

## Best Evidence Statement (BEST)

**Date published/posted: June 29, 2009**

### **Outcomes assessment tool for children with Autism Spectrum Disorder (ASD)**

#### **Clinical Question**

- P** (population/problem): Among children with Autism Spectrum Disorder (ASD) up to 9 years of age,  
**I** (intervention): is the Canadian Occupational Performance Measure (COPM) a reliable and valid tool to measure changes  
**O** (outcome): in occupational performance and caregiver satisfaction?

#### **Target Population**

##### **Inclusions:**

- Children up to 9 years of age who present with a diagnosis of ASD according to the DSM-IV criteria

##### **Exclusions:**

- Children with a diagnosis of the following subcategories of ASD: Rett Syndrome or Childhood Disintegrative Disorder

#### **Recommendations**

1. It is recommended that the Canadian Occupational Performance Measure (COPM) be used to assess change in occupational performance and caregiver satisfaction (*Carswell 2004 [1b], Law 2005 [5], Local Consensus [5]*) and
  - a. that a licensed and trained occupational therapist administer the COPM to the caregiver of a child with ASD (*Law 2005 [5], Local Consensus [5]*) and
  - b. that the COPM be administered within two months of initiating treatment (*Local Consensus [5]*).
2. It is recommended that the COPM be re-administered at a time set by the caregiver and the therapist at the initial administration (*Law 2005 [5]*).

**Note:** "The reassessment may take place near the end of therapy, or when significant change has occurred" (*Law 2005 [5]*).

#### **Discussion/summary of evidence**

The COPM was developed to detect change in self perception of occupational performance and satisfaction over time in persons with a variety of disabilities and at different developmental stages (*Law 2005 [5]*). In a systematic review, Carswell states that the COPM is a valid, reliable and clinically useful tool to measure change in occupational performance and client/caregiver satisfaction with the outcome of therapy (*Carswell 2004 [1b]*). Since administration requires a structured interview with the client, the developers assert that the caregiver can serve as a proxy for children under eight years of age or for individuals with significant cognitive deficits (*Canadian Association of Occupational Therapy Website [5]*). The COPM also assists the therapist with the development of a focused treatment plan by exploring family concerns, prioritizing caregiver goals and identifying the priorities for intervention (*Carswell 2004 [1b]*). The body of evidence for the use of the COPM with adults who have various diagnoses is high. McKinnon studied 107 adults, focusing on client values and satisfaction with therapy. Results demonstrated the COPM to be useful for measuring change in occupational performance and client satisfaction (*McKinnon 2000 [4b]*). The body of evidence for use of the COPM with children is low. However, the COPM helps the caregiver identify and prioritize the client problems in areas of occupational performance and helps the therapist measure changes associated with therapy. Watling proposes that progress during therapy for individuals with ASD is demonstrated, in part, by improved occupational performance and client satisfaction (*Watling 2005 [5]*), which supports the use of the COPM with individuals with ASD and assists therapists with identifying caregiver goals.

**Reliability and validity for the COPM:**

Test-retest reliability ranges from 0.84 to 0.92 for 3 studies using the COPM in patients with stroke, schizophrenia, and chronic obstructive pulmonary disease (COPD). Inter-rater reliability is not testable because each client determines a score and list of problems according to their situation (Carswell 2004 [1b]). Three types of validity have been evaluated, including content, criterion, and construct (Asher 2007 [5]).

**Note:** Research studies conducted to assess reliability and validity of the COPM did not involve children with autism (Law 2005 [5]).

**Health Benefits, Side Effects and Risks**

There are no known side effects or risks found using the COPM.

**References/Citations** (evidence grade in [ ]; see *Table of Evidence Levels following References*)

**Note:** When using the electronic version of this document,  indicates a hyperlink to a PubMed abstract. A hyperlink following this symbol goes to the article PDF when the user is within the CCHMC network.

1. Asher, I. E.: Occupational therapy assessment tools: An annotated index 2007, [5]  \_\_\_\_\_.
2. Canadian Association of Occupational Therapy Website. Accessed 01/08/2008 from <http://www.caot.ca/copm/index.htm> [5] .
3. Carswell, A.; McColl, M. A.; Baptiste, S.; Law, M.; Polatajko, H.; and Pollock, N.: The Canadian Occupational Performance Measure: a research and clinical literature review. *Can J Occup Ther*, 71(4): 210-22, 2004, [1b] \_\_\_\_\_ .
4. Law, M.; Baptiste, S.; Carswell, M.; McColl, M.; Polatajko, H.; and Pollock, N.: Canadian Occupational Performance Measure. Report for, 2005, [5] .
5. Local Consensus: at the time the BEST was developed. [5].
6. McKinnon, A.: Client values and satisfaction with occupational therapy. *Scandinavian Journal of Occupational Therapy* 7(23): 99-106, 2000, [4b] .
7. Watling, R.; Tomchek, S.; and LaVesser, P.: The scope of occupational therapy services for individuals with autism spectrum disorders across the lifespan. *Am J Occup Ther*, 59(6): 680-3, 2005, [5] \_\_\_\_\_ .

