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| Body System: Endocrine | | |
| Session Topic: Diabetes Update | | |
| 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. <u>Please describe your interest and plan for teaching a PBL on your proposal form.</u> |
| Professional Practice Gap | Learning Objective(s) that will close the gap and meet the need | Outcome Being Measured |
| <ul style="list-style-type: none"> Physicians have statistically significant and meaningful gaps in the medical skill necessary to efficaciously manage treatment; and management of those at risk for developing diabetes, such as patients with metabolic syndrome. Physicians have knowledge gaps related to utilizing a patient-centered approach to care that involves the entire care team to help make the office visit with the physician more efficient; recognizing latent autoimmune diabetes in adults (LADA); understanding and adhering to current screening and evaluation guidelines; being up to date on current guidelines for medications and therapeutic approaches; improving efforts toward patient education and counseling for prevention in | <ol style="list-style-type: none"> Evaluate current standards of care (screening, prevention, diagnosis, treatment, management) for patients with diabetes, or who are at risk for developing diabetes, for opportunities to update standards in accordance to current research and evidence-based guidelines. Create a long-term chronic care disease management plan that includes medical therapy, lifestyle modification, self-management education and psychosocial assessment and care, inclusive of new pharmacologic guidelines for the management of diabetes and updated recommendations for initiation of insulin therapy. Establish alternatives to traditional individual office visits (e.g. group visits) for optimizing diabetes care. Organize a team-based care approach in the provision of diabetes education and other diabetes services. | Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations. |



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| <p>pre-diabetic patients, including effective use of group visits; effective control and maintenance of patients receiving treatment; and having an awareness of current guidelines for gestational diabetes.</p> <ul style="list-style-type: none"> • Physicians are often not aware of updated clinical guidelines and results of clinical interventions from retrospective studies that prove such recommendations to be effective. • Physicians do not routinely use clinical guidelines in managing care for patients with diabetes, and often do not provide optimal coordination of care with specialists. | | |
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ACGME Core Competencies Addressed (select all that apply)

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| X | Medical Knowledge | | Patient Care |
| | 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 up to 3 evidence-based recommended practice changes that can be immediately implemented, at the conclusion of the session; including SORT taxonomy & reference citations
- Facilitate learner engagement during the session
- Address related practice barriers to foster optimal patient management
- Provide recommended journal resources and tools, during the session, from the American Family Physician (AFP), Family Practice Management (FPM), and Familydoctor.org patient resources; those listed in the References section below are a good place to start
 - Visit <http://www.aafp.org/journals> for additional resources
 - Visit <http://familydoctor.org> for patient education and resources
- Provide an overview of current updates on diabetes topics in general and their immediate



impact to patient care, including recommendations for implementation.

- Describe the best evidence for screening for and prevention of type 2 diabetes.
- Outline the diagnostic criteria for type 2 diabetes.
- Summarize initial testing and treatment of a patient with newly diagnosed type 2 diabetes.
- Describe goals for blood pressure, cholesterol, and A1c levels based on best evidence for patient-oriented outcomes.
- Summarize drug treatment for glucose control for patients with type 2 diabetes.
- Discuss potential benefits and adverse effects of combination drugs for glucose control.
- Describe alternatives to traditional individual office visits for optimizing diabetes care.
- Summarize team-based care in the provision of diabetes education and other diabetes services.
- Describe ways to incorporate technology in the care of a panel of patients with diabetes.
- Summarize options for organizing and billing for group visits for diabetes.

Needs Assessment

* Note – for the purposes of this session, the scope and focus is intended to provide an overview of current updates on diabetes topics in general and their immediate impact to patient care, including recommendations for implementation.

Family physicians providing care for a broad spectrum of patients, from birth to geriatric care, can be challenged to remain up to date on evidence-based guidelines and recommendations, especially when those guidelines are updated, vague or contradictory. Physicians need continuing medical education that will help them to apply the most current and clinically relevant evidence-based recommendations to practice.

