Updates on Pediatric Guideline Development and Implementation
Combined Sections Meeting 2016
Anaheim, California, February 17-20, 2016

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Disclosures

• I am an author of a Section on Pediatrics CPG but receive no financial benefits from that publication.
• I receive a stipend to train CPG developers for APTA
• I receive modest financial support to present at this meeting.
• I have no other conflicts of interest to declare, but I am biased toward the use of evidence to support clinical decision making.

Objectives

1. Describe the methods that clinicians and clinical settings are using to implement the SoP CPG on Congenital Muscular Torticollis.
2. Describe the status of the current CPGs in development.
3. Understand the methods used for developing CPGs for the SoP, and how they relate to international and Institute of Medicine standards.
4. Identify opportunities for participating in or supporting the work of CPG development.
What are CPGs?

“Clinical practice guidelines are statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options.”

IOM (2011)

Why are they useful?

• Systematic syntheses of relevant literature
• Indicates level of confidence in the body of literature
• Provides direction for best practice based on literature
• Assists with standardizing key aspects of care
• No time to read all the primary articles!
  – Not every clinician has access to all literature.
  – Most don’t have time to read all the literature.

6S hierarchy of pre-appraised evidence: Critical for searching for evidence.

<table>
<thead>
<tr>
<th>Type of evidence</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems</td>
<td>Computerized decision support, EHR</td>
</tr>
<tr>
<td>Summaries</td>
<td>Evidence based CPGs, and evidence based textbooks</td>
</tr>
<tr>
<td>Synopses of syntheses</td>
<td>EB Journal abstracts</td>
</tr>
<tr>
<td>Syntheses</td>
<td>Systematic Reviews</td>
</tr>
<tr>
<td>Synopses of studies</td>
<td>EB Journal abstracts</td>
</tr>
<tr>
<td>Primary Studies</td>
<td>Journal articles</td>
</tr>
</tbody>
</table>

APTA CPG Development Process

- Proposal reviewed by Section; includes topic, search, justification and budget.
- Approved Guideline Development Groups (GDGs) attend July training at APTA.
  - Set priorities or scope
  - Review GDG membership
  - Identify target audience
  - Identify Consumer and Stakeholder involvement
  - Conflict of interest considerations
  - Develop timeline for CPG steps
  - Identify methods of communication and materials organization

These are your colleagues, they could be you!!

CPG Blueprint – Outcome of Training Program

- Includes:
  - PICO/PECOT Question generation
    (Patient group, Intervention/Exposure, Comparison, Outcomes, Time)
  - Determine search terms and important outcomes, interventions, values and preferences
  - Inclusion/exclusion criteria for evidence
  - Determine processes for critical appraisal and summaries of evidence
  - Develop recommendations and determine strength grades based on evidence levels
- Develops a game plan for moving forward.

CPG Construction

- Validate the need for the CPG (surveys, focus groups, literature)
- Collect body of relevant evidence sources.
- Read and critically appraise literature
- Construct recommendations and summaries of supporting evidence, accounting for implementation and feasibility
- Peer review processes
  - Specific stakeholders (with possible revisions)
  - Public review (with possible revisions)
Pediatric CPG Updates

Final (Repeating) Stages

- Publication
- Dissemination and implementation
  - National Guideline Clearinghouse
  - PEDro
  - PTNow
  - Presentations of content
- Evaluate uptake and implementation
- Revision every 5 years or less (an ongoing process with formal revisions starting in yr. 3-4)
- Average time from start to finish: 3.5 years!!

APTA Strategic Plans & CPG Development Process

- Goal to support members’ knowledge translation of research into practice through the use of synthesized products
  - Clinical Summaries
  - Clinical Practice Guidelines
- Allocates budget to support CPG development
  - Training of GDGs (4 cohorts to date =>36 groups)
  - Grant funding for GDG applicants
- Supports meetings and ongoing consultation
- Designing patient registries based on CPG recommendations for measurement