**Note:** Full tables of evidence grading system available in separate document:

- [Table of Evidence Levels of Individual Studies by Domain, Study Design, & Quality](#) (abbreviated table below)
- [Grading a Body of Evidence to Answer a Clinical Question](#)
- [Judging the Strength of a Recommendation](#) (abbreviated table below)

**Table of Evidence Levels** (see note above)

| <i>Quality level</i> | <i>Definition</i>  |
|----------------------|--|
| 1a† or 1b†           | Systematic review, meta-analysis, or meta-synthesis of multiple studies            |
| 2a or 2b             | Best study design for domain   |
| 3a or 3b             | Fair study design for domain   |
| 4a or 4b             | Weak study design for domain   |
| 5                    | Other: General review, expert opinion, case report, consensus report, or guideline |

†a = good quality study; b = lesser quality study

**Table of Recommendation Strength** (see note above)

| <i>Strength</i>  | <i>Definition</i>   |
|--|---|
| “Strongly recommended”   | There is consensus that benefits clearly outweigh risks and burdens (or visa-versa for negative recommendations). |
| “Recommended”  | There is consensus that benefits are closely balanced with risks and burdens.                                     |
| No recommendation made   | There is lack of consensus to direct development of a recommendation.   |
| <b>Dimensions:</b> In determining the strength of a recommendation, the development group makes a considered judgment in a consensus process that incorporates critically appraised evidence, clinical experience, and other dimensions as listed below.   |   |
| <ol style="list-style-type: none"> <li>1. Grade of the Body of Evidence (see note above)</li> <li>2. Safety / Harm</li> <li>3. Health benefit to patient (<i>direct benefit</i>)</li> <li>4. Burden to patient of adherence to recommendation (<i>cost, hassle, discomfort, pain, motivation, ability to adhere, time</i>)</li> <li>5. Cost-effectiveness to healthcare system (<i>balance of cost / savings of resources, staff time, and supplies based on published studies or onsite analysis</i>)</li> <li>6. Directness (<i>the extent to which the body of evidence directly answers the clinical question [population/problem, intervention, comparison, outcome]</i>)</li> <li>7. Impact on morbidity/mortality or quality of life</li> </ol> |   |

## Supporting information

### Introductory/background information

The COPM was originally developed in 1991 as a result of quality assurance guidelines for occupational therapy practice in Canada. The National Health Research Development Program and the Canadian Occupational Therapy Foundation funded a joint project to develop an outcome measure for occupational performance. Upon examining 136 measures, none were found to meet their list of criteria, thus the COPM was developed (*Law 2005 [5]*). Currently the COPM has been translated into 20 languages and is used by occupational therapists in over 35 countries (*Carswell 2004 [1b]*).

Client satisfaction is playing an increasingly important role in healthcare services. The COPM was developed to detect change in self-perception of occupational performance and satisfaction over time. It was intended to be administered by occupational therapists to persons with a variety of disabilities and at different developmental stages (*Law 2005 [5]*). The Canadian Occupational Therapy Association states that “children younger than eight years have difficulty with the self assessment required to complete the COPM, i.e. identifying where they are experiencing difficulties.... [and] The COPM cannot be used directly with very young children or individuals with severe cognitive deficits. In these cases, proxies [caregivers] will be necessary (*Canadian Association of Occupational Therapy Website [5]*).”

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### **Search strategy**

#### **1. Databases**

OVID MEDLINE

OVID CINAHL

EBSCOhost

[www.otseeker.com](http://www.otseeker.com)

[www.pedro.fhs.usyd.edu.au](http://www.pedro.fhs.usyd.edu.au)

[www.otcats.com](http://www.otcats.com)

[www.tripdatabase.com](http://www.tripdatabase.com)

Can Child - <http://www.canchild.ca/>

**2. Search Terms:** Autism, outcomes, occupational therapy, COPM, Canadian Occupational Performance Measure, Canadian Journal of Occupational therapy, pediatrics.

**3. Limits and Filters:** English.

### **Applicability issues**

**Cost:** the time it takes to administer the COPM can vary. On average it takes 30 minutes depending upon several factors such as: personality of the caregiver (e.g. open/talkative vs. reserved and quiet) and awareness of issues and concerns that the caregiver has about the child.

**Insight:** if the client or caregiver lacks insight into their situation, the COPM would be difficult to administer (*Carswell 2004 [1b]*).

**Known conflicts of interest:** *Conflict of interest declarations were completed as stated above and none were found.*

Copies of this Best Evidence Statement (BEST) are available online and may be distributed by any organization for the global purpose of improving child health outcomes. Website address: <http://www.cincinnatichildrens.org/svc/alpha/h/health-policy/ev-based/default.htm>

Examples of approved uses of the BEST include the following:

- copies may be provided to anyone involved in the organization's process for developing and implementing evidence-based care;
- hyperlinks to the CCHMC website may be placed on the organization's website;
- the BEST may be adopted or adapted for use within the organization, provided that CCHMC receives appropriate attribution on all written or electronic documents; and
- copies may be provided to patients and the clinicians who manage their care.

Notification of CCHMC at [HPCEInfo@cchmc.org](mailto:HPCEInfo@cchmc.org) for any BEST adopted, adapted, implemented or hyperlinked by the organization is appreciated.

*Additionally, for more information about CCHMC Best Evidence Statements and the development process, contact the **Division of Occupational Therapy and Physical Therapy** at: 513-636-4651 or [OTPT@cchmc.org](mailto:OTPT@cchmc.org)*

**Note**

**This Best Evidence Statement addresses only key points of care for the target population; it is not intended to be a comprehensive practice guideline. These recommendations result from review of literature and practices current at the time of their formulation. This Best Evidence Statement does not preclude using care modalities proven efficacious in studies published subsequent to the current revision of this document. This document is not intended to impose standards of care preventing selective variances from the recommendations to meet the specific and unique requirements of individual patients. Adherence to this Statement is voluntary. The clinician in light of the individual circumstances presented by the patient must make the ultimate judgment regarding the priority of any specific procedure.**

**Reviewed by** Clinical Effectiveness