According to the Centers for Disease Control and Prevention (CDC) 2014 National Diabetes Statistics Report, 29.1 million Americans (9.3% of the population) have diabetes; with 21.0 million people diagnosed, and 8.1 million (27.8% of people with diabetes) are undiagnosed.^{1,2} Additional highlights of the report include:

- Of the 29.1 million, 21.0 million were diagnosed, and 8.1 million were undiagnosed. In 2010 the figures were 18.8 million and 7.0 million.
- The percentage of Americans age 65 and older remains high, at 25.9%, or 11.8 million seniors (diagnosed and undiagnosed).
- The incidence of diabetes in 2012 was 1.7 million new diagnoses/year; in 2010 it was 1.9 million.
- In 2012, 86 million Americans age 20 and older had prediabetes; this is up from 79 million in 2010.
- Diabetes remains the 7th leading cause of death in the United States in 2010, with 69,071 death certificates listing it as the underlying cause of death, and a total of 234,051 death certificates listing diabetes as an underlying or contributing cause of death. However, diabetes may be underreported as a cause of death. Studies have found that only about 35% to 40% of people with diabetes who died had diabetes listed anywhere on the death certificate and about 10% to 15% had it listed as the underlying cause of death



The CDC's *National Ambulatory Medical Care Survey* (NAMCS) reported that from 1996 to 2006, the percentage of visits by adults 18 and over with chronic diabetes increased 40% and served as one of the most frequent medical diagnoses for physician office visits.³ In fact, family physicians treat patients with diabetes in more than 8.8 million office visits per year, the second most commonly seen condition (after hypertension).⁴

Patients who have diabetes who are not adequately screened, who go undiagnosed, or who are diagnosed but do not adequately control their disease can experience a host of complications. Providing family physicians with appropriate education and training on how to screen and diagnose patients with diabetes can help to decrease the number of patients who go undiagnosed; strategic patient education may also help to prevent the onset the diabetes.

Data from a recent American Academy of Family Physicians (AAFP) CME Needs Assessment survey indicate that family physicians have statistically significant and meaningful gaps in the medical skill necessary to efficaciously manage treatment; manage diabetes complications (addressed in other Assembly CME sessions); and in managing those at risk for developing diabetes, such as patients with metabolic syndrome.⁵ This data also suggests that family physicians do not have knowledge gaps with regard to diabetes mellitus screening and diagnosis, managing diabetic Ketoacidosis, or managing diabetes during pregnancy. In part, because diabetes in pregnancy, as a topic, was rated as much less relevant to practice as most other topics. In fact AAFP members ranked 494 other topics as more relevant to their practice than diabetes in pregnancy. However, for those family physicians that do provide OB care for their patients, they must be kept up to date on the latest guidelines and treatments. Additionally, CME outcomes data from several 2012-2014 AAFP Assembly sessions focused on diabetes topics suggest that physicians need continuing medical education with regard to utilizing a patient-centered approach to care that involves the entire care team to help make the office visit with the physician more efficient; recognizing latent autoimmune diabetes in adults (LADA); understanding and adhering to current screening and evaluation guidelines; being up to date on current guidelines for medications and therapeutic approaches; improving efforts toward patient education and counseling for prevention in pre-diabetic patients, including effective use of group visits; effective control and maintenance of patients receiving treatment; and having an awareness of current guidelines for gestational diabetes.⁶⁻⁸

Some family physicians may not be aware of updated clinical guidelines and results of clinical interventions from retrospective studies that prove such recommendations to be effective.⁹ Research suggests that primary care physicians do not routinely use clinical guidelines in managing care for patients with diabetes, and often do not provide optimal coordination of care with specialists.¹⁰ For example, the Diabetes Control and Complications Trial (DCCT) reported that intensive diabetes therapy aimed at lowering glycemic levels reduces the risk of diabetic retinopathy, nephropathy and neuropathy.¹¹ Additionally, consensus from a number of organizations, including the Joint National Committee on the Prevention, Detection, Evaluation and Treatment of High Blood Pressure, the American Diabetes Association and the National Kidney Foundation, supports aggressive blood pressure targets in patients with diabetes, which may require pharmacologic therapy.¹² Family physicians can also help patients make numerous lifestyle modifications, including smoking cessation, alcohol restriction, dietary modification (often with sodium restriction), physical activity and weight loss, all of which can decrease



patients' risk of complications from diabetes and improve their overall health. Current data suggests that physicians achieve the standard care for chronic diseases and preventive care only 50 percent to 60 percent of the time; therefore, physicians may need continuing education to assist them in developing and maintaining team-based chronic disease care strategies.^{9,13,14}

