

MEMORANDUM October 26, 2012

Subject: Federal Activities and Spending for Diabetes Prevention, Research, and Treatment

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This memorandum was prepared to enable distribution to more than one congressional office.

Introduction

To support congressional work on diabetes-related activities CRS has prepared this memorandum providing details of the federal government's involvement in and spending on diabetes mellitus research, surveillance, prevention and education, and health treatment.¹

The roadmap to this memorandum is as follows. It begins with an overview of the *Methodology and Scope of Analysis*. The Congressional Research Service (CRS) addresses the definitional issue at the start of this memorandum, that is, the definition of diabetes-related activity, as agencies independently define this term. Definitional differences have an effect on all the elements of this memorandum. This subject and other methodological issues will be discussed in that section. A *Brief History of Federal Diabetes-Related Activities* includes relevant legislation. This is followed by *Coordination of Federal Diabetes-Related Activities* that focuses primarily on the Diabetes Mellitus Interagency Coordinating Committee (DMICC). *Federal Spending on Diabetes-Related Activities* follows and presents a discussion of federal spending of the Department of Health and Human Services (HHS) and other agencies and departments that participate in the DMICC, including the Department of Defense (DOD), the U.S. Department of Agriculture (USDA), and the Veterans Health Administration (VHA). This section ends with a compilation of diabetes-related spending on minority health.

If you have any further questions about issues raised in this memorandum, please contact Judith Glassgold at 7-9455.

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¹For brevity, these activities will be summarized in the text as diabetes-related activities. These activities include health-related activities and do not include activities, such as disability or income support. Unless otherwise specified, these activities include activities related to diabetes mellitus in all its forms (e.g., type 1, type 2 and gestational diabetes). Except in specific situations, most agencies do not distinguish between these subtypes of the disease when identifying their diabetes-related activities. Type 1 diabetes is an autoimmune disorder where the body does not make insulin. This disease usually appears in childhood. Type 2 diabetes occurs because the body does not sufficiently respond to insulin and eventually does not make enough insulin. The onset can be in childhood or adulthood. Gestational diabetes is a pregnancy-related condition where a pregnant woman without a history of diabetes is diagnosed with high blood sugar. For more information see: http://diabetes.niddk.nih.gov/dm/pubs/overview/#what.

Methodology and Scope of Analysis

Definitions and Estimates of Diabetes-Related Activities

For the purposes of this memorandum CRS defined diabetes-related activity as an activity related to diabetes through prevention and public health education, research, surveillance, and health treatment. CRS does not include nutrition-related services or education as diabetes-related activities unless these activities are specifically targeted at diabetes-prevention and are separate from general nutrition-related activities. In addition, although obesity is a risk factor for diabetes, for the purposes of specificity, we do not to include obesity-related activities in this memorandum. Spending is defined in this memorandum as spending on diabetes-related activities.

This memorandum provides an estimate of the scope of diabetes-related activities and federal spending on these activities. This memorandum relies on information from agencies that identified their own diabetes-related activities, and as a result, agency definitions may not be uniform.

Of those agencies that provided spending estimates, the estimates may overestimate or underestimate spending. In some instances, specific diabetes-related activities are subsumed in general activities. For instance, given that prevention and public health efforts, as well as direct health treatment, provide interventions that can affect multiple health conditions simultaneously, it is difficult to estimate which part of the spending is uniquely attributable to a specific disease, such as diabetes. Many agencies include all diagnostic subtypes of diabetes in their definitions of diabetes-related activities, so that in this memorandum we include all types of diabetes, and specify, where possible, specific spending on type 1, type 2, or gestational diabetes. Finally, although CRS does not include nutrition or obesity-related spending in its estimates, some agencies have included these activities and their relevant spending in their estimates, due to, for example, a particular aspect of the agency's mandate.⁴

Methodology and Sources

CRS based this memorandum on four sources of information: (1) agency descriptions of programs and spending; (2) FY2012 and FY2013 Moyer Material submitted to Congress by HHS;⁵ (3) CRS analyst research on primary materials; and (4) secondary sources from the federal government and non-governmental entities.

CRS requested information from agencies listed in this request on their programs and expenditures on diabetes-related activities. HHS agencies generally relied on FY2012 Moyer Material for spending estimates. Non-HHS agencies (DOD and VHA) provided their own data. Some agencies and departments

³However, in cases where legislation or activities address both diabetes and obesity, obesity-related activities will be noted.

²See http://diabetes.niddk.nih.gov/dm/pubs/causes/.

⁴For instance, the Endocrine and Metabolic Drugs Advisory Committee of the FDA is responsible for recommendations of drugs for diabetes, obesity, and weight loss; see **Table 8**.

⁵Office of the Assistant Secretary for Financial Resources, *FY2012 Moyer Material*, U.S. Department of Health and Human Services, Washington, DC, March 2011, pp. 22-25; and Office of the Assistant Secretary for Financial Services, *FY2013 Moyer Material*, U.S. Department of Health and Human Services, Washington, DC, February 24, 2012, pp. 23-26. Hereafter referred to as Moyer Material. Moyer Material is cross-cutting material that is submitted to the House Committee on Appropriations as a supplement to the annual HHS Budget request.

⁶Ibid. FY2013 Moyer Material had not been published when this request was first processed.

provided details about specific programs on diabetes or chronic illness. Congressional liaisons from agencies and departments were contacted for additional details as needed. The HHS Office for the Assistant Secretary for Legislation was asked to provide a description of coordination efforts for diabetes-related policies and DMICC was asked to describe its activities.

CRS reviewed the FY2012 and FY2013 Moyer Material, a cross-sectional accounting of spending by HHS agencies relative to selected health conditions (e.g., Alzheimer's disease, diabetes, and obesity) and special populations (e.g., aging, minority health, and women's health) prepared by the Office of the Assistant Secretary for Financial Resources (ASFR). CRS reviewed the FY2012 and FY2013 Moyer Material for diabetes-related spending and examined other sections of the Moyer Material. The Moyer Material may not account for a complete picture of federal diabetes-related spending. For instance, it does not include spending by the Administration on Aging (AoA)⁸ and the Substance Abuse and Mental Health Services Administration (SAMHSA). Further the Moyer Material appears to exclude some prevention and education services and surveillance activities across agencies. In this memorandum, CRS includes spending from AoA and SAMHSA, and describes diabetes-related prevention, education, and surveillance activities. In addition, publicly available information for each agency was reviewed for diabetes-related activities. This included reviewing grant expenditures, agency websites, and agency reports.

This memorandum also considers legislation related to diabetes-related activities and spending. For instance, in order to present a history of diabetes-related activities, CRS searched legislation for the keyword "diabetes." In addition, CRS reviewed key documents of the DMICC and participating agencies and identified key legislation establishing diabetes-related programs. CRS included in the history section legislation and programs whose sole mission is diabetes-related (e.g., P.L. 93-354, *The Special Statutory Funding Program for Type 1 Diabetes Research*; see **Table 1**) or that changed the nature of existing federal efforts (e.g., P.L. 109-171, The Deficit Reduction Act of 2005, expanded Medicare coverage for diabetes screenings; see **Table 1**).

Secondary sources such as historical federal reports, including U.S. Government Accountability Office (GAO) reports on the implementation of the National Diabetes Mellitus Research and Education Act (P.L. 93-354) were also analyzed. CRS examined reports on the impact of diabetes on health and expenditures of the federal government by non-governmental entities (e.g., Mathematica Policy Research, United Healthcare and the American Diabetes Association). The most comprehensive non-governmental source is a series of reports by Mathematica Policy Research (MPR) on the cost of type 2 diabetes to the federal government. The MPR reports estimate the cost using an analytical model that approximates the

⁸Administration on Aging became part of the Administration for Community Living in April, 2012. See "Administration on Aging (AoA)"; and see footnote 43.

¹⁰Marsha Gold, Ronette Briefel, and The MPR Study Team, *Study of Federal Spending on Diabetes: An Opportunity for Change*, Mathematica Policy Research, Washington, DC, June 2007, p. E-2, http://www.mathematicampr.com/publications/PDFs/FederalSpending.pdf. Hereafter referred to as the MPR report. MPR has a series of reports relating to this analysis, see http://www.mathematica-mpr.com/publications/SearchList2.aspx?jumpsrch=yes&txtSearch=diabetes.

http://www.unitedhealthgroup.com/hrm/unh_workingpaper5.pdf; and http://www.diabetes.org/diabetes-basics/diabetes-statistics/.

⁷Ibid.

⁹See footnote 5.

¹¹U.S. General Accounting Office (now, U.S. Government Accountability Office), *Federal Diabetes Activities*, HRD-81-21, October 23, 1980, http://www.gao.gov/products/HRD-81-21; and U.S. General Accounting Office (now, U.S. Government Accountability Office), *Federal Diabetes Activities*, HRD-79-90, June 4, 1979, http://www.gao.gov/products/HRD-79-90.

¹²UnitedHealth Center for Health Reform and Modernization, *The United States of Diabetes: Challenges and Opportunities in the Decade Ahead*, Working Paper 5, Minnetonka, MN, October 2010,

¹³See footnote 10.

difference in government spending per individual, comparing those with and without diabetes.¹⁴ According to MPR, their estimate is not comparable to Moyer Material spending figures and by extension, the figures in this memorandum, both of which measure federal spending on specific governmental activities.

Federal Spending on Diabetes-Related Activities

An accounting of total federal spending on diabetes-related activities is complicated by differences in how federal agencies define diabetes-related activities. Many diabetes-related activities are not separated from general agency activities, as with CDC surveillance activities. ¹⁵ For example, in reviewing specific federal programs, it is clear that some programs' mandates are specifically directed toward diabetesrelated activities, such as research at the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). Other federal programs provide services for those affected by diabetes and its consequences within broader mandates (e.g., Medicare provides health coverage to all adults over 65, and those with end-stage kidney disease and certain individuals with disabilities). Some programs affect diabetes through their impact on factors that may lead to the development of diabetes (e.g., nutrition programs, transportation planning, urban design). The Mathematica study describes the ways that almost all federal government programs affect diabetes, including nutrition programs (as related to obesity), transportation and housing programs (as related to physical activity), and disability programs for those whose physical limitations are linked to diabetes. 17 This type of broad categorization could result in the largest estimate of diabetes-related spending, but risks including activities that may be only indirectly related to diabetes. 18 Alternatively, in this memorandum, CRS provides an analysis of direct spending linked to specific programs that provide diabetes-related activities, such as research, prevention and education, surveillance, and health treatment.

History of Legislation Aimed at Federal Diabetes-Related Activities

Table 1 provides a history of legislation that explicitly target diabetes. In this chronology is legislation whose mission is solely diabetes-related or legislation that changed existing federal programs to include a diabetes-related activity. Numerous federal departments and agencies are involved in diabetes-related activities, and many of these activities are authorized in the Public Health Service Act (PHSA)¹⁹ and the Social Security Act (SSA), so that this chronology includes amendments to those acts, but does not include those acts given their broad scope.²⁰

¹⁸Marsha Gold, Ronette Briefel, and The MPR Study Team, *Study of Federal Spending on Diabetes: An opportunity for change.*, Mathematica Policy Research, June 2007, p. vii, http://www.mathematica-mpr.com/publications/pdfs/FederalSpending.pdf.

¹⁴Ibid, pp. 102-107 and E-1, http://www.mathematica-mpr.com/publications/PDFs/federalmedical.pdf.

¹⁵E-mail from the Office of the Associate Director of Policy, CDC Washington, May 18, 2012.

¹⁶See footnote 10.

¹⁷Ibid.

¹⁹PHSA, in particular Titles III, IV, IX, and XVIII; 42 U.S.C. §§ 201 et seq.

²⁰Social Security Act (SSA), in particular Title II, XVIII, XIX, and XXI, 42 U.S.C. §§ 1801 et seq. For a history of Medicare and description of benefits see http://www.ssa.gov/policy/docs/statcomps/supplement/2011/medicare.html; and for a brief history of Medicaid see http://www.ssa.gov/policy/docs/statcomps/supplement/2011/medicaid.html.