Current Status of Pediatric Section CPGs

 Strategic Planning Goal: 5 CPGs in 5 years

- Completed CPGs
  - Congenital Muscular Torticollis (2013)
- CPGs in Development
  - Developmental Coordination Disorder
  - Gait Analysis for Children with Cerebral Palsy
  - Prevention of Spinal Deformities in Children with DMD (on hold)
- Topics under consideration…….Suggestions?
  - Plagiocephaly
  - Down Syndrome
  - Scoliosis
**What is the Impact of the 1st CPG?**

- **Uptake Survey Results**
  - Positive changes in practice
  - Clinician needs for tools
- **New research**
  - Validity and Reliability of the Classification of Severity
  - Case report on implementing the recommendations (Gutierrez & Kaplan, 2016)
- **What we don’t know yet:**
  - Impact on infant age of referral for PT
  - Impact on infant outcomes – episode of care, home compliance
  - Impact on cost of care – number of visits needed
  - More clinically efficient (and reliable) measurement approaches
  - How many of the research recommendations are being examined
- **What is needed**
  - Case or controlled studies of other approaches
  - Documentation hemi-neglect as a possible consequence

**Implementation/Uptake of the CMT CPG**

- Who is using them:
  - 78% APTA Pediatric Section members, 22% non-members
  - 98% provide direct care
  - 44% Hospital based
  - 24% Private clinic
  - 19% Home based services
  - 13% Early intervention center
  - 27% teach entry level PT students

**Action Statements - Results on History & Screening**

<table>
<thead>
<tr>
<th>Action Statement</th>
<th>Before 10/2013</th>
<th>After 10/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Document all items all the time</td>
<td>41%</td>
<td>70%</td>
</tr>
<tr>
<td>4. Screen infants, always, all items</td>
<td>36%</td>
<td>58%</td>
</tr>
<tr>
<td>4. Screen &lt; 5 items or rarely screen</td>
<td>18%</td>
<td>2%</td>
</tr>
<tr>
<td>5. Refer for red flags (always + frequent)</td>
<td>81%</td>
<td>89%</td>
</tr>
<tr>
<td>6. Request images (frequently + always)</td>
<td>38%</td>
<td>66%</td>
</tr>
</tbody>
</table>

Changes of >15%
### Action Statements- Examination & Classification

<table>
<thead>
<tr>
<th></th>
<th>Before 10/2013</th>
<th>After 10/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posture – Always</td>
<td>80%</td>
<td>91%</td>
</tr>
<tr>
<td>Bilateral passive cervical rotation &amp; lateral flexion – Always</td>
<td>80%</td>
<td>90%</td>
</tr>
<tr>
<td>Bilateral active cervical rotation &amp; lateral flexion</td>
<td>80%</td>
<td>94%</td>
</tr>
<tr>
<td>P/AROM Extremities/spine -Always</td>
<td>61%</td>
<td>80%</td>
</tr>
<tr>
<td>Pain-Always</td>
<td>69%</td>
<td>84%</td>
</tr>
<tr>
<td>Skin integrity-Always</td>
<td>49%</td>
<td>67%</td>
</tr>
<tr>
<td>Cranial asymmetry -Always</td>
<td>68%</td>
<td>91%</td>
</tr>
<tr>
<td>Classify level of severity</td>
<td>70% Never</td>
<td>21% Rarely</td>
</tr>
</tbody>
</table>

### Action Statement - Assess Activities

<table>
<thead>
<tr>
<th>Activity/Developmental status – Always</th>
<th>Before 10/2013</th>
<th>After 10/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternating bottle/breast feeding sides</td>
<td>48%</td>
<td>68%</td>
</tr>
<tr>
<td>Sleep positions – always</td>
<td>64%</td>
<td>80%</td>
</tr>
<tr>
<td>Time spent prone – always</td>
<td>86%</td>
<td>94%</td>
</tr>
<tr>
<td>Time in equipment</td>
<td>71%</td>
<td>86%</td>
</tr>
</tbody>
</table>

### Action Statement - Determine Prognosis

<table>
<thead>
<tr>
<th>Determine prognosis-Always + Frequently</th>
<th>Before 10/2013</th>
<th>After 10/2013</th>
</tr>
</thead>
</table>

