Body System: Reproductive-Male

Session Topic: Erectile Dysfunction

Educational Format		Faculty Expertise Required
REQUIRED	Interactive Lecture	Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience with audience response systems (ARS). Utilizing polling questions and engaging the learners in Q&A during the final 15 minutes of the session are required.
OPTIONAL	Problem-Based Learning (PBL)	Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. Please describe your interest and plan for teaching a PBL on your proposal form.

Professional Practice Gap	Learning Objective(s) that will close the gap and meet the need	Outcome Being Measured
• Erectile dysfunction (ED) is often under reported and left un-treated. • Sexual health assessments are often inadequate when ED prescriptions are made. • Physicians have knowledge gaps with regard to the management of ED. • Physicians have knowledge gaps with regard to managing cardiovascular problems associated with ED. • Physicians have knowledge gaps with regard to managing ED as a complication of diabetes. • Physicians have knowledge gaps with regard to managing medical interactions of polypharmacy. • Physicians have knowledge gaps with regard to providing sexual counseling. • Treatment updates for diabetes are considered by	1. Include erectile dysfunction into the medical history of patients presenting with known ED co-morbidities. 2. Perform a sexual health assessment for patients with erectile dysfunction before prescribing medication. 3. Counsel patients regarding pharmacologic and non-pharmacologic therapies for those with diagnosed erectile dysfunction. 4. Screen patients for causes of diagnosed erectile dysfunction, as well as associated diagnoses such as cardiovascular risk factors.	Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations.

 Last modified 6-10-15

many physicians as their primary need, particularly with regard to appropriate initial (titration) and maintenance dosing with insulin analogs to achieve adequate glycemic control, and for managing associated co-morbid conditions.		

ACGME Core Competencies Addressed (select all that apply)			
X	Medical Knowledge		Patient Care
X	Interpersonal and Communication Skills		Practice-Based Learning and Improvement
	Professionalism		Systems-Based Practice

Faculty Instructional Goals

Faculty play a vital role in assisting the AAFP to achieve its mission by providing high-quality, innovative education for physicians, residents and medical students that will encompass the art, science, evidence and socio-economics of family medicine and to support the pursuit of lifelong learning. By achieving the instructional goals provided, faculty will facilitate the application of new knowledge and skills gained by learners to practice, so that they may optimize care provided to their patients.

- Provide recommendations for including erectile dysfunction into the medical history of patients presenting with known ED co-morbidities.
- Provide recommendations for including a sexual health assessment for patients complaining of erectile dysfunction before prescribing medication.
- Provide strategies and resources for counseling patients regarding pharmacologic and non-pharmacologic (e.g. lifestyle modifications, behavioral, alternative therapies, surgical and procedural) therapies for those with diagnosed erectile dysfunction.
- Provide recommendations for screening patients with diagnosed erectile dysfunction for cardiovascular risk factors.
- Provide an overview of current evidence-based ED pharmacologic and non-pharmacologic therapies, including recommendations for managing medical interactions of polypharmacy.
- Provide evidence-based recommendations for treating low-T as indicated by diagnosis and evaluation.

Needs Assessment

Erectile dysfunction (ED) is the most prevalent sexual problem in men, causing significant negative impact on intimate relationships, quality of life, and self-esteem; and may also be the presenting symptom of undetected cardiovascular disease.[1-3] In fact, men with ED are at a 65% increased relative risk of developing coronary heart disease and a 43% increased risk of stroke within 10 years, and should therefore be screened for cardiovascular risk factors.[1,3-5] The National Institutes of Health estimates that ED affects as many as 30 million men in the United States.[6] However, ED is under-reported due primarily to patient embarrassment about the issue; particularly among patients who receive care from other sub-specialties for health conditions that impact sexual performance, such as urologists and oncologists.[7,8] Approximately 12.5% to 35% of men with ED have low testosterone (low-T) levels however, research study evidence was

insufficient to verify if men with ED had a higher prevalence of hypogonadism or hyperprolactinemia compared with men without ED; therefore, the value of routine hormone testing is uncertain.[9] The prevalence of hypogonadism (HG) is high; however, estimates differ according to the definition used. The crude prevalence in men ≥ 45 years presenting to primary care offices is 38.7%; however, only an estimated 5-35% HG males receive treatment for their condition.[10-12] Despite the high prevalence of ED and the recognition of the benefits from treatment, ED is under treated as several barriers to optimal management exist, including physician-patient communication and physician recognition of patient and partner preferences.[13,14]