The chronology starts with the establishment of a research program focused on diabetes and related disorders, P. L. 81-692, the Omnibus Medical Research Act. This act established National Institute of Arthritis and Metabolic Diseases and included diabetes-related activities in the mission of this institute. In 1972, P. L. 92-305 re-emphasized the importance of digestive diseases, including diabetes, and appointed an advisory council to guide research. P.L. 93-354, the National Diabetes Mellitus Research and Education Act of 1974 increased the diabetes-related research and education activities of the NIH, and created the Diabetes Mellitus Interagency Coordinating Committee (DMICC) to coordinate interagency efforts. In addition, this law established the position of Director of Diabetes in charge of efforts at NIH and created an advisory commission, the National Commission on Diabetes, to develop a long-term plan for research and surveillance.

Most federal efforts from 1974 to 1997 focused on DMICC's role as the center of diabetes activities (see **Table 1**). In 1976, the National Diabetes Advisory Board Act (P.L. 94-562) established an expert advisory board to provide guidance to NIH. In subsequent years Congress made diabetes a key focus of the NIH through increasingly specific mission statements for what was ultimately to become the NIDDK, and requested more explicit goals for NIH research (e.g., P.L. 103-43). Other policy initiatives in 1997 included the expansion of funding to establish a special focus on type 1 diabetes research and addressing diabetes in Indians. In subsequent years Congress also passed legislation to expand research initiatives such as clinical trials in Medicare.

The American Recovery and Reinvestment Act of 2009 (ARRA, P.L. 110-5) and the Patient Protection and Affordable Care Act (ACA, P.L. 111-148) included specific provisions that focused on improving health care, service delivery, and health treatment, as well as research. ARRA funding expanded funding for research, especially at NIH (see **Table 12**); funded comparative effectiveness research; and expanded funding for community health centers, aimed to increase access to care. ACA provided funds for new treatment models and programs for diabetes and other chronic illnesses in specific federal programs, (e.g., Medicare, Medicaid, and the Indian Health Service), and also added resources for the study of comparative effectiveness research (see **Table 1**). In addition, ACA authorized the Prevention and Public Health Fund (PPHF) (Sec. 4002) to fund prevention and health promotion activities across multiple HHS agencies.

Table 1. Chronology of Federal Diabetes-Related Legislation (1974-2010)

Date Action		Description
1950	P. L. 81-692: Omnibus Medical Research Act	Expanded national research institutes to support scientific and medical research. Established the National Institute of Arthritis and Metabolic Diseases (NIAMD) and included diabetes among other diseases. ²

²¹E-mail from the Office of the Assistant Secretary of Legislation, HHS, May 31, 2012.

²²See P.L. 105-33, Balanced Budget Act of 1997 (Sec. 4921 and 4922), as amended by P.L. 105-34, Taxpayer Relief Act of 1997; and most recently, P.L. 111-309, Medicare and Medicaid Extenders Act of 2010.

²³See P.L. 108-173, Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA).

²⁴See CRS Report R40181, *Selected Health Funding in the American Recovery and Reinvestment Act of 2009*, coordinated by C. Stephen Redhead; and Department of Health and Human Services, "HHS Releases \$338 million to Expand Community Health Centers, Serve More Patients," press release, March 29, 2009, http://www.hhs.gov/news/press/2009pres/03/20090327a.html; and http://www.hhs.gov/recovery/hrsa/healthcentergrants.html.

²⁵For more information, see http://www.healthcare.gov/news/factsheets/2011/02/prevention02092011b.html.

Date	Action	Description
1972	P.L. 92-305:To amend the Public Health Service Act (PHSA) to designate the National Institute of Arthritis and Metabolic Diseases as the National Institute of Arthritis, Metabolism, and Digestive Diseases, and for other purposes.	Renamed the National Institute of Arthritis and Metabolic Diseases the National Institute of Arthritis, Metabolism, and Digestive Diseases. Designated this institute as the home for research on digestive diseases and established the National Arthritis, Metabolism, and Digestive Diseases Advisory Council to advise Institute. ^a
1974	P.L. 93-354: National Diabetes Mellitus Research and Education Act.	Authorized appropriations for research and public education for diabetes. Required the Director of NIH to formulate a long-range plan on diabetes with the assistance of a National Commission. The plan was to include a coordinated research program. In addition, the Act authorized the Secretary of the Department of Health, Education, and Welfare (now HHS) to develop or expand centers for research and training in diabetes mellitus and related endocrine and metabolic disorders, and authorized the appropriation of \$40 million over three years for such centers. Directed the establishment of a coordinating committee within NIH, the Diabetes Mellitus Coordinating Committee to coordinate federal diabetes health research. ^b
1976	P.L. 94-562: National Diabetes Advisory Board Act.	Extended many of the provisions of P.L. 93-354, as well as established the National Diabetes Advisory Board, charged with advising Congress and the Secretary of Health, Education, and Welfare (now HHS) on implementing the Long-Range Plan to Combat Diabetes developed by the National Commission on Diabetes. The National Commission on Digestive Diseases is established to investigate the incidence, duration, mortality rates, and social and economic impact of digestive diseases. ^b
1980	P.L. 96-538: Health Programs Extension Act of 1980.	Renamed the NIH institute tasked with diabetes research to include the term "Diabetes": the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases. The law authorized the National Diabetes Information Clearinghouse, the Diabetes Data Group, and the National Digestive Diseases Information and Education Clearinghouse. In addition, it reauthorized advisory boards for arthritis and diabetes research.
1985	P.L. 99-158: The Health Research Extension Act of 1985.	Authorized the reorganization of the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases and separated arthritis and other related conditions from diabetes and kidney diseases, and renamed the institute, the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). Established the Advisory Council on research directions. ^b
1993	P.L. 103-43: The NIH Revitalization Act of 1993.	Tasked the NIDDK as responsible for research on nutritional disorders and obesity, including the formation of a research and training centers program. ^b
1997	Reports accompanying H.R. 2264 and S. 1061, FY1998 Appropriations for Labor/HHS/Education.	Recommended that NIH and NIDDK establish a diabetes working group to develop a comprehensive plan for future directions in NIH-funded research. A report "Conquering Diabetes, A Strategic Plan for the 21st Century" was sent to Congress on March 23, 1999. ^b
1997	P.L. 105-33: Balanced Budget Act of 1997 (Sec. 4921 and 4922) as amended by P.L. 105- 34: Taxpayer Relief Act of 1997.	Established the Special Statutory Funding Program for Type 1 Diabetes Research (Section 330B of the PHSA) and the Special Diabetes Program for Indians (Section 330C of the PHSA). The latter program is administered by the Indian Health Service and focuses on improving care and reducing health disparities. They were each funded at a total of \$150 million over FY1998 through FY2002 (\$30 million per year) by transfer from the appropriations

Date	Action	Description
		for the State Children's Health Insurance Program (SCHIP). ^b
2000	P.L. 106-310: Title IV, Section 402 of the Children's Health Act of 2000: Reducing the Burden of Diabetes Among Children and Youth.	Directed CDC and NIH to conduct long-term epidemiology studies, support regional clinical research centers, improve surveillance, and provide national prevention effort relative to type I diabetes. ^b
2000	P.L. 106-554: Consolidated Appropriations Act, 2001, Appendix F; Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000	Provided appropriations for the Special Statutory Funding Program for Type I Diabetes Research and Special Diabetes Program for Indians for FY2001, FY2002, and FY2003; appropriations for each program totaled \$240 million for FY2001 through FY2003. ^b
2002	P.L. 107-360: To amend the Public Health Service Act (PHSA) with respect to special diabetes programs for Type I diabetes and Indians.	Provided appropriations for the Special Statutory Funding Program for Type I Diabetes Research and the Special Diabetes Program for Indians for FY2004-FY2008. The appropriations were increased to \$150 million per year for a total appropriation of \$750 million for each program for FY2004 through FY2008.
2003	P.L. 108-173: Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA).	Authorized a clinical trial that included Medicare beneficiaries (pancreatic islet transplantation clinical trial), with funding for costs, transplantation, and related services for beneficiaries to be covered by Medicare. ^b
2004	P.L. 108-362: The Pancreatic Islet Cell Transplantation Act of 2004.	Amended the PHSA to increase the supply of pancreatic islet cells for research and improve coordination of federal activities. The law directed the DMICC to assess the federal activities and programs related to pancreatic islet transplantation in its annual report. ^b
2005	P.L. 109-171: The Deficit Reduction Act of 2005 (Sec. 5114).	Added diabetes self-management training (DSMT) to the list of Medicare covered billable services at Federally Qualified Health Centers. ^b
2007	P.L. 110-173: Medicare, Medicaid, and SCHIP Extension Act of 2007 (Sec. 302).	Provided appropriations for the Special Statutory Funding Program for Type 1 Diabetes Research and the Special Diabetes Program for Indians for FY2009 at \$150 million for each program. ^b
2008	P.L. 110-275: Medicare Improvements for Patients and Providers Act of 2008 (Sec. 303).	Provided appropriations for the Special Statutory Funding Program for Type 1 Diabetes Research and Special Diabetes Program for Indians for FY2010 and FY2011 at \$150 million per year for each program. ^b
2009	P.L. 111-5: American Recovery and Reinvestment Act of 2009.	Provided more than \$17.5 billion in supplemental appropriations for biomedical research, public health, and other health-related programs in HHS. NIH received \$10 billion of which \$274 million was spent on diabetes-related research. NIH also awarded \$10.8 million in grants for diabetes-related comparative effectiveness research (CER). The Agency for Healthcare Research and Quality (AHRQ), CDC, the Administration on Aging (AoA), and the Health Resources and Services Administration (HRSA) received additional funding for programs related to diabetes and obesity. ^c

Date	Action	Description
2010	P.L. 111-148: Patient Protection and Affordable Care Act (ACA).	Included provisions specific to improving diabetes health treatment, and prevention and health promotion. These programs included Better Diabetes Care, which would develop a diabetes report card; ^d and in consultation with the Institute of Medicine, an appropriate level of diabetes-related medical education (Sec. 10407); the National Diabetes Prevention Program (NDPP) (Sec. 10501(g) new PHSA § 399V-3); Prevention and Public Health Fund (Sec. 4002); Community Transformation Grants (Sec. 10403); expanded community health teams (Sec. 3502); and a new National Prevention, Health Promotion & Public Health Council (Sec 10401). ^e Established Patient-Centered Outcomes Research Institute to develop comparative effectiveness research (Sec. 6301). Added a new section to the Indian Health Care Improvement Act (IHCIA § 204 [25 U.S.C§ 1621c]), the Diabetes Prevention, Treatment and Control Act, to reduce the incidence and improve health treatment of diabetes among Indians. ^e
		Expanded Medicare coverage of prescription drugs without cost-sharing (SSA §§ 1861 and 1833); expanded coverage of diabetes-related preventive services in private insurance (PHSA § 2713), Medicare (SSA § 1861) and Medicaid (SSA § 1904(a)(13)). Specifically added coverage of Gestational Diabetes Screenings for pregnant women as part of preventive health benefits. Authorized grants to improve and coordinate primary and chronic care under Medicaid (SSA § 4108).8
2010	P.L. 111-309: Medicare and Medicaid Extenders Act of 2010 (Sec. 112).	Provided appropriations for the Special Statutory Funding Program for Type 1 Diabetes Research and the Special Diabetes Program for Indians for FY2012 and FY2013 at the level of \$150 million per year for each program.

Source: NIDDK & CRS publications as referenced.