### Action Statement - 1st Choice Interventions

<table>
<thead>
<tr>
<th></th>
<th>Before 10/2013</th>
<th>After 10/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROM to neck – Always</td>
<td>76%</td>
<td>83%</td>
</tr>
<tr>
<td>AROM to neck/trunk – Always</td>
<td>78%</td>
<td>88%</td>
</tr>
<tr>
<td>Symmetrical movement – Always</td>
<td>84%</td>
<td>94%</td>
</tr>
<tr>
<td>Environmental adaptations – Always</td>
<td>76%</td>
<td>85%</td>
</tr>
<tr>
<td>Parent/Caregiver Education- Always</td>
<td>94%</td>
<td>98%</td>
</tr>
</tbody>
</table>

### Action Statement - Supplemental Interventions

<table>
<thead>
<tr>
<th>Use of supplemental interventions as 2nd choice - Always + Frequently</th>
<th>Before 10/2013</th>
<th>After 10/2013</th>
</tr>
</thead>
</table>
**Pediatric CPG Updates**

### Action Statements - Consultations, Outcomes & Follow-Up

<table>
<thead>
<tr>
<th>Action Statement</th>
<th>Before 10/2013</th>
<th>After 10/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refer for consults for lack of progress – Always</td>
<td>43%</td>
<td>68%</td>
</tr>
<tr>
<td>Document outcomes at discharge per criteria – Always</td>
<td>49%</td>
<td>76%</td>
</tr>
<tr>
<td>Provide follow-up screening</td>
<td>40% - Always + Frequently</td>
<td>55% - Always + Frequently</td>
</tr>
<tr>
<td></td>
<td>29%-Never</td>
<td>14%-Never</td>
</tr>
<tr>
<td></td>
<td>Changes of &gt;15%</td>
<td></td>
</tr>
</tbody>
</table>

### Implementation: Align documentation with recommended measures.

<table>
<thead>
<tr>
<th>Action</th>
<th>Within Own Practice</th>
<th>Beyond Practice Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haven’t tried to change forms or share recommendations for documentation</td>
<td>16%</td>
<td>39%</td>
</tr>
<tr>
<td>Tried but not effective</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>Minimally effective</td>
<td>7%</td>
<td>19%</td>
</tr>
<tr>
<td>Very effective</td>
<td>38%</td>
<td>38%</td>
</tr>
<tr>
<td>Already meeting criteria</td>
<td>38%</td>
<td>NA</td>
</tr>
</tbody>
</table>

### Implementation: Sharing the CPG with MDs, midwives, or other health care providers who have contact with newborns.

<table>
<thead>
<tr>
<th>Action</th>
<th>Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haven’t tried to share the CPG recommendations</td>
<td>67%</td>
</tr>
<tr>
<td>Not effective at all</td>
<td>5%</td>
</tr>
<tr>
<td>Minimally effective</td>
<td>17%</td>
</tr>
<tr>
<td>Very effective</td>
<td>11%</td>
</tr>
</tbody>
</table>

Need to consider how we impact our referral sources!
What would help with implementation?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>63%</td>
<td>A standardized documentation template to adopt in your practice.</td>
</tr>
<tr>
<td>26%</td>
<td>Participation in a registry of infants with CMT who receive PT exams and/or intervention.</td>
</tr>
<tr>
<td>85%</td>
<td>A parent friendly brochure that explains the recommended actions.</td>
</tr>
<tr>
<td>48%</td>
<td>Continuing education courses on how to perform specific tests and measures identified in the CPG.</td>
</tr>
<tr>
<td>37%</td>
<td>Continuing education courses on evidence-based practice and the rigorous methods used for CPGs.</td>
</tr>
<tr>
<td>28%</td>
<td>Virtual, real time journal club discussions about how to implement the CPG.</td>
</tr>
</tbody>
</table>

Template available in PTJ
Knowledge Translation Committee to address brochure.

Why are these data important?

- Guidelines are expensive to produce (time and money)
- SoP supports the CPG groups – need to know effectiveness
- Clinicians in the survey
  - Increased implementation of all recommendations.
  - Identified items that would facilitate implementation
  - Need assistance with knowledge translation
    - 38% have effectively changed exam documentation but 41% haven’t tried.
    - 22% effectively implementing long term follow-up but 54% have not tried.
    - 11% have effectively disseminated the CPG to referral sources, but 67% have not tried.
- Need to learn more about how best to effect changes in practice.