Despite potential risks and established clinical guidelines, recent data suggest that some patients are not being managed optimally for diabetes.¹⁵ There are several evidence-based clinical performance measures for adult diabetes, including those defined by the National Diabetes Quality Improvement Alliance. Many family physicians traditionally have relied on the American Medical Association (AMA)-convened Physician Consortium for Performance Improvement (PCPI) list of clinical performance measures for adult diabetes; however, many physicians continue to need education and strategies to assist them with consistent implementation of these measures into practice.

A review of the literature reveals a number of updates with regard to diabetes care and management, including (but not limited to):

- ACOG Releases Guideline on Gestational Diabetes¹⁶
 - Screening for gestational diabetes usually occurs at 24 to 28 weeks' gestation, but early screening is recommended in women with risk factors.
 - Gestational diabetes should be treated with nutrition therapy.
 - If medications are needed, insulin and oral medications are equally effective and appropriate for first-line therapy.
 - Women with gestational diabetes should be screened again at six to 12 weeks postpartum.
- Recent FDA approval of diabetes treatments¹⁷⁻²⁰
 - FDA approves Invokana to treat type 2 diabetes (first in a new class of diabetes drugs)
 - FDA approves Tanzeum (albiglutide) to treat type 2 diabetes
 - FDA approves Afrezza (insulin human) Inhalation Powder to treat diabetes
 - FDA approves Trulicity (dulaglutide) to treat type 2 diabetes
 - FDA has recently approved SGLT2 inhibitors for diabetes; however, the FDA has also issued a warning that the type 2 diabetes medicines canagliflozin, dapagliflozin, and empagliflozin may lead to ketoacidosis²¹
- Currently recruiting diabetes-related medical trials²²
- Culturally appropriate health education for people in ethnic minority groups with type 2 diabetes mellitus²³
- Reminder systems for women with previous gestational diabetes mellitus to increase uptake of testing for type 2 diabetes or impaired glucose tolerance²⁴
- Intensive glucose control versus conventional glucose control for type 1 diabetes mellitus²⁵
- Surgery for weight loss in adults²⁶
- ACE/Obesity Society/ASMBS Clinical practice guidelines for the perioperative nutritional, metabolic, and nonsurgical support of the bariatric surgery patient²⁷
- Outpatient glycemic control with a bionic pancreas in type 1 diabetes²⁸



- Effect of angiotensin-converting enzyme inhibitors and angiotensin II receptor blockers on all-cause mortality, cardiovascular deaths, and cardiovascular events in patients with diabetes mellitus: a meta-analysis²⁹
- Physical activity and sedentary behaviors associated with risk of progression from gestational diabetes mellitus to type 2 diabetes mellitus: a prospective cohort study³⁰
- Glycemic Control in Type 2 Diabetes (Drug Treatments)³¹

Physicians may improve their care of patients with diabetes, or at risk of developing diabetes, 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:³²⁻³⁷