- a. http://history.nih.gov/research/sources_legislative_chronology.html.
- b. See http://www.nih.gov/about/almanac/organization/NIDDK.htm.
- c. For description of the diabetes-related programs funded by ARRA see http://www.hhs.gov/recovery/programs/diabetesandrecovery.html, and CRS Report R40181, Selected Health Funding in the American Recovery and Reinvestment Act of 2009, coordinated by C. Stephen Redhead.
- d. For the 2012 Diabetes Report Card, see http://www.cdc.gov/diabetes/pubs/pdf/DiabetesReportCard.pdf.
- e. For more information, see CRS Report R40943, Public Health, Workforce, Quality, and Related Provisions in the Patient Protection and Affordable Care Act (P.L. 111-148), coordinated by C. Stephen Redhead and Erin D. Williams, and see CRS Report R41630, The Indian Health Care Improvement Act Reauthorization and Extension as Enacted by the ACA: Detailed Summary and Timeline, by Elayne J. Heisler.
- f. See HRSA website for more details: http://www.hrsa.gov/womensguidelines/.
- g. For more information on provisions in the ACA and diabetes, see Kenneth E. Thorpe, "The Affordable Care Act Lays The Groundwork for a National Diabetes Prevention and Treatment Strategy," *Health Affairs*, vol. 31, no. 1 (May 2012), pp. 61-66; and Katie Mason, NCSL Health Program, Federal Health Reform Provisions Related to Diabetes, National Conference of State Legislatures, Denver, CO, 2011.

Coordination of Federal Diabetes-Related Activities

The major departments and administrations that carry out diabetes-related activities are HHS, USDA, DOD, and VHA. As stated earlier, for the purpose of this memorandum, CRS defined diabetes-related activity as an activity related to diabetes through prevention and public health education, research, surveillance, and health treatment. CRS does not include nutrition-related services or education as diabetes-related activities unless these activities are specifically targeted at diabetes-prevention and are separate from general nutrition-related activities. Almost all HHS agencies have some diabetes-related

activities, although the breadth and depth of these activities varies (see **Table 2**). There are two coordinating entities for diabetes-related activities. The DMICC coordinates departments and agencies across the federal government. The Office of the Assistant Secretary for Health (OASH) coordinates HHS-only agencies, offices, and centers. These roles will be discussed in the following section.

Diabetes Mellitus Interagency Coordinating Committee (NIH)

The Diabetes Mellitus Interagency Coordinating Committee (DMICC), located at the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) of the NIH, is the primary entity responsible for coordinating the diabetes-related federal agency research activities. The DMICC is chaired by the Director of the Division of Diabetes, Endocrinology, and Metabolic Diseases (DEMD) of NIDDK. The National Diabetes Mellitus Research and Education Act (P.L. 93-354) states that the DMICC shall be composed of the Directors of the NIH Institutes involved in diabetes-related research, and shall include representatives from all federal departments and agencies whose programs and activities are determined relevant by the Secretary. DMICC members include parts of the Centers for Disease Control and Prevention (CDC); some of the NIH Institutes, Offices, and Centers, the Agency for Healthcare Research and Quality (AHRQ); the Centers for Medicare & Medicaid Services (CMS); the HHS Office of Disease Prevention and Health Promotion (ODPHP); the HHS Office of Minority Health (OMH); the Food and Drug Administration (FDA); the Health Resources and Services Administration (HRSA); and the Indian Health Service (IHS). Non-HHS members include the Department of Defense (DOD), the U.S. Department of Agriculture (USDA), and the Veterans Health Administration (VHA).

The DMICC coordinates these activities through meetings with participating federal agencies and outside experts; strategic planning across multiple NIH Institutes and Centers, and among participating agencies; the development and coordination of special programs, such as the *Special Statutory Funding for type 1 Diabetes Research*; and evaluation of current federal activities to assess the need to add or eliminate programs. The DMICC has published a number of evaluations, reports, and strategic plans that direct federal research activities, including recent publications on recent scientific advances and new research directions; a strategic planning report of the DMICC; and an evaluation of the *Special Statutory Funding Program for type 1 Diabetes Research*.

DMICC lists a variety of programs as examples of successful coordination of efforts.³² One example is the National Diabetes Prevention Program (NDPP), whose goal is to prevent type 2

²⁶Authorized by National Diabetes Mellitus Research and Education Act, P.L. 93-354.

²⁷See http://www2.niddk.nih.gov/AboutNIDDK/CommitteesAndWorkingGroups/DMICC/#Members.

²⁸For a description of the activities and members of the DMICC, see http://www2.niddk.nih.gov/AboutNIDDK/CommitteesAndWorkingGroups/DMICC/.

²⁹National Institute of Diabetes and Digestive and Kidney Diseases, *NIDDK: Recent Advances & Emerging Opportunities*, National Institutes of Health, NIH Publication Number: 12-7808, Bethesda, MD, February 2012, http://www2.niddk.nih.gov/NR/rdonlyres/77A34262-0642-45CA-BD84-0A2D2E28A941/0/FebDoc2012_Full_508.pdf.

³⁰Diabetes Mellitus Interagency Coordinating Committee, *Advances and Emerging Opportunities in Diabetes Research: A Strategic Planning Report of the Diabetes Mellitus Interagency Coordinating Committee*, Diabetes Mellitus Interagency Coordinating Committee, NIDDK, National Institutes of Health, Washington, DC, February 2011, p .1, http://diabetesplan.niddk.nih.gov).

³¹Diabetes Mellitus Interagency Coordinating Committee, *Special Statutory Funding Program for Type 1 Diabetes Research*, Diabetes Mellitus Interagency Coordinating Committee, NIDDK, National Institutes of Health, Washington, DC, January 2011, http://www2.niddk.nih.gov/NR/rdonlyres/41852AFA-823A-433E-9F70-FD441ABBADF0/0/Type1DiabetesReport_Final.pdf.

³²Diabetes Mellitus Interagency Coordinating Committee, *Coordinating the Federal Investment in Diabetes Research to Improve the Health of Americans*, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, June 4, 2012, (continued...)

diabetes through a prevention campaign for high risk populations, which was a collaboration of NIH, CDC, state and private-sector partners.

For the purposes of this memorandum, CRS organized the diabetes-related activities of the federal government by a typology based on materials from DMICC and participating agencies as well as secondary sources.³³ The rationale behind this typology is to categorize relevant diabetes-related activities; to provide an understanding of the scope of these activities; and to group activities into legislatively meaningful categories that correspond to existing federal programs or activities. This typology includes, in alphabetical order:

- Advisory and Policy: Creates and coordinates planning documents.
- *Health Care Delivery, Financing, Services, and Training*: Finances or provides direct health services, health provider training, and grants to improve health treatment.
- *Prevention and Education*: Provides information on disease prevention and treatment, and health promotion, which is available to the public.
- Regulatory Authority: Regulates devices and drugs; regulates participating providers and institutions; provides guidance to federal and state programs and/or industry standards for food, nutrition or safety.
- Research, Evaluation, Monitoring, and Surveillance: Funds applied, basic, clinical and translational research, evaluates; monitors health care delivery and public programs; provides estimates of incidence and prevalence of disease.

In the table below, CRS lists diabetes-related activities of the federal agencies that participate in DMICC by typology. The specific activities within each agency fitting this typology are described in the agency narratives that follow. This typology is a summary of activities and permits a comparison among agencies and departments. Notably, most agencies provide multiple types of diabetes-related activities.

Table 2. Typology of Diabetes-Related Activities in DMICC-Participating Agencies
In Alphabetical Order

Agency/Division	Advisory & Policy ^a	Health Care Delivery, Financing & Services	Prevention & Education	Regulatory Authority	Research, Evaluation & Monitoring
HHS Centers, Offices	Divisions				
AHRQ	✓	✓	✓		✓
CDC	✓		✓		✓
CMS	✓	✓		✓	✓
FDA	✓		✓	✓	✓
HRSA	✓	✓			✓

(...continued)

http://www2.niddk.nih.gov/AboutNIDDK/CommitteesAndWorkingGroups/DMICC/Default.htm. For future priorities, see NIDDK Significant Items as part of the President's Budget Request for FY2013 Appropriations: http://www2.niddk.nih.gov/AboutNIDDK/BudgetAndLegislativeInformation/.

³³See footnote 14.

Agency/Division	Advisory & Policy ^a	Health Care Delivery, Financing & Services	Prevention & Education	Regulatory Authority	Research, Evaluation & Monitoring
IHS	✓	✓	✓		✓
NIH	✓		✓		✓
OMH	✓	✓	✓		
Other Departments a	nd Agencies				
DOD	✓	✓	✓		
USDA	✓		✓	✓	✓
VHA	✓	✓			✓

Source: Compiled by CRS. Typology adapted from FY2012 Moyer Material and Mathematica Study, see footnote 11. These categories are not mutually exclusive; an activity in one area may be placed in another. These activities include past and present efforts.

Note:

All DMICC participating agencies have an advisory and policy function through their participation in DMICC.

Office of the Assistant Secretary for Health (OASH)/HHS

OASH coordinates diabetes-related activities in HHS pursuant to its general mandate to manage public health activities within HHS. OASH develops strategies for the management, prevention, and health treatment of multiple chronic conditions, including diabetes. HHS agencies implement these strategies through a variety of activities across multiple agencies.³⁴

OASH also houses a variety of advisory committees that coordinate activities in minority health, chronic disease prevention, and public health. For instance, the Advisory Committee on Minority Health advises HHS on ways to improve the health of minorities through HHS programs and targets the impact of diabetes on minority communities. The Advisory Committee on Prevention, Health Promotion, and Integrative and Public Health provides leadership and coordination with regard to health promotion and public health goals, including diabetes-related activities in diverse communities.³⁵

The Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives includes outside experts, a federal interagency workgroup, and lead federal agencies, and develops a planning document, *Healthy People*. ³⁶ Diabetes-related goals of *Healthy People*: 2020 focus on reducing the prevalence of the disease and its economic impact, as well as improving the quality of life for those with the disease.³⁷ Healthy People aims to establish national health objectives and provide the tools for

³⁴See http://www.hhs.gov/ash/initiatives/mcc/actions.html and HHS Interagency Workgroup on Multiple Chronic Conditions under the direction of Anand Parekh, MD, MPH Deputy Assistant Secretary for Health, U.S. Department of Health and Human Services Inventory of Programs, Activities, and Initiatives Focused on Improving the Health of Individuals with Multiple Chronic Conditions, U.S. Department of Health and Human Services, Office of the Assistant Secretary of Health, Washington, DC, September 2011, http://www.hhs.gov/ash/initiatives/mcc/mcc-inventory-20111018.pdf.

³⁵Ibid.

³⁶For more information about the *Healthy People 2020* process and history see http://www.healthypeople.gov/2020/about/default.aspx.

³⁷For more information, see http://healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=8.

states, localities, and individuals.³⁸ All the DMICC departments, agencies, and centers participate in developing and implementing the plan; additional agencies and departments include AoA, SAMHSA, and the Department of Education.³⁹ The expansion of the *Improving Patient Care Program* (IPC) of the Indian Health Service and the *Primary and Behavioral Health Care Integration Program* (PBHCI) of Substance Abuse and Mental Health Services Administration (SAMHSA) are examples of implementation of these strategies.⁴⁰

Federal Spending on Diabetes-Related Activities

This section includes spending on federal diabetes-related activities. It provides information on HHS agencies, AoA, AHRQ, CDC, CMS, FDA, HRSA, IHS, NIH and SAMHSA. Non-HHS diabetes-related spending at DOD, USDA and VHA follows. The memorandum concludes with a discussion of minority health diabetes-related programs and spending.

Department of Health and Human Services

HHS Total Spending

Total HHS spending on diabetes is listed below and represents spending from all the HHS agencies and the Office of the Secretary. The narrative in the following section details each operating division's reported diabetes-related activities and spending. The majority of HHS spending on diabetes-related activities is for health care delivery, financing, and services, followed by research, evaluation and monitoring, and finally prevention and education.

Spending by AoA and SAMHSA are not included in **Table 3** totals, as they are not included in the FY2012 or FY2013 Moyer Material.⁴¹ AoA and SAMHSA are also not formally listed as members of the DMICC.

Table 3. Total HHS Spending On Diabetes-Related Activities

Dollars in Millions

Agency	FY2009	FY2010	FY2011	FY2012
HHS Total	10,887	10,210	10,368	10,747

Source: FY2013 Moyer Material (see footnote 5).