Data from the most recent AAFP CME Needs Assessment Survey indicate that family physicians report having a knowledge gap regarding the management of erectile dysfunction, sexual counseling, and cardiovascular problems associated with ER.[15] Lifestyle modification and modifying pharmacotherapy are first-line therapies for ED; however, physicians have knowledge gaps in managing medical interactions of polypharmacy and providing sexual counseling, including inadequate sexual history assessments during the time surrounding the initial prescription of ED medication.[3,15,16]

This same data suggest that family physicians also have knowledge and skill gaps related to managing hypogonadism (HG) and associated comorbidities such as diabetes, obesity, depression, and metabolic syndrome; but gaps also existed in managing pituitary diseases, which are a related cause of secondary acquired HG. More specifically, CME outcomes data from 2013 AAFP Assembly: *Hit Below the Belt: Winning Strategies to Combat Men's Health Issues* sessions suggest that physicians need continuing medical education with regard to when to sample blood for testosterone deficiency, which testosterone replacement therapy (TRT) provides more stable serum concentrations, the appropriate frequency of hematocrit measurement, identification of low-T symptoms (other than a decrease in spontaneous erections), involving the patient's spouse in treatment considerations, appropriate timing of referral, and monitoring/follow-up after treatment.[17] Additionally, patients with diabetes are three time more likely to have ED compared to the general population; however, AAFP CME Needs Assessment Survey data indicates that family physicians have a knowledge gap with regard to managing complications of diabetes.[3,15]

Physicians may improve their care of patients with ED by engaging in continuing medical education that provides practical integration of current evidence-based guidelines and recommendations into their standards of care; including, but not limited to the following:[2,3,18-22]

- Diagnostic testing for erectile dysfunction should usually be limited to obtaining a fasting serum glucose level and lipid panel, thyroid-stimulating hormone test, and morning total testosterone level.
- First-line therapy for erectile dysfunction should consist of oral phosphodiesterase type 5 inhibitors.
- Phosphodiesterase type 5 inhibitors are most effective in the treatment of erectile dysfunction associated with diabetes mellitus and spinal cord injury, and of sexual dysfunction associated with antidepressants.
- Additional therapy for erectile dysfunction may consist of psychosocial therapy and testosterone supplementation in men with hypogonadism.

- Testosterone supplementation in men with hypogonadism improves erectile dysfunction and libido.
- Screening for cardiovascular risk factors should be considered in men with erectile dysfunction.
- The American College of Physicians recommends that clinicians initiate therapy with a PDE-5 inhibitor in men who seek treatment for erectile dysfunction and who do not have a contraindication to PDE-5 inhibitor use (Grade: strong recommendation; high-quality evidence).
- The American College of Physicians recommends that clinicians base the choice of a specific PDE-5 inhibitor on the individual preferences of men with erectile dysfunction, including ease of use, cost of medication, and adverse effects profile (Grade: weak recommendation; low-quality evidence).
- The American College of Physicians does not recommend for or against routine use of hormonal blood tests or hormonal treatment in the management of patients with erectile dysfunction (Grade: insufficient evidence to determine net benefits and harms).
- Don't prescribe testosterone to men with erectile dysfunction who have normal testosterone levels.