What is on the horizon?

- [Image of a beach]
Pediatric CPG Updates

CPG on Developmental Coordination Disorder

- Team Leader:
  - Lisa Dannemiller, PT, DSc, PCS
- Clinical Experts
  - Jeannemarie Fagan, PT, DPT, PCS
  - Erin Iverson PT, DPT, PCS
  - Adrah Leitner PT, DPT
  - Melinda Mueller, PT, DPT, PCS
- Methodologist
  - Sandra L. Kaplan, PT, DPT, PhD
- Trained in July, 2014

Major Tasks Accomplished from 12/10/14 to 11/10/15

- PT Survey (5 items that >50% felt were critically important: n=175)
  - Current definition of the diagnosis of DCD
  - Differential diagnostic tests performed by a PT
  - Functional activities that should be measured
  - Participation domains that should be assessed
  - Intervention type and methods for PT treatment
- Survey of Physicians (4 items that >40% felt were critically important: n=7)
  - Current definition of the diagnosis of DCD
  - Importance of early diagnosis
  - Typical impairments or limitations associated with DCD
  - Quick reference guide for recommendations and interventions

Pediatric CPG Updates - Continued

- Established advisory board (Occupational therapist, Psychologist, Physical education teacher, Special education teacher, Parent, Physician)
- Extensive literature search
- Identified intervention articles for review (inclusion/exclusion)
- Recruited reviewers
- Reviewer training on the APTA CAT-EI via webinar
- Established reliability with review of EACD CPG and systematic review
- Attended EACD revision meeting in France
- Presented to physician group in CO
- Beginning article draft
- Critical evidence based definitions of DCD established
Pediatric CPG Updates

CPG on Developmental Coordination Disorder

Continued:

- Refined purposes:
  - To systematically appraise the current peer-reviewed literature and make recommendations based on the quality of the research for the physical therapy examination and intervention of individuals with DCD.
  - To inform the community of families, educators and clinicians about recommendations related to physical therapy examination and intervention for individuals with DCD.

Sample article tracking sheet

Continued:

- Creation of article spreadsheet

2014 Plan and Progress
Pediatric CPG Updates

2015 Plan and Progress

- Meet with advisory group (parents, special education teacher, 2 adaptive PE teachers, psychologist, OT, MD)
- Complete critical appraisers' reliability screen
- Critical appraisals using CAT-EI
- GDG team review articles with info entered onto spreadsheet
- Parent survey
- Begin to synthesize other articles about characteristics, diagnosis, co-occurring conditions
- Engage SoP Knowledge Translation Group about support
- Work with BridgeWiz to develop recommendations
- Continue draft of CPG
- Plan 1 day working retreat, Nov. 2016

Pediatric CPG Updates

CPG on Developmental Coordination Disorder

Upcoming tasks:
- Meet with advisory group (parents, special education teacher, 2 adaptive PE teachers, psychologist, OT, MD)
- Complete critical appraisers’ reliability screen
- Critical appraisals using CAT-EI
- GDG team review articles with info entered onto spreadsheet
- Parent survey
- Begin to synthesize other articles about characteristics, diagnosis, co-occurring conditions
- Engage SoP Knowledge Translation Group about support
- Work with BridgeWiz to develop recommendations
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Pediatric CPG Updates

The Role of Gait Analysis in the Management of Children With Cerebral Palsy

American Physical Therapy Association
Section on Pediatrics
Clinical Practice Guideline Development Group