³⁸For more information, see http://healthypeople.gov/2020/implementing/default.aspx.

³⁹For more information, see http://www.healthypeople.gov/2020/about/leadFederalAgencies.aspx.

⁴⁰See Ibid, p. 18 and p. 20.

⁴¹See footnote 5. HHS and USDA collaborate on some nutritional activities that will be listed in the USDA section.

Administration on Aging (AoA) 42

Background⁴³

The mission of AoA is to develop a comprehensive and coordinated system of home and community-based services to help elderly individuals maintain their health and independence in their homes and communities. AoA efforts are directed at preventing and reducing the impact of chronic diseases, including diabetes. AoA participates in *Healthy People 2020* activities.

AoA diabetes-related activities include: (1) grants under the Disease Prevention and Health Promotion Services Program; (2) grants to increase diabetes self-management training (DSMT) among seniors aged 60 and over; and (3) grants for Chronic Disease Self-Management and Education Programs. ⁴⁴ **Table 4** includes funding levels for these programs since FY2008.

Grants under the Disease Prevention and Health Promotion Services Program test new approaches in evidence-based prevention programs to improve the health and well-being or reduce diseases, disability and injury among older adults. Diabetes-related services are included under those criteria. Grants go to state-level agencies such as health centers; public health departments; and state and local non-profit organizations.

Grants to increase the utilization of DSMT aim to increase a patient's knowledge and skills about the disease, and increase the ability of the patient to improve the course of his or her illness. AoA, in partnership with the American Diabetes Association and others, developed a program directed to states to increase access to community-based trainers. Training funds were distributed in 2008 and 2009, and since 2010 AoA involvement has been limited to providing Area Agencies on Aging and partners technical assistance to meet certain accreditation standards.

The grants of the Chronic Disease Self-Management Education Programs aim to reduce the burden of and to prevent multiple chronic diseases, including diabetes. ⁴⁶ The goals for the grants are consistent with the goals of *Healthy People 2020*, which are to increase utilization of DSMT benefits in Medicare and to increase access to evidence-based interventions to manage multiple chronic diseases. ⁴⁷

⁴²Kirsten Colello, Specialist in Health and Aging Policy (Health Services and Research Section, DSP), contributed to the AoA section.

⁴³The Administration for Community Living (ACL) was created by HHS Secretary Sebelius in April, 2012 to combine the activities of the Administration on Aging (AoA), the Administration on Developmental Disabilities and the Office of Disability. This did not alter AoA diabetes-related activities. AoA is authorized under the P.L. 89-73 as amended, most recently by P.L. 109-365.

⁴⁴Authorized in Older Americans Act, Title IIID (Sec. 361); 42 U.S.C. § 3030m.

⁴⁵See http://www.aoa.gov/AoARoot/AoA_Programs/HCLTC/Evidence_Based/index.aspx.

⁴⁶For description of grants, see http://www.grants.gov/search/search.do?mode=VIEW&oppId=167553.

⁴⁷Telephone conversation with Office of Legislative Services, June 5, 2012.; and see also, footnotes 37 and 39.

AoA Spending

Table 4.AoA Spending on Diabetes-Related Activities

Dollars in Millions

Program	FY2008	FY2009	FY2010	FY2011	FY2012
Disease Prevention and Health Promotion Program	21.0	21.0	21.0	20.9	20.9
Diabetes Self-Management Training Programs	0.2	0.3	NAª	NA	NA
Empowering Older Adults and Adults with Disabilities through Chronic Disease Self-Management Education Programs ^b	NA	NA	NA	NA	8.5 ^b

Source: http://www.aoa.gov/aoaroot/grants/funding/docs/2012/FY2012_CDSMP_042612.pdf and telephone conversation with Office of Legislative Services, ACL, June 5, 2012. "NA" means not applicable.

Notes

- Starting in 2010 AoA has provided technical assistance to select sites, but has discontinued direct funding.
- b. Financed through the PPHF. Program established in FY2012. Approximate funding level, based on availability of funds (see http://www.aoa.gov/aoaroot/grants/funding/docs/2012/FY2012_CDSMP_042612.pdf).

Agency for Healthcare Research and Quality (AHRQ)48

Background⁴⁹

AHRQ is the federal agency charged with supporting research designed to improve the quality of health care, increase the efficiency of its delivery, and broaden access to essential health services. To accomplish these goals, the agency supports research, through the awarding of grants and contracts, aimed at reducing the costs of care, promoting patient safety, and increasing the effectiveness of health care services. AHRQ's budget is organized according to program areas, including: (1) Healthcare Costs, Quality, and Outcomes (HCQO) Research, (2) the Medical Expenditure Panel Surveys (MEPS), and (3) program support.

The majority of the agency's funding is allocated to HCQO Research, and it is within this broader area that the agency's diabetes activities reside. Related diabetes activities include, among other things, developing quality measures for diabetes-related health treatment, reducing health disparities in diabetes care and outcomes, evaluating comparative effectiveness of specific health treatments for diabetes, improving primary care for the care and management of diabetes, and increasing the use of health information technology (HIT) to promote better diabetes care. Some of AHRQ's advisory and policy activities occur through its participation in DMICC. The typology of AHRQ diabetes-related activities along with other DMICC members is provided in **Table 2.**

⁴⁸Amanda K. Sarata, Specialist in Health Policy (Health Services and Research Section, DSP), contributed to the AHRQ section.

⁴⁹AHRQ is authorized under PHSA Title IX; 42 U.S.C. §§ 201 et seq.

AHRQ Spending

Table 5 estimates AHRQ's diabetes-related spending, but is likely to underestimate the agency's work in this area, as some of the non-diabetes specific research and data collection activities undertaken by the agency could inform the management, prevention, and health treatment of diabetes.

Table 5.AHRQ Spending on Diabetes-Related Activities

Dollars in Millions

Program description	FY2008	FY2009	FY2010	FY2011	FY2012
Health Costs, Quality and Outcomes (HCQO) Research	6.8	7.8	5.1	5.1	5.1

Source: Personal communication, AHRQ Office of Legislation, November 8, 2011; and FY2012 and FY2013 Moyer Material (see footnote 5).

Centers for Disease Control and Prevention (CDC)50

Background

CDC's mission is to create the expertise, information, and tools to protect individual and community health through health promotion, disease prevention, and preparedness. ⁵¹ CDC programs range across the following domains: epidemiology and surveillance, environmental approaches to promote health and healthful behaviors; preventive health system interventions; policy development and planning; and strategies to improve community-clinical coordination. ⁵² CDC provides grants that aim to prevent diabetes and its complications, and to reduce obesity and promote health. ⁵³ One of the first agency collaborations in diabetes occurred between CDC and NIH, when in 1997 they created the NDEP with the goal of reducing the prevalence of diabetes, its morbidity and mortality, and its complications. ⁵⁴ Some of CDC's advisory and policy activities occur through its participation in DMICC. The typology of CDC diabetes-related activities along with other DMICC members is provided in **Table 2**.

CDC spending on diabetes-related activities listed in **Table 6** includes funding for the National Diabetes Prevention Program (NDPP) established pursuant to ACA, a program that aims to bring to communities evidence-based lifestyle change interventions for preventing type 2 diabetes.⁵⁵ This approach is based on the NIH Diabetes Prevention Program research study, which demonstrated that certain lifestyle changes can reduce the risk of developing type 2 diabetes in people at high risk.⁵⁶

In addition, **Table 6** includes spending for the CDC Division of Diabetes Translation (DDT), which is part of the CDC National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP). The

⁵³A description of these grants can be found at the CDC website (http://www.cdc.gov/diabetes/).

⁵⁰Sarah A. Lister, Specialist in Public Health an Epidemiology (Health Services and Research Section, DSP), contributed to the CDC section.

⁵¹For more information, see http://www.cdc.gov/about/organization/mission.htm.

⁵²PHSA Title III; 42 U.S.C. § 241 et seq.

⁵⁴For more information, see http://www.nih.gov/about/almanac/organization/NIDDK.htm

⁵⁵See **Table 1**. ACA P.L. 111-148, Sec. 10501(g).

⁵⁶National Institute of Diabetes and Digestive and Kidney Diseases, *Diabetes Prevention Program (website)*, National Institutes of Health, http://diabetes.niddk.nih.gov/dm/pubs/preventionprogram/.

strategic goals of the NCCDPHP are to promote health through prevention and control of chronic diseases, including diabetes. Often NCCDPHP addresses risk factors common to the major chronic diseases rather than focusing on a particular disease. This approach aims to address policy, systems, and environmental changes, as well as establishes community and clinical linkages that can reduce the incidence of chronic diseases, including diabetes. Pursuant to these goals, for FY2013, CDC's budget request would consolidate its spending on certain chronic diseases, such as heart disease and diabetes, in order to coordinate activities when risk factors and, therefore, preventive and health promotion efforts, are similar. CDC requested an additional \$129 million above FY2012 for this proposed consolidation, the *Coordinated Chronic Disease Prevention and Health Promotion Program.*

CDC Spending

The expenditures listed in **Table 6** represent spending for CDC activities in general, and NDPP specifically. These amounts may underreport total diabetes-related activities within CDC, as they do not include expenditures for a variety of cross-cutting prevention programs, e.g., Communities Putting Prevention to Work, Community Transformation Grants, and Racial and Ethnic Approaches to Community Health (REACH). Further, these expenditures do not include CDC general infrastructure spending that provide research, reporting, and surveillance, such as the National Community Health Survey and *Morbidity and Mortality Weekly Report*. 61

Table 6. CDC Spending on Diabetes-Related Activities

		5 0.1.4.5 11.1.1.11.11	0110		
Program	FY2008	FY2009	FY2010	FY2011	FY2012
CDC Diabetes Total	71.1	73.4	73.6	64.8 ^a	74.4 ^b
NDPP (non-add)	NA	NA	NA	10 ^a	10 ^b

Dollars in Millions

Source: FY2012 and FY2013 Moyer Material (see footnote 5); and e-mail from CDC Washington Office, July 20, 2012.

Notes: "NA" means not applicable; NDPP did not receive funding prior to FY2011. *Non-add* refers to amounts that are already included in the total and are not additional.

- a. Total includes \$10 million in discretionary funds for NDPP.
- b. Total includes \$10 million in mandatory funds for the NDPP from the Prevention and Public Health Fund (PPHF) appropriated under ACA, Sec. 4002; 42 U.S.C. §300u-11.
- c. FY2013 spending for NDPP is an estimate because diabetes program activities, including NDPP, are proposed for consolidation into the Coordinated Chronic Disease Prevention and Promotion Program.

⁶⁰For more information see http://www.cdc.gov/communitiesputtingpreventiontowork/; and http://www.cdc.gov/communitytransformation/ and http://www.cdc.gov/reach/.

⁵⁷Source: E-Mail from CDC Washington Office, May 22, 2012 and CDC public information. See also Eyre, E.H., Kahn, R., Robertson, R.M. and the ACS/ADA/AHA Collaborative Writing Committee, Clark, N. G., Doyle, C., Gansler, T., Glynn, T., Hong, Y., Smith, R. A., Taubert, K. & Thun, M. J. (2004), Preventing Cancer, Cardiovascular Disease, and Diabetes: A Common Agenda for the American Cancer Society, the American Diabetes Association, and the American Heart Association. CA: *A Cancer Journal for Clinicians*, 54, no.4, July/August, pp. 190–207. doi: 10.3322/canjclin.54.4.190.

⁵⁸Centers for Disease Control and Prevention, *FY2013: Justification of Estimates for Appropriations Committees.*, Department of Health and Human Services, Washington, DC, 2012, p. 118 ff.,

 $http://www.cdc.gov/fmo/topic/Budget\%20Information/appropriations_budget_form_pdf/FY2013_CDC_CJ_Final.pdf.$

⁵⁹Ibid, pp. 7, 12,135, 137.

⁶¹E-mail from CDC Washington Office, May 18, 2012.

