



# Effective Health Care

## Cryptorchidism

### Nomination Summary Document

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

- Cryptorchidism (undescended testicle) will go forward for refinement as a systematic review. The scope of this topic, including populations, interventions, comparators, and outcomes, will be further developed in the refinement phase.
- When key questions have been drafted, they will be posted on the AHRQ Web site and open for public comment. To sign up for notification when this and other Effective Health Care (EHC) Program topics are posted for public comment, please go to <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>.

#### Topic Description

**Nominator:** Health care professional association

**Nomination Summary:** The nominator asks several questions about the etiology, diagnosis, treatment, and follow-up care of cryptorchidism, as well as patient counseling/informed decision-making about treatment and associated abnormalities and their impact on treatment and outcomes.

##### **Staff-Generated PICO**

**Population(s):** patients with cryptorchidism (undescended testicle)

**Intervention(s):** diagnostic methods (imaging, laparoscopy), hormone therapy, surgical therapy, specific surgical techniques, early treatment, follow-up care, counseling of patient's parents/guardian

**Comparator(s):** diagnostic methods (imaging, laparoscopy), non-treatment, timing of treatment, medical therapies, different surgical techniques

**Outcome(s):** diagnostic ability of test, final testicular size and location, fertility/infertility/subfertility (including measures of semen count/quality, paternity, and other measures), incidence of testicular cancer, informed decision-making by parents/guardians about child's treatment, psychological and emotional outcomes for the child or young adult

**Key Questions from Nominator:**

1. What is the etiology of cryptorchidism? What are the environmental factors (maternal smoking, maternal diabetes mellitus, etc.) that may contribute to the development of this condition?
2. What is the ideal diagnostic workup for accurate identification of cryptorchidism? What are the relative benefits of imaging vs. laparoscopy in determining the location of the cryptorchid testis?

3. What are the relative benefits of the various treatment interventions (surgical vs. hormonal, early vs. late orchiopexy, different surgical techniques) for this condition, particularly with regard to infertility/subfertility and risk of development of testicular malignancy?
4. How does the form of cryptorchidism (unilateral vs. bilateral, palpable vs. non-palpable, anatomic location) and occurrence of associated abnormalities (hernia, hypospadias, etc.) impact treatment and outcomes?
5. What are the complications associated with the various treatment alternatives?
6. What is the appropriate follow-up care for patients treated for cryptorchidism? For those in whom the condition is observed but not treated?
7. What information must be conveyed to the patient's parents or guardians during counseling to enable them to make an informed decision about their child's treatment?

## Considerations

- The topic meets all EHC Program selection criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- Cryptorchidism, or undescended testes, can have a major impact throughout an individual's life in the form of subfertility, infertility, or testicular cancer. Cryptorchidism is the most common male genital anomaly identified at birth and while the majority of infants initially affected by cryptorchidism have testes that spontaneously descend within the first year, a number of boys continue to be affected by the condition into adulthood. As a result, cryptorchidism is both a significant and costly health problem in the United States. Despite its prevalence, there is considerable uncertainty regarding appropriate diagnostic approaches for cryptorchidism as well as appropriate therapeutic approaches and their outcomes. A high-quality, detailed systematic review could be a valuable resource for improving effectiveness of diagnosis and treatment and guiding future research.