- The AAFP *recommends* screening for gestational diabetes mellitus (GDM) in asymptomatic pregnant women after 24 weeks of gestation. (2014).
- The AAFP *concludes that the current evidence is insufficient* to assess the balance of benefits and harms of screening for GDM in asymptomatic pregnant women before 24 weeks of gestation. (2014).
- The AAFP *recommends* screening for type 2 diabetes in asymptomatic adults with sustained blood pressure (either treated or untreated) greater than 135/80 mm Hg. (2008)
- The AAFP *concludes that the current evidence is insufficient* to assess the balance of benefits and harms of screening for type 2 diabetes in asymptomatic adults with blood pressure of 135/80 mm Hg or lower. (2008).
- The guideline, Management of Newly Diagnosed Type 2 Diabetes Mellitus in Children and Adolescents, was developed by the American Academy of Pediatrics and endorsed *with qualifications* by the American Academy of Family Physicians.
 - Insulin therapy should be initiated for children and adolescents with T2DM who are ketotic or in diabetic ketoacidosis and in whom the distinction between T1DM and T2DM is unclear.
 - Insulin therapy should be initiated for patients who have random venous or plasma blood glucose (BG) concentrations ≥ 250 mg/dL or whose HbA1c is $> 9\%$.
 - In all other instances, a lifestyle modification program and metformin should be initiated as first-line therapy at the time of diagnosis of T2DM.
 - HbA1c concentrations should be monitored every 3 months and treatment intensified if treatment goals for BG and HbA1c concentrations are not being met.
 - Patients should be advised to monitor finger-stick BG concentrations if they are taking insulin or other medications with a risk of hypoglycemia, are initiating or changing their diabetes treatment regimen, have not met treatment goals, or have intercurrent illnesses.
 - Nutritional counseling may incorporate the Academy of Nutrition and Dietetics' *Pediatric Weight Management Evidence-Based Nutrition Practice Guidelines*.
 - Children and adolescents with T2DM should be encouraged to engage in moderate-to-vigorous exercise for at least 60 minutes daily and to limit nonacademic screen time to less than 2 hours per day.
- The guideline, Oral Pharmacologic Treatment of Type 2 Diabetes Mellitus, was developed by the American College of Physicians and endorsed by the American Academy of Family Physicians.



- Pharmacologic therapy should be added in individuals diagnosed with type 2 diabetes when lifestyle modifications, including diet, exercise, and weight loss, have failed to adequately improve hyperglycemia.
- Monotherapy with metformin should be the initial pharmacologic therapy for most patients with type 2 diabetes.
- A second agent should be added to metformin to treat patients with persistent hyperglycemia when lifestyle modifications and monotherapy with metformin fail to control hyperglycemia.
- The guideline on Management of Overweight and Obesity in Adults was developed by the American College of Cardiology, the American Heart Association, and the Obesity Society, and was endorsed by the American Academy of Family Physicians.
 - *Note: This topics is covered by other sessions
- Metformin should be used as first-line therapy to reduce microvascular complications, assist in weight management, reduce the risk of cardiovascular events, and reduce the risk of mortality in patients with type 2 diabetes mellitus.
- Patients with prediabetes or new-onset diabetes should undertake extensive lifestyle changes to slow the progression of type 2 diabetes.
- Patients with existing cardiovascular disease, two or more cardiovascular disease risk factors, or duration of diabetes of 10 years or more should have higher A1C goals because of a lack of benefit and the potential for increased risk of mortality compared with lower A1C goals.
- Self-monitoring of blood glucose levels for patients taking noninsulin therapies does not significantly affect glycemic control.
- Screening for GDM should occur after 24 weeks of gestation in all women without known diabetes mellitus.
- USPSTF recommendation based on systematic reviews and meta-analyses
- Initial management of GDM involves dietary changes, increased physical exercise, and blood glucose self-monitoring.
- Systematic review and meta-analysis of inconsistent studies; consensus guideline
- Target glucose values in women with GDM are ≤ 95 mg per dL (5.3 mmol per L) with fasting, ≤ 140 mg per dL (7.8 mmol per L) one-hour postprandial, or ≤ 120 mg per dL (6.7 mmol per L) two-hour postprandial.
- Recommendation from consensus guideline; one small randomized controlled trial
- Pharmacologic therapy with metformin (Glucophage), glyburide, or insulin is appropriate for women with GDM whose glucose values are above goal despite lifestyle modifications.
- Systematic review and meta-analysis of inconsistent studies; consensus guideline
- Women with GDM should be screened at six to 12 weeks postpartum, and every three years thereafter, for abnormal glucose metabolism.