Centers for Medicare and Medicaid Services (CMS)

Background

The Centers for Medicare and Medicaid Services (CMS) administers the Medicare and Medicaid programs to defined populations. ⁶² This memorandum includes Medicare expenditures as listed by FY2012 and FY2013 Moyer Material. ⁶³ There is no similar reporting of Medicaid diabetes-related services at the federal level. States do report Medicaid claims by diagnosis and medical procedures to CMS, but CMS does not currently have a reporting vehicle for these data. ⁶⁴

Medicare is the nation's health insurance program for individuals aged 65 and over and certain disabled persons and covers a variety of services for individuals with diabetes, such as glaucoma screenings, DSMT, drugs such as insulin, and outpatient and inpatient services.⁶⁵ ACA expanded Medicare services to include certain clinical services including diabetes screening and other preventive services.⁶⁶ The typology of CMS diabetes-related activities along with other DMICC members is provided in **Table 2**.

CMS Spending

Table 7 provides an estimate of CMS diabetes-related spending is likely to underestimate the agency's work in this area, as health treatment of conditions for chronic illnesses, End-Stage Renal Disease, and health effects of diabetes may not be included in this accounting.

Table 7. Medicare Spending on Diabetes-Related Activities

Dollars in Millions

Division	FY2009	FY2010	FY2011	FY2012
Medicare Services	8,995	8,785	8,929	9,286

Source: FY2012 and FY2013 Moyer Material (see footnote 5). FY2008 spending estimate is omitted as CMS revised the methodology for calculating spending in FY2009 so FY2008 estimates are not comparable.

⁶⁴E-mail from CMS, Office of Legislative Services, June 1, 2012.

⁶²Authorized under P. L. 89-97, the Social Security Amendments of 1965; Title XVIII of the Social Security Act §§ 1801 et seq. (Medicare) and Title XIX of the Social Security Act (Medicaid).

⁶³See footnote 5.

⁶⁵A basic description of the Medicare program and its coverage of medical expenses is found in CRS Report R40425, *Medicare Primer*, coordinated by Patricia A. Davis and a comprehensive list of Medicare services related to diabetes at Centers for Medicare and Medicaid Services, *Medicare & You: 2012*, Centers for Medicare and Medicaid Services, CMS Product No. 10050, Baltimore, MD, December 2011, pp. 3, 41, 43, 45, 77. http://www.medicare.gov/publications/pubs/pdf/10050.pdf.

⁶⁶See CRS Report R41196, *Medicare Provisions in the Patient Protection and Affordable Care Act (PPACA): Summary and Timeline*, coordinated by Patricia A. Davis.

Food and Drug Administration (FDA)67

Background

The Food and Drug Administration (FDA) includes diabetes-related activities in its overall mission to protect public health through activities designed to assure the safety, efficacy, and security of human drugs, biological products, medical devices, and the national food supply. Many of these activities involve regulatory approval or clearance of medicines and devices, related research, scientific conferences and panels, and health provider and consumer education. Specific diabetes-related activities include staff review of drug applications for products intended to treat both type 1 and type 2 diabetes; organizing workshops relating to cell transplantation to treat diabetes; research to identify genetic predisposition to obesity; regulation of medical devices used by diabetic patients such as glucose meters and continuous glucose sensors; and certain diagnostic tests such as Hemoglobin A1c (HbA1c). For instance, in 2010, the FDA restricted access to Avandia, a drug to treat diabetes due to negative side effects, and this year Belviq and Qsymia received approval as treatments for weight management and obesity.

Additional activities include providing guidance for industry on evaluating cardiovascular risk in antidiabetes therapeutics,⁷¹ as well as testimony⁷² and guidance⁷³ on medical devices related to diabetes treatment such as the artificial pancreas. FDA Centers and Committees have specific responsibilities for diabetes-related activities and **Table 8** describes these activities.

⁶⁷Susan Thaul, Specialist in Drug Safety and Effectiveness (Health Services and Research Section, DSP), contributed to the FDA section.

⁶⁸Authorized under the Food and Drug Administration Safety and Innovation Act (P.L. 112-144). For the purposes of this memorandum we do not include FDA food safety and food-related regulatory activities.

⁶⁹See http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/InVitroDiagnostics/ucm218389.htm.

⁷⁰See http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/ucm226956.htm; and U. S. Food and Drug Administration, "FDA approves Belviq to treat some overweight and obese adults," press release, June 26, 2012, http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm309993.htm; and U.S. Food and Drug Administration, "FDA approves weight-management drug Qsymia," press release, June 16, 2012, http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm312468.htm.

⁷¹Center for Drug Evaluation and Research, *Guidance for Industry: Diabetes Mellitus - Evaluating Cardiovascular Risk in New Therapies to Treat Type 2 Diabetes*, U.S. Department of Health and Human Services, Food and Drug Administration, Washington, DC, December 2008,

http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM071627.pdf.

⁷²See Testimony of Charles Zimlicki, PhD, Chair Artificial Pancreas Critical Path Initiative, Center for Devices and Radiologic Health, Food and Drug Administration before the Committee on Homeland Security and Governmental Affairs, June 22, 2011, http://www.fda.gov/NewsEvents/Testimony/ucm259446.htm.

⁷³Center for Devices and Radiological Health, *Draft Guidance for Industry and the Food and Drug Administration Staff: The Content of Investigational Device Exemption (IDE) and Premarket Approval (PMA) Applications for Low Glucose Suspend Device Systems*, U.S. Department of Health and Human Services, Food and Drug Administration, Washington, DC, June 22, 2011, http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/ucm259301.htm.

Table 8. Selected FDA Diabetes-Related Activities

Entity	Activity	Examples of Diabetes-Related Activities
Center for Drug Evaluation & Research	Regulatory: Reviews safety and effectiveness data in applications for drug	Approved/rejected several drugs for the treatment of diabetes.
	marketing, and monitors post-market safety and effectiveness.	In 2008 issued guidance for industry on developing diabetes drugs and biologics,
	Regulatory: Develops guidance for the regulation of drugs and therapeutic biologics.	and issued guidance on avoiding cardiac risk in diabetes drugs. ^a
Endocrine and Metabolic Drugs Advisory Committee	Research and Evaluation: Reviews and evaluates data concerning the safety and effectiveness of marketed and investigational human drug products for use in treatment of endocrine and metabolic disorders. Makes appropriate recommendations to Commissioner of FDA.	Recommends whether to approve drugs to treat diabetes and obesity. ^b
Center for Devices and Radiological Health	Research and Evaluation: Reviews research, provides guidelines to industry, provides	Reviews development of the artificial pancreas. ^c
	recommendations for designing and testing devices, sets performance and safety standards, establishes discussions between government and private researchers, and public forums.	In 2011 issued draft guidance on investigational device exemption and premarket approval of artificial pancreas and low glucose monitoring devices.d

Source: FDA website; and e-mail from Liz Ortuzar, FDA, March 15, 2012.

Notes:

- a. See for instance, http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/ucm071624.pdf.
- b. See for instance, http://www.fda.gov/Drugs/DevelopmentApprovalProcess/default.htm.
- See for instance, http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/HomeHealthandConsumer/ConsumerProducts/A rtificialPancreas/default.htm.
- d. See for instance, http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/ucm281706.htm; and http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/ucm259301.htm.

FDA provides science-based educational materials to the public on diabetes-related drugs and devices. The agency also provides webcasts, booklets and information on diabetes, drugs and devices used in diabetes treatment, and targeted information for specific populations (e.g., women and children). The typology of FDA diabetes-related activities along with other DMICC members is provided in **Table 2**.

FDA Spending

Table 9 includes FDA spending on its diabetes-related activities. The categories refer to the different products or scientific areas where FDA has regulatory responsibilities. This accounting may underestimate FDA spending on diabetes-related activities as it does not include educational efforts.

Table 9. FDA Spending on Diabetes-Related Activities

Dollars in Millions

Program Function	FY2008	FY2009	FY2010	FY2011	FY2012
Human Drugs	2.6	2.8	3.5	4.1	4.2
Biologics	0.9	1.0	1.0	1.1	1.2
Medical Devices	3.0	2.0	2.6	2.7	2.7
Toxicological	0	0	0.1	0	0.3
Total	6.5	5.8	7.2	7.9	8.4

Source: FY2012 and FY2013 Moyer Material (see footnote 5).

Health Resources and Services Administration (HRSA)74

Background

The Health Resources and Services Administration (HRSA) funds programs that aim to improve health services and provide access to health care for underserved populations. ⁷⁵ As part of its overall mission to provide leadership and resources to improve access to culturally competent, quality health care, HRSA awards grants to non-profit organizations and government entities including community-based organizations; colleges and universities; hospitals, state, local and tribal governments; and private entities. HRSA policy and planning activities include participation in the DMICC, as well as *Healthy People 2020*, and the Strategic Framework for Multiple Chronic Health Conditions. ⁷⁶ HRSA partners with SAMHSA to disseminate patient-centered integrated care to improve the health of those with mental illness and with multiple chronic conditions. ⁷⁷ In addition, HRSA partners with IHS to expand the Improving Patient Care (IPC) program of the IHS. ⁷⁸

Some of HRSA's diabetes-related activities are contained in HRSA programs that target vulnerable populations, including members of racial and ethnic minorities who often have higher rates of diabetes than the general population.⁷⁹ The agency's programs may provide diabetes-related care or undertake activities to prevent diabetes as part of their spectrum of services. For example, HRSA administers the health center program, which provides grants to non-profit entities to operate facilities that provide primary care to medically underserved individuals.⁸⁰ Community health centers may also provide health

⁷⁴Elayne J. Heisler, Analyst in Health Services (Health Services and Research Section, DSP), contributed to the HRSA section.

⁷⁵HRSA is authorized under the PHSA, Title III; 42 U.S.C. §§ 201 et seq. For more information on HRSA, see CRS Report R41737, *Public Health Service (PHS) Agencies: Overview and Funding, FY2010-FY2012*, coordinated by C. Stephen Redhead and Pamela W. Smith.

⁷⁶See footnote 36 and footnote 78.

⁷⁷For more information on this joint program see Substance Abuse and Mental Health Services Administration (SAMHSA).

⁷⁸HHS Interagency Workgroup on Multiple Chronic Conditions under the direction of Anand Parekh, MD, MPH Deputy Assistant Secretary for Health, U.S. Department of Health and Human Services Inventory of Programs, Activities, and Initiatives Focused on Improving the Health of Individuals with Multiple Chronic Conditions, U.S. Department of Health and Human Services, Office of the Assistant Secretary of Health, Washington, DC, September 2011, pp. 17-18, http://www.hhs.gov/ash/initiatives/mcc/mcc-inventory-20111018.pdf.

⁷⁹National Center for Health Statistics, "Age-Adjusted Percentage of Civilian, Noninstitutionalized Population with Diagnosed Diabetes, by Race, United States, 1980-2009," press release, April 5, 2011, http://www.cdc.gov/diabetes/statistics/prev/national/figbyrace.htm.

⁸⁰For more information, see CRS Report R42433, Federal Health Centers, by Elayne J. Heisler.

services and diabetes self-management training and health education to patients with diabetes or those at risk of developing diabetes. ⁸¹ In addition, HRSA administers programs related to maternal and child health that may include treatment and prevention of gestational diabetes. ⁸² As HRSA does not report funding for these programs, the spending amounts presented in the table below likely underestimate total HRSA funding for diabetes-related activities. The typology of HRSA diabetes-related activities along with other DMICC members is provided in **Table 2**.

HRSA Spending

Table 10. HRSA Spending on Diabetes-Related Activities

Dollars in Millions

Program description	FY2008	FY2009	ARRA FY2009	FY2010	FY2011	FY2012
Health Center Program	130.1	264.0	126.0	132.8	124.1	133.6a

Source: FY2012 and FY2013 Moyer Material (see footnote 5). For more information see http://bphc.hrsa.gov/. ARRA funds were available only in FY2008.

Notes: ARRA refers to American Recovery and Reinvestment Act of 2009 (P.L. 111-5).

a. P.L. 111-148 provided \$11 billion over 5 years to grants to Community Health Centers (CHC) for operations, expansion and construction, but FY2012 and FY2013 Moyer Material did not include any of these funds in estimates of HRSA spending on diabetes-related activities.

