**Results of Topic Selection Process & Next Steps**

The nominator is interested in a new evidence review on eating disorders to improve treatment decisions and quality of care.

We identified an in-process clinical practice guideline informed by systematic reviews covering the scope of the nomination, therefore, a new review would be duplicative of an existing product. No further activity on this nomination will be undertaken by the Effective Health Care (EHC) Program.

**Topic Brief**

**Topic Number and Name:** Eating Disorder Treatments, #840

**Nomination Date:** 2/7/2019

**Topic Brief Date:** 6/27/2019

**Authors**
Christine Chang

**Conflict of Interest:** None of the investigators have any affiliations or financial involvement that conflicts with the material presented in this report.
Background

- Eating disorders encompass a number of conditions, including
  - Anorexia nervosa, characterized by a restriction of energy intake leading to a significantly low body weight, and accompanied by a fear of gaining weight and disturbance in one’s body image.\(^1\) The lifetime prevalence of anorexia nervosa in adults was 0.6%.\(^2\)
  - Binge eating disorder characterized by recurrent and persistent episodes of binge eating associated with distress about binge eating, and absence of compensatory behaviors.\(^1\) Estimated prevalence of binge eating disorder was 1.2% in 2003.\(^2\)
  - Bulimia nervosa characterized by recurrent episodes of binge eating, recurrent inappropriate behavior to prevent weight gain, and self-evaluation unduly influenced by body shape or weight.\(^1\) Prevalence of bulimia nervosa was 0.3% in 2003\(^2\)
- The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) was published in 2013.\(^1\)
  It included
  - Changes to the diagnostic criteria for anorexia nervosa and bulimia nervosa;
  - Established binge eating disorder as an official diagnosis;
  - Re-named eating disorders not otherwise specified as unspecified feeding or eating disorders;
  - Added avoidant/restrictive food intake disorder, rumination, and pica.
- A review of studies\(^3\) comparing prevalence of different eating disorders based on differences in diagnostic criteria between DSMIV-TR and DSM 5 have found
  - Decrease in EDNOS
  - Increases in anorexia nervosa, bulimia nervosa, and binge eating disorder
- Treatments vary by eating disorder type. Generally these include pharmacologic and nonpharmacologic treatments.
- The nominator expresses concerns about effectiveness of treatments using the new diagnostic criteria for the different eating disorders.

Key Questions and PICOs

The key questions for this nomination are:

1. What is the effectiveness of treatments for anorexia nervosa?
   a. Do outcomes vary by level of care?
   b. Do outcomes vary by patient characteristics?
2. What is the effectiveness of treatments for bulimia nervosa?
3. What is the effectiveness of treatments for binge-eating disorder
4. What is the effectiveness of treatments for avoidant/restrictive food intake disorder?
5. What is the effectiveness of treatments for other specified feeding or eating disorder?

To define the inclusion criteria for the key questions, we specify the population, interventions, comparators, outcomes, timing, and setting (PICOTS) of interest (Table 1).
Table 1. Key Questions and PICOTS