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

- AAP Management of newly diagnosed type 2 Diabetes Mellitus (T2DM) in children and adolescents³⁸
- ADA Standards of medical care in diabetes³⁹
- ACOG Gestational diabetes mellitus¹⁶
- Management of Blood Glucose with Noninsulin Therapies in Type 2 Diabetes³³
- Screening, Diagnosis, and Management of Gestational Diabetes Mellitus³²
- Adding health education specialists to your practice⁴⁰
- Envisioning new roles for medical assistants: strategies from patient-centered medical homes⁴¹
- The benefits of using care coordinators in primary care: a case study⁴²
- An organized approach to chronic disease care¹³
- Patient-physician partnering to improve chronic disease care¹⁴
- Group visits for chronic illness care: models, benefits and challenges.⁴³
- Keys to high-functioning office teams⁴⁴
- Registries made simple⁴⁵
- AMA PCPI Approved Quality Measures¹⁵
- Engaging Patients in Collaborative Care Plans⁴⁶
- The Use of Symptom Diaries in Outpatient Care⁴⁷
- Health Coaching: Teaching Patients to Fish⁴⁸
- Medication adherence: we didn't ask and they didn't tell⁴⁹
- Encouraging patients to change unhealthy behaviors with motivational interviewing⁵⁰
- Integrating a behavioral health specialist into your practice⁵¹
- Simple tools to increase patient satisfaction with the referral process⁵²
- Documenting Diabetes Mellitus under ICD-10⁵³
- FPM Toolbox – Disease Management: Diabetes⁵⁴
- FamilyDoctor.org. Diabetes Overview (patient education)⁵⁵
- FamilyDoctor.org. Gestational Diabetes | Overview (patient education)⁵⁶

References

1. Centers for Disease Control and Prevention. National Diabetes Statistics Report: Estimates of Diabetes and Its Burden in the United States. *Diabetes Public Health Resource* 2014; <http://www.cdc.gov/diabetes/pubs/statsreport14.htm>. Accessed September, 2014.
2. American Diabetes Association. Statistics About Diabetes. 2014; <http://www.diabetes.org/diabetes-basics/statistics/>. Accessed September, 2014.



3. Cherry DK, Hing E, Woodwell DA, Rechtsteiner EA. National Ambulatory Medical Care Survey: 2006 summary. *National health statistics reports*. Aug 6 2008(3):1-39.
4. CDC. National Ambulatory Medical Care Survey. Hyattsville, MD: Centers for Disease Control and Prevention, National Center for Health Statistics; 2008.
5. AAFP. 2012 CME Needs Assessment: Clinical Topics. American Academy of Family Physicians; 2012.
6. American Academy of Family Physicians (AAFP). 2012 AAFP Scientific Assembly: CME Outcomes Report. Leawood KS: AAFP; 2012.
7. American Academy of Family Physicians (AAFP). 2013 AAFP Scientific Assembly: CME Outcomes Report. Leawood KS: AAFP; 2013.
8. American Academy of Family Physicians (AAFP). AAFP Assembly CME Outcomes Report. Leawood KS: AAFP; 2014.
9. American Diabetes Association. Standards of medical care in diabetes--2013. *Diabetes care*. Jan 2013;36 Suppl 1:S11-66.
10. Beaser RS, Okeke E, Neighbours J, Brown J, Ronk K, Wolyniec WW. Coordinated primary and specialty care for type 2 diabetes mellitus, guidelines, and systems: an educational needs assessment. *Endocrine practice : official journal of the American College of Endocrinology and the American Association of Clinical Endocrinologists*. Nov-Dec 2011;17(6):880-890.
11. Nathan DM, Cleary PA, Backlund JY, et al. Intensive diabetes treatment and cardiovascular disease in patients with type 1 diabetes. *The New England journal of medicine*. Dec 22 2005;353(25):2643-2653.
12. Whalen KL, Stewart RD. Pharmacologic management of hypertension in patients with diabetes. *American family physician*. Dec 1 2008;78(11):1277-1282.
13. Lyon RK, Slawson J. An organized approach to chronic disease care. *Family practice management*. May-Jun 2011;18(3):27-31.
14. Denmark D. Patient-physician partnering to improve chronic disease care. *Family practice management*. May 2004;11(5):55-56.
15. American Medical Association (AMA). PCPI Approved Quality Measures. 2013; <http://www.ama-assn.org/apps/listserv/x-check/qmeasure.cgi>. Accessed May, 2013.
16. American College of Obstetricians and Gynecologists, Committee on Practice Bulletins-Obstetrics. Practice Bulletin No. 137: Gestational diabetes mellitus. *Obstet Gynecol*. Aug 2013;122(2 Pt 1):406-416.
17. U.S. Food and Drug Administration. FDA approves Invokana to treat type 2 diabetes. *FDA NEWS RELEASE*. 2013. <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm345848.htm>. Accessed September 2014.
18. U.S. Food and Drug Administration. FDA approves Tanzeum to treat type 2 diabetes. *FDA NEWS RELEASE*. 2014. <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm393289.htm>. Accessed September 2014.
19. U.S. Food and Drug Administration. FDA approves Afrezza to treat diabetes. *FDA NEWS RELEASE*. 2014. <http://www.fda.gov/newsevents/newsroom/pressannouncements/ucm403122.htm>. Accessed September 2014.