Indian Health Service (IHS)83

Background

The Indian Health Service (IHS) provides health care for approximately 2.0 million eligible American Indians/Alaska Natives of all ages through a system of programs and facilities located on or near Indian reservations and through contractors in certain urban areas. HIS provides services directly at facilities operated by the IHS, Indian tribes (ITs), or Tribal Organizations (TOs). IHS provides indirect services through programs within federally operated facilities through self determination contracts and self-governance compacts. HIS also awards grants to Urban Indian Organizations (UIOs) to provide health services in urban areas. The Indian Health Care Improvement Act (IHCIA) provides authority for most IHS programs and activities. HIS also receives appropriated funding from the *Special Diabetes*

⁸¹The Deficit Reduction Act of 2005, P.L. 109-171 (Sec. 5114). For more information on the federal health center programs see P.L. 112-144CRS Report R42433, *Federal Health Centers*, by Elayne J. Heisler.

⁸²For example, HRSA awards grants as part of the Maternal Child Health Research program for research on gestational diabetes; see http://mchb.hrsa.gov/research/project_info.asp?ID=170.

⁸³Elayne J. Heisler, Analyst in Health Services (Health Services and Research Section, DSP), contributed to the IHS section.

⁸⁴U.S. Department of Health and Human Services, Indian Health Service, IHS Fact Sheet: IHS Year 2012 Profile, http://www.ihs.gov/PublicAffairs/IHSBrochure/Profile2012.asp.

⁸⁵Authorized by P.L. 93-638, the Indian Self-Determination and Education Assistance Act of January 4, 1975, 88 Stat. 2203, as amended; 25 U.S.C. § 450 et seq.

⁸⁶P.L. 64-437 as amended [25 U.S.C. §§ 1601 et. seq]. A description of the most recent reauthorization of the Indian Health Care Improvement Act can be found in CRS Report R41630, *The Indian Health Care Improvement Act Reauthorization and Extension as Enacted by PPACA: Detailed Summary and Timeline*, by Elayne J. Heisler.

Program for Indians (SDPI), which is authorized in Section 330B of the PHSA⁸⁷ and has authority for alcohol and substance abuse-related programs.⁸⁸

American Indians/Alaska Natives have the highest rates of type 2 diabetes of all racial and ethnic groups in the United States. As such, IHS undertakes extensive prevention activities; provides health education; and provides health services to individuals with diabetes or those at risk of developing diabetes. ⁸⁹ IHS also administers the Model Diabetes Program, Diabetes Grants, the SDPI, ⁹⁰ and the Diabetes Periodontal Treatment Program. In addition, IHS either directly or through ITs, TOs, or UIOs provides health services and health education for patients with diabetes or those at risk of developing diabetes. ⁹¹ Some of IHS advisory and policy activities occur through its participation in DMICC. **Table 2** lists the typology of IHS diabetes-related activities along with those of other DMICC members.

IHS Spending

IHS spending on diabetes-related activities, shown in **Table 11** likely underestimates total agency spending on diabetes due to the integration of diabetes services into IHS general health and prevention services.⁹²

Table II. IHS Spending on Diabetes-Related Activities

Dollars in Millions

Program Description	FY2008	FY2009	FY2010	FY2011	FY2012
Model Diabetes Programa	7.7	7.7	7.7	7.7	7.7
Diabetes Grants ^b	3.0	3.0	3.0	3.0	3.0
Special Diabetes Program for Indians ^c	150.0	150.0	150.0	150.0	150.0
Diabetes Periodontal Treatment Program ^d	0.3	0.3	0.3	0.3	0.3
Total	161.0	161.0	161.0	161.0	161.0

Source: FY2012 and FY2013 Moyer Material (see footnote 5).

Notes: See program notes for full description of program components:

a. Funding amounts are totals for all three components of the Model Diabetes Program. For descriptions of all three programs see http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=programsSDPI, http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=peopleADC, and http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=home.

⁸⁸For example, P.L. 111-211 enacted the Tribal Law and Order Act, which included requirements for cross-agency coordination on Indian Alcohol and Substance Abuse related issues.

⁹¹For a description of overall IHS funding, see CRS Report R41896, *Interior, Environment, and Related Agencies: FY2012 Appropriations*, coordinated by Carol Hardy Vincent.

⁸⁷See 42 U.S.C.§ 254c-2.

⁸⁹Indian Health Service, "IHS Fact Sheets: Diabetes," press release, January 2012, http://www.ihs.gov/PublicAffairs/IHSBrochure/Diabetes.asp.

⁹⁰See 42 U.S.C.§ 254c-2.

⁹²Ibid.

- b. See http://www.naclubs.org/initiatives/diabetes_prevention.shtml; http://www.ihs.gov/HPDP/; and http://www.ihs.gov/NonMedicalPrograms/gogp/index.cfm?module=HHS-2008-IHS-HLY-0001.
- c. See http://www.ihs.gov/MedicalPrograms/Diabetes/index.cfm?module=programsSDPI.
- d. See http://www.ihs.gov/phoenix/index.cfm?module=dsp_phx_hf_phx and http://www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Tools/BestPractices/2011_BP_OralHealth_508c.pdf.

National Institutes of Health (NIH)93

Background

The National Institutes of Health (NIH) supports and conducts a wide range of basic and clinical research, training, and dissemination of health information in the biomedical sciences. ⁹⁴ NIH institutes and centers support research activities in diabetes, with the National Institute for Diabetes, and Digestive and Kidney Diseases (NIDDK) the leading source of research grants and coordinating activities (see **Table 12**). The Division of Diabetes, Endocrinology, and Metabolic Diseases of the NIDDK sponsors 25 separate research programs in three main areas of research; specific details on each program can be found at the NIDDK website. ⁹⁵ The FY2013 Budget Request includes detailed information on the key research programs being pursued by the institute. ⁹⁶ Itemized listing of specific grants impacting diabetes are posted at the NIH Research Portfolio Online Reporting Tools (RePORT) website. ⁹⁷ NIH provides a specific website with a searchable database for clinical trials, including those on diabetes-related activities. ⁹⁸

NIDDK houses the DMICC;⁹⁹ the National Diabetes Data Group, which serves as the federal lead for collecting, analyzing, and sharing data on diabetes and its complications; and National Diabetes Education Program (NDEP), which is a public health partnership of the NIH and CDC and non-governmental organizations. In addition, the National Diabetes Information Clearinghouse (NCIC) provides public information and education.¹⁰⁰ NIH provides public information regarding the science of diabetes relevant to health treatment and tests and research trials.¹⁰¹ In 1997 NIDDK established the Office of Minority Health Research Coordination as an effort to address the special concerns of ethnic minority populations and to reduce health disparities.¹⁰² The typology of NIH diabetes-related activities along with DMICC members is provided in **Table 2.**

 $http://www2.niddk.nih.gov/AboutNIDDK/BudgetAndLegislativeInformation/CongressionalJustification/FY2013PresidentsBudgetRequest.html \#toc_10.$

⁹³Pamela W. Smith, Analyst in Biomedical Policy (Health Services and Research Section, DSP), contributed to the NIH section.

⁹⁴NIH is authorized under the PHSA Title IV; 42 U.S.C. §§ 281 et seq. For more information see CRS Report R41705, *The National Institutes of Health (NIH): Organization, Funding, and Congressional Issues*, by Judith A. Johnson and Pamela W. Smith. For more information on FY2013 Administration research requests see CRS Report R42410, *Federal Research and Development Funding: FY2013*, coordinated by John F. Sargent Jr.

⁹⁵See http://www.nih.gov/about/almanac/organization/NIDDK.htm.

⁹⁶For more information see

⁹⁷See http://report.nih.gov/.

⁹⁸See http://clinicaltrials.gov/ct2/search.

⁹⁹See "Diabetes Mellitus Interagency Coordinating Committee (NIH)."

¹⁰⁰See http://www.nih.gov/about/almanac/organization/NIDDK.htm#educationservices.

¹⁰¹ See http://www.diabetes.niddk.nih.gov/dm/pubs/A1CTest and http://www.nih.gov/health/clinicaltrials/.

¹⁰²For more information, see http://www.nih.gov/about/almanac/organization/NIDDK.htm.

NIH Spending

Table 12 provides diabetes-related spending at the relevant NIH Institutes, Centers, and Offices.

Table 12. NIH Spending on Diabetes-Related Activities

Dollars in Millions

Institute/Office/Center	FY2008	FY2009	ARRA FY2009	FY2010	FY2011	FY2012
Natl. Cancer Institute (NCI)	57.1	15.9	1.1	12.7	24.1	24.2
Natl. Heart, Lung & Blood Institute (NHLBI)	135.7	159.4	27.3	117.7	126.4	126.8
Natl. Inst. of Dental & Craniofacial Research (NIDCR)	8.4	11.8	0.4	13.9	14.4	14.4
Natl. Inst. of Diabetes & Digestive & Kidney Diseases (NIDDK)	414.1	628.1	135.4	502.3	506.5	510.6
Natl. Inst. of Neurological Disorders & Stroke (NINDS)	18.0	10.3	2.8	18.4	22.5	22.6
Natl. Inst. of Allergy & Infectious Diseases (NIAID)	80.3	25.8	7.4	27.2	33.7	33.7
Natl. Inst. of General Medical Sciences (NIGMS)	11.0	14.1	2.4	10.5	10.5	10.8
Eunice K. Shriver Natl Inst. of Child Hlth & Human Dev (NICHD)	23.8	41.7	14.5	28.1	29.0	29.1
Natl. Eye Institute (NEI)	33.4	34.0	7.4	34.4	42.9	43.0
Natl. Inst. of Environmental Health Sciences (NIEHS)	10.4	9.8	3.1	10.4	9.3	9.4
Natl. Inst. on Aging (NIA)	26.9	28.0	4.4	24.6	22.1	22.2
Natl. Inst. of Arthritis & Musculoskeletal & Skin Diseases (NIAMS)	5.4	6.8	1.8	5.5	6.7	6.8
Natl. Inst. on Deafness & Communication Disorders (NIDCD)	1.4	2.7	1.0	1.5	1.5	1.5
Natl. Inst. of Mental Health (NIMH)	10.5	8.6	0.4	5.3	4.9	4.9
Natl. Inst. on Drug Abuse (NIDA)	0.4	1.3	0.8	0.9	0.7	0.7
Natl. Inst. on Alcohol Abuse & Alcoholism	5.6	5.5	NA	5.5	6.7	6.7
Natl. Inst. of Nursing	4.5	6.3	1.2	6.4	5.9	6.0

Institute/Office/Center	FY2008	FY2009	ARRA FY2009	FY2010	FY2011	FY2012
Research (NINR)	112000	1 1 2007	112007	112010	112011	112012
Natl. Human Genome Research Institute (NHGRI)	7.6	8.5	1.1	7.4	9.0	9.0
Natl. Inst. of Biomedical Imaging & Bioengineering (NIBIB)	4.5	3.5	1.0	3.3	4.3	4.2
Natl. Center for Research Resources (<i>NCRR</i>) (abolished FY2012)	36.9	36.3	7.5	20.0	17.0	NA
Natl. Center for Complementary & Alt Med (NCCAM)	6.4	5.4	0.2	5.8	2.5	0.0
Natl. Inst. on Minority Health and Health Disparities (NIMHD)	13.8	19.3	1.5	18.1	15.1	15.1
Natl. Center for Advancing Sciences (created in FY2012)	NA	NA	NA	NA	NA	17.1
Fogarty International Center	0.3	0.3	NA	0.6	0.6	0.6
Natl. Library of Medicine (NLM)	0.6	5.2	5.2	0.2	0.2	0.2
Office of the Director (OD)	10.1	60.6	45.5	5.5	5.0	5.0
Common Fund/Roadmap	3.1	4.1	NA	8.9	4.3	4.3
Special Statutory Funding Program for Type I Diabetes Research ^a	150.0	150.0	NA	150.0	150.0	150.0
Total (FY2009 includes Recovery Act)	1080.2	1,303.3	273.4	1,045.0	1,075.9	1,078.7

Source: FY2012 and FY2013 Moyer Material (see footnote 5).

