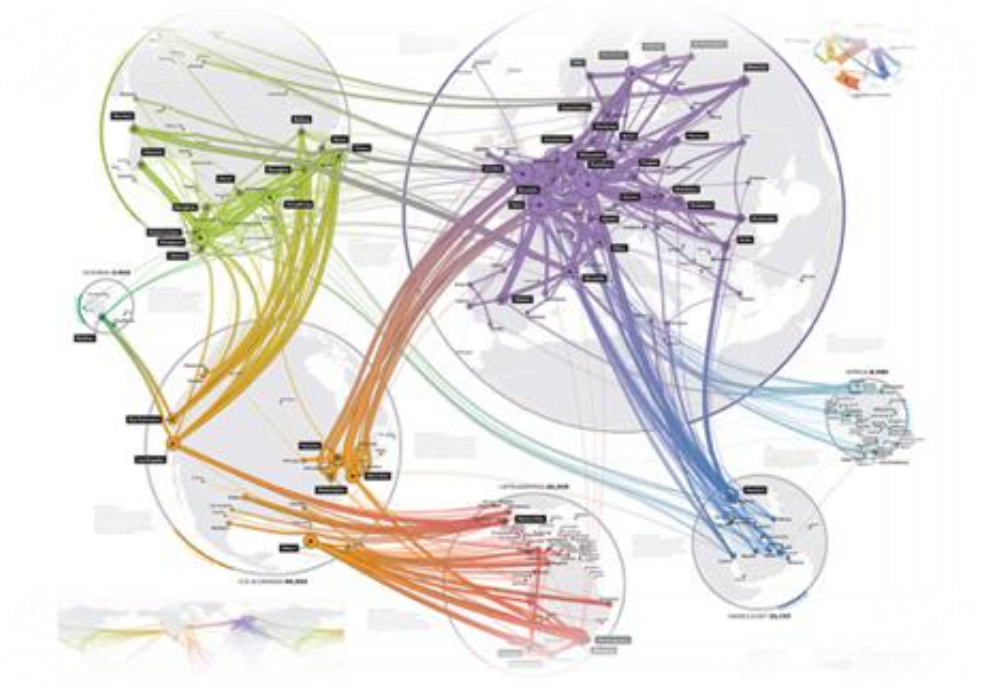
4) **Use of Inflatable Cushions in Classroom Seating:**
   - Appraisal of the literature followed by development of resources for educators:
     - Data Tracking Form (for informal outcome measurement)
     - Use of Inflatable Cushions in Classroom Seating Handout

5) **Use of Weighted Equipment:**
   - Traffic lighting the state of the evidence followed by development of resources for educators:
     - Data Tracking Form (for informal outcome measurement)

   For educators and parents:
     - Use of Weighted Vests Handout
     - Use of Weighted Lap Snakes Handout

6) **Handwriting Difficulties in Autism Spectrum Disorder:**
   - Critically Appraised Topic (CAT) evidence synthesis on the association between Autism and handwriting difficulties

Knowledge Translation and Dissemination



Practice Change

Handwriting intervention

Sensory interventions (inflatable cushions, therapy balls, weighted vests)

Safety in power mobility

Motor planning/ coordination & DCD

Life skills training & transition planning

Handwriting assessment

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