20. U.S. Food and Drug Administration. FDA approves Trulicity to treat type 2 diabetes. *FDA NEWS RELEASE*. 2014.
<http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm415180.htm>. Accessed September 2014.
21. U.S. Food and Drug Administration. FDA Drug Safety Communication: FDA warns that SGLT2 inhibitors for diabetes may result in a serious condition of too much acid in the blood. 2015; <http://www.fda.gov/Drugs/DrugSafety/ucm446845.htm>. Accessed July, 2015.
22. ClinicalTrials.gov. Diabetes | Open Studies. 2014;
<http://clinicaltrials.gov/ct2/results?term=diabetes&recr=Open>. Accessed September, 2014.
23. Attridge M, Creamer J, Ramsden M, Cannings-John R, Hawthorne K. Culturally appropriate health education for people in ethnic minority groups with type 2 diabetes mellitus. *Cochrane Database of Systematic Reviews*. 2014(9).
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD006424.pub3/abstract>.
24. Middleton P, Crowther Caroline A. Reminder systems for women with previous gestational diabetes mellitus to increase uptake of testing for type 2 diabetes or impaired glucose tolerance. *Cochrane Database of Systematic Reviews*. 2014(3).
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009578.pub2/abstract>.
25. Fullerton B, Jeitler K, Seitz M, Horvath K, Berghold A, Siebenhofer A. Intensive glucose control versus conventional glucose control for type 1 diabetes mellitus. *Cochrane Database of Systematic Reviews*. 2014(2).
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD009122.pub2/abstract>.
26. Colquitt Jill L, Pickett K, Loveman E, Frampton Geoff K. Surgery for weight loss in adults. *Cochrane Database of Systematic Reviews*. 2014(8).
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003641.pub4/abstract>.
27. Mechanick JI, Youdim A, Jones DB, et al. Clinical practice guidelines for the perioperative nutritional, metabolic, and nonsurgical support of the bariatric surgery patient--2013 update: cosponsored by American Association of Clinical Endocrinologists, the Obesity Society, and American Society for Metabolic & Bariatric Surgery. *Endocrine practice : official journal of the American College of Endocrinology and the American Association of Clinical Endocrinologists*. Mar-Apr 2013;19(2):337-372.
28. Russell SJ, El-Khatib FH, Sinha M, et al. Outpatient glycemic control with a bionic pancreas in type 1 diabetes. *The New England journal of medicine*. Jul 24 2014;371(4):313-325.
29. Cheng J, Zhang W, Zhang X, et al. Effect of angiotensin-converting enzyme inhibitors and angiotensin II receptor blockers on all-cause mortality, cardiovascular deaths, and cardiovascular events in patients with diabetes mellitus: a meta-analysis. *JAMA internal medicine*. May 2014;174(5):773-785.
30. Bao W, Tobias DK, Bowers K, et al. Physical activity and sedentary behaviors associated with risk of progression from gestational diabetes mellitus to type 2 diabetes mellitus: a prospective cohort study. *JAMA internal medicine*. Jul 2014;174(7):1047-1055.
31. Gorter K, Van De Laar FA, Janssen P, Houweling S, Rutten G. Glycemic Control in Type 2 Diabetes (Drug Treatments). *American family physician*. 2014;89(10):820-822.
<http://www.aafp.org/afp/2014/0515/p820.html>. Accessed September 2014.