The guideline, *Hormonal Testing and Pharmacologic Treatment of Erectile Dysfunction*, was developed by the American College of Physicians and was endorsed by the American Academy of Family Physicians. The Canadian Urological Association recently release their *2015 CUA Practice guidelines for erectile dysfunction*. It may be helpful to point out any relevant recommendations that may be considered by U.S. physicians.[23] These recommendations are provided only as assistance for physicians making clinical decisions regarding the care of their patients. As such, they cannot substitute for the individual judgment brought to each clinical situation by the patient's family physician. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but they should be used with the clear understanding that continued research may result in new knowledge and recommendations. These recommendations are only one element in the complex process of improving the health of America. To be effective, the recommendations must be implemented. As such, physicians require continuing medical education to assist them with making decisions about specific clinical considerations.

Resources: Evidence-Based Practice Recommendations/Guidelines/Performance Measures

- Management of erectile dysfunction[3]
- ACP Hormonal Testing and Pharmacologic Treatment of Erectile Dysfunction: A Clinical Practice Guideline[9]
- AUA: The management of erectile dysfunction[22]
- Medication adherence: we didn't ask and they didn't tell[24]
- Engaging Patients in Collaborative Care Plans[25]
- Health Coaching: Teaching Patients to Fish [26]
- Simple tools to increase patient satisfaction with the referral process[27]
- The benefits of using care coordinators in primary care: a case study [28]
- Adding health education specialists to your practice[29]

- Integrating a behavioral health specialist into your practice[30]
- Are you ready to discuss complementary and alternative medicine?[31]
- FamilyDoctor.org. Erectile Dysfunction | Causes & Risk Factors (patient education)[32]

References

1. Miner M, Nehra A, Jackson G, et al. All men with vasculogenic erectile dysfunction require a cardiovascular workup. *The American journal of medicine.* Mar 2014;127(3):174-182.

2. Vlachopoulos C, Ioakeimidis N, Aznaouridis K, et al. Prediction of cardiovascular events with aortic stiffness in patients with erectile dysfunction. *Hypertension.* Sep 2014;64(3):672-678.

3. Heidelbaugh JJ. Management of erectile dysfunction. *American family physician.* Feb 1 2010;81(3):305-312.

4. Moore CS, Grant MD, Zink TA, et al. Erectile dysfunction, vascular risk, and cognitive performance in late middle age. *Psychology and aging.* Mar 2014;29(1):163-172.

5. Nicolai MP, van Bavel J, Somsen GA, et al. Erectile dysfunction in the cardiology practice-a patients' perspective. *American heart journal.* Feb 2014;167(2):178-185.

6. National Kidney and Urologic Disease Information Clearinghouse (NKUDIC). Erectile Dysfunction. 2009; http://kidney.niddk.nih.gov/KUDiseases/pubs/ED/index.aspx. Accessed August, 2014.

7. Flynn KE, Reese JB, Jeffery DD, et al. Patient experiences with communication about sex during and after treatment for cancer. *Psycho-oncology.* Jun 2012;21(6):594-601.

8. Baldwin K, Ginsberg P, Harkaway RC. Under-reporting of erectile dysfunction among men with unrelated urologic conditions. *International journal of impotence research.* Apr 2003;15(2):87-89.

9. Qaseem A, Snow V, Denberg TD, et al. Hormonal Testing and Pharmacologic Treatment of Erectile Dysfunction: A Clinical Practice Guideline From the American College of Physicians. *Annals of internal medicine.* 2009;151(9):639-649.

10. Dandona P, Rosenberg MT. A practical guide to male hypogonadism in the primary care setting. *International journal of clinical practice.* May 2010;64(6):682-696.

11. Mulligan T, Frick MF, Zuraw QC, Stemhagen A, McWhirter C. Prevalence of hypogonadism in males aged at least 45 years: the HIM study. *International journal of clinical practice.* Jul 2006;60(7):762-769.

12. Bassil N, Alkaade S, Morley JE. The benefits and risks of testosterone replacement therapy: a review. *Therapeutics and clinical risk management.* Jun 2009;5(3):427-448.