Notes: "NA" means not applicable. ARRA refers to American Recovery and Reinvestment Act of 2009 (P.L. 111-5). ARRA spending is included in the FY2009 spending and is not additional; it is separated here for informational purposes.

a. For more information on the history of funding for this program, see $\boldsymbol{Table}\ \boldsymbol{I}.$

Substance Abuse and Mental Health Services Administration (SAMHSA)103

Background

The mission of the Substance Abuse and Mental Health Administration (SAMHSA)¹⁰⁴ is to reduce the impact of substance abuse and mental illness by funding services and translating research. SAMHSA's advisory and policy activities include participation in *Healthy People 2020* activities.¹⁰⁵

SAMHSA's diabetes-related activities include grants to improve the physical health status of people with mental illness and addictions that are administered through the Primary and Behavioral Health Care Integration (PBHCI) Program. ¹⁰⁶ This integrated program is a joint project of SAMHSA and HRSA with joint funding, coordination, and development of models of care integration. The SAMHSA-HRSA Center for Integrated Health Solutions provides strategic care and policy guidance in areas of training and consultation. ¹⁰⁷ These grants target multiple chronic conditions, including improving the health treatment of diabetes and reducing the incidence of the disease. Program evaluation measures, developed in partnership with HRSA and AHRQ, include diabetes screening and health outcome indicators. ¹⁰⁸ SAMHSA funds demonstration projects that provide health homes, and that coordinate and integrate services under Medicaid for individuals with mental illnesses and co-occurring chronic illnesses, including diabetes. This program was authorized in the ACA to improve Medicaid and other programs, including state mental health and substance abuse agencies. ¹⁰⁹ A full list of grantees is available on the SAMHSA website. ¹¹⁰

SAMHSA spending on diabetes-related activities is not listed as part of the FY2012 or FY2013 Moyer Material. CRS includes it in our accounting as it focuses on explicit diabetes-related outcomes.

SAMHSA Spending

Table 13 lists SAMHSA spending on diabetes-related activities. This accounting identifies funds from PPHF¹¹² for selected activities.

¹⁰³Erin Bagalman, Analyst in Health Policy (Health Services and Research Section, DSP), contributed to the SAMHSA section.

¹⁰⁴SAMHSA activities relevant to this memorandum are authorized under PHSA Title V and XIX, 42 U.S.C. §§ 281 et seq.

¹⁰⁵See footnotes 36 and 33.

¹⁰⁶See http://www.integration.samhsa.gov/about-us/pbhci.

¹⁰⁷See http://www.integration.samhsa.gov/about-us/about-cihs.

¹⁰⁸See http://www.integration.samhsa.gov/clinical-practice/health-indicators.

¹⁰⁹See ACA, (P.L. 111-148), Sec. 2703; and for more information see Cindy Mann, Deputy Administrator/Director, Center for Medicaid and CHIP Services, *RE: Health Homes for Enrollees with Chronic Conditions*, Centers for Medicare and Medicaid Services, SMDL # 10-024; ACA# 12, Baltimore, MD, November 16, 2010, http://www.samhsa.gov/healthReform/healthHomes/healthHomes/DealthReform/healthHomes/healthHomes/DealthReform/healthReform/healthHomes/DealthReform/healthHomes/DealthReform/healthReform/healthReform/healthReform/healthReform/healthReform/healthReform/healthReform/healthReform/healthReform/healthReform/healthReform/healthReform/healthReform/healthReform/healthReform/healthReform/healthReform/healthReform/hea

¹¹⁰See http://www.samhsa.gov/grants/2012/sm_12_008.aspx#awardinfo; and http://www.samhsa.gov/Statesummaries/index.aspx.

¹¹¹See footnote 5.

¹¹²ACA (P.L. 111-148), Sec. 4002; 42 U.S.C. §300u-11.

Table 13. SAMHSA Spending on Diabetes-Related Activities

Dollars in Millions

Agency	FY2009	FY2010	FY2011	FY2012
Primary & Behavioral Health Care Integration (PBHCI) (see PHSA Sec. 520A).	7.0	34.0	28.0	14.0
Prevention and Public Health Fund.	NA	NA	35.0	18.0
Total	7.0	34.	63.0	32.0
Co-locating primary and specialty care in community-based mental health settings (PHSA Sec. 520K).	NA	NA	0	19
Prevention and Public Health Fund.	NA	NA	0	17
Total	NA	NA	0	36

Source: E-mail Office of Program Analysis and Coordination, HHS/SAMSHA/CMHS, May 31, 2012.

Note: "NA" means not applicable. These programs target multiple chronic health conditions, so that spending is not exclusively diabetes-related.

Non-HHS Departments

Department of Defense¹¹³

Background

The primary mission of the military health system, which includes the Defense Department's hospitals, clinics, and medical personnel, is to maintain the health of military personnel so they can carry out their military missions, and to be prepared to deliver health care during wartime. The military health system also provides health care services through either Department of Defense (DOD) medical facilities or through private health care providers.¹¹⁴

The DOD's TRICARE program provides health services, including medical, dental and vision services, and prescription drug coverage for over 9 million beneficiaries. Diabetes-specific services include medically necessary health treatments for diabetes and its health-related consequences, diabetes supplies and DSMT. The military health programs deliver services through military health treatment facilities and through care purchased from the private sector. TRICARE also provides some information

http://www.tricare.mil/mybenefit/jsp/Medical/IsItCovered.do;jsessionid=PHVL5szmhkln31pxXR1yND991HXGyNJJyjVnC25dG1zJNxN3qVPK!-1344178956?kw=Diabetes+Outpatient+Self+Management+Training+Services.

¹¹³Don Jansen, Analyst in Defense Health Care Policy (Defense Budget, Manpower and Management Section, FDT), contributed to the DOD section.

¹¹⁴For more information on TRICARE see CRS Report RL33537, *Military Medical Care: Questions and Answers*, by Don J. Jansen.

¹¹⁵See http://www.health.mil.

¹¹⁶See http://www.tricare.mil/mybenefit/jsp/Medical/IsItCovered.do?kw=Diabetic+Supplies.

¹¹⁷See

to members about diabetes and its prevention. ¹¹⁸ DOD advisory and policy activities occur through its participation in DMICC. The typology of DOD diabetes-related activities along with other DMICC members is provided in **Table 2.**

DOD Spending

Table 14 includes spending by TRICARE and does not include other DOD health expenditures on diabetes.

DOD funds medical research in clinical practice, medical technology, and patient safety directly and through civilian partners though the Congressionally-directed Medical Research Program (CDMRP). Since the program's inception in FY1993, there has been no stand-alone peer-reviewed diabetes research program, but in the past, there have been diabetes-related Investigator-Initiated Research Awards. 119

Table 14: DOD Spending on Diabetes-Related Activities

Dollars in Millions

Program description	FY2008	FY2009	FY2010	FY2011	FY2012 estimate
TRICARE Expenditures for health services	834.0	902.0	1,004.0	1,082.0	1,119.5

Source: TRICARE information provided by legislative liaison for the Office of the Assistant Secretary of Defense (Health Affairs) in a communication dated 9/30/2011. TRICARE data for FY2012 is an estimate.

U.S. Department of Agriculture (USDA)120

Background

USDA's mission is to develop and implement policies on food, agriculture, and natural resources. Many of the USDA activities relevant to diabetes are in the area of nutrition programs, including food support, and nutritional guidelines. USDA's regulatory responsibilities include developing standards for meals served at child-serving institutions, such as school lunch and breakfast programs. USDA supports research through nutrition-related scientific grants and policy research.

USDA's Food and Nutrition Service (FNS) includes domestic food assistance programs such as the Supplemental Nutrition Assistance Program (SNAP), Special Supplemental Nutrition Program for Women, Infants and Children (WIC), and the National School Lunch Program. ¹²¹ SNAP provides funds

¹¹⁸See http://www.tricare.mil/pressroom/press_article.aspx?fid=597.

¹¹⁹For grant details see http://cdmrp.army.mil/pubs/pips/prmrp_pip.pdf.

¹²⁰Randy A. Aussenberg, (Analyst in Nutrition Assistance Policy, Children and Families Section, DSP), contributed to the section on USDA.

¹²¹Food nutrition programs are authorized by 42 U.S.C. §§ 1771 et seq., as amended by P.L. 111-296. For more information on appropriations for domestic food assistance programs see CRS Report R41964, *Agriculture and Related Agencies: FY2012 Appropriations*, coordinated by Jim Monke; and CRS Report R42596, *Agriculture and Related Agencies: FY2013 Appropriations*, by Jim Monke. For an overview of domestic food programs see CRS Report R42353, *Domestic Food Assistance: Summary of Programs*, by Randy Alison Aussenberg and Kirsten J. Colello. For more information on FNS, see http://www.fns.usda.gov/fns/ and WIC, see http://www.fns.usda.gov/wic/.

for nutrition education at the state level. However, states have a great deal of discretion in how these funds are spent, and it is unclear if these funds are spent on diabetes-related activities. WIC is for pregnant, post-partum, and breast-feeding women, infants and children. WIC eligibility includes income guidelines, state residency requirement, and an evaluation that the individual is at "nutritional risk." There may be individuals who are diagnosed with gestational diabetes, or who are pre-diabetic or diabetic in this population and they would receive supplemental foods accordingly. These nutrition programs could potentially include activities to improve health and prevent obesity through efforts to improve nutrition and health by providing food assistance and nutrition education. ¹²²

USDA has a regulatory role through its oversight of child-serving institutions' nutrition programs. In order for schools and other institutional settings, such as child care centers, to receive USDA subsidies or reimbursements for meals, the meals served must meet nutritional guidelines. The most recently released and updated standards for these meal programs require nutritional standards that have as explicit goals the reduction of childhood obesity and diabetes. ¹²³ These programs may play a role in the prevention of diabetes by increasing children's access to healthy foods and nutrition and reducing the prevalence of overweight and obesity in children. ¹²⁴

The Center for Nutrition Policy and Promotion (CNPP) links nutrition research to dietary guidance and provides dietary information for a healthy population. One key function of CNPP is the publication of *Dietary Guidelines for Americans* in partnership with HHS. These guidelines provide evidence-based nutritional guidance to promote health, reduce the risk of chronic diseases, and reduce the prevalence of overweight and obesity through improved nutrition and physical activity. One caveat is that these guidelines and other guidance CNPP provides are not prescriptive, and represent recommendations for healthy people, not those with chronic health conditions such as diabetes. 127

The USDA funds research through grants by the Agricultural Research Service and the Economic Research Service. ¹²⁸ In the past some of this research funding included projects related to diabetes and nutrition in children, older adults, and ethnic minority populations. ¹²⁹ Finally, on its website, the USDA provides information and resources to the public on diabetes and pre-diabetes related to healthy eating,

¹²⁶For more information on the guidelines see http://www.cnpp.usda.gov/dietaryguidelines.htm.

¹²²Marsha Gold et al., *Study of Federal Spending on Diabetes: Summaries of Federal Government Agencies and Their Relevant Activities*, Mathematica Policy Research, Inc., Working Papers, Washington, DC, January 2007, pp. 70-78, http://www.mathematica-mpr.com/publications/PDFs/FederalSpendingWP.pdf.

¹²³77 Fed. Reg. 4088 January 26, 2012. http://www.gpo.gov/fdsys/pkg/FR-2012-01-26/pdf/2012-1010.pdf.

¹²⁴United States Department of Agriculture, 2013 USDA Budget Explanatory Notes for Committee on Appropriations. Food and Nutrition: 2013 Explanatory Notes, Washington, DC, May 22, 2012, pp. 30-167, http://www.obpa.usda.gov/FY13explan_notes.html.

¹²⁵See http://www.cnpp.usda.gov/.

¹²⁷E-mail, Director of Public and Governmental Affairs, USDA Center for Nutritional Policy and Promotion.