32. Garrison A. Screening, diagnosis, and management of gestational diabetes mellitus. *American family physician*. Apr 1 2015;91(7):460-467.
33. George CM, Brujin LL, Will K, Howard-Thompson A. Management of Blood Glucose with Noninsulin Therapies in Type 2 Diabetes. *American family physician*. Jul 1 2015;92(1):27-34.
34. Dileepan K, Feldt MM. Type 2 diabetes mellitus in children and adolescents. *Pediatrics in review / American Academy of Pediatrics*. Dec 2013;34(12):541-548.
35. American Academy of Family Physicians (AAFP). Diabetes. *Clinical Practice Guidelines* 2013; <http://www.aafp.org/patient-care/clinical-recommendations/all/type2-diabetes.html>. Accessed September, 2014.
36. American Academy of Family Physicians (AAFP). Diabetes. *Clinical Preventive Service Recommendation* 2014; <http://www.aafp.org/patient-care/clinical-recommendations/all/diabetes.html>. Accessed September, 2014.
37. Qaseem A, Humphrey LL, Sweet DE, Starkey M, Shekelle P. Oral Pharmacologic Treatment of Type 2 Diabetes Mellitus: A Clinical Practice Guideline From the American College of Physicians. *Annals of internal medicine*. 2012;156(3):218-231.
38. Copeland KC, Silverstein J, Moore KR, et al. Management of newly diagnosed type 2 Diabetes Mellitus (T2DM) in children and adolescents. *Pediatrics*. Feb 2013;131(2):364-382.
39. American Diabetes Association (ADA). Standards of medical care in diabetes--2014. *Diabetes care*. Jan 2014;37 Suppl 1:S14-80.
40. 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.
41. Naughton D, Adelman AM, Bricker P, Miller-Day M, Gabbay R. Envisioning new roles for medical assistants: strategies from patient-centered medical homes. *Family practice management*. Mar-Apr 2013;20(2):7-12.
42. 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.
43. Jaber R, Braksmajer A, Trilling J. Group visits for chronic illness care: models, benefits and challenges. *Family practice management*. Jan 2006;13(1):37-40.
44. Kuzel AJ. Keys to high-functioning office teams. *Family practice management*. May-Jun 2011;18(3):15-18.
45. Bagley BA, Mitchell J. Registries made simple. *Family practice management*. May-Jun 2011;18(3):11-14.
46. Mauksch L, Safford B. Engaging Patients in Collaborative Care Plans. *Family practice management*. 2013;20(3):35-39.
47. Hodge B. The Use of Symptom Diaries in Outpatient Care. *Family practice management*. 2013;20(3):24-28.
48. Ghorob A. Health Coaching: Teaching Patients to Fish. *Family practice management*. 2013;20(3):40-42.
49. 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.
50. Stewart EE, Fox CH. Encouraging patients to change unhealthy behaviors with motivational interviewing. *Family practice management*. May-Jun 2011;18(3):21-25.
51. Reitz R, Fifield P, Whistler P. Integrating a behavioral health specialist into your practice. *Family practice management*. Jan-Feb 2011;18(1):18-21.



52. Jarve RK, Dool DW. Simple tools to increase patient satisfaction with the referral process. *Family practice management*. Nov-Dec 2011;18(6):9-14.
53. American Academy of Family Physicians (AAFP). DOCUMENTING DIABETES MELLITUS UNDER ICD-10. 2014; PDF. Available at: <http://www.aafp.org/fpm/2013/1100/fpm20131100p22-rt1.pdf>. Accessed September, 2014.
54. American Academy of Family Physicians (AAFP). Disease Management: Diabetes. *FPM Toolbox* 2014; <http://www.aafp.org/fpm/toolBox/viewToolType.htm?toolTypeId=10>. Accessed September, 2014.
55. FamilyDoctor.org. Diabetes Overview. 2011; <http://familydoctor.org/familydoctor/en/diseases-conditions/diabetes.html>. Accessed July, 2013.
56. FamilyDoctor.org. Gestational Diabetes | Overview. 2000; <http://familydoctor.org/familydoctor/en/diseases-conditions/gestational-diabetes.html>. Accessed August, 2013.