13. Shabsigh R, Perelman MA, Laumann EO, Lockhart DC. Drivers and barriers to seeking treatment for erectile dysfunction: a comparison of six countries. *BJU international.* Nov 2004;94(7):1055-1065.

14. Frederick LR, Cakir OO, Arora H, Helfand BT, McVary KT. Undertreatment of Erectile Dysfunction: Claims Analysis of 6.2 Million Patients. *The journal of sexual medicine.* 2014:n/a-n/a.

15. AAFP. 2012 CME Needs Assessment: Clinical Topics. American Academy of Family Physicians; 2012.

16. Holman KM, Carr JA, Baddley JW, Hook EW, 3rd. Sexual history taking and sexually transmitted infection screening in patients initiating erectile dysfunction medication therapy. *Sexually transmitted diseases.* Nov 2013;40(11):836-838.

17. American Academy of Family Physicians (AAFP). 2013 AAFP Scientific Assembly: CME Outcomes Report. Leawood KS: AAFP; 2013.

18. National Guideline C. Hormonal testing and pharmacologic treatment of erectile dysfunction: a clinical practice guideline from the American College of Physicians. http://www.guideline.gov/content.aspx?id=15652&search=erectile+dysfunction. Accessed 6/2/2014.

19. American Academy of Family Physicians (AAFP). Clinical Practice Guidelines: Erectile Dysfunction. 2011; http://www.aafp.org/patient-care/clinical-recommendations/all/erectile-dysfunction.html. Accessed June, 2014.

20. American Academy of Family Physicians (AAFP), American Urological Association (AUA). Don't prescribe testosterone to men with erectile dysfunction who have normal testosterone levels. *Choosing Wisely* 2014; http://www.aafp.org/afp/recommendations/viewRecommendation.htm?recommendationId=89. Accessed August, 2014.

21. National Guideline Clearinghouse. (1) The management of erectile dysfunction: an update. (2) 2006 addendum. 2006; http://www.guideline.gov/content.aspx?id=10018. Accessed 8/21/2014.

22. Montague DK, Jarow JP, Broderick GA, et al. Chapter 1: The management of erectile dysfunction: an AUA update. *The Journal of urology.* Jul 2005;174(1):230-239.

23. Bella AJ, Lee JC, Carrier S, Bénard F, Brock GB. 2015 CUA Practice guidelines for erectile dysfunction. *Canadian Urological Association Journal.* Jan-Feb 2015;9(1-2):23-29.

24. Brown M, Sinsky CA. Medication adherence: we didn't ask and they didn't tell. *Family practice management.* Mar-Apr 2013;20(2):25-30.

25. Mauksch L, Safford B. Engaging Patients in Collaborative Care Plans. *Family practice management.* 2013;20(3):35-39.

26. Ghorob A. Health Coaching: Teaching Patients to Fish. *Family practice management.* 2013;20(3):40-42.

27. Jarve RK, Dool DW. Simple tools to increase patient satisfaction with the referral process. *Family practice management.* Nov-Dec 2011;18(6):9-14.

28. Mullins A, Mooney J, Fowler R. The benefits of using care coordinators in primary care: a case study. *Family practice management.* Nov-Dec 2013;20(6):18-21.

29. Chambliss ML, Lineberry S, Evans WM, Bibeau DL. Adding health education specialists to your practice. *Family practice management.* Mar-Apr 2014;21(2):10-15.

30. Reitz R, Fifield P, Whistler P. Integrating a behavioral health specialist into your practice. *Family practice management.* Jan-Feb 2011;18(1):18-21.

31. Blackman JA. Are you ready to discuss complementary and alternative medicine? *Family practice management.* Jul-Aug 2007;14(7):26-30.

32. FamilyDoctor.org. Erectile Dysfunction | Causes & Risk Factors. 2000; http://familydoctor.org/familydoctor/en/diseases-conditions/erectile-dysfunction/causes-risk-factors.html. Accessed August, 2013.