¹²⁸The Agricultural Research Service is the main research arm of the USDA on scientific issues, including human nutrition, food safety and animal health, see http://www.ars.usda.gov/main/main.htm. The Economic Research Service aims to inform private and public decision-making on economic and policy issues related to agriculture, food, the environment, and rural development, see http://www.ers.usda.gov/about-ers.aspx.

¹²⁹ Diabetes: Nutrition Research Tackles Widespread Disease (Agricultural Research Service, July 2010). http://www.ars.usda.gov/is/AR/archive/jul10/diabetes0710.pdf; and Food Stamps, Blood Sugar Control, and Medicare Costs of Older Diabetics (Economic Research Service, 2009); and Addressing Child Hunger and Obesity in Indian Country: Report to Congress (Mathematica, 2012 - funded by Food and Nutrition Service, and includes discussion of diabetes), see http://www.ers.usda.gov/briefing/foodnutritionassistance/funding/RIDGEprojectSummary.asp?Summary_ID=211; and http://www.fns.usda.gov/ora/menu/published/cnp/FILES/IndianCountry.pdf.

nutrition, and food safety. ¹³⁰ USDA advisory and policy activities occur through its participation in DMICC. The typology of DOD diabetes-related activities along with other DMICC members is provided in **Table 2.**

USDA Spending

Most USDA activities that are diabetes-related are not separated from existing USDA activities, and as a result, CRS was not able to obtain an estimate of USDA spending on diabetes-related activities. ¹³¹

Veterans Health Administration (VHA)132

Background

The Veterans Health Administration (VHA) is primarily a direct service provider of primary care, specialized care, and related medical and social support services to veterans through an integrated health care system. In addition, the VHA trains medical professionals, performs clinical research, and aids in disaster response efforts. Veterans generally must enroll in the health care system to receive medical care. Eligibility for enrollment is based primarily on previous military service, disability, and income. VHA provides free inpatient and outpatient medical care to veterans for service-connected conditions and to low-income veterans for non service-connected conditions.¹³³

Diabetes is the second most common primary diagnosis in the VHA affecting over 960,000 patients. The VHA reports that approximately 20 percent of the care it provides is for diabetes-related conditions. ¹³⁴

VHA Spending

Table 15.VHA Spending on Diabetes-Related Care

(dollars in millions)

	FY2008	FY2009	FY2010	FY2011	FY2012a
Costs for Patient Services	946.0	963.0	1,004	1,030	1,051

Source: Veteran's Health Administration, personal communication, September, 2012.

¹³²Sidath Viranga Panangala, Specialist in Veterans Policy (Health Services and Research Section, DSP), contributed to the VHA section.

¹³⁰See USDA websites: http://fnic.nal.usda.gov/diet-and-disease/diabetes; http://www.nutrition.gov/nutrition-and-health-issues/diabetes and Food Safety for People with Diabetes (USDA Food Safety and Inspection Service); http://www.fsis.usda.gov/PDF/Food_Safety_for_Diabetics.pdf; National Agriculture Library's Food and Nutrition Information Center http://fnic.nal.usda.gov/diet-and-disease/diabetes; and http://fnic.nal.usda.gov/consumers/eating-health/diabetes-and-prediabetes; and http://www.healthycommunitieshealthyfuture.org/.

¹³¹See footnote 124.

¹³³For more information on the VHA, see CRS Report R42518, *Veterans' Medical Care: FY2013 Appropriations*, by Sidath Viranga Panangala; and, CRS Report R42747, *Health Care for Veterans: Answers to Frequently Asked Questions*, by Sidath Viranga Panangala and Erin Bagalman.

¹³⁴See Department of Veteran's Affairs, FY2013 Funding and FY 2014 Advance Appropriation Request, v. 2 Medical Programs and Information Technology Programs.

Notes: Costs are based on primary diagnosis of Diabetes Mellitus, ICD-10 250.

a. FY2012 costs are an estimate, June actual obligations are annualized through September 30, 2012.

In addition, the Office of Research and Development of the VHA conducts diabetes-related clinical science, including biomedical, health services and rehabilitation research at selected medical centers. Other VHA advisory and policy activities occur through its participation in DMICC. The typology of VHA diabetes-related activities along with other DMICC members is provided in **Table 2.**

Table 16 lists VHA spending on diabetes-related research.

Table 16.VHA Office of Research & Development Spending on Diabetes-Related Activities

Dollars in Millions

Spending Category	FY2008	FY2009	FY2010	FY2011	FY2012
Diabetes & Major Complications	26.9	34.9	39.7	35.1	35.1

Source: E-mail from Department of Veterans Affairs, Congressional Liaison, October 11, 2011.

Minority Health Resources

Background

Ethnic minority populations in the United States have a higher prevalence of diabetes and the burden is higher. This section compiles information from the HHS Office of Minority Health (OMH), IHS, and sections of FY2012 and FY2013 Moyer Material identified as minority health-related. Diabetes-related spending was then selected from these estimates. Although this material is listed by agency and department in other sections of this report, it is gathered here per the request to facilitate an overview of diabetes-related spending related to minority health.

Office of Minority Health¹³⁶

The Office of Minority Health (OMH) was created in 1986 by the Secretary of HHS and is tasked with improving the health of racial and ethnic minority populations through the development of health policies and programs that will help eliminate health disparities. Section 10334 of ACA (P.L. 111-148) expanded the emphasis on minority health by moving the OMH from the Office of Public Health and Science to the Office of the Secretary, with the Deputy Assistant Secretary of Minority Health reporting directly to the Secretary. ACA authorized the establishment of Offices of Minority Health in CDC, HRSA, SAMHSA, AHRO, FDA and CMS. 137

OMH collaborates with communities and public and private sector organizations to support a systemic approach for eliminating health disparities. OMH develops strategic plans, provides grants, and advises

¹³⁵Agency for Healthcare Research and Quality, *Diabetes Disparities Among Racial and Ethnic Minorities: Fact Sheet*, http://www.ahrq.gov/research/diabdisp.htm.

¹³⁶Amalia K. Corby-Edwards, Analyst in Public Health and Epidemiology (Health Services and Research Section, DSP), contributed to the section on minority health.

¹³⁷Amends PHSA Title I, Sec. 1707A; Sec. 42 U.S.C. 300u-6).

community and faith-based organizations, institutions of higher education, tribes and tribal organizations, and other organizations.

OMH diabetes-related activities include developing policy and planning documents. A recent initiative is the *National Partnership for Action to End Health Disparities* (NPA), a private-public collaboration whose aim is to develop a nationwide, community-based approach to combat health disparities and to increase health equity. ¹³⁸Two planning documents have emerged from this initiative: the *National Stakeholder Strategy for Achieving Health Equity*¹³⁹ and *The HHS Action Plan to Reduce Racial and Ethnic Health Disparities* (HHS Action Plan). ¹⁴⁰ The HHS Action Plan consists of a roadmap to reduce health disparities including a diabetes-related priority to reduce childhood obesity through the CDC program, Racial and Ethnic Approaches to Community Health (REACH). ¹⁴¹ REACH contains a Minority Health Surveillance Program to assess specific risk factors in minority communities, and grants to community-based participatory approaches that address the social determinants of health across communities, health care settings, schools, and work sites. ¹⁴² Another HHS Action Plan initiative improves the quality of diabetes care in primary care settings and expands DSMT in minority communities. ¹⁴³

OMH reported three grant programs from FY2008 to FY2012 that have included diabetes-related programs: 144

Partnerships Active in Communities: These grants improve minority access to and utilization of health care. Programs address designated health areas (including diabetes); ¹⁴⁵

Community Partnerships to Eliminate Health Disparities Demonstration Grant Program: These grants, funded from FY2007-FY2010, supported community-based programs that address racial and ethnic health disparities in targeted minority communities; ¹⁴⁶ and

Bilingual/Bicultural Demonstration Grants: Grants funded from FY1993-FY2009 developed the capacity of health care professionals to address cultural and linguistic barriers to health delivery, and to increase health care access for limited English-proficient populations, particularly those who are racial or ethnic minorities, for designated priority health conditions (including diabetes). ¹⁴⁷ The typology of OMH diabetes-related activities along with those of other DMICC members is listed in **Table 2**.

¹⁴⁴Telephone call from OMH, October 25, 2011.

¹³⁸See http://minorityhealth.hhs.gov/npa/templates/browse.aspx?lvl=1&lvlid=11.

¹³⁹See http://minorityhealth.hhs.gov/npa/templates/content.aspx?lvl=1&lvlid=33&ID=286.

¹⁴⁰See http://minorityhealth.hhs.gov/npa/templates/content.aspx?lvl=1&lvlid=33&ID=285.

¹⁴¹Office of Minority Health, *HHS Action Plan to Reduce Racial and Ethnic Health Disparities: A Nation Free of Disparities in Health and Health Care*, Department of Health and Human Services, Washington, DC, April 2011, p.4. http://minorityhealth.hhs.gov/npa/files/Plans/HHS/HHS_Plan_complete.pdf.

¹⁴²See http://www.cdc.gov/Features/dsREACHUS/ and http://www.cdc.gov/reach/index.htm.

¹⁴³See footnote 141, pp. 17, 21.

¹⁴⁵See http://minorityhealth.hhs.gov/templates/content.aspx?ID=8493&lvl=2&lvlID=1.

¹⁴⁶For more information see http://minorityhealth.hhs.gov/templates/content.aspx?ID=5104&lyl=2&lylID=1.

¹⁴⁷See http://minorityhealth.hhs.gov/templates/content.aspx?ID=3148.

Table 17. OMH Spending on Diabetes-Related Activities

Dollars in millions

Program description	FY2008	FY2009	FY2010	FY2011	FY2012
Partnerships Active in Communities ^a	0	0	3.2	3.2	3.2
Bilingual/Bicultural Demonstration Grants	0.5	0.5	0	0	0
Community Partnerships to Eliminate Health Disparities Demonstration Grant Program	2.4	2.4	0	0	0

Source: Telephone communication from the Office of Minority Health, October 25, 2011.

Note:

a. This project period is from September 1, 2010-August 31, 2013, and funding is expected to be constant; however, FY2012 and FY2013 spending is estimated.

Other HHS Spending on Minority Health

Agency-level spending for programs for diabetes-related services for ethnic and racial minority populations and for the reduction of health disparities among these groups is provided in **Table 18**. This estimate of expenditures is an underreporting of funds spent on minority health as many of the other HHS and non-HHS agencies provide a range of services for ethnic minorities but do not keep a separate accounting of those disbursements. For instance, CMS, DOD, and the VHA provide medical services for all Americans, including ethnic and racial minorities. **Table 18** lists the Minority Health cross-sectional analyses found in FY2012 and FY2013 Moyer Material specifically identified as diabetes-related. Spending on diabetes-related activities at the NIH National Institute on Minority Health and Health Disparities is also included. 149

Table 18. Spending on Diabetes-Related Activities for Minority Health

Dollar in Millions

Agency/Office	FY2008	FY2009	FY2010	FY2011	FY2012
NIDDK	209.4	320.9	225.6	220.3	222.1
Recovery Act - NIDDK (Non-add)	NA	58.7	NA	NA	NA
Natl. Inst. on Minority Health and Health Disparities	13.8	19.3	18.1	15.1	15.1
Office of Minority Health, Office of the Director	1.8	1.8	0	0	0
Indian Health Service	161.0	161.0	161.0	161.0	161.0

¹⁴⁸See footnote 5. FY2012 Moyer Material, pp. 34-38; and FY2013 Moyer Material, pp. 34-39.

¹⁴⁹This information is also listed in **Table 12**.

Source: FY2012 Moyer Material, pp. 34-38 and FY2013 Moyer Material, pp. 34-39 (see footnote 5).

Notes: "NA" means not applicable. Listed expenditures for NIDDK are part of the Institute's overall expenditures on diabetes-related research. *Non-add* refers to amounts that are included the total spending and are not additional. *Recovery Act* refers to American Recovery and Reinvestment Act of 2009 (P.L. 111-5).

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