<table>
<thead>
<tr>
<th>Key Questions</th>
<th>1. Anorexia nervosa (AN)</th>
<th>2. Bulimia nervosa (BN)</th>
<th>3. Binge-eating disorder (BED)</th>
<th>4. Avoidant/restrictive food intake disorder (ARFID)</th>
<th>5. Other specified feeding or eating disorder (OSFED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>Children and adults diagnosed with AN defined by DSM 5</td>
<td>Children and adults diagnosed with BN defined by DSM 5</td>
<td>Children and adults diagnosed with BED defined by DSM 5</td>
<td>Children and adults diagnosed with ARFID defined by DSM 5</td>
<td>Children and adults diagnosed with OSFED defined by DSM 5</td>
</tr>
<tr>
<td>Interventions</td>
<td>• Pharmacologic treatment</td>
<td>• Pharmacologic treatment</td>
<td>• Pharmacologic treatment</td>
<td>• Pharmacologic treatment</td>
<td>• Pharmacologic treatment</td>
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<tr>
<td></td>
<td>• Non-pharmacologic treatment</td>
<td>• Non-pharmacologic treatment</td>
<td>• Non-pharmacologic treatment</td>
<td>• Non-pharmacologic treatment</td>
<td>• Non-pharmacologic treatment</td>
</tr>
<tr>
<td></td>
<td>• Combination treatment</td>
<td>• Combination treatment</td>
<td>• Combination treatment</td>
<td>• Combination treatment</td>
<td>• Combination treatment</td>
</tr>
<tr>
<td>Comparators</td>
<td>• Usual care</td>
<td>• Usual care</td>
<td>• Usual care</td>
<td>• Usual care</td>
<td>• Usual care</td>
</tr>
<tr>
<td></td>
<td>• Other active treatment</td>
<td>• Other active treatment</td>
<td>• Other active treatment</td>
<td>• Other active treatment</td>
<td>• Other active treatment</td>
</tr>
<tr>
<td>Outcomes</td>
<td>• Inappropriate compensatory behaviors</td>
<td>• Inappropriate compensatory behaviors</td>
<td>• Binge-eating episodes</td>
<td>• Inappropriate compensatory behaviors</td>
<td>• Inappropriate compensatory behaviors</td>
</tr>
<tr>
<td></td>
<td>• Psychological features of the eating disorder</td>
<td>• Psychological features of the eating disorder</td>
<td>• Psychological features of the eating disorder</td>
<td>• Psychological features of the eating disorder</td>
<td>• Psychological features of the eating disorder</td>
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<tr>
<td></td>
<td>• Depression</td>
<td>• Depression</td>
<td>• Depression</td>
<td>• Depression</td>
<td>• Depression</td>
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<tr>
<td></td>
<td>• Anxiety</td>
<td>• Anxiety</td>
<td>• Anxiety</td>
<td>• Anxiety</td>
<td>• Anxiety</td>
</tr>
<tr>
<td></td>
<td>• Substance use</td>
<td>• Substance use</td>
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</tr>
<tr>
<td></td>
<td>• Weight/BMI</td>
<td>• Weight/BMI</td>
<td>• Weight/BMI</td>
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<td>• Weight/BMI</td>
</tr>
<tr>
<td></td>
<td>• Vital signs (BP, pulse, temperature)</td>
<td>• Vital signs (BP, pulse, temperature)</td>
<td>• Vital signs (BP, pulse, temperature)</td>
<td>• Vital signs (BP, pulse, temperature)</td>
<td>• Vital signs (BP, pulse, temperature)</td>
</tr>
<tr>
<td></td>
<td>• Medical morbidity (osteoporosis, infertility, GI disorders)</td>
<td>• Medical morbidity (osteoporosis, infertility, GI disorders)</td>
<td>• Medical morbidity (osteoporosis, infertility, GI disorders)</td>
<td>• Medical morbidity (osteoporosis, infertility, GI disorders)</td>
<td>• Medical morbidity (osteoporosis, infertility, GI disorders)</td>
</tr>
<tr>
<td></td>
<td>• Death</td>
<td>• Death</td>
<td>• Death</td>
<td>• Death</td>
<td>• Death</td>
</tr>
<tr>
<td>Timing</td>
<td>All</td>
<td>All</td>
<td>All</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Setting</td>
<td>Inpatient, residential, partial hospitalization/day treatment, intensive outpatient, Outpatient</td>
<td>Inpatient, residential, partial hospitalization/day treatment, intensive outpatient, Outpatient</td>
<td>Inpatient, residential, partial hospitalization/day treatment, intensive outpatient, Outpatient</td>
<td>Inpatient, residential, partial hospitalization/day treatment, intensive outpatient, Outpatient, Outpatient</td>
<td>Inpatient, residential, partial hospitalization/day treatment, intensive outpatient, Outpatient</td>
</tr>
</tbody>
</table>

Abbreviations: AN=anorexia nervosa; ARFID=Avoidant/restrictive food intake disorder; BED=binge-eating disorder; BMI=body mass index; BN=bulimia nervosa; BP=blood pressure; DSM=Diagnostic and Statistical Manual of Mental Disorders; GI=gastrointestinal; OSFED=Other specified feeding or eating disorder
Methods

We assessed nomination for priority for a systematic review or other AHRQ EHC report with a hierarchical process using established selection criteria. Assessment of each criteria determined the need to evaluate the next one. See Appendix A for detailed description of the criteria.