Trained July 2015

sopcpg@gmail.com
Gait Analysis GDG Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Role or Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ellen M. Godwin PT, PhD, PCS</td>
<td>Team Leader</td>
</tr>
<tr>
<td>Long Island University</td>
<td></td>
</tr>
<tr>
<td>Amy Winter Bodkin PT, PhD, PCS</td>
<td>Team Member</td>
</tr>
<tr>
<td>Children's Hospital Colorado</td>
<td>Content Expertise</td>
</tr>
<tr>
<td>Joseph J. Krzak PT, PhD, PCS</td>
<td>Team Member</td>
</tr>
<tr>
<td>Midwestern &amp; Shriners Chicago</td>
<td>Content Expertise</td>
</tr>
<tr>
<td>Rebecca States, MA, PhD</td>
<td>Team Member</td>
</tr>
<tr>
<td>Long Island University</td>
<td>Systematic Review Expertise</td>
</tr>
<tr>
<td>Yasser Salem, PT, PhD, PCS, NCS</td>
<td>Team Member</td>
</tr>
<tr>
<td>University of North Texas</td>
<td>Systematic Review Expertise</td>
</tr>
<tr>
<td>Sheryl Comet PT, DPT, OCS</td>
<td>Team Member</td>
</tr>
<tr>
<td>Long Island University</td>
<td></td>
</tr>
</tbody>
</table>

Recent Group Activity

- Attended the APTA CPG Development workshop in July 2015 and completed our workbook/blueprint plan
- Bi-Weekly conference calls on Adobe Connect
- Zotero reference manager – shared by group
- Survey development
- Review of appraisal guides / checklists
- Cooperation of other professional memberships
  - AACPDM – American Academy of CP and Developmental Medicine
  - GCMAS – Gait and Clinical Movement Analysis Society

Survey Development

- As a result of our discussions at the workshop we determined we needed a survey to gain information on:
  - Referral patterns: who, when, where, why, documentation needed prior to gait analysis
  - Components of the gait study: What do most labs include, Video, 3-D, EMG
  - Review and Interpretation of Data: who does it
  - Documentation: Who writes it, what is included, format, time frame
  - Post gait analysis: what happens next
- Two versions of the survey:
  - One for those who work in a gait lab
  - One for those who refer to gait labs, including MD’s
### Survey Development

- Survey is written and in review process
  - Completion expected December 2015
- IRB is being submitted at LIU
  - Will be submitted at January 2016 IRB meeting (December meeting was moved up and we missed the deadline for submission)
- Survey will be piloted at the 12 Shriners gait analysis laboratories
  - January – February 2016
- Survey will be fully distributed to the following groups:
  - APTA Section on Pediatric Members
  - AACPDM Members
  - GCMAS Members
  - February – March 2016

### Next Steps

- Develop literature grid / evidence table
- Practice with Critical Appraisal Tool
  - To establish reliability among group members
- Obtain BridgeWiz and learn program
- Develop PICO questions

### APTA CPG Teams Underway

- Hip Fracture
- Acute Total Knee Replacement
- Post Acute Total Knee Replacement
- Post Concussion Management
- Locomotor training - Neuro impairments
- Antepartum Pelvic Pain
- Post Partum Pelvic Pain
- Venous Ulcer
- Developmental Coordination Disorder
- DM Foot Ulcer
- Aquatics for Hip OA
- Venous Thromboembolism
- Carpal Tunnel Syndrome
- Upper Quadrant Lymphedema
- Lateral Epicondylosis
- Distal Radius Fracture
- Exercise post breast cancer
- Chronic Heart Failure
- Peripheral Vestibular Hypofunction
- Core set of outcome measures for Neuro pts.
- Urinary Incontinence
- Constipation
- Osteoporosis
- Falls management
- Gait analysis for CP
- Achilles Tendonopathy Revision
Growing Body of CPG Resources: Multidiscipline Repositories

- National Guidelines Clearinghouse [www.guideline.gov]
- AHRQ [http://www.ahrq.gov/clickcpgstx.htm]
- SIGN - Scottish Intercollegiate Guidelines Network [http://www.sign.ac.uk/]
- Guidelines International Network [http://www.g-i-n.net/library]
- Canadian Medical Association [http://www.cma.ca/cpgs/]
- PEDro [http://www.pedro.org.au/]
- CDC [http://stacks.cdc.gov/browse?parentid=cdc%3a100&pub=cdc%3a100&type=1&facetRange=960]

This is just a partial list of a growing set of repositories.