1. Determine the appropriateness of the nominated topic for inclusion in the EHC program.
2. Establish the overall importance of a potential topic as representing a health or healthcare issue in the United States.
3. Determine the desirability of new evidence review by examining whether a new systematic review or other AHRQ product would be duplicative.
4. Assess the potential impact a new systematic review or other AHRQ product.
5. Assess whether the current state of the evidence allows for a systematic review or other AHRQ product (feasibility).
6. Determine the potential value of a new systematic review or other AHRQ product.

Appropriateness and Importance
We assessed the nomination for appropriateness and importance.

Desirability of New Review/Duplication
We searched for high-quality, completed or in-process evidence reviews published in the last three years on the key questions of the nomination. See Appendix B for sources searched.

Results
See Appendix A for detailed assessments of all EPC selection criteria.

Appropriateness and Importance
This is an appropriate and important topic.

Desirability of New Review/Duplication
A new evidence review would be duplicative of an existing evidence review. We found multiple reviews on the four conditions, though it was not always clear whether they focused only on individuals diagnosed with DSM V criteria (Appendix C). In addition a guideline is underway by the American Psychiatric Association (APA); this guideline will be informed by systematic reviews. They plan to assess the impact of different diagnostic criteria (DSM 5 vs. DSM IV)\(^4\).

The nominator confirmed that the efforts by APA would meet their needs and a new AHRQ systematic review would duplicate these efforts.

Summary of Findings

- **Appropriateness and importance:** The topic is both appropriate and important.
- **Duplication:** A new review would be duplicative of an existing product. We found multiple systematic reviews, with most focused on bulimia, anorexia nervosa, and binge-eating disorder. In addition there is an in-process review and guideline that addresses all conditions included in this nomination.
References

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5939188/


### Appendix A. Selection Criteria Assessment

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Appropriateness</strong></td>
<td></td>
</tr>
<tr>
<td>1a. Does the nomination represent a health care drug, intervention, device, technology, or health care system/setting available (or soon to be available) in the U.S.?</td>
<td>Yes</td>
</tr>
<tr>
<td>1b. Is the nomination a request for a systematic review?</td>
<td>Yes</td>
</tr>
<tr>
<td>1c. Is the focus on effectiveness or comparative effectiveness?</td>
<td>Yes</td>
</tr>
<tr>
<td>1d. Is the nomination focus supported by a logic model or biologic plausibility? or is it consistent or coherent with what is known about the topic?</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>2. Importance</strong></td>
<td></td>
</tr>
<tr>
<td>2a. Represents a significant disease burden; large proportion of the population</td>
<td>• The lifetime prevalence of anorexia nervosa in adults was 0.6%(^2)</td>
</tr>
<tr>
<td></td>
<td>• Estimated prevalence of binge eating disorder was 1.2% in 2003(^2)</td>
</tr>
<tr>
<td></td>
<td>• Prevalence of bulimia nervosa was 0.3% in 2003(^2)</td>
</tr>
<tr>
<td>2b. Is of high public interest; affects health care decision making, outcomes, or costs for a large proportion of the US population or for a vulnerable population</td>
<td>Yes, this affects healthcare decision making around how best to treat people with eating disorders.</td>
</tr>
<tr>
<td>2c. Represents important uncertainty for decision makers</td>
<td>Yes, The nominator voices concern about uncertainty about the effectiveness of treatments for people diagnosed with an eating disorder under DSM-5.</td>
</tr>
<tr>
<td>2d. Incorporates issues around both clinical benefits and potential clinical harms</td>
<td>Yes</td>
</tr>
<tr>
<td>2e. Represents high costs due to common use, high unit costs, or high associated costs to consumers, to patients, to health care systems, or to payers</td>
<td>Individuals with ED had greater annual health care costs ($1869).(^5)</td>
</tr>
<tr>
<td><strong>3. Desirability of a New Evidence Review/Duplication</strong></td>
<td></td>
</tr>
<tr>
<td>3. Would not be redundant (i.e., the proposed topic is not already covered by available or soon-to-be available high-quality systematic review by AHRQ or others)</td>
<td>Yes, we found an in-process review and guideline by the American Psychiatric Association that addresses the scope of the nomination.(^4) The nominator confirms that this effort meets their needs. In addition we identified many systematic reviews on the different types of eating disorders. However it is unclear whether they will be addressing changes in the diagnostic criteria under DSM-5. See Appendix C for the full list of potentially relevant systematic reviews.</td>
</tr>
</tbody>
</table>