More Resources: Sample Discipline Specific CPG Sites

- PEDro – Physiotherapy Evidence Database
  - [http://www.pedro.org.au/]
- Orthopaedic Section - JOSPT
  - [http://www.jospt.org/issues/type.3,status.execute/collections.asp]
- Pediatric Section
  - [http://www.orthopt.org/content/c/0nternational_classication_of_functioning_and_disability]
- American Pain Society
  - [http://www.ampainsoc.org/pub/cp_guidelines.htm]
- Cincinnati Children’s Hospital
  - [http://www.cincinnatichildrens.org/svc/alpha/h/health-policy/guidelines.htm]
- Kaiser Permanente
  - [http://www.kaiserpermanente.kansascity.emergency_pediatricclinicalguidelines.html]
- American Academy of Pediatrics
  - [http://aappolicy.aappublications.org/practice_guidelines/index.dtl]

Determining which CPGs are Trustworthy

- Inst. of Medicine Standards for Developing Trustworthy Clinical Practice Guidelines
- 8 Standards to strive for:
  - Establish transparency
  - Manage Conflicts of Interest
  - GOGS composition
  - CPGs are based on SIRs
  - Evidence foundations underlying ratings of strength of recommendations
    - Rationale
    - Benefits and harms
    - Aggregate quality of the evidence
    - Role of values, opinion and differences of opinion
    - Precision of recommendation wording
    - External review processes
    - Updating requirements
AGREE II
CPG Critical Appraisal Tool

- Internationally accepted tool to assess the quality and reporting of CPGs
- 23 items to rate that provides an overall score
- Free online training for reliability

AGREE II Items

- Scope and purpose (3 questions)
- Stakeholder involvement (3 questions)
- Rigor of development (8 questions)
- Clarity of presentation (3 questions)
- Applicability (4 questions)
- Editorial independence (2 questions)

Critical Appraisal of Primary Intervention Articles

- Critical appraisal of primary studies required for
  - Systematic review of literature
  - Weighting of the levels of evidence for relevant outcomes
  - Determination of the strength of supporting literature for recommendations
- CATs are more reliable than informal appraisal processes (Crowe, Sheppard, & Campbell, 2011)
- The process is more structured, standardized, and straight-forward. (Raslich, 2007)
- CATs based on empirical, verified criteria can improve the focus on risks of bias (Moyer, 2005)
- Improves communication among raters on a guideline development team. (Yost et al, 2014)
### Challenges of CATs for Primary Articles
- Many instruments exist! But they lack standardization. (Moyer, 2005; Rasiah, 2007)
- Significant item variability across tools (Katrak, 2004; Glenny, 2005; Armjo-Olivo, 2013)
- Often based on consensus (Armjo-Olivo, 2013) but lack reliability & validity. (Crowe, 2011)
- Tool may or may not be applicable to your field or your patient population. (MacDermid, 2009)
- Different quality rating analyses will be obtained based on the tool that is used to appraise literature (Jüni, 1999; Moyer, 2005; Armjo-Olivo, 2013)
- Need to appraise individual outcome measures (McClimans, 2013)
- APTA CPG groups wanted 1 CAT for all groups to use.

### Brief History of the APTA CAT-EI
- Critical Appraisal of Experimental Intervention Studies
- 36 CPG groups trained over 4 years by APTA.
- 2012 - 1st groups requested a single critical appraisal form.
- 2013 – Explored options for adoption or adaptation.
  - Compiled 21 tools and compared content.
  - None separated outcomes from design, items inconsistent.
- 2014 – Finalized review
  - Selected items to appraise.
  - Form designed to separate study methods from outcomes.
- 2015 - Initiated study to establish content validity and inter-tester reliability

### Overall Organization of the APTA CAT-EI
- Introduction and instructions
- 3 parts
  - **Part A** - Study context, purpose, location, IRB
  - **Part B**
    - Items 1-11: Research methods and rigor
    - Items 12-19: Outcome measure quality
    - Quality Assessment
  - **Part C**: Impact
- Scoring instructions for each ‘yes’, ‘no’ or ‘n/a’ precede the tool.
Study Design to Determine Validity/Reliability

- Phase 1 (n=46)
  - Volunteers read 2 articles
  - CAT-EI completed on each
  - Feedback form that rated clarity of items and usefulness
- Data analysis and revisions
- Phase 2 (n=27)
  - Random assignment of either 1st or 2nd article
  - CAT-EI completed on assigned article
  - Feedback form that rated clarity of items and usefulness

Content Validity - Phase 1
- Feedback ratings on the 19 questions

<table>
<thead>
<tr>
<th>(n=45)</th>
<th>Clear</th>
<th>Somewhat Clear</th>
<th>Not clear</th>
<th>No answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarity</td>
<td>73%</td>
<td>14.5%</td>
<td>2%</td>
<td>10%</td>
</tr>
<tr>
<td>Include</td>
<td>Neutral</td>
<td>Don't include</td>
<td>No Answer</td>
<td></td>
</tr>
<tr>
<td>Appropriate</td>
<td>77%</td>
<td>9%</td>
<td>&lt;1%</td>
<td>13%</td>
</tr>
</tbody>
</table>

- Revisions to the tool addressed comments and items 12,13,14,15,19

Content Validity - Phase 2
- Feedback ratings on the 19 questions
  - Clarity of Item
  - Appropriate to Include

<table>
<thead>
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<th>(n=45)</th>
<th>Clear</th>
<th>Somewhat Clear</th>
<th>Not clear</th>
<th>No answer</th>
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<tr>
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<td>81%</td>
<td>13% (1.5)</td>
<td>1% (1)</td>
<td>4%</td>
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<tr>
<td>Include</td>
<td>Neutral</td>
<td>Don't include</td>
<td>No Answer</td>
<td></td>
</tr>
<tr>
<td>Appropriate</td>
<td>78%</td>
<td>8% (1)</td>
<td>2% (1)</td>
<td>9%</td>
</tr>
</tbody>
</table>

- Further revisions were made to clarify 'yes/no/na' choices.
Inter-tester Reliability

<table>
<thead>
<tr>
<th>Phase</th>
<th>N</th>
<th>Article</th>
<th>ICC(3,k) Single Measure</th>
<th>ICC(3,k) Average Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>46</td>
<td>1</td>
<td>.341</td>
<td>.960</td>
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<tr>
<td></td>
<td>46</td>
<td>2</td>
<td>.650</td>
<td>.988</td>
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<tr>
<td>2</td>
<td>13</td>
<td>1</td>
<td>.816</td>
<td>.985</td>
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<tr>
<td></td>
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<td>2</td>
<td>.828</td>
<td>.985</td>
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</table>

Phase 1 single measure absolute matching was weak-moderate.
Phase 2 single measure absolute matching is strong.
Average measures were very strong through both phases.

APTA CAT-EI Summary

- The APTA CAT-EI has both content validity and strong inter-tester reliability.
- It allows for separate evaluations of bias for each outcome of interest.
- It provides explanations for the intermediate user who is familiar with the terminology of research and EBP methods.
- It is not a generic tool – designed for experimental studies with 2 or more groups.
- Pediatric Section CPGs will use this for their experimental intervention articles (as are other CPG groups)
- Critical appraisers would be trained to use this tool.

Membership Support!

How YOU can help with CPG development!

- Critical appraisal of literature
  - Requires training and reliability testing by reading/rating an article
  - Meet threshold, may contribute to literature appraisals for CPGs
- DCD reviews are underway
- Gait analysis group is recruiting
- CMT revisions to start soon
- Invited stakeholder review
- Public stakeholder review – CRITICAL
- Promotion of published CPGs to colleagues
- Participation in ‘uptake’ studies
More Opportunities for Participation

- Implementation of published CPGs
  - Make changes in practice
  - Provide us with feedback: what works, doesn’t work
  - Share products developed
- Research on outcomes of best practice adoption
  - Publish case or outcome studies (pre/post implementation of recommendations)
- Identification of next critical topics or PICO questions
- Participation on or leadership of a team or a revision team
  Complete the Volunteer Form!!

Thank you!
Questions?
kaplansa@shrp.rutgers.edu

Want a peak at the CAT-EI?

References

<table>
<thead>
<tr>
<th>References</th>
<th>Pediatric CPG Updates</th>
</tr>
</thead>
</table>