*Abbreviations: AHRQ=Agency for Healthcare Research and Quality; KQ=Key Question*
### Appendix B. Search for Evidence Reviews (Duplication)

Listed below are the sources searched, hierarchically:

<table>
<thead>
<tr>
<th>Source</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>VA Products: PBM, and HSR&amp;D (ESP) publications, and VA/DoD EBCPG Program</td>
<td><a href="https://www.hsrd.research.va.gov/publications/esp/">https://www.hsrd.research.va.gov/publications/esp/</a></td>
</tr>
<tr>
<td>Cochrane Systematic Reviews</td>
<td><a href="http://www.cochranelibrary.com/">http://www.cochranelibrary.com/</a></td>
</tr>
<tr>
<td>AHRQ Products in development</td>
<td><a href="https://effectivehealthcare.ahrq.gov/">https://effectivehealthcare.ahrq.gov/</a></td>
</tr>
<tr>
<td>VA Products in development</td>
<td><a href="https://www.hsrd.research.va.gov/publications/esp/">https://www.hsrd.research.va.gov/publications/esp/</a></td>
</tr>
<tr>
<td>Cochrane Protocols</td>
<td><a href="http://www.cochranelibrary.com/">http://www.cochranelibrary.com/</a></td>
</tr>
<tr>
<td>PROSPERO Database (international prospective register of systematic reviews and protocols)</td>
<td><a href="http://www.crd.york.ac.uk/prospero/">http://www.crd.york.ac.uk/prospero/</a></td>
</tr>
</tbody>
</table>
Appendix C. Potentially Relevant Systematic Reviews

We found multiple systematic reviews on various treatments. Almost none stated that they explicitly focused only on studies that defined an eating disorder under DSM V.

Eating disorders – general

- Nonpharmacological treatment
  - Clus et al. The Use of Virtual Reality in Patients with Eating Disorders: Systematic Review. 2018
  - De Jong et al. Enhanced cognitive behavioural therapy for patients with eating disorders: a systematic review. 2018
  - Linardon et al. The empirical status of the third-wave behaviour therapies for the treatment of eating disorders: A systematic review. 2017
  - Linardon et al. The efficacy of cognitive-behavioral therapy for eating disorders: A systematic review and meta-analysis. 2017
    https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=122618
  - Batista et al. Does repetitive transcranial magnetic stimulation have positive effects on adults with eating disorders and/or excessive weight?
    https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=110078

Anorexia Nervosa

- Pharmacologic treatment
  - Couturier et al. Systematic review of pharmacological and psychotherapeutic treatment practices for children and adolescents with eating disorders.
    https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=56890
    - Focuses on atypical antipsychotics
- Non-pharmacologic treatment
  - Van den Berg. Meta-analysis on the efficacy of psychological treatments for anorexia nervosa. 2019
  - Fisher et al. Family therapy for those diagnosed with anorexia nervosa. 2018
  - Zeeck et al. Psychotherapeutic treatment for anorexia nervosa: A systematic review and network meta-analysis. 2018
  - Tchanturia, Evidence for Cognitive remediation therapy in young people with anorexia nervosa: systematic review and meta-analysis of the literature. 2017
  - Hay et al. Specific psychological therapies versus other therapies or no treatment for severe and enduring anorexia nervosa.
    https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=25641
• Rhind et al. A systematic review of group-based psychological therapies for adolescents diagnosed with anorexia nervosa. https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=93341

• Couturier et al. Systematic review of pharmacological and psychotherapeutic treatment practices for children and adolescents with eating disorders. https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=56890
  ▪ Focuses on family-based treatment


• Pharmacological vs. non-pharmacological treatments
  o Murray et al. Treatment outcomes for anorexia nervosa: a systematic review and meta-analysis of randomized-controlled trials. 2019.¹⁸
  o Wade et al. Comparative efficacy of pharmacological and non-pharmacological interventions for the acute treatment of adult outpatients with anorexia nervosa: study protocol for the systematic review and network meta-analysis of individual data. 2017.¹⁹

Bulimia nervosa

• Pharmacologic treatment
  o Price et al. Psychological and pharmacological treatment for bulimia nervosa: an updated meta-analysis of randomized controlled trials. Diagnosis by DSM or ICD. https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=36280
  o Dekker et al. The efficacy of pharmacotherapy for bulimia nervosa. Diagnosis by DSM or ICD. https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=2397
    ▪ Includes SSRI

• Nonpharmacologic treatment
De Carvalho et al. Virtual Reality as a Promising Strategy in the Assessment and Treatment of Bulimia Nervosa and Binge Eating Disorder: A Systematic Review. 2017.21

Hodges et al. Internet CBT for bulimia nervosa a systematic review. https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=2867

Price et al. Psychological and pharmacological treatment for bulimia nervosa: an updated meta-analysis of randomized controlled trials. Diagnosis by DSM or ICD. https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=36280

Dekker et al. The efficacy of psychotherapy for bulimia nervosa. Diagnosis by DSM or ICD. https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=2400

  - Includes family-based treatment, cognitive behavioral therapy, and dialectical behavior therapy


Binge-eating disorder

- Pharmacologic treatment
  - Peat et al. Comparative Effectiveness of Treatments for Binge-Eating Disorder: Systematic Review and Network Meta-Analysis. 2017.22
    - Updates an AHRQ EPC systematic review
  - Brownley et al. Binge-Eating Disorder in Adults: A Systematic Review and Meta-analysis. 2016.23
    - Derived from an AHRQ EPC systematic review
  - Nourredine et al. Effect of topiramate on the frequency of binge eating episode in adults with binge eating disorder, a systematic review and meta-analysis. https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=124500
  - Dekker et al. The efficacy of pharmacotherapy in the treatment of binge eating disorder. DSM or ICD.
    - https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=2404

- Non-pharmacologic treatment
  - De Carvalho et al. Virtual Reality as a Promising Strategy in the Assessment and Treatment of Bulimia Nervosa and Binge Eating Disorder: A Systematic Review. 2017.21
- Dekker et al. Binge eating disorder: the effectivity of psychological treatments. Patients identified by DSM or ICD. 
  [https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=2403](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=2403)
  [https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=24544](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=24544)
- Stephen Jones. The use of "Third-wave" Psychological Therapies for people diagnosed with eating disorders: a systematic review. PROSPERO 2016 CRD42016045784 Available from: 
  [http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42016045784](http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42016045784)

Avoidant/restrictive food intake disorder


Other specified feeding disorder

  [https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=24544](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=24544)
- Stephen Jones. The use of "Third-wave" Psychological Therapies for people diagnosed with eating disorders: a systematic review. PROSPERO 2016 CRD42016045784 Available from: 
  [http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42016045784](http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42016045784)